



Korea Defense Products Guide



Korea Defense Industry Association



FOREWORD

The purpose of the **KOREAN DEFENSE PRODUCTS GUIDE** is to introduce nationally-designated major weapon systems and military equipment produced in and guaranteed their quality by the Republic of Korea. The well-known economic miracle and related industrial technology evolution of the last three decades have established a firm foundation for the development of the Korean defense industry.

Currently, Korea is capable of manufacturing a wide range of conventional weapon systems, and at the same time, Korea has acquired the technologies and experiences to produce sophisticated weapon systems. In addition, the Korean defense manufacturers ensure high quality and price competitiveness in the world market.

We strongly believe this catalogue will contribute to international cooperation in the defense area by providing the latest information on the Korean defense industry and their major products.

This catalogue is expected to enhance your understanding of our defense industry and products, and we promise to provide any assistance you may need.

Thank you!

September, 2019

CONTENTS

SMALL ARMS & ARTILLERY

Products	Company	Page
Small Arms	S&T MOTIV	10
	S&T DYNAMICS CO., LTD.	14
	DASAN MACHINERIES CO., LTD.	18
Artillery	HANWHA DEFENSE	20
	HYUNDAI-WIA CORPORATION	24
Parts & Components	WOO KYUNG OPTICS CO., LTD.	28
	BOLYUNG ENGINEERING CO	29
	IONES CO., LTD.	30
	SOOSUNG DEFENSE INDUSTRIES LTD.	31
	D. I. OPTICAL CO., LTD.	33
	EO SYSTEM CO., LTD.	34
	IPEC HIGH PRECISION INC	35
	SU OPTICS	36
	UTECH CORP., LTD.	38

AMMUNITION & EXPLOSIVES

Products	Company	Page
Ammunition	HANWHA CORPORATION	40
	POONGSAN CORPORATION	44
Explosives	DAEKWANG CHEMICAL CO., LTD.	48
	KOREA CNO TECH CO., LTD.	49
	KORYO PYROTECHNICS CO., LTD.	51
Fuze	POONGSAN FNS CORPORATION	52
Parts & Components	ARCONIC KOREA LTD.	56
	DOOWON HEAVY INDUSTRIAL CO., LTD.	57
	KPC METAL CO., LTD.	60
	LC-TEK CO., LTD.	62
	LIG POONGSAN PROTECH CO., LTD.	63
	KOREA NON-FERROUS METALS CO., LTD.	64

MBT, ARMORED & MILITARY VEHICLES

Products	Company	Page
MBT	HYUNDAI ROTEM COMPANY	66
Armored Vehicle	HANWHA DEFENSE	70
Military Vehicles	KIA MOTORS CORPORATION	74
	DAEWOO TRUCKS	78

CONTENTS

Anti-Riot Vehicle	DAEJI PRECISION & INDUSTRIES CO., LTD.	81
	JINO MOTORS CO., LTD.	82
Patrol Vehicle	POSCO INTERNATIONAL Corporation	84
Parts & Components	DOOSAN INFRACORE CO., LTD.	86
	LS MTRON LTD.	88
	DONGSUNG ELECTRIC MACHINE CO., LTD.	89
	SEGI PRECISION ENGINEERING CO.	91
	BOSUNG INDUSTRY.	92
	BS AUTOPARTS CO.,LTD.	94

COMMUNICATIONS & ELECTRONICS

Products	Company	Page
Battle Management System	LIG NEX1 CO., LTD.	96
	HANWHA SYSTEMS	100
	HUNEED TECHNOLOGIES CO., LTD.	102
Command & Control	INSOPACK CO., LTD.	105
	HYUNDAI J.COMM CO., LTD.	106
Communications	YEONHAB PRECISION CO., LTD.	107
	WOORIBYUL CO., LTD.	108
Digital Jammer	BA SOLUTIONS CO., LTD.	109
Electronic Warfare System	VICTEK CO., LTD.	110
Radar	RFHIC CORPORATION	111
Shelter	KS SYSTEM CO., LTD.	112
Sonar Systems	METANETWORKS CO., LTD.	113
	FS CO., LTD.	114
Parts & Components	DUSITECH CO., LTD.	115
	EOS Corporation	116
	FOSTEC INC.	117
	GIGALANE CO., LTD.	118
	HUMEDIA CO., LTD.	119
	KUKDONG ELECTRONIC PRECISION CO., LTD.	120
	KUKDONG TELECOMMUNICATION CO., LTD.	121
	NAVCOURS Co., LTD.	122
	QNION CO., LTD.	123
	SOLVIT SYSTEM CO., LTD.	124
	SUNGSAN ELECTRONICS & COMMUNICATIONS CO., LTD.	125
	U-TEL CO., LTD.	126
	ZHT CO., LTD.	127

AIRCRAFT

Products	Company	Page
Advanced Trainer	KOREA AEROSPACE INDUSTRIES, LTD.	130
UAV	KOREAN AIR LINES CO., LTD.	134
	UCONSYSTEM CO., LTD.	138
	FINE KOWAC CO., LTD.	139
Engine	HANWHA AEROSPACE CO., LTD.	140
Helicopter	UI HELICOPTER CO., LTD.	142
Satellite	ASIA PACIFIC SATELLITE INC. (APSI)	143
	SATREC INITIATIVE CO., LTD. (SI)	144
	SI IMAGING SERVICES CO., LTD. (SIIS)	145
Tactical Training Simulator	NAVIWORKS CO., LTD.	147
Maintenance	AERO PEACE INC.	148
Parts & Components	KENCOA AEROSPACE CORPORATION	149
	FIRSTEC CO., LTD.	150
	AERO MASTER CORPORATION	154
	DACC CARBON CO., LTD.	155
	DAWIN FRICTION CORPORATION	156
	KOLON DACC COMPOSITE CO., LTD.	158
	KOMACO CO., LTD.	160
	KOREA LOST-WAX CO., LTD.	161
	PSIONDSP CORPORATION	162
	FOREX	163
	FINE PRECISION IND., LTD.	164
	HYOSUNG HEAVY INDUSTRIES CORPORATION	165

NAVAL VESSELS

Products	Company	Page
Frigate	DAEWOO SHIPBUILDING & MARINE ENGINEERING CO., LTD.	168
Destroyer	HYUNDAI HEAVY INDUSTRIES CO., LTD.	172
Landing Platform Helicopter	HANJIN HEAVY INDUSTRIES AND CONSTRUCTION CO., LTD.	176
Minesweeping	KANGNAM CORPORATION	180
Small Boat	FINE INC.	184
	VOGO CO., LTD.	186
	WOOSUNG I.B. CO., LTD.	188
	WOORI OCEANTECH	189
Parts & Components	KOREA T.E.S CO., LTD.	190
	JINYOUNG TBX Co., LTD.	191

CONTENTS

NBC EQUIPMENT PROTECTIVE

Products	Company	Page
Detector	HKC CO., LTD.	194
Gas Mask	HANCOM LIFECARE INC.	195
	SG SAFETY CORPORATION	197

MISCELLANEOUS

Products	Company	Page
Perimeter Detection System	SAMSUNG S-1 CORPORATION	202
Battery & Power	D-ECO ENERGY CO., LTD.	205
	EHWA TECHNOLOGIES INFORMATION	206
	SAMJEONG TURBINE CO., LTD.	208
	KOREA SPECIAL BATTERY CO., LTD.	209
	SUNTECH CO., LTD.	210
	VITZROCELL CO., LTD.	211
Bulletproof Equipment	DAE-SUNG TECH CO., LTD.	212
	KOLON GLOBAL CORPORATION	213
	LOTUS INTERNATIONAL CO., LTD.	216
	KYUNG CHANG INDUSTRY	217
	JAIN TECHNOLOGY	218
	TAEKYUNG	219
Integrated Logistics Support	WINTEK CO., LTD.	220
Lightning Protection Solutions	GROUND CO., LTD.	221
Optical Devices	TBT SYSTEM	222
	GREEN OPTICS CO., LTD.	225
	KOREA ELECTRO-OPTICS CO., LTD.	226
Revolver Smart Weapon Storage	KODUCT CO., LTD.	227
	ZIWOO INFORMATION & TECHNOLOGY INC.	228
Sound Wave Transmitter	JD SOLUTIONS CO., LTD.	231
Thermal Sensor Targets	CONET SYS CO., LTD.	232
Surveillance Integrated System	U2SR	233
Security Equipment	SHIELDK CO., LTD.	234
Extinguishing System	KANGWOON INDUSTRY CO., LTD.	235

INDEX

INDEX OF COMPANIES	236
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SMALL ARMS & ARTILLERY

S&T MOTIV	10
S&T DYNAMICS CO., LTD.	14
DASAN MACHINERIES CO., LTD.	18
HANWHA DEFENSE	20
HYUNDAI-WIA CORPORATION	24
WOO KYUNG OPTICS CO., LTD.	28
BOLYUNG ENGINEERING CO.	29
IONES CO., LTD.	30
SOOSUNG DEFENSE INDUSTRIES LTD.	31
D. I. OPTICAL CO., LTD.	33
EO SYSTEM CO., LTD.	34
IPEC HIGH PRECISION INC.	35
SU OPTICS	36
UTECH CORP., LTD.	38



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Company Introduction: Since our founding in December 1981, S&T Motiv has produced and developed products for the defense industry, automotive core components and so on with over 40 years of precision technology. Based on a variety of experiences as well as global competitiveness, we have become established as a global company entering the world marketplace in Asia, Europe, America, etc. through innovative management aimed at being a top-notch company for the 21st Century.

K2C 5.56mm Assault Rifle

The Most Optimized Rifle for the Latest Trends

- 310mm(12.2") Barrel with 3-Prong Flash Hider.
- Carbine version of K2
- 6-Position Telescoping Folding Stock.
- MIL-STD-1913 mounting rails for optics, lights and laser devices

Technical Data

Caliber	5.56 X 45mm	
Weight	3.3 kg	
Operating System	Gas Operated(Gas Piston)	
Length	Barrel	310mm(12.2")
	Stock Extended	875mm(34.4")
	Stock Retracted	777mm(30.6")
	Stock Folded	570mm(22.4")
Barrel Rifling	Number of Grooves	6
	Twist of Rifling	Right Hand
	Pitch of Rifling	185.4mm(7.3")
Effective Range	500m(K100)	
Rate of Fire	700~900RPM	
Muzzle Velocity	825m/s	
Fire Control	Safe-Semi-Auto-Burst	
Etc.	Originated from K2	



K2C1 5.56mm Assault Rifle

The Next Generation Rifle of K2

- 465mm(18.3") / 310mm(12.2") Barrel with 3-Slot Flash Hider
- Originated from K2
- 5-Position Telescoping Folding Stock.
- Attachable Rear Sight and Front Grip

Technical Data

		K2C1	K2C1(Short Barrel)
Caliber		5.56 X 45mm	
Ammunition		K100 / K101/ M193 / M196 / M855 / SS109	
Weight		3.684kg	3.3kg
Operating System		Gas Operated(Gas Piston)	
Length	Barrel	465mm(18.3")	310mm(12.2")
	Stock Extended	1014mm(39.9")	854mm(33.6")
	Stock Retracted	940mm(37")	780mm(30.7")
	Stock Folded	730mm(28.7")	570mm(22.4")
Barrel Rifling	Number of Grooves	6	
	Twist of Rifling	Right Hand	
	Pitch of Rifling	185.4mm(7.3")	
Muzzle Velocity		960m/s(M193), 920m/s(K100)	820m/s(K100)
Rate of Fire		700~900RPM	
Effective Range		600m(K100)	500m(K100)
Fire Control		Safe-Semi-Auto-Burst	
Magazine Capacity		20rds, 30rds	



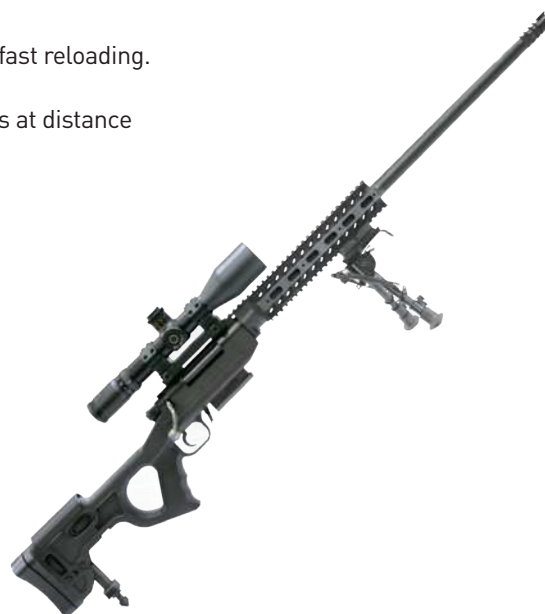
K-14 7.62mm Sniper Rifle

1.0MOA Accuracy

- 609.6mm(24") Barrel with 4-Prong Vortex style Flash Hider.
- A bolt-action rifle with a bolt handle that opens at 60 degrees for fast reloading.
- Free floating barrel
- Adjustable folding monopod attached to a stock for accurate shots at distance
- Adjustable folding bipod fitted with MIL-STD 1913 mounting rails.

Technical Data

Caliber		7.62 X 51mm(.308 Win.)
Weight		7.0kg
Length	Barrel	609.6mm(24")
	Overall	1,150mm(45.27")
Barrel Rifling	Number of Grooves	4
	Twist of Rifling	Right Hand
	Pitch of Rifling	304.8mm(12")
Maximum Effective Range		800m
Accuracy 1.0 MOA		1.0 MOA
Operating System		Bolt Action
Magazine Capacity		5rds, 10rds
Optical Scope		3 ~ 12 X



S&T Motiv

K12 7.62mm Machine Gun

155mm / 39cal, Self-Propelled Howitzer

- 559mm(22") Barrel with 3-Prong Flash Hider.
- Easy to convert aircraft mode to Infantry mode.
- Open-bolt operation; belt-fed with quick change barrel.
- Gas Operated and rotating bolt locking system for greater reliability
- Ability to mount in a bipod, tripod or aircraft
- Full-automatic only
- Multiple integrated MIL-STD-1913 mounting rails for optics, lights and laser devices

Technical Data

Caliber	7.62 X 51mm	
Weight	11.9kg	
	Barrel	559mm(22")
Length	Overall	1,110mm(43.7") (equipped with dual spade grips)
	Stock Extended	1,215mm(47.8")
Barrel Rifling	Number of Grooves	4
	Twist of Rifling	Right Hand
	Pitch of Rifling	304.8mm(12")
Operating System	Gas Operated, Open Bolt	
Rate of Fire	650-950RPM	
Fire Control	Automatic	
Magazine Capacity	200rds (Link)	
Effective Range	Point Target	800m
	Area Target	1800m



K4 40mm Automatic Grenade Launcher(Machine Gun)

- Portable 40mm grenade weapon system suited for light infantry vehicles and tripod applications
- Dismounted personnel within a radius of 15 meters from impact will be immobilized by blast and fragmentation.
- Penetrates 2 inches of armor at 2,000 meters. 15meters blast and fragmentation effect
- Dual spade grips for stable control
- Attachable of PVS-05K night vision sight system
- Firing on automatic mode selectable or manual mode by electric controllable system



Technical Data

Caliber	40 X 53mm	
Ammunition	All high velocity 40mm NATO-qualified	
Weight	Gun	34.4kg
	Mount	29.5kg
	Ammunition Box	9.1kg(48rds), 4.5kg(24rds)
Operating System	Advanced Blowback ignition	
Length	Barrell	412mm(16.2")
	Overa	1,072mm(42.2")
Barrel Rifling	Number of Grooves	18
	Twist of Rifling	Right Hand
	Pitch of Rifling	1219.2mm(48")
Muzzle Velocity	241m/s	
Rate of Fire	325-375RPM	
Range	2,000m(Area target)	
	1,500m(Point target)	
Fire Control	Automatic	
Magazine	24rds, 48rds (Link)	



K6 12.7mm(0.50") Heavy Machine Gun

Closed-bolt design; short-recoil barrel operation

- Fixed headspace and timing eliminates safety concerns associated with barrel changing and improper timing.
- Can be fitted to all types of armored, light and heavy vehicles, naval crafts, helicopters and other aircraft.
- Fires all types of NATO ammunition: Ball, Tracer, AP, API, APIT, AP Hardcore and Multipurpose.
- Sustained automatic or single-shot firing from the closed bolt for single-shot accuracy.
- Variety of mounting applications that can be fired manually or by solenoid.
- Closed-bolt design; short-recoil barrel operation
- Quick Changeable Barrel(QCB) allows the barrel to be quickly exchanged by one operator



Technical Data

Caliber	12.7X99mm(0.50")	
Ammunition	Ball / TR / AP / API / API-T / AP-T	
Weight	Gun	38kg
	Barrel	12.6kg
Operating System	Short recoil	
Length	Complete gun	1654mm(65.1")
	Barrel Length	1143mm(45")
Barrel Rifling	Number of Grooves	8
	Twist of Rifling	Right hand
	Pitch of Rifling	381mm(15")
Muzzle Velocity	930m/s	
Rate of Fire	450-600RPM	
Range	Maximum	6,765m
	Effective	1,830m





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S&T Dynamics Co., Ltd., which was established in 1959, has progressed into a world-renowned company through continuous research and development as well as technology innovation in the manufacture of automotive parts, machine tools and defense products. S&T Dynamics is now pursuing the plan to diversify into new products including 120mm Self Propelled Mortar and 20mm Turreted Gun System. We are actively and successfully achieving this with the help of our engineering.

K6E1, 12.7mm Machine Gun



Technical Data

Caliber	12.7mm	Maximum Firing Range	6,765m
Gun Weight	38kg	Effective Firing Range	1,830m
Barrel Weight	12.6kg	Feeding Type	Link Belt
Gun Length	1,654mm	Operation	Short Recoil
Barrel Length	1,143mm	Cooling	Air
Number Of Grooves	8	Ammunition	Ball, AP, API, API-T, TR, AP-T
Rate Of Fire	500~600rpm	Application	Fighting Vehicles, Warships
Muzzle Velocity	930m/s		Helicopters, Grounds

KM168, 20mm Vulcan Cannon



Technical Data

Gun Weight	118kg	Feeding	Link-Belt
Maximum Firing Range	4,500mm	Ammunition	HEIT-SD, HEI, TP-T,
Effective Firing Range	2,200mm		TP & STP, MPT-SD
Rate of Fire	2,700 ~ 3,000rpm	Application	Carriers, AA Guns,
Muzzle Velocity	1,030m/s		Warships, Fighters

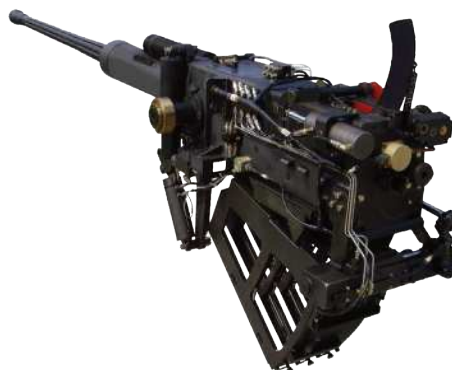
KKCB, 30mm Automatic Gun



Technical Data

Effective Firing Range	3,000mm	Operating	Gas Operated
Rate of Fire	600rpm	Ammunition	TP-T, HEI, HEI-T
Muzzle Velocity	1,080m/s	Application	AA Guns, Self-Propelled Anti-Aircraft
Feeding	Link-Belt		Guns, Combat Vehicles, Warships

K40, 40mm Automatic Gun



Technical Data

Weight	720kg	Firing Mode	Safety, Single, Burst
Effective Firing Range	6,000m(ground)	Feeding	Bottom-up, Multiple, Linkless
Maximum Firing Range	12,000m(Approx.)	Operating	Auto(Remote), Manual
Rate of Fire	300rds/min	Ammunition	PFHE, APFSDS, MMFA, TP
Muzzle Velocity	1,005m/s(HE)	Application	Fighting Vehicles

S&T DYNAMICS CO., LTD.

X200-5K



Technical Data

General Rating	Gross Engine Power	350HP
	Max. Input Speed Range	2,300rpm
	Vehicle Weight	up to 18 tons
Weight(Dry)		522kg
Application	Vehicle	K200A1 APC, K242A1, K281A1, K263A1, K277A1, K216 M113 Family
	Engine	D2848T

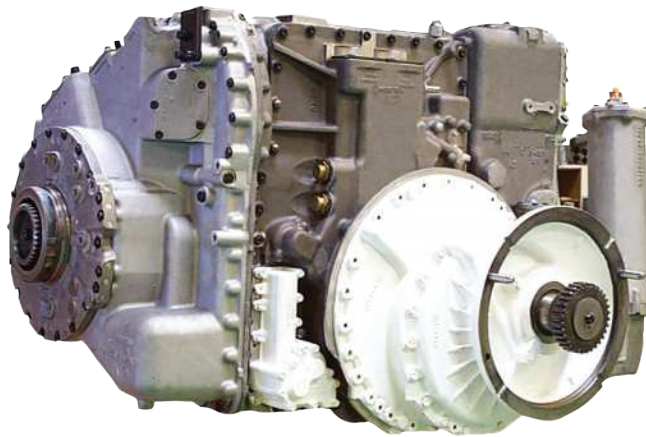
XTG411-2A/4/4A



Technical Data

Item		XTG411-2A	XTG411-4A
General Rating	Gross Engine Power	405HP	650HP
	Max. Input Speed Range	2,300rpm	2,500rpm
	Vehicle Weight	Up to 23 tons	47 tons
Weight(Dry)		1,084kg	1,111kg
Application	Vehicle	K55 SPH, K77 FDCV, M109, M10	MX992, Stingray M578
	Engine	8V71T	8V90TA

X1100-5A3



Technical Data

General Rating	Gross Engine Power	1,500HP
	Max. Input Speed Range	2,000 to 3,000rpm
	Vehicle Weight	45 to 60 tons
Weight(Dry)		2,050kg
Application	Vehicle	K9 SPH, K10 ARV
	Engine	MT881KA-500

EST15K



Technical Data

General Rating	Gross Engine Power	1,500 ~ 1,650HP
	Max. Input Speed Range	1,800 to 3,200rpm
	Vehicle Weight	Up to 65 tons
Weight(Dry)		2,500kg



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Dasan Machineries Co., Ltd is a professional manufacturer and exporter of premier pistols, rifle parts and completed firearms. Since its foundation in 1992, we have supplied our products to firearms company and end-users worldwide. In August 2016, Dasan was officially designated by the Defense Acquisition Program Administration (DAPA) as a Korean defense contractor that manufactures and supplies firearms to Korean Armed Forces.

Scope of Service

- Pistol
- Rifle
- Pistol & Rifle Components

Major Products

- 1911 Pistol
- Striker-Pistol
- DSAR15
- DSAR15P
- DSAR47
- DSMG9
- DSAK47
- DSSR762 Sniper
- DSAR10S

DSAR15 (M4 Platform)

- Gas Tube & Rotating Bolt Operation
- Chrome Coating Plated to Barrel Rifling
- Aluminum Alloy Steel adopted for Lightening Weight
- Adapted Picatinny-rail with Handguard for various accessories
- Butt Stock Length Adjustable With 6 Steps For User Body Type
- Available with Classic Hand guards



SPECIFICATION

Caliber	5.56x45mm NATO
Weight	2.88 ~ 3.25kg
Barrel Length	7.5" 11.5" 14.5" 16" 18" 20"
Overall Length	756mm Stock Retracted 840mm Stock Extended
Coating(Optional)	QPQ / CHROMIUM
Effective Range	5500m
Magazine Capacity	30 Round
Rate of Fire	800 RPM
Operation System	Gas Tube
Rifling	1:7 Twist, 6 Grooves RH 1:8 Twist, 6 Grooves RH

DSAR15P

- Designed for the High-end use of law enforcement and military applications.
- Gas Piston & Rotating Bolt Operation
- Adjustable Function for Gas quantity and fire rate depending environment
- Butt Stock length adjustable with 6 step for user body type.
- New Technology applied for Recoil relieve enhancing ballistic dispersion and accuracy.
- Adapted Picatinny-rail with Upper & Lower Handguard for Various Accessories (Flip Sight, Flashlight, Laser Sights and etc.,)

SPECIFICATION

Caliber	5.56x45mm NATO
Weight	3.0 ~ 3.2 kg
Barrel Length	7.5" 11.5" 14.5" 16" 18" 20"
Overall Length	720mm Stock Retracted 800mm Stock Extended
Coating(Option)	QPQ / CHROMIUM
Effective Range	550m
Magazine Capacity	33 Round
Rate of Fire	750~950 RPM
Operation System	Gas Piston
Rifling	1:7 Twist, 6 Grooves RH



1911 PISTOL (DHP9G)

- A Traditional 1911 pistol model
- Double Safety Device Adopted
- Single Action Trigger System
- Precise Machining capability and technology for Barrel's long Durability and High Accuracy
- Various Frame Materials with Alloy Steel, Aluminum and etc.,



SPECIFICATION

Caliber	9mm .40S&W .45ACP
Weight	1.10kg 1.12kg 1.15kg
Overall Length	210mm
Barrel	127mm, Government STD Barrel, Bull Barrel
Finish	Black Color, Cerakote, PVD Coating
Magazine	10 Rounds
Trigger	4.5lbs w/AMBI Safety Lever
Sights	Fixed Ledge Rear, Ramped Front
Other	Picatinny Under-Rail

STRIKER-PISTOL (DSP9A)

- Excellent Reliability
- Applied the Full-Size Aluminum frame material
- Ergonomic design is applied to improve the grip strength of the handle
- Safe Action trigger system included



SPECIFICATION

Caliber	9mm
Weight	0.77kg
Overall Length	177mm
Barrel	102mm Commander
Finish	Black Color, Cerakote, PVD Coating
Material	Grip/Frame: Aluminum Slide: SUS or Steel
Magazine	15 Rounds +
Trigger	~ 5.5lbs (2.5kg) with Trigger Safety
Sights	Fixed Type
Other	Picatinny Under-Rail



HANWHA DEFENSE

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Hanwha Defense entered the defense industry in 1983, developing and producing land systems that play a pivotal role in increasing the defense power of Republic of Korea's military. After becoming an affiliate of Hanwha Group in 2015, we built synergy with other defense affiliates. We intend to grow as a 'global top provider of land systems'. By developing total convergence solutions for artillery, armored vehicles unmanned systems as well as for energy storage systems, we are the leader in advanced technology for the defense industry



K9 Thunder



K10 ARV



K55A1



EVO 105mm



KAAV

K9 THUNDER

155mm / 52cal, K9 Self-Propelled Howitzer

As a key cannon for the South Korean artillery, it boasts the world's highest-performance range and fire rapidity. Loaded with automatic fire control and ammunition loading systems, it is favored around the world due to its excellent mobility and survivability.

Main Characteristics

Max. range	40 km
Rate of fire	6-8 rounds per minute
Ammunition loading	Automatic
Ammunition capacity	48 rounds
Combat weight	47 tons



K10 ARV

K10 Ammunition Resupply Vehicle

Maximizing the fighting power of K9 self-propelled howitzers, this ammunition resupply vehicle began mass production in 2006. It realized the complete automation of ammunition treatment, and has the equivalent mobility of the K9.

Main Characteristics

Ammunition capacity	Projectile	104 rounds
	Propellant	504 unit
Transfer rate		10 rounds per minute
Inventory management		Automatic
Combat weight		47 tons



HANWHA DEFENSE

K55A1

155mm / 39cal, Self-Propelled Howitzer

This equipment features improved range, fire rapidity, and survivability, achieved by applying the K9's automatic radiation and fire control systems to the K55 self-propelled howitzers currently in operation.

Main Characteristics

Max. range	32 km
Rate of fire	4 rounds per minute
Ammunition loading	Semi-automatic
Ammunition capacity	36 rounds
Combat weight	27 tons



EVO 105mm

Wheeled self-propelled howitzers

This equipment boasts maximized performance by combining a 105mm towed artillery with IT technologies. It also has leading-edge features such as automatic fire control and positioning systems.

Main Characteristics

Max. range	11 km
Rate of fire	10 rounds per minute
Ammunition loading	Automatic
Ammunition capacity	60 rounds
Combat weight	19 tons



KAAV

Korea Amphibious Assault Vehicle

This special-purpose armored vehicle has both combativeness and survivability, and is a key military strength for landing operations by the Marine Corps, which performs both marine and ground operations.

Main Characteristics

Max. speed	Land	72 km/h
	Water	13 km/h
Cruising distance	Land	480 km
	Water	7 hours
Armored personnel		3/21
Combat weight		23.1 tons





HYUNDAI-WIA CORPORATION

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HYUNDAI WIA Develops, Delivers, and Supports Advanced Defense and Aerospace Systems

Artillery is very important in national self-defense. HYUNDAI WIA Corporation has been designated as an artillery manufacturer for the Korean Government since 1970. We have produced various kinds of artillery exclusively for the government. HYUNDAI WIA Corporation is fully equipped with manufacturing equipment and development capacity, and has developed and produced new types of artillery, many of which we have exported overseas, based on our technology.

HYUNDAI WIA Corporation has also produced rescue vehicles using its artillery manufacturing skills, high-level technology, and knowhow as an automobile parts maker.

HYUNDAI WIA Corporation respects nature and conserves the environment.

MAIN ARMAMENT FOR SELF-PROPELLED HOWITZER

Self-Propelled Howitzer K9 Armed with 155mm Main Armament

Characteristics

- Longer range, higher rate of fire, and more accurate fire
- Large multiple-slotted muzzle brake
- Fume evacuator
- Vertically sliding breech mechanism
- High-strength obturator ring
- Automatic primer feeding magazine
- Constant, hydro-pneumatic, independent recoil mechanism
- Highly rigid cradle to minimize lateral barrel motion
- Thermal warning device
- Automatic projectile loading system



K9 Main Armament

Specifications

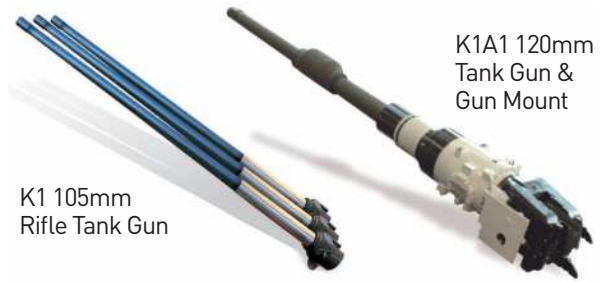
Caliber	155mm
Barrel length	52 caliber
Max. firing range	40km (RAP)
Rate of fire (max.)	6rds / min / 3min
Rate of fire (sustained)	2rds / min / 60min
Primer feeding system	Automatic (revolver type)

TANK GUN

MBT Armed with 105 / 120mm Tank Gun [K1 / K1A1]

Characteristics

- Fitted on K1A1, K1, and M48A5 MBT
- Fume evacuator
- Vertically sliding breech mechanism
- Hydro-spring, concentric recoil mechanism
- Highly rigid cradle



K1 105mm Rifle Tank Gun

K1A1 120mm Tank Gun & Gun Mount



K1 Breech Mechanism

K1 Gun Mount

Specifications

Model	K1	K1A1
Caliber	105mm	120mm
Barrel length	52 caliber	44 caliber
Max. firing range	1.5km	2km
Bore type	Rifled gun	Smooth bore gun

MORTAR

KM181 60mm Mortar

Characteristics

- Lightweight, high angle-of-fire, high rate-of-fire, and portable weapon
- Increased range
- Capability to fire all current or improved 60mm ammunition
- New cooling fin
- Radioactive self-luminous sources



KM181 60mm Mortar

KM187 81mm Mortar

Characteristics

- Uses both new ammunition and U.S.-standard ammunition
- Heat-radioactive fins
- Forged lightweight aluminum-alloy mounts
- Highly tensile stainless steel, welded-structure base plate
- Capability to fire both on the ground and on concrete



Sight Unit KF 812



KM187 81mm Mortar

Specifications

Model	KM181	KM187
Caliber	60mm	81mm
Firing range	Max. 3,590m, Min. 44m	Max. 6,325m, Min. 75m
Rate of fire (max.)	30rds / min / 4min	30rds / min / 1.5min
Rate of fire (sustained)	20rds / min / 10min	10rds / min / -
Total weight	18kgs	42kgs
Barrel length	987mm	1,550mm

HYUNDAI-WIA CORPORATION

RECOILLESS RIFLE

KM67 90mm Recoilless Rifle

Characteristics

- Lightweight, portable, crew served weapon
- Anti-tank and anti-personnel weapon
- Fired from the ground and on the shoulder
- Air-cooled, breech-loaded, single-shot rifle
- Direct firing only



Breech of KM67 in Open Position



Sight of KM67

Specifications

Model	KM67	KM40A2
Caliber	90mm	106mm
Firing range	Max. 2,100m	Max. 7,700m
Armor penetration	350mm	450mm at 1,000m
Rate of fire	1rds / 6sec	1rds / min
Total weight	16.4kg	217kg
Cannon length	1,350mm	3,430mm

KM40A2 Mounted on Armored Personnel Carriers

Characteristics

- Light, mobile, accurate anti-tank weapon
- 3,000 rounds barrel life
- With a .50-caliber spotting rifle
- 7,700m H.E. round
- Three flat box-girder legs attached



LANDING GEAR

T-50 Landing Gear



T-50 Advanced Trainer (Golden Eagle)



Main Landing Gear



Nose Landing Gear

KT-1 Landing Gear



KT-1 Primary Trainer



Main Landing Gear

Nose Landing Gear

Specifications

Model	T-50	KT-1
Weight	Nose 54kg, Main 126kg (each)	Nose 26.7kg, Main 36.0kg (each)
Material	300M, 4340, A7075	4340, L168-T6511, S154, S99
Type	Retractable, Single wheel	Retractable, Single wheel
Stroke	Nose 330.2mm, Main 134.5mm	Nose 219mm, Main 248mm
Co-developed by	Messier-Dowty	Claverham
Customer	ROK Air Force	ROK Air Force

KHP



Korean Helicopter Program



Nose Landing Gear
Pilot Seat
Main Rotor Control

Specifications

Nose Landing Gear

Material	300M, 4340, A7175
Type	Oleo-pneumatic, Fixed
Stroke	Nose 340mm, Main 626.4mm
Crash	10.5m / s
Cooperation	APPH (UK)
Customer	ROK Army

Main Rotor Control & Pilot Seat

Armor protection	7.62mm AP
Absorbing type	Strip bending
Safety belt	5 Point belt
Cooperation	F+E (Germany)

KF-16 Landing Gear



KF-16 Fighter (Falcon)



Main Landing Gear



Nose Landing Gear

Specifications

Weight	Nose 59kg, Main 92kg (each)
Material	300M steel, A7049-T73, 4330V steel
Type	Retractable, Single wheel
Stroke	Nose 262.4mm, Main 106.4mm
Licensor	Goodrich
Customer	ROK Air Force

NAVAL GUN MOUNT

KMK45 Gun Mount, Control and Power Panels



KMK45 for KD-II, KD-III License Production



Korean Destroyer-II



Digital Control Panel Power Panel Loader Drum

Specifications

Caliber	62 cal	
Train	-15°~65°	
Elevation	±170°	
Rate of fire	Max. 20 round / min	
Operation type	Hydraulic / Electric	
Range	Conventional round	24km
	ERGM	116km

Woo Kyung Optics

WOO KYUNG OPTICS CO., LTD.

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WOO KYUNG OPTICS CO., LTD. (WKOL) is a manufacturer, developer and exporter of various kinds of fire control optics equipment in Korea. WKOL is defence nominated & very famous in optics industry field. Main products are sighting telescopes for artillery and finger-print sensors for biometrics. Among fire control optics, there are three categories per artillery kind; (towed) howitzer, infantry mortar and recoilless rifles. As an official defense product supplier to the Korean Army, WKOL produces the fire control devices (panoramic elbow telescope and straight telescope, etc.) for a 155mm, 105mm, 106mm, 90mm, 81mm, 60mm and 4.2inch artillery. The company supplying these telescopes to DAPA, Korean MND annually. In pursuit of the opto-mechatronics technology, Woo Kyung Optics mass-produces electronic and optical products in the areas of optics, mechanics and electronics.

MAIN EXPORT ITEMS

Panoramic Telescope for SPH

Self Propelled Howitzer
(105mm M108 / 155mm M109 (K55))

- Power: 4×
- Field of view: 10°
- Range: 6,400 mils (Azimuth)
- Height: 20 in



Panoramic Telescope

Howitzer (105mm M101 / M102,
155mm M114)

- Power: 4×
- Field of view: 10°
- Range: 6,400 mils (Azimuth)
- Height: 9.75 in



Elbow Telescope

Howitzer (105mm M101 / M102,
155mm M114)

- Power: 3×
- Field of view: 13°20'
- Exit pupil dia.: 0.30 in
- Height: 5.75 in



Night Vision Monocular

- Power: Unity (1×)
- Field of view: 40°
- Exit pupil dia.: 6.00mm
- 3rd Gen. Image Intensifier tube used
- Eye relief: 25.0mm
- Diopter range: -6D ~ +2D



Sight Unit M53A1

- Mortar 81mm
- Power: 4× (M109 Telescope)
- Field of view: 10°
- Exit pupil dia.: 0.15 in
- Range: 6,400 mils (Azimuth)
- Height: 25cm (10 in)
- Weight: 2.38kg (5.3 lb)





BOLYUNG ENGINEERING CO.

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Based on its technical competence accumulated over the past 30 years, Bolyung Engineering has been developing various components for military equipment of the army, navy and air force and providing them at high quality and low cost.

Our technical competence has been recognized in the national defence areas.

In particular, the gun barrel automatic cleaner developed by us will realize people-focused humanity by enabling those advanced and expensive military equipment to show full performance and making them operate in a safe and efficient way.

AUTOMATIC GUN BARREL CLEANER

BLD-155A



Technical Data

Applied equipment		155mm Rifle Bore Gun
Details	Body size	Out diameter: 159.5mm, Length: 820mm
	Power	DC 24V
	Weight	Body: 22kg, Components: 19kg (with storage case) * Total: 41kg
Operator		1 person
Moving speed		3.0m (min.)
Automatic oil spray		Built-in automatic oil infection function
Led		Attached
Operating temperature		-30°C ~ +50°C



IONES CO., LTD.

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IONES is a major high-technology company that produces semiconductor and LCD super-precision parts since 1993. The company has experienced rapid business growth by focusing on a customer first mind-set and doing continuous research and development, which enabled the company to provide high quality product to the customers.

Today, IONES has broaden its business successfully and National Defense Development Department of IONES is promptly and efficiently contributing to the national defense of ROK forces.

NEW INNOVATIVE CANNON BORE CLEANING SYSTEM

Cannon Bore Cleaning System



Specifications

Bore size	105mm	155mm
Weight [kg]	Max. 14	Max. 20
Size (L)×(W)×(H)	1,150×360×180	1,400×350×260

Advantages Application

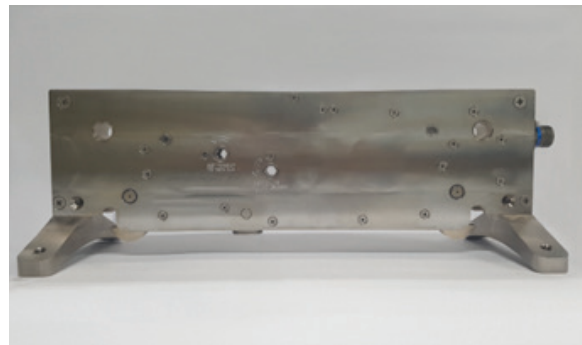
- Capable of cleaning cannon bore in shortest time with minimum manpower
- Shows maximum cleaning effect

Power Take-Off Shaft



Bomb Rack Unit

1,450 Lbs (MIL-STD-2088B Type I)



2.75" Rocket Launcher





Soosung Defense Industries Ltd.

SOOSUNG DEFENSE INDUSTRIES LTD.

www.soosungdi.co.kr

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Soosung Defense Industries Ltd. (SDI) is committed to challenging the future defense industry by developing the world-class products. As an exemplary achievement toward this direction, it has released the world first Automatic Bore Cleaner system. In order to become a role model for invigorating creative economy in the global market, all executives and staff members of SDI have been devoted to creating value and profit for our customers.

BUSINESS AREAS

Artillery / Tank



(Paladin, K-9, PZH-2000, G-6 etc.)



(M1 Abraham, Leopard 1 etc.)

■ RB-155mm



Specifications

- Caliber: RB-155mm
- Weight: 14.5kg
- DC 24V (Standard Tank Power Output)
- Alternatively AC 110V / 220V

■ RB-105mm



Specifications

- Caliber: RB-105mm
- Weight: 7.5kg
- DC 24V (Standard Tank Power Output)
- Alternatively AC 110V / 220V

SOOSUNG DEFENSE INDUSTRIES LTD.



(T-90, T-72 etc.)



(K-2, Leopard 2, M1A1, M1A2 etc.)

Naval Artillery



(Applicable for all types of naval artillery)



(Applicable for all types of naval artillery)

Model	RB-76/105	RB-127/155	SB-80/120/125
Cleaning Speed	2.1~2.5 m/min	1.5~1.8 m/min	2.1~2.4 m/min
Required Manpower	1 person		
Use Temperature (min.~max.)	-32°C ~ +50°C		
Function	Automatic Cleaning Oil Spray		
Bore	(Rifle Bore) O	(Smooth Bore) O	
Remarks	Spray Amount Adjustable		

■ RB-125mm



Specifications

- Caliber: RB-125mm
- Weight: 9.7kg
- DC 24V (Standard Tank Power Output)
- Alternatively AC 110V / 220V

■ RB-120mm



Specifications

- Caliber: RB-120mm
- Weight: 9kg
- DC 24V (Standard Tank Power Output)
- Alternatively AC 110V / 220V

■ RB-127mm



Specifications

- Caliber: RB-127mm
- Weight: 12kg
- DC 24V (Standard Tank Power Output)
- Alternatively AC 110V / 220V

■ RB-76mm



Specifications

- Caliber: RB-76mm
- Weight: 4.5kg
- DC 24V (Standard Tank Power Output)
- Alternatively AC 110V / 220V

- Provides a perfect cleaning result in a short period of time.
- Possible to clean the barrel within the tank. (Protects the lives of soldiers by minimizing dangerous combat exposure time)
- No need for wide space to clean.
- Operates in all weather conditions.
- The perfect cleaning will ensure high shooting accuracy and maximum utilization of the barrel life.
- No additional equipment necessary.
- Powered directly by the battery on the tank. (Both AC 110V ~ 240V and DC 24V are usable)
- Only one person required to operate.



D. I. OPTICAL CO., LTD.

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D.I. Optical has evolved into a defense venture company, providing rifle and machine gun optics to the military and law enforcement sectors.

D.I. Optical sights are specially designed and built for use in the tactical arena. Allowing for situational awareness, rapid target acquisition and target transition, without any degradation of accuracy.

MAIN EXPORT ITEMS

DCL120 / Heavy Machine Gun Sight



Specifications

Objective Lens	120×70mm
Reticle Shape & Size	3 MOA Dot & 40 MOA Circle
Brightness Setting	8 daylight, 3 night vision
Dimensions	330×180×155mm w/o Mount 330×180×240mm w/ Mount
Weight	3,300g w/o Mount 4,200g w/ Mount
Battery Life	CR123 @ 2/ 1,400hrs 1/ 700hrs
Operation Temp	-41°~71°C, (-42°~160°F)
Designed Weapons	M2HB, K6
Trajectory Range	200, 400, 600, 800, 1,200 meters (5 Ranges)

DTS100L / Thermal Red Dot Sight



Specifications

General	MIL-STD810, 100×56mm Objective Lens, 200~2,000 Trajectory Compensation, for 12.7(M2HB, K6) / 20~30mm Canon / 40mm AGL
Day Time Dot Sight	3 MOA Dot & 60 MOA Circle, 16 Levels brightness setting, ≥1,000hrs Battery Life
Night Time Thermal Sight	Uncooled LWIR Thermal Imager, 640×480 Pixel Format, 17um Pixel Size, <35mK @ 25°C F/1.0 NETD, 30Hz Frame rate, 4 Reticle Type & Color, White / Black Hot Image Polarity, 5 Steps Stretch, ×2 ×4 Digital Zoom, 8°×6° (Dia. 10°) FOV, ≥6hrs
Laser Range Finder	≥2,000m Measurement Range, 1 sec. Measurement Time, Laser Class, 1 mrad Divergent, 1,550nm Wavelength, 1m Measurement Resolution



EO SYSTEM CO., LTD.

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EO System Co., LTD. is the leading R&D based, optical and electro-optical manufacturer & Supplier. Since its foundation in 1979, EOST has contributed to the technological evolution of Korean Defense by offering domestically-made, high quality optical products, thermal imaging systems and ruggedized electro-optic assemblies.

MAIN EXPORT ITEMS

THETIS-M (Tactical Hand-held Enhanced Thermal Imaging System – Multifunction)



Specifications

- Sensor Type : 640×480
- Field of View : 6°
- Thermal Camera / Day Optic / Digital Magnetic Compass / Laser Range Finder / GPS

MGS-5 (Machine Gun Sight – 5)



Specifications

- Day Time Detection : >1,100m
- Thermal Detection : >1,100m
- Weight : 1.05kg
- Dimension : 290×110×50(mm)
- Objective Focus : 10m ~ infinity
- Field of View : 7.8°×5.85°
- Magnification : 3×
- Eye Diopter : -5D ~ +2D



IPEC HIGH PRECISION INC.

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IPEC has a strong background in the high precision machining and has specialized around manufacturing optical equipment and accessories for guns.

To be global leader representing the korean high precision machining and defense industry through continuous development of high technology machining systems.

MAIN EXPORT ITEMS

PVS-04K

Optical Performance

- 1 × magnification
- 40 × angle of view
- 25 to Infinity Focus range

Image Intensifier

- Gen 3 intensifier tube
- 64 lp/mm resolution
- 21:1 signal-to-noise ratio
- Auto-gate (Option)

Use and Handling

- Built-in infrared illuminator
- Compatible with head / helmet / firearm (Picatinny) mounting
- In-view low-battery / IR indicator
- Manual focus objective lens

Construction Details

- Waterproof to 1 meter for 30 minutes
- -51 to 49°C Operating temperature
- -51 to 85°C Storage temperature
- 380g weight (include batteries)
- 122mm length





SU Optics

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SU Optics is specialized in riflescope which has been trusted by world-wide customers through out continuous innovation and challenge in riflescope business with outstanding quality from designing to final assembled product. SU Optics has been growing dramatically based on own technology and creativity with research and development, and it has been exporting more than 90% to overseas.

TECHNOLOGY & PRODUCT



1-4x military riflescope

TECHNOLOGY

Designing optical Scope

In riflescope, the image clarity mostly depends on the distance, angle and size between the lenses, and the optical path design is the key technology of riflescope. SU Optics has its own state of the art design technology of various magnifications both single magnification and variable magnifications as 1-4x, 3-9x, 3-12x, 4-16x, 6-18x, 6-24x etc.

RETICLE design

SU Optics has design technology of reticle ,in which, user enables to estimate size and distance of target, SU Optics has reticle technology of First & Second focal plane, Illumination etc.

METAL MACHINING

SU Optics has click gearbox designing & processing technology up to the world best level 0.125MOA which allows reticle's fine and minute movement in riflescope.

ASSEMBLING

With over 30year experience, SU Optics has the advanced technology of producing high quality and durable products



6-24x sniper riflescope

PRODUCT RANGE

- Variable magnification riflescope : 3, 4, 5, 6 times zoom RIFLESCOPE, Aiming accuracy 1/100
- 1st focal plane reticle riflescope / 2nd focal plane reticle riflescope / Illuminated reticle riflescope

TECHNOLOGY APPLYING MILITARY FIELD

TECHNOLOGY

SU Optics has been developing and supplying specialized riflescope for domestic sniper, and actively involving several developing projects such as weapon system modification etc. and developing various own products for import substitution.

- Developing & Supplying 1-4x riflescope
- Launching Power Change Lever product
- Passed United States defense FCT test
- Developed illumination / sunlight riflescope
- 1-4x riflescope Selected in Excellent Goods from Korea military



UTECH CORP., LTD.

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UTECH Corp., Ltd. was established in 1999 and is doing ILS, Thermal sight & Laser Aimer device manufacturing and Smart MILES training system development.

UTS, UTECH Thermal Sight, provides full color image by CMOS and thermal image for day & night time.

LAD-3, Laser Aiming Device is target designator using by Visible & IR ray and IR Illuminator.

Smart MILES training system was developed based on project experiences of KCTC & Urban MILES system provided at 2007.

MAIN EXPORT ITEMS

UTS (Utech Thermal Sight)



- Detector: FLIR TAU 2
- Array size:
640×512, 17μm (30Hz)
- Detection Range:
1.5km(Person) /
3.0km(Vehicle)
- FOV: 8°×6° (H×V)
- Weight: 1kg (BAT include)

LAD-3 (Laser Aiming Device with Illuminator)



- Range: 2km (VIS / IR / IR Illuminator)
- Size: 99×73×45mm
- Weight: 215g
- Operation time: 5hr
- Mount: Picatinny rail

Smart MILES Training System



- Mobility increase
- Able to overcome limitation of training area and do stereoscopic monitoring using by air repeater & monitoring system
- Light weight & simplification
- Trainer convenience & Reliability increase using by Smart watch



AMMUNITION & EXPLOSIVES

HANWHA CORPORATION	40
POONGSAN CORPORATION	44
DAEKWANG CHEMICAL CO., LTD.	48
KOREA CNO TECH CO., LTD.	49
KORYO PYROTECHNICS CO., LTD.	51
POONGSAN FNS CORPORATION	52
ARCONIC KOREA LTD.	56
DOOWON HEAVY INDUSTRIAL CO., LTD.	57
KPC METAL CO., LTD.	60
LC-TEK CO., LTD.	62
LIG POONGSAN PROTECH CO., LTD.	63
KOREA NON-FERROUS METALS CO., LTD.	64



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Hanwha Corporation has played a crucial role in supporting the nation's economic development for the past sixty years. Our corporation is continuously expanding its existing portfolio of precision guided munitions and ammunitions, based on its expertise and technology amassed. As the nation's leading defense contractor, it is also enhancing its global competitiveness through active advancements into global markets and partnerships with leading global players.

New Generation Korean MRL System

CHUNMOO

The Chunmoo is a new multiple rocket launcher system which will be the most powerful MRL system of Korean Army. This is a multi - caliber rocket system and will use 130mm and 239mm rockets. These rockets can be fired from the same platform, but have different ranges.

Rockets are factory fitted and sealed in pods and can be stored without any maintenance for a number of years.

The Chunmoo is based on 8x8 high - mobility vehicle and wheeled chassis launcher. Vehicle has an armored cab, which provides protection against small arms fire and artillery shell splinters.

This has a fast reaction time and can launch its rockets within several minutes from travelling. A full salvo can be launched directly from the cab, or remotely from the vehicle.

Characteristic & Advantage

- Korea's 1st Industry led R&D Project : Approved by ROKA in Dec 2013
- Guided Rocket based on GPS / INS (Inertial Navigation System):
Long Range and pinpoint guiding
- Operating Various Rocket with One Launcher
- Apply wheeled vehicle type launcher and ASV (Ammunition Support Vehicle): boost in the mobility and battle sustainment
- Quick Loading System : Pod type rocket packing



Multiple Rocket Launcher

70mm MRL

The 70mm MRL is world's unique armed - vehicle introduced by Hanwha Corp. using 70mm rocket family as munitions. The 70mm MRL is the light weight weapon system which has the high mobility. The automated firing control system makes the forward enemy unit neutralized by massive firepower within 8km.

As the MRL can cover an extensive area in a very short time, it is possible to destroy any high - speed fleet.

ADVANTAGES

- LOS (Line of Sight) & NLOS, Close combat fire support, Air Transportable
- Various Warheads: HE / Practice
- Anti - Personnel, Anti - Light armor, Anti - Small Ship
- Use for Infantry / Artillery / Special Forces
- Easy to shoot and scoot



40mm CARTRIDGE

HE KM383



This cartridge is a high explosive round designed to inflict personnel casualties in the target area using ground burst effect, and is fired from 40mm automatic Machine Guns MK19 Mod 3 or K4.

HEDP K212



This cartridge is a high explosive, dual purpose, impact type round designed to penetrate at least two inches of steel armor at 0 angle of obliquity and inflict personnel casualties in the target area. It is fired from 40mm Machine Guns MK19 Mod 3 or K4.

HE K200



This cartridge is a high explosive round designed to inflict personnel casualties using ground burst effect, and is fired from 40mm Grenade Launcher M79 or M203. (Attached to the M16 series rifle)

HEDP HW921



This cartridge is a dual purpose impact type round which is designed to penetrate at least two inches of steel armor at 0 angle of obliquity and inflict personnel casualties in the target area. It is fired from 40mm Grenade Launcher M79 or M203.

Specifications

Model	HE KM383	HEDP K212
Type	HE	HEDP (high explosive, dual purpose)
Weight	350g	350g
Length	112mm	112mm
Filler and weight	Comp - A5, 52g	Comp - A5, 38g
Fuze	PD KM533	PIBD K541
Propellant	KM2	KM2
Primer	FED215	FED215
Link	KM16A2	KM16A2
Weapons	40mm Automatic Machine Gun MK19 Mod 3, K4	
Max. range	2,200m	2,200m
Muzzle velocity	242mps	242mps
Arming distance	18 to 36m	18 to 40m
Penetration	—	65mm of steel plate
Packing	48 rounds in linked belt per metal container	
Packing box	29kg	29kg
U.N. number	0006	0006
IMDG code	1.1E	1.1E

Model	HE K200	HEDP HW921
Type	HE	HEDP (high explosive, dual purpose)
Weight	215g	225g
Length	100mm	100mm
Filler and weight	Comp - B, 32g	Comp - A5, 45g
Fuze	PD K502	PIBD K503
Propellant	KM9	KM9
Primer	KM42	KM42
Weapons	40mm Grenade Launcher M79, M203, K201	
Max. range	400m	400m
Muzzle velocity	75.3mps	75.3mps
Arming distance	14 to 27m	14 to 27m
Packing	6 rounds in bandoleer, 12 bandoleers per wooden box	
Packing box	24kg	24kg
U.N. number	0006	0006
IMDG code	1.1E	1.1E

HANWHA CORPORATION

MORTAR BOMB

60mm HE KM49A4

This cartridge is fired in 60mm mortars M2, M19 and KM181 for use against personnel and light materiel, providing both fragmentation and blast effect.

60mm HE K207

This cartridge is fired in the 60mm KM181, M19 or M224 mortar in the Light-weight company system. It is used against personnel and light materiel, providing both fragmentation and blast effect.

81mm HE KM374

This cartridge is fired in 81mm mortars M1, M29, M29A1 and KM187 for use against personnel and materiel, producing both fragmentation and blast effect.

81mm HE K247

This Cartridge is an High Explosive round for use in the 81mm M29A1 and KM187 (Korea Type) improved mortar system and is used against personnel and light material, providing both fragmentation and blast effect.



Specifications

Model	60MM HE KM49A4	60MM HE K207	81MM HE KM374	81MM HE K247
Type	HE	HE	HE	HE
Weight	1,450g	1,769g	4,240g	4,300g
Length	294mm	374mm	529mm	529mm
Filler and weight	Comp - B, 190g	Comp - B, 370g	Comp - B, 950g	Comp - B, 900g
Fuze	PD KM525	PD K510KA1 or MP K584	PD KM526	PD K516 or MP K589
Ignition cartridge	KM5A2	K1	KM66A1	K2
Percussion prime	KM32	KM35	KM71A2	KM35
Fin assembly	KM2	K4	KM149	K5
Propelling charge	KM181	K672A1	KM90 (A and B)	K675
Weapons	60mm Mortar M2, M19, KM181	60mm Mortar M19, KM181, M224	81mm Mortar M1, M29, M29A1, KM187	81mm Mortar M29A1, KM187
Max. range	1,814m	3,490m	4,500m	6,500m
Muzzle velocity	158mps	247mps	261mps	323mps
Packing	1 cartridge in fiber container, 12 cartridges per wooden box	1 cartridge in fiber container, 9 cartridges per wooden box	1 cartridge in fiber container, 3 cartridges per wooden box	1 cartridge in fiber container, 3 cartridges per wooden box
Packing box	29kg	27kg	25kg	29kg
U.N. number	0321	0321	0321	0321
IMDG code	1.2E	1.2E	1.2E	1.2E

FUZE

K519



Point Detonating Fuze K519 is a selective superquick or 0.05 second delay impact fuze designed for use in K307 HE BB ammunition for the Korean 155mm self-propelled howitzer K9. (Cal.52)

HW594



Point Detonating Fuze HW594 is selective superquick and 0.05 second delay impact fuze designed for use in all standard HE artillery, 4.2 inch Mortar, 105mm through 8 inch Howitzers and 175mm Guns. (This fuze is equivalent to M739A1 Fuze.)

KM577A1



Mechanical Time and Superquick (MTSQ) Fuze M577A1 is used with 4.2inch and 105mm cartridges and 155mm and 8inch projectiles. It is used with projectiles carrying payloads that are expelled during projectile flight. (airburst)

KM582A1



Mechanical Time and Superquick (MTSQ) Fuze KM582A1 is used with the 105mm howitzer conventional cartridges (HE M1, HERA M548 and WP Smoke M60 series), 155mm howitzer projectiles (HE M107, HERA M549/M549A1 and WP Smoke) and 8inch projectiles. (HE M106 and HERA M650)

Specifications

Model	K519	HW594	KM577A1	KM582A1
Type	PD	PD	MTSQ	MTSQ
Weight	715g	610g	640g	685g
Length	167mm	152mm	131mm	148mm
Thread size	2.0 -12UNS -1A	2.0 -12UNS -1A	2.0 -12UNS -1A	2.0 -12UNS -1A
Operating mode	Superquick or 0.05 delay action, impact type		Superquick impact, Time (2-200sec.)	
Safety distance	57m	38m	45m	45m
Packing	8 fuzes in metal container, 2 containers in a wire bound box			
Packing box	22kg	22kg	22kg	24kg
U.N. number	0408	0408	0410	0408
IMDG code	1.1D	1.1D	1.4D	1.1D

HAND GRENADE

K413

Fragmentation hand grenade K413 is smaller, lighter, and enhanced type of M67 (US model) in the aspect of throwing distance and accuracy. Over 1000 - equal - size - fragmentation from the blast makes K413 much more effective and powerful than existing fragmentation hand grenades.



Specifications

Body material	Preformed cubic fragments
Weight / Length	260g / 72mm
Color	Olive drab w / yellow marking
Fuze	K414, Pyrotechnic delay detonating
Delay time	4-5sec.
Safety device	Pull ring and safety pin, and safety clip
Explosive Filler	Comp - B, 62g
Casualty radius	10m
Packing	30 grenades in wooden box
Packing Drum	17kg
U.N. number	0292
IMDG code	1.1F

MINE CLEARING LINE CHARGE

MICLIC

The MICLIC is used to clear a path for tanks, vehicles and personal through minefields or other obstacles. This system is capable of clearing a path upto 6 meters wide (3 meters each to the left and right of linear charge) and 110 meters long through a minefield. Minefields planted with single - impulse, pressure - type, antitank mines, and/or mechanically actuated antipersonnel mines can be cleared with use of the MICLIC. Mines that are not detonated by explosion of the linear charge will usually be uncovered or blown from the ground. This system is deployable in various types of climate and weather conditions. The rocket motor and linear charges can be remotely detonated either from the towing vehicle or a covered position 75 feet (23 meters) away. And launcher and trailer are fully reusable and can be reloaded with a new rocket motor and linear charge in 30 minutes.



POONGSAN

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Company Profile: Ammunition Manufacturer

Poongsan is a world-famous ammunition manufacturer that produces a wide variety of ammunition from small caliber to large caliber ammunition. Poongsan's munitions are highly competitive in terms of product quality, price and delivery, thanks to the Company's fully integrated production system. Poongsan ensures top quality through its sophisticated quality management system. The Company will also seek to extend its leadership in high-tech precision ammunition markets through continuous research and development.



SMALL CALIBER RIFLE AMMUNITION

5.56x45mm



7.62x51mm



7.62x39mm



12.7x99mm



Specifications

Caliber	5.56x45mm	7.62x51mm	7.62x39mm	12.7x99mm
Weight	12.3g	25.4g	18.0g	114.2g
Height	57.4mm	71.1mm	55.7mm	138.4mm
Muzzle velocity	914m/s	838m/s	693m/s	887m/s
Max. range	3,300m	3,725m	2,500m	6,800m
Bullet options	Ball, Tracer, 4Ball-1Tracer linked	Ball, Tracer, 4Ball-1Tracer linked	Ball	Ball, Tracer, AP, API, APIT, Any combination linked

SMALL CALIBER PISTOL AMMUNITION

9x19mm



.38



.45



Specifications

Caliber	9x19mm	.38	.45
Weight	11.7g	13.7g	21.1g
Height	29.5mm	39.3mm	32.3mm
Muzzle velocity	343m/s	290m/s	260m/s
Max. range	1,707m	1,676m	1,554m

ANTI-AIRCRAFT & NAVAL GUN AMMUNITIONS

Anti-Aircraft Ammunitions



Naval Ammunitions



Specifications

Item	20mm	30mm	35mm	40mm L / 70	76mm / 62Cal
Weight of cartridge (g)	KM56A3 : 257 KM246 : 264 KM55A2, KM220 : 255	Approx. 870	1,570	2,500 (K218 : 2,400)	12,400
Length of cartridge (mm)	255 168.02	Approx. 285.25	387	K216, K217, K218 : 534.4, K219 : 502.5	909.1
Pressure (psi)		Max. 3,600 (average)	3,600	53,100	45,700~51,000
Velocity (mps)	Max. 4,254 1,030 ±15	1,080 ±15	1,175 ±15	K216, K217 : 1,005 ±15 K218 : 1,025 ±15 K219 : 1,010 ±15	910 ±9
Accuracy (inch)	Max. 15 at 600yds	1.3mil at 200-300yds	1.3mil at 200-300yds	—	—
Arming distance	25~35ft	18m	18m	—	—
Self destruction time (sec.)	3.1~7.0 (KM246)	8 ±2	11 ±2	K216 : 7~17 K218 : 7~10	—
Tracer burning time (sec.)	Min. 3.1	Min. 4	Min. 6		
Max. range (m)	7,000	10,200	11,000	12,000	16,300 (H) 11,100 (V, 85°)

POONGSAN CORPORATION

120mm ANTI-TANK AMMUNITION

120mm
APFSDS-T120mm
HEAT-MP-T

Operation Features

- The 120mm APFSDS-T is a kind of kinetic energy ammunition which consists of a tungsten heavy alloy (WHA) penetrator, electric primer, combustible cartridge case and specially designed propellant.
- The 120mm HEAT-MP-T is a new shaped charge ammunition which penetrating power has been maximized by optimum design & precision spun shape of the cone. Its debris scattering effect can disable troops around a tank as well.

Specifications

Model	120mm APFSDS-T	120mm HEAT-MP-T
Weight	19.7kg	24.5kg
Length	973mm	989mm
Muzzle velocity	1,700m/s	1,130m/s
Chamber pressure	85,000psi	65,000psi

155mm ARTILLERY PROJECTILES

155mm HE
Projectile, M107155mm HE BB
Projectile, K307

Operation Features

- The 155mm HE projectile, M107 is a basic and standard ammunition for every 155mm field artillery. It has both debris scattering effect and blast effect.
- The 155mm HE BB projectile, K307 is a 155mm long range ammunition developed by Poongsan with its state-of-the-art computer-aided design and precision forging technology. It has been designed for minimum air resistance during the flight and maximum destructive power.

Specifications

Model	155mm HE Projectile, M107	155mm HE BB Projectile, K307
Weight	41.8kg	46.4kg
Length	684mm (w / plug)	945mm (w / fuze)
Fuze	PD or MTSQ fuzes	PD K519 only
Max. range	18km (M119A1 & 39cal. cannon)	40km (K676 & 52cal. cannon)
Propellant	M3A1, M4A2, M119A1, K677	M4A2, M119A1, M203, K676

SEMI-FINISHED PRODUCTS & COMPONENTS

- Brass Cases • Bullets • Projectiles • Brass Cups • Brass Discs
- Copper Cones • Rotating Bands • Fins • Links • Fuzes • Primers



Cones & R / Bands



Cups



Discs



Links



Fuzes



Primers

PROPELLANTS

- Double base for small calibre ammunitions
- Single base for 30mm & 35mm ammunitions
- Triple base for anti-tank & recoilless rifle ammunitions



Double Base



Single Base



Triple Base



DAEKWANG CHEMICAL CO., LTD.

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DaeKwang Chemical Co., Ltd is specialized manufacturer in tear gas and defense industries.

We have various kinds of anti-riot products like teargas products, color smoke products, and sound & flash products and rubber ball products which are two types like launching and throwing type.

DaeKwang has exported to more 23 countries, receiving positive reviews with reasonable prices, high quality product, and seamless after sales service.

MAIN EXPORT ITEMS

DK-38S(Aluminum)



Description: DK-38S, 38mm teargas shell is burning type which is loaded 38/40mm anti-riot launcher at 40° toward rioters who are far away.

Specifications

- Diameter: $\varnothing 38 \pm 1 \text{mm}$
- Length: $120 \pm 2 \text{mm}$
- Weight: $180 \pm 10 \text{g}$
- Burning time: $20 \pm 5 \text{sec}$
- Range: about 100m (Range can be adjustable)

DK-N500



Description: DK-N500, teargas hand grenade is burning type which is thrown by hands and effective rioters who are close. The rioters cannot pick and throw back because Its twisting after being thrown.

Specifications

- Diameter: $\varnothing 64 \pm 1 \text{mm}$
- Length: $133 \pm 2 \text{mm}$
- Weight: $250 \pm 10 \text{g}$
- Burning time: $20 \pm 5 \text{sec}$
- Body movement: Random twisting within 1~10 meter area



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We are an innovative company who manufactures and provides Military Purpose Training Ammunition and Anti-riot Purpose Ammunitions & Equipment to all over the world since 1997.

MILITARY PURPOSE TRAINING AMMUNITIONS

Eco-Friendly & Non-Metallic Practice Hand Grenade

This "eco-friendly, non-metallic training hand grenade" is made of naturally degradable materials for environmental protection such as clay for the bomb body and bio-degradable plastic for fuse head.



It also shows great safety during training because its fragmentation and flames from explosion do not cause any injury or hurt, even very close explosion from the thrower. Sound effect, smoke and body blasting provide realistic training environment so that soldiers can get great confidence of handling live hand grenade.

Eco-Friendly 40mm Practice Grenade

- **Eco-friendly** practice Grenade – safer to Trainee and free from environmental effects.
- Environmentally friendly materials are used such as naturally degraded clay filler and bio-degradable plastic ogive.
- **Centrifugal type** of safety device and low rate of flying fragments provide good safety during 40mm training. No fire at target area as well as very low misfire rate (nearly 0% misfire rate) is secured even on Mud, Water or Grass.

- **No fire** at target area by explosion with nearly.
- **Zero percentage misfire rate** even on mud, water and grass etc.
- **Sound and Smoke effects** are occurred by High level of sound and yellow smoke puff simulate explosive impact.



ANTI-RIOT PURPOSE AMMUNITIONS

CS Tear Gas Hand Grenade

CS Smoke – Combustion - Random Movement (Spin Action)

- 10±5 sec CS smoke emission
- Violent spin action with radius 5~10m



KOREA CNO TECH CO., LTD.

**37 / 38mm & 40mm
Air Burst
Cartridge**

- 170dB Sound with 5million CP flash
- Plastic or aluminum cartridge



**37 / 38mm & 40mm
Rubber Ball
Cartridge**

- Single Rubber Baton: 3 batons
- 28-70 balls rubber



**37 / 38mm & 40mm
CS Tear Gas
Cartridge**

**CCS-40CA / CS Tear
Smoke-Discharging**

- 25±5 sec CS smoke emission
- Customized CS concentration (6%~45%)



**40mm
Rubber Foam Impact
Spin Stabilizing**

- Muzz levelocity max. 85m / sec (@6.1m)
- Effective range 20~27m by M203 Rifle
- Impact energy max. 160J



**37 / 38mm & 40mm
Smoke Cartridge**

**Color Smoke Emission /
For Safe Training**

- 25±5 sec Color smoke emission
- Yellow, Red, Green, White, Blue, Orange Color



**Flash Bang
Sound & Flash**

- 170~140dB sound effect
- Single sound: 12 bang sound
- 5million CP flash
- Rubber coated body, No fragment



Aerosol Spray

Irritant Agent Aerosol Spray

- Irritant agent, CS, OC & PAVA
- Operational distance 1~7m
- 50mmℓ, 90mmℓ, 400mmℓ



ANTI-RIOT GRENADE LAUNCHER

Hand Held Grenade Launcher

Single Shot

- 37 / 38mm, 40mm
- Double action
- Butt fold / Top open



Hand Held Grenade Launcher

Six (6) Rounds Multi Shot

- 37 / 38mm, 40mm
- Pumping action
- Top open



STARK® Machine

Vehicle Mounted Remote Control Type

- 3 Type : 10 rounds STARK-10, 15 rounds STARK-15, 30 rounds STARK-30
- Tilt & Elevation: minus 5 deg up to 70deg / Rotation: 350 deg
- Reloadable magazine





KORYO PYROTECHNICS CO., LTD.

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We have been in charge of the advancement and technology development of the training practice cartridge for self-reliant defense potential improvement since 1976.

By the support and encouragement from our customer and subsidiary company, we could be developed continuously. After the years of efforts, we have occupied the best market share.

We keep investing research and development for strengthening the competitiveness.

MAIN EXPORT ITEMS

Smoke Hand Grenade



Smoke Hand Grenade KM8, KM18 is used for a tactical training and concealment effect. It is 5 colors (White / Red / Violet / Yellow / Green). Burning time is White 90~135sec and other colors 50~90sec.

Practice Hand Grenade



This practice hand grenade is used for a tactical training. Body is made by synthetic rubber and fuse is ZnDC. Body is semi-permanent use.

Signal Kit personel distress K912



The signal kit K912 is used for signal, illuminant since tactical training and a distress signaling. It is composed of manual color signal.



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Poongsan FNS Corporation was established in 1973 to produce precision machinery products. In particular, it specialized in fuze products and sensors for the defence sector, as it produced nuclear fuel assembly (WH-type top and bottom nozzle) parts and specialty tools for the nuclear power plant sector.

Additionally, Poongsan FNS entered the aerospace industry by forming industry-education cooperation agreements with the Agency for Defence Development and the Korea Institute of Science & Technology, enabling research, development and production of precision machinery parts.



FUZE PRODUCTS

Electronic Time Fuze, KM451

■ Use: 227mm ER-MLRS Rocket KM26A2



Technical Data

Function	ET	
Arming	Mechanical	24G, 0.82sec after firing
	Electrical	3.78 sec at a set time
Set Time	4.0~199.9sec, 0.1sec increments	
Electronic Timing Accuracy	+0.08~-0.06sec	
Flight Timing Accuracy	Within 0.2sec or 0.5% of a set time	
Power Source	Fluidic Generator	
Diameter	83.0mm	
Length	206.95mm	
Weight	1.0kg	

Point Detonating Fuze, PF302

■ Use: 105 / 155mm Artillery Projectile



Technical Data

Function	PD & PD-Delay
Safety Distance	38m
	76m (Option)
Diameter	61.0mm
Length	151.6mm
Weight	680g

Proximity Fuze, PF600A

■ Use: 105/155mm Artillery Projectile



Technical Data

Function	Proximity & PD
Safety Distance	38m
Height of Burst	9±3m
Power Resource	Lithium reserve battery
Diameter	61.0mm
Length	151.6mm
Weight	830g

Point Detonating Fuze, K302

■ Use: 5"/54, 5"/62 Naval Gun Ammunition



Technical Data

Function	PD
Safety Distance	100m
Diameter	68.96mm
Length	183mm
Weight	1.64kg

Proximity Fuze, K303

■ Use: 5"/54, 5"/62 Naval Gun Ammunition



Technical Data

Function	Proximity, PD, SD
Safety Distance	100m
Miss Distance	7m max, at sea state
Self-Destruction	35±5sec
Diameter	68.96mm
Length	159mm
Weight	1.35kg

Point Detonating Fuze, KM423 / KM427

■ Use: 2.75inch Rocket



Technical Data

Function	PD
Safety Distance	130m
Diameter	44.4mm
Length	101.67mm
Weight	280g

Mechanical Time Fuze, KDM93

■ Use: 60/81/120mm Illumination, Smoke, HE rounds, Mortar



Technical Data

Function	MTSQ & PD
Safety Distance	40m
Set Time Range	6.0~54.0sec
Power Resource	Power spring
Diameter	49.0mm
Length	86.8mm
Weight	225g

Point Detonating Fuze, KM533

■ Use: 40mm High-speed Grenade, HE KM383, K-4 Machine Gun



Technical Data

Function	PD
Safety Distance	18.3m
Arming	6,000rpm
Diameter	40.69mm
Length	39.52mm
Weight	69.5g

POONGSAN FNS CORPORATION

Point Initiation Base Detonating Fuze, K541

■ **Use:** 40mm High-Speed Grenade, HEDP K212, K-4 Machine Gun



Technical Data

Function	PIBD
Safety Distance	18.3m
Arming	6,000rpm
Diameter	40.68mm
Length	36.60mm
Weight	60g

Point Detonating & Self-Destruct Fuze, KLI472

■ **Use:** 40mm L/70HEIT, K216



Technical Data

Function	PD, SD
Safety Distance	55m
Self Destruction	12±5sec
Diameter	25.83mm
Length	50.4mm
Weight	43g

Depth Charge Extender, KMK6 MOD2

■ **Use:** Safety and Arming Device for Depth Charge, KMK6 MOD2/KMK9 MOD4



Technical Data

Function	Static water pressure
Diameter	162.5mm
Length	119.47mm
Weight	3.5kg

Depth Charge Pistol, KMK6 MOD2

■ **Use:** Safety and Arming Device, Firing Device for Depth Charge, KMK6 MOD2/KMK9 MOD4



Technical Data

Function	Static water pressure
Diameter	162.5mm
Length	391.87mm
Weight	7.5kg

Electronic Time Fuze for Small Depth Charge, PF751

■ **Use:** Depth Charge KH740



Technical Data

Function	Electronic time
Set Time	2.5~30.0sec, 0.1sec increments
Setting	Inductive fuze setter
Diameter	90mm
Length	192.5mm
Weight	2.3g

Point Detonating Fuze, M412A1

■ **Use:** Law Rocket, HE



Technical Data

Function	PIBD
Safety Distance	9~13m
Diameter	31.62mm
Length	47.2mm
Weight	63.3g

Timer Assembly

■ **Use:** Aircraft Flare K610



Technical Data

Function	Time set
Set Time	55.56sec (max.)
Diameter	123mm
Length	73mm
Weight	550g

Point Detonating Fuze, PF201

■ **Use:** 20mm Grenade, TP, K11 DAW



Technical Data

Function	PD
Safety Distance	13m
Arming	8,000rpm
Diameter	19.87mm
Length	42.7mm
Weight	24.3g

SENSOR PRODUCTS

Accelerometer Series, PSA-1500



PSA-1500 is developed for high-g applications in many military and commercial equipment with reduced size and greater operating ranges.

** International Patent*



Technical Data

Input Range	[g]	±70
Bias	Nominal Value [mg]	<5
Scale Factor	Nominal Value [mA/g]	0.7~1.0
Misalignment	Nominal Value [mrad]	<2
Operating Temperature	[°C]	-40°~+80°
Shock	[g, msec]	90.6
Bandwidth	[Hz]	>600
Weight	[gram]	<50

Accelerometer Series, PSA-2000



PSA-2000 is used for a high performance, inertial navigation system in many military and commercial applications with excellent Bias, Scale Factor, and Axis misalignment over the temperature range.

** International Patent*



Technical Data

PSA-2000-010* / PSA-2000-020* / PSA-2000-030*		
Input Range	[g]	±25
Bias	Nominal Value [mg]	<4
Scale Factor	Nominal Value [mA/g]	0.8~1.2
	Non-linearity [μg/g ²]	<20
Misalignment	Nominal Value [mrad]	<2
Operating Temperature	[°C]	-40°~+85°
Shock	[g, msec]	40.11
Bandwidth	[Hz]	>600
Weight	[gram]	<70

** Grade : divided by other test conditions*



ARCONIC
Arconic Korea Ltd.
 Changwon Precision Extrusions

ARCONIC KOREA LTD.

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Changwon Precision Extrusions, CPE

In 2002, Arconic acquired Changwon-based "Dooray Air Metals", which produced hard alloy extrusions used for industrial, transportation, defense, and aerospace applications. Changwon Precision Extrusions (CPE) provides customers with cutting-edge technologies, expertise, and integrated solutions concerning its various lines of products by making full use of Arconic's global production capability. We produce hard alloy extrusions primarily used for defense, aerospace, and industrial applications in the Asian and US markets.

MAIN EXPORT ITEMS

Precision Hard Alloy Extruded Shapes

Product Range

- Small / Intermediate / Large Extruded Shapes, Rods, Bars and Seamless Tubes

Product Alloy

- 1xxx series / 2xxx series / 3xxx series / 4xxx series / 5xxx series / 6xxx series / 7xxx series



Production Capabilities

Alloys

Excalibar® 6013 / UltraAlloy® 6020 / Toolrite 2011® / Deltalloy® 4032

Series	1050	1070	1100		
1xxx Series	2011	2011(C23B)	2012	2014(2014A)	2017
2xxx Series	2024	2219	2618(2618A)		
3xxx Series	3003				
4xxx Series	C278(AZ78) A356	4032 A390	AHS 1	AHS 2	A332
5xxx Series	5052	5056	5083	5086	5AAA
6xxx Series	6005	6013(×30)	6020	6042(×50)	6061
	6061(CE84) H0682(×40)	6063 6101	6066 6106	6070 6262(C243)	6082 6351
7xxx Series	7001	7003	7022	7050	7055
	7075	7085	TH72M	7129	7175
	7475	CE75	CE76		

Shapes

	Press(tons/inch)	Thickness (min.)	Weight/ft (min.)	Circle size (max.)	Finish length (max.)	Thick to thin ratio(STD)	Extrusion ratio(max.)
HARD ALLOY	660	3"	0.040	0.143	2.0	240	60
	1350	5"	0.060	0.633	3.5	295	41
	1650	5"	0.060	0.472	3.5	295	55
	1800	7"	0.120	1.177	5.0	335	44
	2200	7"	0.120	1.036	5.0	335	50
		9"		2.331	6.3		35
	4200	11"(ID)	0.280	3.945	6.0	4	30
			0.390	7.890	8.3		15
		15"	0.600	20.560	10.3		10
SOFT ALLOY	660	3"	0.040	0.143	2.0	240	60
	1350	5"	0.050	0.313	3.5	295	80
	1650	5"	0.050	0.313	3.5	295	80
	1800	7"	0.100	0.624	5.0	335	80
	2200	7"	0.100	0.624	5.0	335	80
		9"	0.120	0.983	6.3		30
	4200	11"(ID)	0.280	3.945	6.0	4	15
			0.390	7.890	8.3		10
		15"	0.600	20.560	10.3		

Pipes and Tubes

	Press(tons/inch)	Thickness (min.)	Weight/ft (min.)	Circle size (max.)	Finish length (max.)	Thick to thin ratio(STD)	Extrusion ratio(max.)
SEAMED	660	3"	0.039	0.107	1.3	240	80
	1350	5"	0.047	0.101	2.5	295	100
	1650	5"	0.047	0.101	2.5	295	100
	1800	7"	0.047	0.101	7.0	335	100
	2200	7"	0.047	0.101	7.0	335	100
		9"	0.196		7.87		100
	4200	11"(ID)	NA	NA	NA	NA	100
			0.196	3.840	9.84		15
		15"	0.767	14.240	11.96		10
	SEAMLESS	660	3"	NA	NA	NA	NA
1350		5"	NA	NA	NA	NA	NA
1650		5"	NA	NA	NA	NA	NA
1800		7"	NA	NA	NA	NA	NA
2200		7"	0.098	0.225	5.0	283	100
		9"		1.34	6.69		60
4200		11"(ID)	NA	NA	NA	NA	NA
			11"(D)	NA	NA		NA
		15"					

Rods and Bars

Material	2xxx		6xxx		7xxx	
	Cold Finished (T351)	Extruded (T3, T3511)	Cold Finished (T651)	Extruded (T6, T6511)	Cold Finished (T651)	Extruded (T6, T6511)
Rod Size	0.5" - 2.5"	0.5" - 4.25"	0.5" - 2.625"	0.5" - 5.7"	0.5" - 2.5"	0.5" - 4.25"
SQ Bar Size	0.5" - 2.0"	0.5" - 3.8"	0.5" - 2.25"	0.5" - 4.5"	0.5" - 2.0"	0.5" - 3.8"
Flat Bar Size	0.5"×1.5" - 1.75"×2.25"	0.5"×6" - 3"×3.5"	0.5"×1.5" - 1.75"×2.5"	0.5"×12" - 4"×5.25"	0.5"×1.25" - 1.5"×2"	0.5"×6" - 3"×3.5"
Hex Bar Size	0.625" - 2.0"	0.625" - 4.1"	0.625" - 2.5"	0.5" - 4.875"	0.625" - 2.0"	0.625" - 4.1"

* Size is Diameter



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Doowon Heavy Industrial Co., Ltd. (DWHI) is specialized in the fields of Ground Weapons, Guided Weapons, Thermal Control Hardware for satellites and Space Launch Vehicles. Especially, DWHI has gained significant competitive advantage in fabricating precision components, fuselages, wings and other airframe structures by participating in Korean missile and space launch vehicle programs.

DWHI is now planning to be a global engineering service provider which will help stay competitive in accelerating global competition.



MAIN EXPORT ITEMS

Airframe Structure for Missiles

Control and Guidance Section

Seeker Section

Fuel Section

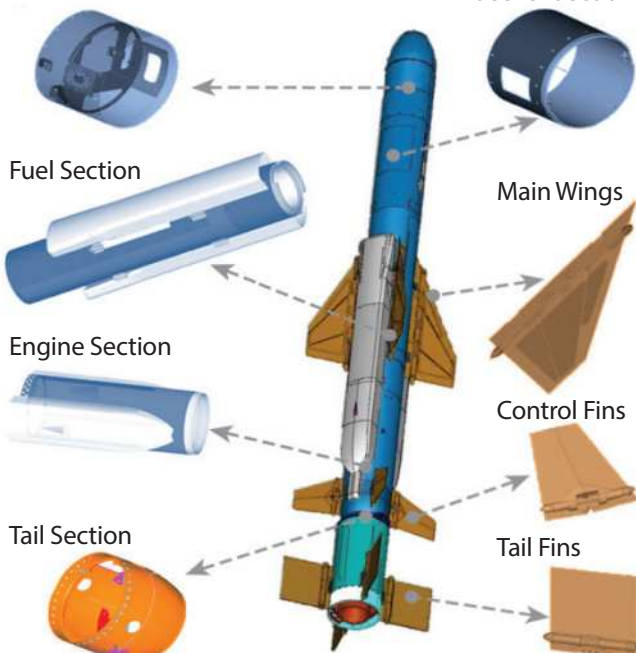
Main Wings

Engine Section

Control Fins

Tail Section

Tail Fins



DOOWON HEAVY INDUSTRIAL CO., LTD.

FIRE CONTROL EQUIPMENT

Aiming Circle, KM2A1



Specifications

- Azimuth Rotation: 0~6,400 mils
- Elevation: ~830 mils
- Depression: ~430 mils
- Field of view: 10°
- Size: 229×79×179 mm
- Illuminated by battery power

Application

- 105mm / 155mm howitzer, Mortar

Functions

KM2A1 is used to measure the azimuth and elevation angles of a ground or aerial target with respect to a preselected base line. The aiming circle has many of the characteristics of a surveyor's transit. Basically, it consists of a telescope mounted on a mechanism which permits unlimited azimuth and limited elevation movements.

Sight Unit, M53A1



Specifications

- Azimuth: 0~6,400 mils
- Elevation: 800~1,600 mils
- Depression: ±200 mils
- Weight: 2.8kg
- Magnification: 3×
- Illuminated by battery power

Application

- 60mm / 81mm Mortar

Functions

The M53A1 sight unit, consists of an M128 telescope mount and an M109 elbow telescope fastened together in one unit for operation. The elbow telescope provides magnification and a line of sight from which the weapon is aimed. The telescope mount secures the telescope in the correct position with respect to weapon azimuth and elevation axis.

Infinity Aiming Collimator, KM1A2



Specifications

- Weight: 11kg
- Height: 1,016mm
- Diameter of Lens: Ø76.2mm
- Rotation of Elevation: ~800 mils (min.)
- Azimuth Rotation: 0~6,400 mils

Application

- 105mm / 155mm Howitzer, Mortar

Functions

The KM1A2 Infinity Aiming Collimator is an optical instrument used for establishing an optical reference from which weapon deflection angles can be measured for indirect fire. It has an illuminated mil scale reticle which functions as an optical projection system that simulates a grid board type of infinity aiming target reference.

Gunner's Quadrant, KM1A2



Specifications

- Operating Range: 0~1,600 mils
- Depression: ~430 mils
- Size: 175×255×153mm
- Self-illuminant

Application

- 105mm / 155mm Howitzer

Functions

The KM1A1 Gunner's Quadrant is a portable precision leveling instrument used for laying artillery weapons in elevation, measuring their angles of elevation, and checking the elevation mechanisms of fire control equipment. The Gunner's Quadrant is used with various rifles, guns, gun carriages, self-propelled guns, howitzers, mortars, anti-aircraft gun mounts, cannons, tracked armored landing vehicles, and multiple rocket launchers.

CAPACITY

Design and Analysis

- Modeling & Simulation for Structure Systems
- Structure Design & Analysis for Structure System of Guided Missile
- Thermal Design & Analysis for Satellite
- Design for Automation System of Ammunition Handling Systems
- Design for Thermal Hardware
- Design for Hydraulic Actuators and Sub-system
- Design for Jig and Tooling

Fabrication

- Precision (Close Tolerance) Machining
- Sheet Metal Forming : Spinning, Cone Rolling, Shearing, Bending
- Welding: Electron Beam, Plasma, TIG, MIG
- Dissimilar material Bonding, Brazing, Soldering
- Super Plastic / Diffusion Bonding for sheet metal
- Sealing of Fuel Tanks
- Assembling of Explosives
- Assembling of Automation Equipment, Fire Control Equipment
- Fabrication of Thermal Hardware of Satellite
- Heat Treatment: Steel, Aluminum, Vacuum, Heat Resistance Steel
- Fabrication of High Pressure Reservoir and Tank

Quality Assurance

- NDT (RT, MT, PT, Shearography)
- Material Test (Chemical Composition Analysis, Mechanical Property)
- Precision Measurement : 3D Scanner, CMM, Laser Tracker
- Test for Hydraulic, Leakage and Pressure
- Sub-Assembly Performance and Functional Test
- Endurance Test (Actuator, Functional Parts)
- System Performance Test
- Environmental Test (Temperature, Vibration, Shock, Salt Spray)
- Calibration System for length, angle and surface roughness



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With 40 years of experience, KPCM is Korea's leading company in production and supply of titanium and nickel-alloys and other super alloys.

We offer an integrated solution to our clients by producing our products in our in-house facilities including VIM, ESR, VAR, ring rolling mill, rolling mill, forging press and radial forging machines. To satisfy our valued customers we make constant efforts for quality assurance and development of advanced materials.

MAIN EXPORT ITEMS

Space Launch Vehicle Part



F316L Shape Forging



Duplex Shape Forging



Cr-Cu Shape Forging



Al7175 & Al7050 Forging Ring

Missile Part



Maraging Forging



D6AC Shape Forging





C250 & T250 Shape Forging

Ti-6AL-4V Shape Forging

Aero Engine Parts

Submarine Components

Lay-up Mandrel for Raked Composite



Inconel 625 / 718 Forging

1.4462 (F51) Forging

1.4313 (F6NM) Forging

Lay-up Mandrel for Raked Composite

Certificates



AS9100



ISO9001



LEADER OF CONTROL TECHNOLOGY

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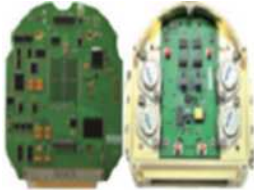


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Provides a series of customized solution and specification which are suitable to supersystem to clients. These enabled the armed forces' platform to realize performance improvement, integration, and maximization currently in Korea. Main product category can be classified as **Electric Motor, Actuator, and Servo Control(Gimbal Actuator, Seeker)**

Major Product family

Product Information

Product	Figure	Specifications
BLDC Motor (ray bolt)		<ul style="list-style-type: none"> - Voltage : 30VDC - No-load RPM(Revolutions per minute) : 15,000rpm - Rated output:56W Rated - RPM:12,000rpm - Size:Φ24.9×32.6(L) - Ball Screw Integrated Type
Seeker Servo Control Device		<ul style="list-style-type: none"> - AD : 16Bit 6Ch - DA : 14Bit 4Ch - DSP : 32Bit, 150MHz - AMP : Analog Power AMP - Control cycle : 2KHz ± 0.1% - Current linearity : within 1% - Current offset : within 20mA - Imaging(IR, CCD)transmission Built-in SOC
Gimbal Driving Device		<ul style="list-style-type: none"> - 540v DC, 1.5kW - Induction motor vector control - Electric Encoder - EnDat 2.0 protocol - Speed : 30rpm±5% - Position : ±0.5 - 3-phase 380VAC input power - Precision position control of induction motor 900Kg of radar rotary precision Speed / home position control possible
Comprehensive Test Equipment		<ul style="list-style-type: none"> - Ultra high-precision measurement technology - Multi-axis motion control technology - High speed rotor signal transmission technology - Supports automatic operation for all test processes - Real-time analysis of measured data - Supports storage management of measured data - Supports output function of test data - Supports for customized test reports - Supports report management function

LIG POONGSAN PROTECH

LIG POONGSAN PROTECH CO., LTD.

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LIG POONGSAN PROTECH Co., Ltd. is a joint venture between LIG Nex1 and POONGSAN. Unique company in Korea to develop and produce Thermoplastic Solid Propellant and Propulsion system. These are being supplied to LIG Nex1 and assembled to the guided missile and then exported.

MAIN ITEMS



PC 1000



PC 300

Advantages

Economical

- High production rates
- Reliable manufacturing process with low reject rate
- Low cost process (No cure cycle)

Technical

- Complex shape design possibility
- No bubbles, cracks
- Excellent mechanical properties
- Low sensitivity to relative humidity
- Easy adjustment of burning rate with catalyst
- Strong cohesive bonding between insulator and propellant
- Good behavior during aging
- Low glass transition point



KOREA NON-FERROUS METALS CO., LTD.

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Korea Non-Ferrous Metals Co., Ltd.(KNF) established in 1987, became one of the biggest domestic Aluminum distributors in the Republic of Korea. Our customer base consists of industrial players from the Aerospace/Defense, Automotive, Marine, Precision Engineering and Electronics segments. By acquiring AS9120 Certificate that is required for the quality system of the Aerospace/Defense industry, we offer total material management solution to our customers-supplying a comprehensive range of specialty aluminums.

Business, Products and Services/Main Export Items

Aluminum is well known material as the high performance of machinability & light-weight. We guarantee to supply aluminum materials with high-standard quality which can be applied on various kinds of fields.

Main Product

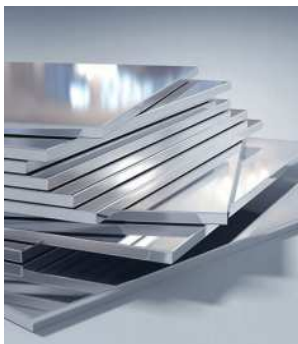
Comprehensive range of Aluminum Plate / Sheet / Coil / Round Bar etc.

Alloy of Product

A2024, A5052, A5083, A6061, A7075, A7050 and more.

Extra Services

Metal Cutting, Sizing and Warehousing



PLATE



SHEET



COIL



EXTRUSION



MBT, ARMORED & MILITARY VEHICLES

HYUNDAI ROTEM COMPANY	66
HANWHA DEFENSE	70
KIA MOTORS CORPORATION	74
DAEWOO TRUCKS	78
DAEJI PRECISION & INDUSTRIES CO., LTD.	81
JINO MOTORS CO., LTD.	82
POSCO INTERNATIONAL Corporation	84
DOOSAN INFRACORE CO., LTD.	86
LS MTRON LTD.	88
DONGSUNG ELECTRIC MACHINE CO., LTD.	89
SEGI PRECISION ENGINEERING CO.	91
BOSUNG INDUSTRY	92
BS AUTOPARTS CO., LTD.	94



HYUNDAI ROTEM COMPANY

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As a member of Hyundai Motor Group, Hyundai Rotem Company, Korea's sole manufacturer of tanks and an official developer of wheeled armored vehicles takes great pride in its significant contributions to the enhancement of the Korean Armored Forces' defense capabilities and has actively contributed to timely deployment of the latest ground weapon systems over the past 30 years.

K2 (KOREAN MAIN BATTLE TANK)

K2 Main Battle Tank designed to lead the future combat environments – is the Korean indigenous model that has world class mobility, fire power and survivability. It has truly incorporated the latest technologies and excellent functions such as the digital battle management system connected with the C4I system.



General

- Crew: 3
- Combat Weight: 55,000kg

Mobility

- Max. Speed (Road): 70km/h
- Max. Speed (Cross Country): 50km/h
- Underwater Fording: 4.1m
- Engine: >1500 hp, Diesel
- Suspension: All ISU (In-arm Suspension Unit)
- Attitude Control: Roll / Pitch / Height
- Track Tension Control System

Fire Power

- Main Gun: 120mm 55 Caliber Smoothbore

Survivability

- Armor Protection: Composite Armor / ERA
- Active Protection System: Soft-Kill or Hard-Kill (option)
- Identification of Friend or Foe

Fire Control

- Gunner's Primary Sight (GPS)
- Commander's Panoramic Sight (CPS)
- Auto Target Detection
- Auto Target Tracking
- Hunter Killer Function

Operability

- Navigation: GPS & INS
- Battlefield Management: Yes (C4I)
- Embedded Training / Built-In Test / Air-Conditioning System

K1A2 MBT (ADVANCED VERSION OF K1A1 MBT)

The K1A2 MBT is an upgrade version of the K1A1 tank, which meets the needs of network centric warfare by real-time information sharing and interoperability with other allied forces.

It features additional systems such as Battlefield Management System (BMS), Identification of Friend or Foe (IFF) system and front/rear cameras.



Main Characteristics

- **Combat Weight:** 54.5 ton
- **Main Gun:** 120mm 44 Caliber Smoothbore
- **Max. Road Speed:** 65 km/h
- **Engine:** 1,200 hp, Water-Cooled Diesel
- **Transmission:** Fully Automatic Forward 4, Reverse 2
- **Gunner's Primary Sight:** 2-axis Stabilization, Day / Night Thermal
- **Commander's Panoramic Sight:** 2-axis Stabilization, Day / Night (Thermal) Hunter-Killer Capability
- **Gun and Turret Drive System:** Electro-Hydraulic
- **Ballistic Computer:** 32 Bit Digital Computer
- **Suspension:** Hydropneumatic + Torsion Bar
- **Fire Suppression System:** Thermocouple Wire / Optical Sensor
- **Communication System:** VRC-947K, VRC-964K

K1 ARMORED RECOVERY VEHICLE

The K1 ARV is operated by a crew of four and equipped with the latest recovery equipment. Its advances crane, winch and dozer systems allow it to perform damaged vehicle recovery missions, and to provide maintenance service for armored vehicles. The K1 ARV uses common components of the K1 MBT to the maximum extent which provides for effective maintenance and logistic support.



Main Characteristics

Combat Weight	51.1 tons	
Size (m)	8.96(L) × 3.60(W) × 2.65(H)	
Main Gun	12.7mm machine gun	
Ground Clearance	0.46m	
Max. Road Speed	65km/h	
Crusing Range	600km	
Engine	1200 hp, Diesel	
Transmission	Fully automatic, Forward 4, Reverse 2	
Crane	Lifting capacity	25 tons
	Traverse	270°
	Elevation angle	70°
	Working slope	15%
Main Winch	Type	Capstan
	Traction force	343kn (1stgear) 47kN (2ndgear)
Dozer	Dozing cap	343kn (1stgear)
	Welding & cutting equipment	
Others	Refuel / Defuel pump	
	Auxiliary power unit	
	Inter-grated Test System (ITS)	

HYUNDAI ROTEM COMPANY

K1 ARMORED VEHICLE LAUNCHED BRIDGE

The K1 AVLB, developers based on the K1 MBT, can carry out mission including the launch and retrieval of the bridge with a crew of two. The main components of the K1 MBT include a 1,200-horse power diesel engine, automatic transmission, suspension system and control system to ensure inter changeability and the best logistic support.



Main Characteristics

Combat Weight	53.2 tons
Size (m)	9.71(L) × 3.59(W) × 2.25(H)
Main Gun	12.7mm machine gun
Ground Clearance	0.46m
Max. Road Speed	65km/h
Crusing Range	500km
Engine	1200 hp, Diesel
Transmission	Fully automatic, Forward 4, Reverse 2
Suspension	Hydropneumatic
Bridge Type	Scissoring type
Max. Crossing Load	MLC 66 (60 tonnes)
Max. Crossing Cycles	8,000 cyles
Bridge	Length: 22.0m
	Effective span: 20.5m
Bridge Width	4.0m
Side slop	3°
Longitudinal Slope	-10°~+10°
Launch Time	3~5 minute
Retrieve Time	10 minute

6×6 WHEELED ARMORED VEHICLE

With a current trend in rapid operation of the infantry and the increased mission over the world, the 6×6 Wheeled Armored Vehicle is aimed at performing in the rear for the purpose of defending military facilities, transporting forces, conducting logistics convoy and reconnaissance mission.



Performance

- Crew: 2+9
- Combat Weight: 16.0 ton
- Max. Road Speed: 100km/h
- Gradient: 60%
- Side Slope: 30%
- Vertical Obstacles: 0.5m
- Trench: 1.5m

Technical

- Engine: HMC 420 hp
- Transmission: Automatics 7F/1R
- Suspension: Independent HSU
- Steering: 1, 2 Axis with Power Assisted
- Tire: 365 / 80R20 (Run-flat)

Battle Field Management

- Network & Communication: Raido
- Driver's Integration Display

Armament

- Primary: 7.62mm MG
- Option: 40mm AGL / 12.7mm RCWS

Options

- Armor Protection Enhancements

8×8 WHEELED ARMORED VEHICLE

With a current trend in rapid operation of the infantry and the increased mission over the world, the 8×8 Wheeled Armored Vehicle conducts high-intensity combat operations in front-line areas for speedy troop deployment and reconnaissance missions.



Performance

- Crew: 2+9
- Combat Weight: 20.0 ton
- Max. Speed: 100km/h
- Max. Speed in Water: 8km/h
- Gradient: 60%
- Side Slope: 30%
- Vertical Obstacles: 0.5m
- Trench: 1.5m

Technical

- Engine: HMC 420 hp
- Transmission: Automatics 7F/1R
- Suspension: Independent HSU
- Tire: 365/80R20 (Run-flat)

Battle Field Management

- Network & Communication: Raido
- Driver's Integration Display

Armament

- Primary: 40mm AGL, 12.7mm MG
- Option: 12.7mm / 30mm RCWS

Options

- Armor Protection Enhancements

MBT, ARMORED & MILITARY VEHICLES

SIMULATOR

The Simulators (trainers) are the state-of-art training equipment providing the crew with controlled safe cost-effective and progressive operating skills under various situations, avoiding a variety of problems including restriction of drill condition, safety and costs caused by actual weapon systems in the field.



K1A1 Tank Gunnery Trainer



K1A1 Tank Driving Trainer



Tactical Training Simulator





HANWHA DEFENSE

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Hanwha Defense, representing the defense industry in Korea, has developed highly technical competence in the defense industry for four decades since its designation as a defense industry company in 1973, and has contributed to independent defense capability and peace for mankind.

Starting with the independent development and mass production of the K200 Korean infantry fighting vehicle in 1984, Hanwha Defense has supplied various weapon systems to the whole army in Korea, including the surface-to-air missile system CHUNMA, the 30mm self-propelled Air Defense System BIHO, 30mm Gun and Missile Air Defense System Hybrid BIHO, the K21 Infantry Fighting Vehicle and the next-generation multiple-launch rocket system CHUNMOO.

Particularly, by exporting the K200 model in 1993, the company successfully exported in mass volume for the first time in the Korean defense industry, and since then the company has exported armored wheeled vehicles and launchers worldwide, which has raised the status of Korean defense industry technologies.

PRODUCT PORTFOLIO

Armored Vehicles

- K21 Infantry Fighting Vehicle
- K200A1 Armored Personnel Carrier
 - Recovery Vehicle
 - NBC Reconnaissance Vehicle
 - 40mm Turret Vehicle
 - Mortar Carrier
 - Command Post Vehicle
 - Smoke Generation Vehicle
- Armored Wheeled Vehicle
 - Barracuda 4x4
 - Black Fox 6x6, 8x8

Launcher Systems

- CHUNMOO Multiple Rocket Launcher / Ammunition Transport Vehicle
- CHUNGOONG Launcher and Loading / Transporting Vehicle
- HAESUNG Ship to ship Missile Launcher
- Korean Vertical Launcher System

Others

- Depot maintenance
- Performance Improvement

Air Defense Systems

- Hybrid BIHO, Self-propelled Gun & Missile Air Defense System
- CHUNMA, Short Range Surface to Air Missile System
- NOBONG, 40mm Twin Naval Gun
- 20mm Vulcan gun system (Army, Navy)

MAJOR PRODUCT OVERVIEW

K21 (Infantry Fighting Vehicle)

The K21 Infantry Fighting Vehicle (IFV) is a world-class infantry combat vehicle equipped with significantly enhanced firepower, survivability and maneuverability, and is capable of performing rapid, three-dimensional movements in the digitalized battle environments of the future.

- Outstanding off-road mobility
- 40mm cannon / 7.62mm coaxial MG / anti-tank guided missile system
- Battlefield management system enabling real-time information sharing
- Amphibious Capability with pontoon system for a stable swimming capability
- Presentation of better vehicle and field information between maneuvers during day or night to drivers and passengers via the chassis control computer



Hybrid BIHO (Self-propelled 30mm gun and missile system)

HYBRID Bi-Ho, self-propelled 30mm gun and missile system, defends against various low level aerial attacks and its agile mobility provides rapid protection for moving forces. Hybrid BIHO's hybrid concept cumulates the advantages of gun-only and missile-only systems. The combination of a 30mm twin-gun (up to 3 km) and guided missiles (effective from 1 to 6 km) is the key to Hybrid BIHO's operational features.

- All weather target detecting capability in day / night and on the move
- Automatic target tracking capability with FLIR and TV
- Fast reaction time of 6~13 seconds
- Excellent hit and kill probability from highly precise automatic tracking and gun, missile and turret driving, real-time fire control, and high gun firing rate of 1,200 rounds/min
- Survivability with armor protection and automatic fire suppression system
 - Built-in-test for self-test and fault isolation



HANWHA DEFENSE

Barracuda 4x4 (Armored Wheeled Vehicle)

Barracuda 4x4 armored wheeled vehicle provides an excellent ride and enough room for 15 soldiers, including a driver and a commander. The bullet-proof window offers safe and wide visibility to allow seamless driving under any conditions. Soldiers can freely choose doors at the side and rear to get into and out of the vehicle depending on the conditions of battlefields.

- Outstanding off-road mobility, high engine output and excellent drivability
- Excellent maneuverability with a maximum speed of 100km/h and a long driving distance of 1,160km
- Variable options such as a CCTV, a GPS, a speaker and a radio
- Use of run-flat tires to allow for running 70km at 25km/h even when the air pressure is lost after being punctured



Black Fox 6x6 / 8x8 (Armored Wheeled Vehicle)

Black Fox 6x6 / 8x8 armored wheeled vehicle independently developed by Hanwha Defense Systems can carry up to 12 soldiers, which may change depending on operation purposes. Its protection capability can be expanded to meet diverse needs. The 400horse power engine of the vehicle ensures unrivaled mobility, with its 7speed fully automatic transmission being optimized to various vehicle operations.

- A maximum running speed of 100km/h and a driving distance of 800km
- Outstanding off-road mobility based on independent suspension
- Various weapon systems (manned / unmanned turret systems)
- Module-based design that can be easily applied to a family of vehicles
- Outstanding protection capabilities
 - Easy handling and convenient maintenance
 - Speedy deployment via transport planes (C-130, C-17, C-5, AN-124, AN-225, etc.)
- A comfortable ride and a low level of noise that enable stealth operations
- Diverse attachments (tactical tires / CTIS* / ABS* /air conditioning system / winch, etc.)
- Maximized operation execution based on an amphibious driving system



CHUNMOO (Multiple Rocket Launcher)

CHUNMOO, a 230mm-class multiple rocket launcher, is a key piece of next-generation equipment in the army's artillery. It is capable of precision strikes on the attack points of enemies and key targets in real-time without damage to friendly forces beyond the gunshot of long-range artillery of enemies.



- Excellent fire control system for tactical operations and calculating automatic firing data
- Multipurpose firing system, capable of operating various types of rockets
- 80 km/h or more maneuverability to carry out joint operations
- Survivability from protection against chemical, biological, radiological and projectile
- Autonomous pod reloading by employing a lifting device

SEA STAR (Ship to Ship Missile Launcher)

The HAESUNG missile system launcher is a launcher for ship-to-ship guided missiles capable of precision strikes on enemy warships within a 150km range and it is currently under deployment by the Korean Navy.



KVLS (Korean Vertical Launcher System)

The Korean vertical launcher system is a multi-purpose vertical launcher system capable of loading and launching various ship-launching guided missiles and it is to be extended for future armament type guided missiles developed in Korea. It is supplied to the Korean Navy.





KIA MOTORS CORPORATION

military.kia.com

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Kia Motors Corporation specializes in the production of military vehicles. In 1976, the company was designated by the Korean government as a sole maker of military vehicles. Since then, the company has been making a great contribution to the enhancement of combat readiness of the Republic of Korea.

Kia Motors Corporation has also supplied its military vehicles to more than 20 overseas countries. Kia Motors Corporation has established a solid reputation for reliability, high quality and technology in the global market for military vehicles. More than forty years of experience in military vehicle production have virtually turned Kia Motors Corporation into a specialist in defense-related transportation equipment.

Kia Motors Corporation is also a pioneer in the design and development of military vehicles. The series of Kia Light Tactical Vehicle, 1¼ ton, 2½ ton, 5 ton and 15 ton vehicles with variants produced by Kia Motors are sufficient in meeting customers' multifarious requirements. Such advanced vehicles are expected to open a new era in the complex battlefield.

Specially, Kia Motors has developed and already started to supply its unique model line-up of Light Tactical Vehicles to the Republic of Korea and overseas countries from 2016, which best suits a changed battle environment and efficient operation of military strength based on its long-accumulated technology and infrastructure involved in commercial and military vehicles.



KIA LIGHT TACTICAL VEHICLE

KLTV141, 4x4, Armored Command Vehicle



Dimension	
Overall length	4,900mm
Overall width	2,195mm
Overall height	1,980mm
Wheel base	3,300mm
Tread	1,870mm
Ground clearance	420mm
Angle of approach	62°
Angle of departure	48°
Weight	
Curb weight	4,400kg
Payload	1,300kg
Gross weight	5,700kg
Performance	
Max. speed	130km/h
Gradeability	60%
Cruising range	640km
Min. turning radius	8.0m
Fording depth	760mm

KLTV182, 4x4, Armored Reconnaissance Vehicle



Dimension	
Overall length	5,900mm
Overall width	2,195mm
Overall height	2,320mm
Wheel base	3,300mm
Tread	1,870mm
Ground clearance	420mm
Angle of approach	62°
Angle of departure	48°
Weight	
Curb weight	4,700kg
Payload	1,000kg
Gross weight	5,700kg
Performance	
Max. speed	130km/h
Gradeability	60%
Cruising range	640km
Min. turning radius	8.0m
Fording depth	760mm

KLTV243, 4x4, Cargo Truck (4 Seats Cabin)



Dimension	
Overall length	6,000mm
Overall width	2,195mm
Overall height	2,550mm
Wheel base	4,000mm
Tread	1,870mm
Ground clearance	420mm
Angle of approach	62°
Angle of departure	35°
Weight	
Curb weight	4,000kg
Payload	3,000kg
Gross weight	7,000kg
Performance	
Max. speed	130km/h
Gradeability	60%
Cruising range	560km
Min. turning radius	9.0m
Fording depth	760mm

KIA MOTORS CORPORATION

CARGO TRUCK

KM450, 1¼ ton, 4x4, Cargo Truck



Dimension	
Overall length	5,460mm
Overall width	2,180mm
Overall height	2,450mm
Wheel base	3,200mm
Tread: fron/rear	1,740/1,775mm
Ground clearance	254mm
Angle of approach	45°
Angle of departure	29°
Weight	
Curb weight	3,150kg
Payload	2,500kg
Gross weight	5,650kg
Performance	
Max. speed	104km/h
Gradeability	60%
Cruising range	750km
Min. turning radius	8.0m
Fording depth	760mm

AMBULANCE

KM451, 1¼ ton, 4x4, Ambulance



Dimension	
Overall length	5,700mm
Overall width	2,180mm
Overall height	2,750mm
Wheel base	3,200mm
Patient compartment (mm)	2,731(L)×2,048(W)×1,540(H)
Ground clearance	254mm
Angle of approach	45°
Angle of departure	20°
Weight	
Curb weight	3,820kg
Payload	1,080kg
Gross weight	4,900kg
Performance	
Max. speed	104km/h
Gradeability	60%
Cruising range	750km
Min. turning radius	8.0m
Fording depth	760mm

SHOP VAN

KM452, 1¼ ton, 4x4, Shop Van



Dimension	
Overall length	5,765mm
Overall width	2,180mm
Overall height	2,635mm
Wheel base	3,200mm
Tread: fron/rear	1,740/1,775mm
Ground clearance	254mm
Angle of approach	32°
Angle of departure	27°
Weight	
Curb weight	3,660kg
Payload	1,100kg
Gross weight	4,760kg
Performance	
Max. speed	104km/h
Gradeability	60%
Cruising range	750km
Min. turning radius	8.0m
Fording depth	760mm

CARGO TRUCK

KM250, 2½ ton, 6×6, Cargo Truck



Dimension	
Overall length	6,800mm
Overall width	2,500mm
Overall height	2,900mm
Wheel base	3,912mm
Tread: fron/rear	1,735/1,780mm
Ground clearance	270mm
Angle of approach	46°
Angle of departure	40°
Weight	
Curb weight	6,500kg
Payload	5,000kg
Gross weight	11,500kg
Performance	
Max. speed	95km/h
Gradeability	60%
Cruising range	900km
Min. turning radius	10.8m
Fording depth	760mm

KM500, 5 ton, 6×6, Cargo Truck



Dimension	
Overall length	7,790mm
Overall width	2,500mm
Overall height	3,000mm
Wheel base	4,547mm
Tread: fron/rear	1,890/1,830mm
Ground clearance	270mm
Angle of approach	44°
Angle of departure	34°
Weight	
Curb weight	10,000kg
Payload	10,000kg
Gross weight	20,000kg
Performance	
Max. speed	88km/h
Gradeability	60%
Cruising range	800km
Min. turning radius	12.7m
Fording depth	760mm

KM1500 15 ton, 8×8, Cargo Truck



Dimension	
Overall length	11,000mm
Overall width	3,000mm
Overall height	3,600mm
Wheel base	1,700/3,200/1,350mm
Tread: fron/rear	2,010/1,890mm
Ground clearance	300mm
Angle of approach	31°
Angle of departure	31°
Weight	
Curb weight	18,000kg
Payload	15,000kg
Gross weight	33,000kg
Performance	
Max. speed	90km/h
Gradeability	60%
Cruising range	700km
Min. turning radius	12.0m
Fording depth	760mm



DAEWOO TRUCKS

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One of the most admired companies in KOREA

DAEWOO TRUCKS Commercial Vehicle is South Korea's second largest truck maker, manufacturing and selling medium / heavy trucks.

Major products include Dump, Tractor, Cargo, Mixer trucks and Special trucks for All Wheel Drive, Special Purpose trucks. Based on various product line-up, the company has more than 60 export destinations in the world including the UAE, South Africa, Algeria, Russia, and Vietnam.

In an effort to increase international business, we focus on KD (knocked-down) business in addition to CBU(Complete built-up) export. **DAEWOO TRUCKS** has begun the KD business in Pakistan, Russia, and South Africa and will continue to expand it into Algeria, Vietnam, Malaysia, Kenya, and the Philippines.

We have so far sold 45,000 units in more than 100 foreign markets, and the international business is growing every year.

With an aim to become a global leader in the comprehensive commercial vehicle sector, **DAEWOO TRUCKS** Commercial Vehicle is gradually working on product development along with its plan to expand the existing production line for medium and heavy trucks to include small and light trucks and buses for export.

MAXIMUS & NOVUS TRUCK

- Medium Duty Truck (4.5~ 7 ton): Cargo
- Heavy Duty Truck (8~25.5 ton): Dump, Tractor, Cargo, Mixer
- All Wheel Drive Truck
- Special Purpose Truck



Product Line-up

NOVUS

MAXIMUS

Classification	MCV		HCV			
	4x2	4x2	6x4	8x4	10x4	
CARGO						
						Twin steer
						Rear 3-axle
DUMP						Twin steer
MIXER						
TRACTOR						
CARGO						
						Twin steer
						Rear 3-axle
DUMP						Twin steer
						Rear 3-axle
MIXER						
TRACTOR						

MBT, ARMORED & MILITARY VEHICLES

DAEWOO TRUCKS

ALL WHEEL DRIVE VEHICLE

AWD Chassis vehicle presented by Daewoo Trucks has strong power with great efficiency that perfectly fits to advanced civil and military vehicle.

*What is *AWD(All Wheel Drive)?*
AWD refers to vehicle capable of providing power to all front- and rear-end wheels full time. Excellent braking and accelerating performance of AWD vehicle enables smooth cornering and anti-skid system on a rainy road. Superior driving performance promises the customer a convenient driving experience under rough conditions including hill, rainy and snowy road, unpaved road, and muddy road.



The ACTION To ADVANCE

EFFICIENCY & PRACTICALITY
MOBILITY & SPECIALTY
UTILITY - Special Features, Capabilities, Engine
LINE UP & SPECIFICATION

SPECIAL PURPOSE VEHICLE

Tank Lorry

Fuel / Water / Water Sprinkler / Water Cannon / Aircraft Refueler / Others



Van Tank

Refrigerated Van / Dry Van / Wing Body



Crane Tank

Stiff Crane Truck / Knuckle Crane Truck / Wrecker Truck



Construction

Concrete Pump Truck



Garbage Tank

Press Pack / Arm Roll / Vacuum Lorry / Road Sweeper / Vacuum Loader Jetter



Special Transport & Trailer

Troop Transport / Fire Truck / Self Loader % Mobile Workshop / Flat Bed / Low Bed / Tank & Buk Cement / Dump & Wal





DAEJI P&I

DAEJI PRECISION & INDUSTRIES CO., LTD.

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DAEJI P&I Co., Ltd. has been keeping sustainable growth in field of special purpose vehicle industry over 40 years under the company's Core Value "Trust, Integrity, Innovation".

DAEJI's strength is to have engineering know-how and qualified proven product with more than 40 years history since 1975. Besides, we are capable to customize user's needs with flexibility.

TECHNICAL DATA

Armored Personnel Carrier

- Ballistic protection level up to NIJ IV [CEN B7]
- Provided all windows with detachable window grilles
- Fitted on all-terrain tyres with run-flat
- 9 gun ports and view ports on both side of the vehicle
- The hatch and slew turret system (option) with protective plate on the roof for crews to manage different kinds of firearms
- Multi-tubular CS/CN gas shell launcher on the roof

TAMBORA
(Toyota Land Cruiser Basis)



DAPC-2
(Ford f550 Basis)



Water Cannon Vehicle

DAEJI P&I's Water Cannon Vehicle is an effective and non-lethal solution to riot control and law enforcement.

The vehicle protects itself with a bullet-proof double cabin, automated fire self-extinguishing system and features a fully operating command cabin. Other standard features include multiple surveillance units and an isolated engine pump.

DWC 6500



Auto Barricading Truck

DAEJI P&I's Auto Barricading truck used for stopping riot crowd and protecting the troops from demonstrator's attack such as Fire bomb, stone, bricks and any kinds of offensive action of rioters. The barriers can be unfolded and folded quickly by hydraulic cylinders and block the street, public square & open space effectively.

Barrier wall can endure 2,000 kilograms thrust power- Intercept the crowd's penetration and isolate the V.I.P Public establishment and troops.

Auto Barricading Truck





JINO MOTORS CO., LTD.

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Since its establishment in 2006, JINO Motors has been one of the world-leading Special Purpose Vehicles manufacturer for military and public sectors.

JINO Motors specializes in manufacturing Anti-Riot Vehicles such as Water Cannons and Barricade Vehicles with accumulated sales record for over 300 vehicles in 20 different countries world-wide.

We continuously pursue to achieve the highest satisfaction level from customers by supplying high-quality products with the specialized after sales service.



Titan - Water Cannon Vehicle



Specifications

- Chassis Type (Korean or International Brand):
4×2 / 6×4 / 6×6
- Water Tank Capacity: 6,500L / 9,000L / 12,000L
- Shooting Range: Max. 70m
- Foam / Tear Gas / Paint Injection:
Automatic mixing system (3 / 6 / 9% proportion control)
- Features & Equipment:
Self firefighting system, self-suction system (from river, streamlet, hydrant, other vehicles), obstacle removal blade, surveillance camera (on a boom), multi-view cameras, digital video recording system, automatic draining system (pipes, lines)

Rex-W & Rex-T - Barricade Vehicle (Water Cannon Type & Troop Carrier Type)



Specifications

- Chassis Type (Korean or International Brand):
4×2 (water cannon & troop carrier type) /
6×4 (water cannon type only)
- Water Tank Capacity (Water Cannon Type):
4,500L / 9,000L
- Shooting Range: Max. 70m
- Foam / Tear Gas / Paint Injection:
Automatic mixing system (3 / 6 / 9% proportion control)
- Features & Equipment:
LED display (multi-language), sound cannon, flood light, self-suction system (from river, streamlet, hydrant, other vehicles), surveillance camera (on a boom), multi-view cameras, digital video recording system.
- Troop Carrier Capacity:
16 persons in rear cabin (3 in front cabin),
extra storage space for police security equipment,
internal communication system between front /
rear cabin.



posco INTERNATIONAL

POSCO INTERNATIONAL Corporation

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Posco International is one of the largest global traders & project organizers, armed with more than 100 overseas operations around the world. Since the foundation in 1967, we have successfully implemented various projects with foreign governments. In particular, when it comes to defense industry, we have supplied a large number of Korean defense & Security equipment to many friendly countries, to their full satisfaction from 1977.

INTELLIGENT PATROL VEHICLE

The Intelligent Patrol Vehicle supports police officers to perform their mission more efficiently, playing a role as mobile police station. This vehicle is equipped with diverse high-technology devices to support police officers, such as CCTV, Computer and Finger Print Reader.





MBT, ARMORED & MILITARY VEHICLES

LANDING PLATFORM DOCK

The Landing Platform dock serves as a Multi-Purpose Vessel. It can be used not only as landing vessel but also disaster relief vessel and hospital vessel. We have various experience in technology transfer of this vessel, as we have already completed 5 units at local shipyards.



Technical data

Length Over All	abt. 122.0 m
Breadth (Mld)	22.0 m
Depth (Mld)	11.3 / 6.7 m
Draft (Full Load / Design / Patrol)	4.9 / 4.5 / 4.2 m
Speed (Max. / Operation / Patrol)	abt. 16.5 / 15.5 / 13.5 knots
Displacement (Full Load)	abt. 7,300 ton
Max. On Board	557 personnel
LCU Dock	1 dock (2 LCUs)
Truck Deck	1 deck (15 units)
Heli Deck	1 deck (2 helis)



DOOSAN INFRACORE CO., LTD.

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Since founded in 1937, Doosan Infracore has been manufacturing construction equipment and engines. Doosan Infracore Engine Business Group started building Korea's first diesel engines in 1958 and has expanded its business ever since. Today, the Engine Business Group supplies global customers with diesel and compressed natural gas engines for buses and trucks, industrial equipment, power generation, marine and military vehicles. The research and development team has been devoted to developing eco-friendly engines to meet stringent emission standards, and developed Euro 6 compliant diesel and CNG engines for commercial vehicles and power generation. The Business Group also completed development of compact diesel engines that satisfy US Tier 4 Final and EU Stage IIIB & IV standards, these models are in production since 2012.

The Engine Business Group operates facilities for engines assembly, materials production, and part machining. The product portfolio includes wide range of power output diesel and CNG engines to satisfy various demands of customers all over the world. Doosan Infracore will keep striving to satisfy alleviating standards of customers and provide a value of lives of people and our environments.

For military uses, the Engine Business group manufactures 5 base models below:

ENGINES FOR HEAVY MILITARY VEHICLES

DL08

400ps@1,900rpm



DV11S

450ps@1,900rpm



DV27K

1,500ps@2,700rpm



D2848T

350ps@2,300rpm



D2840L

750ps@2,300rpm



Outstanding Drivability

Doosan Military Diesel Engines, based on Doosan's diesel engines meet the best-level performance even under harsh conditions thanks to proven heavy-duty and advanced fuel injection and combustion system.

Beneficial Fuel Efficiency

Optimized fuel combustion realizes excellent fuel economy that customers can benefit from.

Easy Installation and Value for money

Doosan Military Diesel Engines deliver easy installation thanks to integrated power-pack type (cooling system, transmission integrated with engine) and provide compatibility of the parts through life support by optimized modular design.

DV27K ENGINE



The new heavy military diesel engine developed with state-of-the-art technology for Next Generation MBT. With successful completion of NATO qualification test and mobility endurance test, Doosan's DV27K diesel engine guarantees the proven power source for the main battle tank. The DV27K's power, torque, low noise, fuel efficiency and easy installation provide reliable clean solution for heavy military vehicles.

- Fully electronic controlled common-rail fuel injection system for high efficiency and low emission
- High strength cylinder block and double-deck cylinder head for efficient cooling
- High efficient dual cooling circuits for high temperature operating condition
- Air filtration system with cyclone separator guarantees long service life for an operation under severe dust condition
- Excellent cold starting with high reliable pre-heating system
- Compact size allows cost effective installation meeting tailored customer needs
- Value for money for heavy military vehicles by reducing life cycle costs

- DV27K diesel engine successfully completed the 400-hour NATO qualification test and 9,600km mobility endurance test for a new MBT

Specifications

Rating	Max. Power	1,500ps@2,700rpm
	Max. Torque	465kg.m@2,000rpm
Type		4-Stroke
Configuration		90° V-12
Cylinder	Bore	138mm
	Stroke	150mm
Swept Volume		27ℓ
Cooling		Water cooling
Aspiration		Twin turbo-chargers, intercooled
Size (mm)		1,828(L)×1,060(W)×1,126(H)
Weight (dry)		2,550kg

LS Mtron

LS MTRON LTD.

www.lstrackshoe.com

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LS Mtron

LS Mtron is "Global No.1 Company" in industrial machinery and high-tech components.

Our business consists of the Machinery Business(Tractor, Injection molding, Defense) and the Component Business(Electronic component, Circuit materials, Automotive component and Ultra Capacitor).

Defense Division

We are the sole manufacturer of military track shoes in Korea. We have been supplying track shoes to the nation's armed forces since 1975 and exported more than 20 countries.

Our goal is to develop new products through cutting-edge technologies and establish a stronger global presence so as to evolve into a global top manufacturer and pioneer for the advancement of the defense industry.

MAIN EXPORT ITEMS

US Vehicle Track Shoes



M60 Track Shoes



M113 Track Shoes

Russian Vehicle Track Shoes



T-80U Track Shoes



BMP-3 Track Shoes

K9 (KRAB) Track Shoes



Band Track Rubber Band



Revetment-kit



Application / Use

- **Track Shoes:** Support the entire weight of combat vehicles such as Main Battle Tanks, Armored Personnel Carriers and Self-Propelled Howitzers.
- **Revetment-kit:** Protecting munitions and facilities from the attack or typhoon.

B to B / B to G Cooperation Areas

- **Track Shoes:** Supplying brand-new Track Shoes, parts, or refurbishing used Track Shoes.
- **Revetment-kit:** Providing entire set of Revetment-kit or parts.



DONGSUNG ELECTRIC MACHINE CO., LTD.

www.dongsungelec.kr

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Founded in 1968, Dongsung Electric is a manufacturer of generators, starters, blowers and servo motors for ground combat vehicles (tanks, armored vehicles, self-propelled guns) in Korea.

GENERATOR



K9 650A
28VDC, 650A
2,400~8,000RPM
BRUSHLESS TYPE
OIL COOLING SYSTEM
ø 204 x L493, 45KG



K1 600A
28VDC, 600A
3,500~13,000RPM
BRUSHLESS TYPE
OIL COOLING SYSTEM
ø 300 x L400, 68KG



KAAV 300A
28VDC, 300A, 2,400~8,000RPM
BRUSHLESS TYPE
ø 250 x L3773, 35KG



K200 200A
28VDC, 200A, 2,400~8,000RPM
BRUSHLESS TYPE
ø 230 x L290, 23KG



M48 300A
28VDC, 300A, 2,400~8,000RPM
BRUSH TYPE
ø 220 x L540, 48KG



K55 100A
28VDC, 100A
2,000~5,000RPM, BRUSH TYPE
ø 150 x L280, 20KG



Ultra-mini generator
250~425VAC, 1.8KW
67,500RPM, Air cooling method



35,000RPM / 70,000RPM
200~350VDC, 1.8KW
35,200 / 75,000RPM, BRUSHLESS TYPE
ø 100 x L130 / ø 80 x L100, 5KG / 3KG



60KW
120/208VAC, AC60KW
2,400~8,000RPM
BRUSHLESS TYPE
ø 270 x L430, 55KG



GYEONMA
320VDC, 7KW
2,400~8,000RPM
BRUSHLESS TYPE
H95 x 260 x 260, 28KG



GENERATOR
620VDC, 125KW
4,400RPM
Water cooling method

DONGSUNG ELECTRIC MACHINE CO., LTD.

STARTER MOTOR

K2 18kW



Specification	
Rating voltage	24[VDC]
Rating current	18[kW]
Type	DC Brush type
Usual temperature condition	-54 ~ 72°C
Pinion	Rotation direction Number of teeth
	CW 11
Weight	43[kg]
Gear type	Sliding gear type

K9 9kW



Specification	
Rating voltage	24[VDC]
Rating current	9[kW]
Type	DC Brush type
Usual temperature condition	-40 ~ 90°C
Pinion	Rotation direction Number of teeth
	CW 12
Weight	39[kg]
Gear type	Sliding gear type

K55 7kW



Specification	
Rating voltage	24[VDC]
Rating current	6.2[kW]
Type	DC Brush type
Usual temperature condition	-54 ~ 72°C
Pinion	Rotation direction Number of teeth
	CW 11
Weight	29[kg]
Gear type	Bendix gear type

M48 8kW



Specification	
Rating voltage	24[VDC]
Rating current	8.9[kW]
Type	DC Brush type
Usual temperature condition	-54 ~ 72°C
Pinion	Rotation direction Number of teeth
	CW 11
Weight	36[kg]
Gear type	Bendix gear type

SERVO MOTOR



2.4KW
270VDC, 2.4KW
2,300RPM

1.4KW
24VDC, 1.4KW
3,000RPM

4.47KW
270VDC, 4.47KW
3,000RPM



K2 EL / K2 AZ
260VDC, 6.8KW, 4,300RPM
260VDC, 10.7KW, 3,000RPM



K4 / K3
310VDC, 1.0Nm, 2,000RPM
24VDC, 2.4Nm, 1,500RPM



Motor for arm turn
24VDC, 880W, 2,200RPM
under 55Arms



K10

0.8KW
270VDC, 0.80KW
5,100RPM

0.95KW
270VDC, 0.95KW
3,300RPM

0.9KW
270VDC, 0.9KW
3,300RPM

0.5KW
24VDC, 0.5KW
2,700RPM



Motor for arm pitch
24VDC, 630W, 1,600RPM
under 45Arms



Motor for video turn
24VDC, 70W, 930RPM
under 7Arms

BLOWER MOTOR



K1 40A
28VDC, 40A, 13,000RPM
BRUSHLESS TYPE
ø 170 x L280, 15KG



K9 BLDC
18~30VDC, 79A, 13,500RPM
BRUSHLESS TYPE
ø 170 x L280, 17KG



K21 25A
27VDC, 110Lts(16.5mbar)
25A



KAAV 25A / 83A
28VDC, 25A / 83A
8,000~9,200RPM, BRUSH TYPE
ø 200 x L172 / ø 280 x L117
10KG / 23KG



K9 BLOWER MOTOR
24VDC, 12.4A, 8,500RPM
63.4MMAQ



K200 2461
28VDC, 5A, 2,000~8,000RPM
BRUSH TYPE
ø 220 x L240, 9KG



K2 FAN
24VDC, 1A, 120ml³/in
1.8m³/sec



K10 1169
28VDC, 20A, 6,000RPM
BRUSH TYPE
ø 260 x L220, 30KG



K9 6617
28VDC, 40A, 5,000RPM
BRUSH TYPE
ø 260 x L400, 9KG



For evaporator
28VDC, 1.0KW
14,500RPM



For condenser
28VDC, 1.8KW
8,000RPM



For compressor
28VDC, 3.8KW
2,000RPM



SEGI PRECISION ENGINEERING CO.

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- We are manufacturing organization producing air-conditioning unit for army equipment and commercial use.
- The company was founded in 1982, and have 20+ years of experience in military industrial area.
- Through application of the latest technology of air-conditioning industry, we supply the most reliable and the most efficient product.
- Our product can be customized to fit each individual needs.



Technical Data

Item	Units	Spec.
Cooling Capacity	BTU / H	18,000
Heating Capacity	BTU / H	12,000
Run Temp. Range	°C	-35 ~ +50
Power	V / PH / Hz	220 / 1.3 / 50
Power Consumption	KW	3.2 (cool) / 4.2 (heat)
Refrigerant	-	R-134a
Noise	dB	65
Dimension	mm	765(W)×850(D)×508(H)
Weight	kg	110
Safety Device	-	Highpass Run, Fresh-Air, Overload Relay
Color	-	Sand Color



Bosung Industry

www.bosungind.com

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Tel: +82 31 719 8307

Fax: +82-31-863-1618

E-mail: bosung29@empas.com

Bosung specializes in waterjet propulsor for amphibious vehicles and high speed vessels. The company has designed, built and delivered more than 200 POD type waterjets of 8x8 Wheeled Armored Vehicles to ROK Army. These days, Bosung is also developing Flush inlet type waterjet of SAB(Submergible Assault Boat) for ROK Navy.

Scope of Service

- Research and Development
- Design and Analysis
- Manufacture
- Physical Test

Major Products

- POD type Waterjet (100HP)
- Flush inlet type Waterjet (500HP)

POD type Waterjet for 8x8 Wheeled Armored Vehicle of ROK Army

- 2 POD type waterjets installed on left and right sides of an armored vehicle
- A compact, lightweight but high thrust verified in ROK army
- Power shaft lifted up from the rear aft of the vehicle and transmitted in the vehicle forward direction through the bevel gear
- Frontly sucked water pulled by the impeller and injected through the stator nozzle
- Thrust of waterjet according to the difference of sucked water and injected water
- Steering force generated by the operation of the bucket attached on stator
- Left / right steering and advance / retreat possible by bucket moving
- Bucket operated by hydraulic cylinder

SPECIFICATION

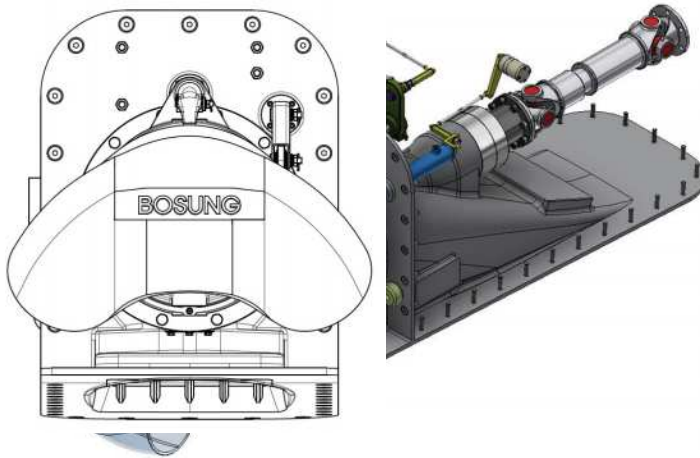
Size	785mm(L) x 517mm(H) x 410mm(W)
Weight	75 kg (max)
Performance	Thrust 6200 N (min), 55kW DHP
Speed	8 km/h (min) (for ROK Army 8x8 Wheeled Armored Vehicle)





Flush inlet type Waterjet for Submergible Assault Boat of ROK Navy

MBT, ARMORED & MILITARY VEHICLES



- 1 Flush inlet type waterjet installed on transom side of the SAB
- A compact, lightweight but high thrust
- Engine Power(500 HP) transmitted through a universal joint
- Frontly sucked water pulled by the impeller and injected through the stator nozzle
- Thrust of waterjet according to the difference of sucked water and injected water
- Steering force generated by the operation of the steering nozzle attached on stator
- Advance / neutral / retreat possible by reversing bucket moving
- Bucket and steering nozzle operated by hydraulic cylinders

SPECIFICATION

Size	2,330mm(L) x 520mm(H) x 653mm(W)
Weight	250 kg (max)
Performance	Thrust 12 kN (min), 350kW DHP, 30 kts
Speed	30 kts (min) (for ROK Navy SAB)



BS AUTOPARTS CO.,LTD.

www.bs-autoparts.com

Add: 22, Seohanam-ro, 584 beon-gil, Hanam-si, Gyeonggi-do, Republic of Korea.

Tel: +82-31-792-8650

Fax: +82-31-792-8658

E-mail: dominic@bs-autoparts.com, 4wd@bs-autoparts.com

BS Auto is specialized in modifying commercial truck into military truck. Modification of trucks are done with BS manufactured 4WD conversion kit and BS auto's 4WD military truck has all the advantages of commercial truck which are compatible price, proven durability and quality, ease of maintenance, with variable options compared to other competing military trucks. Also BS can offer localization of assembly and production by technology transfer and BS military trucks are being sold and widely used around the world from commercial use to military and national police usage. BS Auto founded upon 30 years of experience with spare parts business mainly with manufacturing engine precision parts thus capable of assisting military truck maintenance after supply.

PERFORMANCES (BS 4WD MILITARY TRUCK EURO6)

SPECIFICATION

Overall Dimension (mm)	6,740 x 2,170 x 1,450
Max. Power (ps / rpm)	170/2,500
Max. Speed (km / h)	108
Max. Gradeability	60%
Fuel Consumption (km/l)	10.1 (60km/h cruising)

BS TRUCKS AROUND THE WORLD





COMMUNICATIONS & ELECTRONICS

LIG NEX1 CO., LTD.	96
HANWHA SYSTEMS	100
HUNEEED TECHNOLOGIES CO., LTD.	102
INSOPACK CO., LTD.	105
HYUNDAI J.COMM CO., LTD.	106
YEONHAB PRECISION CO., LTD.	107
WOORIBYUL CO., LTD.	108
BA SOLUTIONS CO., LTD.	109
VICTEK CO., LTD.	110
RFHIC CORPORATION	111
KS SYSTEM CO., LTD.	112
METANETWORKS CO., LTD.	113
FS CO., LTD.	114
DUSITECH CO., LTD.	115
EOS Corporation	116
FOSTEC INC.	117
GIGALANE CO., LTD.	118
HUMEDIA CO., LTD.	119
KUKDONG ELECTRONIC PRECISION CO., LTD.	120
KUKDONG TELECOMMUNICATION CO., LTD.	121
NAVCOURS Co., LTD.	122
QNION CO., LTD.	123
SOLVIT SYSTEM CO., LTD.	124
SUNGSAN ELECTRONICS & COMMUNICATIONS CO., LTD.	125
U-TEL CO., LTD.	126
ZHT CO., LTD.	127



LIG NEX1 CO., LTD.

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Given its key geopolitical position in Northeast Asia and the constant threats it faces from North Korea, South Korea requires formidable defense and military forces at all levels, including the ground, naval, and air forces. Since its foundation in 1976, LIG Nex1 has been researching, developing, and producing state-of-the-arts weapons systems based on its cutting-edge technology and facilities and has thus contributed greatly to the security and self-defense of the Korean people.

Having assisted the self-defense of South Korea over the last 41 years, LIG Nex1 now boasts a world-class workforce, technological prowess, and an extensive global network. These assets allow the company to develop and provide a comprehensive range of weapon-related solutions, including the research and development, testing, production, and logistics support of such advanced weaponry systems as precision strike munitions surveillance systems, command and communications systems, electronic warfare systems, avionics, reconnaissance.

Furthermore, the ties and relations of deep mutual trust and cooperation that LIG Nex1 have cultivated with all departments of the South Korean military, the Agency for Defense Development, the Defense Agency for Technology and Quality, and other such institutions in Korea enable the company to develop products and services of topnotch quality for the company's overseas partners.

LIG Nex1's strong global network begins with its R&D headquarters at Pangyo, encompasses cutting-edge research and production facilities across Korea, and extends to offices in the United States, Colombia, India, and Indonesia, Middle East as well as partnerships with leading defense companies in over 40 countries around the world. This extensive worldwide network is what sustains LIG Nex1's continued drive toward progress.

As a leading developer of defense and weapons systems in South Korea, LIG Nex1 will continue to develop and provide products and services of unsurpassable quality and promote the peace and prosperity of our customers in good faith.

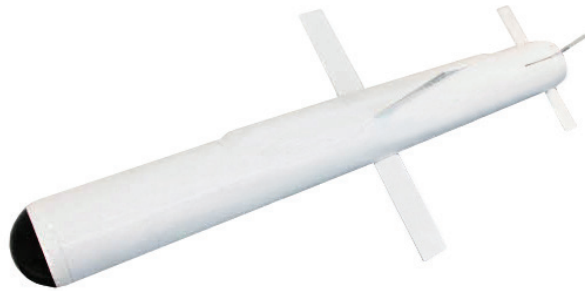


PGM (Precision Guided Munitions)

Anti-tank Guided Missile (Raybolt)

3rd generation mid-range infantry missile for countering threats against tanks and next-generation armored vehicles

Range	Seeker	Guidance	Propulsion
2.5km	Imaging IR	Fire & Forget	Side Thrust & Indoor Firing Capability



2.75" Guided Rocket

2.75 inch Guided Rocket provides successful countermeasure against hostile FIAC (Fast Inshore Attack Crafts) and tactical targets in littoral area. Also, if is mounted on various platforms such as vehicle, warship and airplane.

Range	Seeker	Guidance	Max Missile Load
8km	Imaging IR	Fire & Forget w/ INS & IIR Homing	36 rounds



130mm Guided Rocket

130mm Guided Rocket System provides precision strike capability equipped on patrol boats against fast and multi surface targets at sea. Also, vehicular launcher system is available.

Range	Seeker	Guidance	Max Missile Load
20km	Imaging IR	GPS+INS+Uplink & IIR Homing	12 rounds



LIG NEX1 CO., LTD.

GPS Guided Bomb (GGB)

Cost effective smart bomb with Long Range which increases survivability of own aircrew and aircraft and precision striking against the target behind obstacles.

Range	Bomb	Guidance	Platform
100km	MK-82	Fire & Forge w/ GPS & INS	Proven in F-4 / 5 / 15 / 16 and FA-50



Light Weight Torpedo (Blue Shark)

Lightweight torpedo with 324mm torpedo tube compatible of surface ships, and can be operated as CMS integrated or stand-alone mode.

Range	Depth	Battery	Platform
12km	500m	Rechargeable Lithium Polymer	Warships, Aircrafts & Helicopter



Ship-to-Ship Missile (Sea-Star)

C-Star is an all weather, over-the-horizon sea-skimming, anti-ship missile capable of striking hostile surface ships at a long range with an active radar homing system that is designed with the latest technology currently operating by the Korean Navy.

Range	Seeker	Speed	Guidance
180km~	Microwave	Subsonic	Terminal Guidance with Active Radar Homing



C4ISR

C4I : Command Control Communications Computer and Intelligence

Tactical Multi-band Multi-role Radio (TMMR)

SDR (Software Defined Radio) is the state-of-the-art communications system for real-time command and control that provides simultaneous voice, image and data service.

Frequency	Channel	ECCM	Waveform
30-512 Mhz	Manpack: 2Ch. Vehicle: 3CH.	Frequency Hopping	HF/VHF/UHF



ISR : Intelligence-Surveillance and Reconnaissance

Local Air Defense Surveillance Radar

Local Air Defence Surveillance Radar is a fast preparation system that provides 3-dimension information (range, azimuth, and altitude) to C2A system.

Range	Frequency	Features
80km	X Band	Detecting aircrafts, Low Altitude flying UAV, Helicopter, Cruise Missile



Artillery Locating Radar

Weapon Locating Radar is a radar that detects location of hostile shells, continuously tracks and estimates shell's trajectory, launching location and point of impact.

Range	Time	Features
60km	8 hours	Passive Phased-array antenna technology, Detects and Tracks Artillery Shells



Huneed Technologies



HUNEED TECHNOLOGIES CO., LTD.

www.huneed.com

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Tel: +82-32-457-6180 / +82-10-8911-9626

Fax: +82-32-457-6042

E-mail: mavekim@huneed.com

Founded in 1968, Huneed is a leading Korean Defense SME in communications and aerospace. For half a century, Huneed has provided tactical communication equipment to the Korean armed forces and currently provides: (1) the High Capacity Trunk Radio System (HCTRS: "Acom-TR1") for the country's Tactical Information Communication Network (TICN) program, as well as the Remote Detonation Device (RDD: "Acom-RD2"); (2) the naval Weapon Control System (WCS: "Rena-WC"); and (3) the data link systems. Besides, Huneed, as a Boeing-invested company since 2006, is a key strategic tier-1 supplier to major global aircraft OEMs via supplying: (1) wire harnesses; (2) electrical panels; (3) avionics in the flight control and missile warning areas; and (4) the ground systems for UAVs.



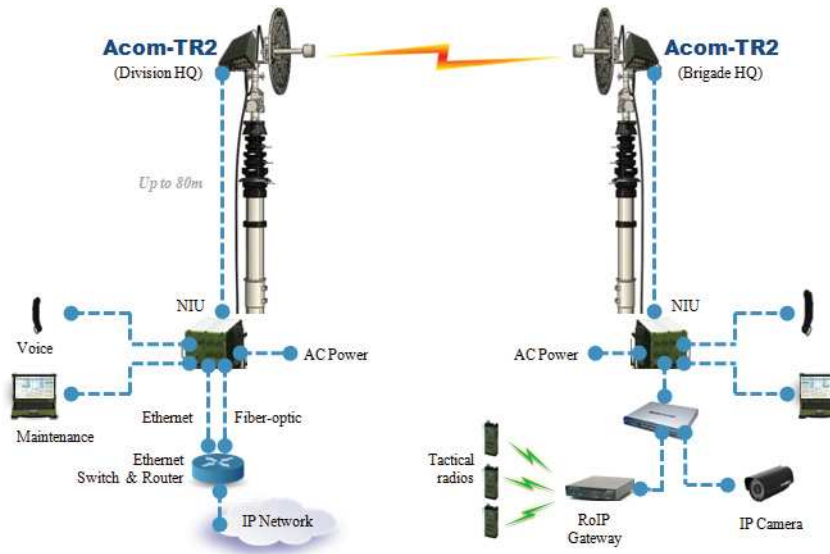
ACOM-TR2

Acom-TR2: High-Speed Trunk Radio System for Tactical Network

- Over 100 Mbps voice / data transmission for over 100km LOS range
- Quick deployment, 2-channel operation (1-terminal relay)
- Interface with IP network via Ethernet / fiber-optic networks via NIU
- Secured communication under 75 km/h wind speed via automatic antenna alignment
- ECCM functionality (APC, AFC)
- Tactical / disaster / island communication application vessels



Configuration



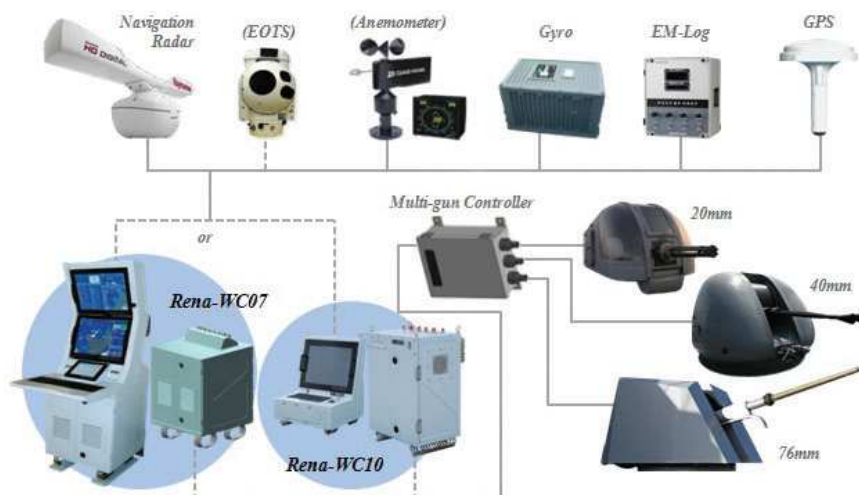
RENA-WC

Rena-WC: Naval Weapon Control System with Multi-Function Console

- World's most cost-effective naval gun control system using navigation radar
- Simultaneous tracking of up to 100 targets
- High-precision trajectory calculation
- User friendly GUI with real-time display of operation / interface status
- Field proven by 50~5,000t classes of naval and coast guard vessels



Configuration



HUNEEED TECHNOLOGIES CO., LTD.

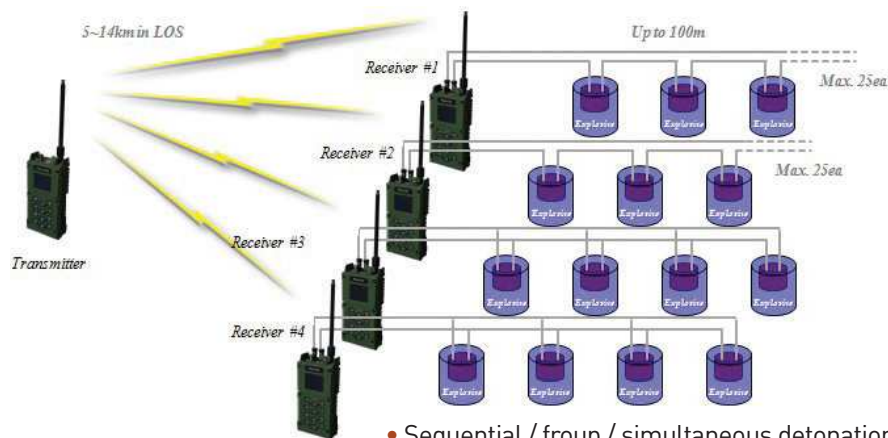
ACOM-RD2

Acom-RD2: PRG-184K Remote Detonation Device

- World's best performance of 25 simultaneous output charges by single transmitter
- Remote control of demolition charges to remove tactical / industrial obstacles
- Operational range within 5~14km in LOS
- Lightweight and compact for optimization of tactical / industrial operations



Configuration



- Sequential / group / simultaneous detonations
- Remote / timer / remote-timer detonations

Components



- Transmitter (× 1), Receiver (× 4), Antenna (× 5)
- Primary battery pack (× 1), Charger (× 1)
- Secondary battery pack (× 1)
- Data cable (× 1), Power cable (× 1)
- Tools (× 3), Pouch (× 1)



INSOPACK CO., LTD.

www.insopack.co.kr

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Tel: +82-31-695-8404~5

Fax: +82-31-695-8406

E-mail: jhkim@insopack.co.kr

INSOPACK Co., LTD., a "Global Leader in Wireless Communications", was established in 2000 as a venture company for ETRI, develops and manufactures digital radios for various purposes from team oriented missions for military to non-military purposes. With its HQ in Daejeon, and offices in Gumi, Suwon, and in New Jersey (US), INSOPACK owns various patents and certifications, such as the NET and the ISO-9001, and provides excellent solutions and services.

MAIN EXPORT PRODUCTS AT A GLANCE

ACRO-S/SM Team-Based Digital Radio Capable of Full-Duplex Communication Up-To 12 Users



- Frequency: 4xx / 8xx / 9xx / 24xx MHz
- Auto relay function (Ad-hoc): 3 hops
- Communication range: 500m (1:1, @LOS), 1.5km (Auto relay, @LOS)
- Dimensions: 50×20×80 (mm)
- Weight: 90g
- Operating hours: 12 hours
- Can only communicate via earset
- Security: AES-256

ACRO-PRR Digital Radio Capable of Simultaneous Two-Way Communication Without a PTT Button



- Frequency: 4xx MHz
- Auto relay function (Ad-hoc): 3 hops
- Communication range: 1km (1:1, @LOS), 3km (Auto relay, @LOS)
- Dimensions: 62×21×101 (mm)
- Weight: 154g
- Operating hours: 12 hours
- Can transmit / receive voice, GPS locations and built-in messages
- Security: AES-256

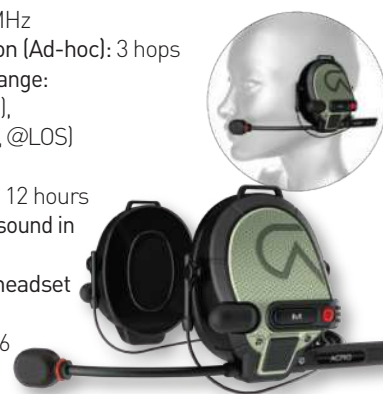
ACRO-V Digital Tactical Radio Capable of Transmitting and Receiving Various Multimedia Data



- Frequency: 4xx MHz
- Auto relay function (Ad-hoc): 3 hops
- Communication range: 3km (1:1, @LOS), 9km (Auto relay, @LOS)
- Dimensions: 86×31×167 (mm)
- Weight: 470g
- Operating hours: 12 hours
- Can transmit / receive voice, GPS locations, built-in messages, and images
- Connects to External Networks Through Bluetooth and Wi-Fi
- Built in Altitude, Gyroscope
- Security: AES-256

ACRO-ANC First Headset Radio Capable of Full-Duplex Communication

- Frequency: 4xx MHz
- Auto relay function (Ad-hoc): 3 hops
- Communication range: 200m (1:1, @LOS), 600m (Auto relay, @LOS)
- Weight: 300g
- Operating hours: 12 hours
- Ability to block of sound in noisy situations
- World first ANC headset combined radio
- Security: AES-256



Hyundai J-Comm

HYUNDAI J.COMM CO., LTD.

www.jcomm.co.kr

Add: 5F Jungang Induspia 3, 27, Sagimakgol-ro 105beon-gil, Jungwon-gu, Seongnam-si, Gyeonggi-do, 13201, Republic of Korea

Tel: +82-31-639-2676

Fax: +82-31-720-5541

E-mail: jhkim@jcomm.co.kr

Hyundai J.Comm is a first mover in handheld blue force tracking device in Korea since 2007. It provided reliable situational awareness through data communication in radio network by position reporting and C2 messages.

Now company launching Iridium satellite blue force tracker as name of mBFT17. Based on iridium network's pole to pole coverage, it helps our troops always connected and share situational awareness by fast and reliable multi-path communication (3G / 4G, Analog modem)

mBFT17, Multi-path Blue Force Tracker



- Handheld BMS terminal (Blue Force Tracker) for units on the move
- Accurate position identification (Electronic map-vector, raster / built in GPS module & antenna)
- Fast & Reliable position reporting (auto / manual) & message exchange
- Global online through seamless Iridium Satellite network
- Simplified situational awareness through C2 messages
- Multiple I / O (optional)
 - Tactical radio (analog modem)
 - Mobile telecom network (WCDMA, LTE module)
 - Range finder / CBR detector / Computer (window 7 or higher)
- Voice communication (Iridium Telephony / Iridium PTT)- mBFT17V only
 - 5"AMOLED (1,280 × 720), Capacitive multi touch
 - Service Area: Global (Includes polar region)
 - Size (mm): 88 × 191 × 33.5 (Excluding protrusions)
 - Weight: Below 680g
 - CPU / Storage: 1.5Ghz Octa Core / 128GB
 - Battery: Lithium Ion Polymer (3.7V / 5,800mAh)
 - Certification: MIL-STD-810G / MIL-STD-461F / FCC

Multiple Wireless Intercoms System



- Full duplex multi user conference (max. 9 users)
- Active noise cancelling with neck microphone
- Powerful radio control (max. 4 radios for vehicular / 1 radio for portable)
- 2.4GHz secured communication (frequency hopping)
- Frequency type: ISM 2,402MHz ~ 2,480MHz
- Output power / Sensitivity : 100mW / -95dBm
- LOS: <200M @Class 1
- Voice latency: <100ms
- Power: internal Li-Polyemer @3.7V / 2,200mA
- Dimension / Weight
 - Master unit: 85.5(H) × 200(W) × 120(D) mm / <1,060g
 - Slave unit: 111.5(H) × 69(W) × 30(D) mm / <220g



YEONHAB PRECISION CO., LTD.

www.yeonhab.com/eng/

Add: 219-27, Haksusosa-gil, Mokcheon-eup, Dongnam-gu, Cheonan-si, Chungcheongnam-do, 31227, Republic of Korea

Tel: +82-41-620-3230

Fax: +82-41-566-5997

E-mail: Johm@yeonhab.co.kr

Yeonhab has adequate facilities, such as clean room and prevention of anti-static electricity room (total 9,012 square meter, designated personnel : 224) and has been manufacturing equipment, wire harness, and cable assemblies over 36 years. Yeonhab is the No.1 Manufacturer of wire harness, cable assembly, and connectors in Korea.

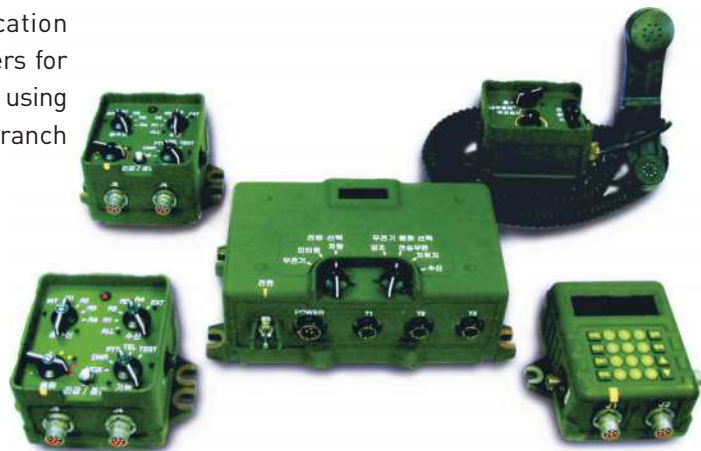
MAIN EXPORT ITEMS

VIC-7DK Intercom (Digital Type)

This digitalized Vehicular intercommunication system can be operated by maximum 6 users for communication between the Crew members, using 4 radios, Tactical Switchboard or Private Branch Exchanger.

Specifications

- Frequency Range: 300 ~ 3,000HZ
- Supply Voltage: 18 ~ 32V DC
- Audio Output: 10Vrms (600Ω) min
- Diagnostic PGM: Built-in Test
- Control Protocol: HDLC Protocol
- Operating Temp: -35°C ~ +50°C





WOORIBYUL CO., LTD.

www.wooribyul.co.kr

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E-mail: shaun130@wooribyul.co.kr

Wooribyul is a market leader in technology whose key breakthroughs include communications and surveillance systems - highly sophisticated and adaptive technologies that provide precise and most effective solutions. Our technologies have powered solutions for clients in a multitude of industries, including government, military, and homeland security and we always strive to exceed customer expectations in quality, delivery and service as we build long-term relationships based on exceptional customer satisfaction.

MAIN EXPORT ITEMS

RoIP (Radio over IP) Gateway Equipment

RoIP (Radio over IP) gateways enables easy communication between communication radios of different makes and manufacturers (VHF / UHF / Military spec / TRS / DMR / iDEN), analogue phones, IP phones, smartphones and PTT servers.

- **Radio Technology**

- Voice communications
- PTT (Push-To-Talk), Voice signal detection
- Voice coding & decoding
- SIP (Session Initiate Protocol) support

- **Network**

- IP: IPv4 (IPv6 available)
- Protocol: TCP / IP, UDP / IP, SIP
- AES128 encryption

- **VoIP Call Management**

- Support: IP phone, FXS, FXO
- Feature: Call, End call, Transfer, Conferencing, DTMF call setup

- **Technology**

- Voice Engine: Auto gain control, Echo canceler, Jitter buffer
- SIP: G.711, G726, G722, DVI4, Linear PCM and iLBC
- Ethernet / WiFi / LTE / 4G / Bluetooth

- **Available**

- Radio: 4~8 ports, available more
- POTS: 4 ports (FXO, FXS each 2 ports), Expendable

- **Power Requirement**

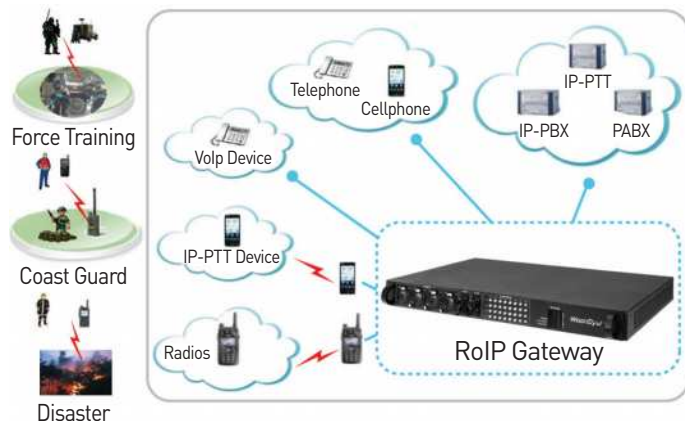
- AC 100 / 220V, DC 12 or 24V



Portable Type



Rack Mount Type





BA SOLUTIONS CO., LTD.

www.jamkor.co.kr / www.basolutions.co.kr

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Tel: +82-31-576-5295

Fax: +82-31-707-7943

E-mail: jamkor@jamkor.co.kr

BA SOLUTIONS is recognized for its ability in IT solution design, consulting and services and manufacturing JAMMER. It is steadily securing the competitiveness of the fourth industrial revolution and defense industry. BA Solutions released Anti-Drone solutions, Drone Sniper and Drone Jammer, that is able to eliminate the side effects of using drones. BA Solutions succeeded in constructing oil cooling jammer that can overcome the disadvantages of the conventional air-cooling method and acquired related patents. In addition, BA Solutions acquired the sales rights of Tethering Drone Solutions that are able to solve the battery problem of the drone. It is possible to overcome the limitations of the drone battery and to establish the drone support system by eliminating the limitation of the drone operation time.

MAIN EXPORT ITEMS

Backpack Jammer

AEGIS-B75W / C

- Total RF Power 75W each (Wide and Cellular) to max 150W
- Water and dust Proof
- Digital Jamming System
- Frequency: The desired jamming band consists of three modules
- 3 mode (Barrage, Sweep, Spot)
- Communication Window (Option)
- Full Band or Cellular Jamming (by customer requirement)
- Back up Battery (Li-Polymer)
- AC / DC, DC / DC Power Supply Unit
- Easy maintenance
- Ultra Wideband Omni directional Antenna
- Weight (with Battery and all included): 15kg \pm 1



Portable Jammer

AEGIS-E series includes

- Product name: AEGIS-E
- Total RF Power 300W (As customer need)
- Rugged Case or Backpack Case (Custom design)
- Digital Jamming System
- 3 mode (Barrage, Sweep, Spot)
- Communication Window Programmable (Option)
- Full Band Jamming (20-2,500MHz or up to 6GHz)
- Back up Battery (Li-Polymer)
- AC / DC, DC / DC Power Supply Unit
- Easy maintenance
- System Editor
- Ultra Wideband Omni directional Antenna



Vehicle Jammer

AEGIS-V1150

- Total RF Power 1,150W (up to 3kW as custom design)
- Water and dust Proof (No cooling Fan)
- Digital Jamming System
- 3 mode (Barrage, Sweep, Spot)
- Communication Window (BEF Function)
- Full Band Jamming (20MHz~6GHz)
- Back up Battery (LiFePO4)
- DC / DC Power Supply Unit
- Operational Temperature: -20°C to +58°C
- Operational Humidity: Up to 95% relative humidity
- Easy maintenance: Modular System
- Frequency Editor
- Ultra Wideband Omni directional Antenna
- Or Ultra Wideband Directional Antenna (Option)



Drone Sniper

- Frequency: 1.5GHz, 2.4GHz, 5.8GHz (Wifi and GNSS) + 1 band (Option)
- Total output power: Depends on customer need
- Jamming Distance: 150m~1km (Depends on customer need)
- Housing: Water Proof, Dust Proof
- Dimension: The supply model will be smaller than the photo's (The size depends on the output)
- Power source: Li-Po
- Completed patent application for technology patent and design patent





VICTEK CO., LTD.

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Fax: +82-31-631-7311

E-mail: tdkang@victek.co.kr

Since its establishment in 1990, VICTEK has become one of the leading company in Korean defense industry by developing and producing cutting edge products in Electronic warfare system, power supply and Signal Processing & Control units. Because out top priority is meeting the needs of our clients, we, Victek, always strive to provide you value that extends beyond your expectation with our product expertise and a deep understanding of defense industry.

MAIN EXPORT ITEMS

Electronic Warfare System

ACES II (Advanced Concept Electronic Support Systems)

ACES II is the compact sized & light-weight Electronic Warfare system for small naval platforms which detects / analyzes / identifies / alerts the hostile attacks or threats in real time by providing highly-accurate frequency and direction of hostile anti-ship guided missiles, radars, etc. and enables the operator to take prompt and appropriate responses.

System Configuration

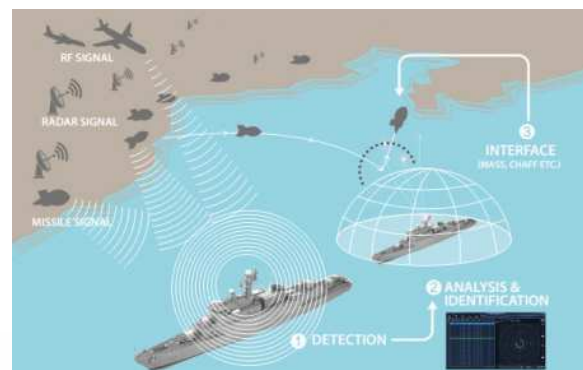
Receiver Units

The Receiver units with the latest amplitude direction finding mechanism are consist of three modular structures, 1 Omni receiver & 2 DF Receivers. These 3 antennas instantaneously and precisely measure the direction of incoming emitter signal on a basis of pulse by pulse.

SPU (Signal Processing Unit)

The SPU provides complex radar signal processing, multi-tasking and parallel distributed data processing, real-time filtering with various parameters, high-speed pre-processor signal filtering and data collection, independent separated receiver divided into two bands, pulse and scan characteristics analysis, threat identification functionality

Operational Concept



OCU (Operation Control Unit)

The OCU is a high performance operator computer with high resolution touch screen monitor. It displays the information of tactical information on the monitor in real-time basis and allows an operator to recognize an exact situational awareness. It can easily be interfaced with various systems (CFCS, FCS, RADAR, Soft Kill Decoy Launching System and etc.) of the ship

RFHIC

RFHIC CORPORATION

www.rfhic.com

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RFHIC Corporation is a leader in the design and manufacture of high-performance RF & Microwave components. RFHIC's products enable worldwide mobility, support advanced functionality and provide enhanced technology in the wired and wireless infrastructure, broadcasting, and defense markets. RFHIC utilizes the most sophisticated technologies including hybrid solutions of GaN (Gallium Nitride), and to become a cost effective solution provider to our all valued customers.

MAIN EXPORT ITEMS

Ku-Band GaN SSPA

RRP162168100-08A

The RRP162168100-08A is designed for Radar system application frequencies from 16.2~16.8 GHz.

This module uses GaN HEMT technology which performs high breakdown voltage, wide bandwidth and high efficiency.

- Frequency from 16.2~16.8 GHz
- GaN HEMT
- 50 Ohm Input / Output impedance
- High efficiency



C-Band GaN SSPA

RRP56571K0-41

The RRP162168100-08A is designed for Radar system application frequencies from 16.2~16.8 GHz.

This module uses GaN HEMT technology which performs high breakdown voltage, wide bandwidth and high efficiency.

- Frequency from 5.25~5.75 GHz
- GaN HEMT
- 50 Ohm Input / Output impedance
- High efficiency



X-Band GaN T/R Module

RFCR91-XTRM-015SP-200A

RFCR91-XTRM-015SP-200A is T/R Module operating at 9.0~9.2 GHz performing 15W output power.

Circulator provides duplexer function and has a built in Limiter Diode which protects receiver. 6-Bit Phase Shifter and Attenuator are controlled by serial data. Bias sequencing is required.

- Frequency from 9.0~9.2 GHz
- GaN on SiC Technology
- High Efficiency
- 50 Ohm Input / Output impedance
- Lower manufacturing cost
- 6BIT phase and attenuation control



GaN SMD Module

HM0225-05A

HM0225-05A have a high performance from 200~2,500 MHz. It has developed for SDR (Software Defined Radio) and TRS (Trunked Radio Service) applications.

Using metal-Lid and AlN-board, it's effective for thermal problems. This HM0225-05A is designed using pout of 5W under pin of 6dBm.

- GaN on SiC HEMT
- 2-stage, In / Out 50Ω Impedance Matching
- Surface Mount Hybrid Type
- Compact Size & Weight
- High Efficiency
- Low Cost
- Custom design available





KS SYSTEM CO., LTD.

www.kssys.co.kr

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 E-mail: hjkim@kssys.co.kr

KS System Co., Ltd., Fast & Steady growing company in Military shelters & Console Business market by through continuous technology development, R&D Investment and quality management system. Our State-of-the-Art Manufacturing capability includes Production facility, assembly facility & skilled work force for Military shelter, Console, LCD, Semiconductor and Telecommunication equipment's sectors. Our Services extended from precision machining, high-level assembling to Sub-SYSTEM ASSEMBLING business scope. We maintain professional management policy to attain customer satisfaction through our employees dedicated workmanship standard and high quality services for mutual success.

MAIN ITEMS

- Mobile shelters
- Communication Cabinets
- Communication Console
- Communication Rack
- Telemetry Systems Housing (ODM)
- Wafer Handling Sub-systems (ODM)
- Heavy Duty Indexing Mechanism (ODM)

LMS-788



- Light weight configuration
- RFI shielding: min. 60dB over 150KHz to 10GHz
- Drop test compliant detachable skid
- Rain & flood proof

ISO 40'



- Light weight configuration
- RFI shielding: min. 60dB over 150KHz to 10GHz
- 6ton lifting load test compliance
- Rain & flood proof

Design Compliance



- MIL-STD-901D
- EMI shielded
- Light weight
- Ergonomic features

Workmanship Standard



- EDS proof
- Particle free
- Galvanic corrosion free
- Micro controlled dimensions



METANETWORKS CO., LTD.

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 E-mail: seneca@metanetworks.co.kr

Meta Networks is a leading company providing solutions in the area of Defense, Smart Security, Network Equipment, and Medical industry. Defense department of Meta Networks mainly provides a DIFAR passive sonobuoy which is dropped into the ocean from ASW aircraft, such as P-3, and used to gather acoustic data to detect anti-submarine.

MAIN EXPORT ITEMS

DIFAR Sonobuoy



Section	Performance
Description	DIFAR / PASSIVE
Length	914 mm
power	Seawater activated battery
Frequency range	136 MHz ~173.5 MHz
Operating time	0.5, 1, 2, 4, 8 hours

Section	Performance
Weight	9.5 kg
Diameter	124 mm
Acoustic frequency	5 Hz ~ 2,400 Hz
Transmission	0~99 channel
Operating depth	30, 50, 120, 300 m



FS CO., LTD.

www.finishedsolution.com

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With over 20 years of experience, FS are well recognized as market leaders in the supply of precision parts components to the defense industry as well as general industry.

We continue to grow as a full service manufacturer offering a wide range of processes and services from in house designs to finished electronic, defense and consumer products.

FS is ISO 9001:2008 registered company which means that we make efforts to achieve the highest quality standards as set by our commercial, industrial and government customers.

We continually strive to offer competitive pricing and on time delivery while maintaining stringent standards of quality.

SONAR



PHS-32

DSQS-21BZ

SQS-58



Using transmitted sound waves to detect and locate submerged objects or measure the distance to the floor of a body of water.

Application / Use

- Small ASW Frigates or Patrol Combat Corvette.

Characteristics

- Submarine Hydro acoustic Active Sensor

CRYCOOLER



Integrated infrared device used in the military is essential to increase the efficiency for the target acquisition.

Application / Use

- Swift acquisition of thermal imaging, apply for a tank / armored vehicle and infrared observation devices in the military.

Characteristics

- Integral Stirling Cooler
- Split Stirling Cooler



DUSITECH CO., LTD.

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DUSITECH Co., LTD. is a venture business that has an original technology of a radio navigation. We supply unmanned systems that converge an automatic inertial navigation (INS / IMU) and error compensation (GBAS / SBAS / NDGPS) of satellite navigation for area of Military, Aviation, Space, sUAV / sUAS and Maritime. We independently developed acquisition analysis of radio error and precision time-synchronization & error compensation algorithm. We have successfully commercialized these technologies. We develop satellite based convergence navigation system and sensor based convergence navigation operation system to solve unmanned systems with convergence technology. Recently our company obtained the development project of space core device and launched Korea navigation Drone(KnDrone). We have a plan to be a global company of unmanned systems with developing unmanned systems to make our lives more convenient.

KnDrone KOREA NAVIGATION UAV



Dusitech Technology Solution

Satellite based Convergence Navigation System

- DGNSS Reference station (Smart type & SBAS / GBAS / MDGPS)
- GNSS (GPS / Galileo) Receiver
- Satellite GNSS Receiver

UAV / UAS Solution

- KnDrone (Korea navigation Drone) System
- 3D Geometric Solution of auto-flight data logger
- Real 2D GIS Solution of commercial sUAS

Operation System of Convergence Navigation

- Convergence Navigation IMU / INS / GINS module
- Jamming / Jammer solution
- Vision Sensor



○ MIL-PRF-31032 / 1 / 4
○ IPC 6012 / 6013

EOS Corporation

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Being one of leading PCB manufacturers, we have been offering our customers powerful and eco friendly products. As an international company, we not only operate in Korea but we are represented all over countries. From CAD to Manufacturing, EOS Corporation provides one stop solution for all kinds of PCB and SMT needs for different companies.

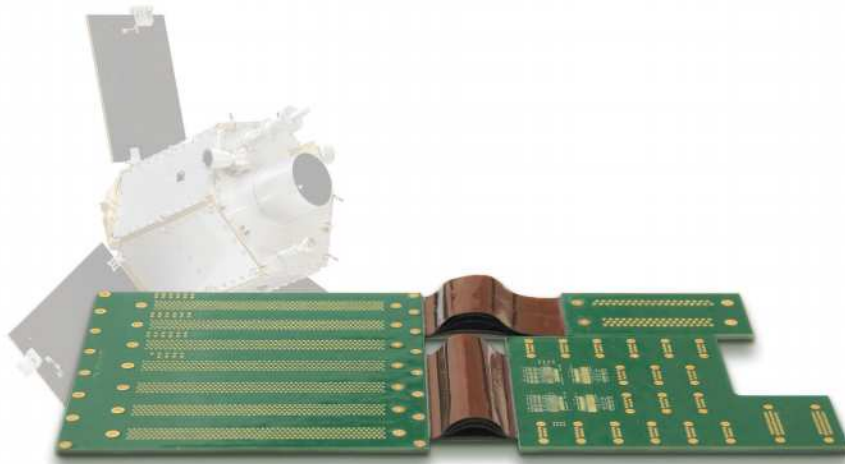
Scope of Service

- CAD Design
- Fabrication PCB
- SMT

Major Products

- Rigid Board
- Flex-rigid board
- Flex board

Flex-rigid board



Both rigid and flexible part are to be integrated, three dimensional space in the device enables smaller and optimized which improves design free. Rigid-flex board is used a variety of industry as Aerospace, Defense and Satellite etc.

FOSTEC

FOSTEC INC.

www.fostec.co.kr / www.facebook.com/fostec1/

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Fiber Optics Technology that Captivates the World

FOSTEC Inc. is a fiber optic components, cables and equipment manufacturer in South Korea. Being founded in 1998, with 19 years history FOSTEC could expand its market to more than 30 countries and keeps capturing customer's satisfaction by its high quality products, affordable prices and professional service.

Since 2015, Fostec participated one of Korean Army projects named TICN supplying military connector and cable.

Expanded Beam Measuring Instrument



- Check out invisible fiber optic condition outdoor to find defectives in advance.
- Laser Source: 1,310nm / 1,550nm
- 4 channels
- Power meter: -55dBm
- Size: 205×100×55 (mm)
- Operating Temperature: -25°C ~ 50°C
- Material: Aluminum

Expanded Beam Fiber Connector

- Fiber optic connectors and cable assemblies for use in the most demanding harsh environment applications.
- Advanced Expanded Beam technology
- Hermaphroditic connector design
- 1 to 16 optical channels
- Multimode and Single mode versions
- Adopted solution by US and Korea Army & Airforce



Fusion Splicer MOFF-S



- Fiber Alignment Splicing Method
- Mirror less Design, Fast Splicing Time
- High efficiency, Above 500 times of Magnification and Resolution
- Bright LED light for dark environment
- 5" High-Resolution Color LCD Touch Screen,
- Easy to replace electrodes, Adapt to harsh weathers
- Anti dust and high temperature, Ceramic Clamp for Better
- Durability, High capacity battery



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GigaLane is a Korean No.1 RF / Microwave connectivity solution provider. We design and manufacture RF / MW connectivity (cable, connector) in-house for the use of Radar, Aerospace, E / W, Mil-communication systems. We Know how to furnish the best and optimized solution for your system. Our cable and connectors are working well on the field and flying high in the sky, adopted on our customer system and platform, without a issue for 7 years in a row.

MAIN EXPORT ITEMS

Low Loss Cable
(Extruded / Taped)



Airborne Cable

**Semi-Flexible /
Semi-Rigid Cable**



**Precision
Connectors**



**End Launch
Connectors**

**Precision
Adapters**



* We provide TD on your demand



HUMEDIA CO., LTD.

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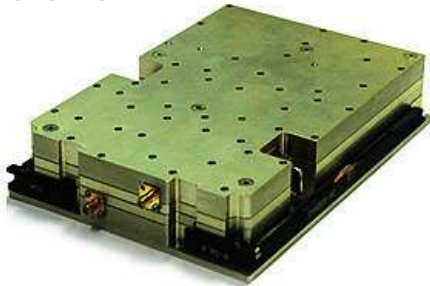
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E-mail: humedia@humcd.co.kr

Development and manufacture of electronic and communication equipment, UAV, Ultra high frequency RF modules used for radar, etc., Frequency synthesizer, AMP, Control parts, and so on

MAIN EXPORT ITEMS

X-Band UPC



- Output frequency: X- band
- ACLR: 1 dBc or lower
- Flatness: 2 dB@BW
- VSWR: 1.5: 1 (max.)
- Applied to tactical system (frequency synthesizer embedded)

X-Band AMP



- Frequency: X-Band
- P1dB: 42dBm
- Gain: 36dB
- Linearity: -35dBc ↓
- Emission Mask:
35dBc @ Fc ±11MHz, 55dBm @ Fc ±22.5MHz

Digital Transmission Module



- 3 Gbps digital transmission
- Wavelength range of 1,310~1,570 nm
- Automatic troubleshooting function embedded
- The related military standard is fulfilled.
- Applied to tactical system

M/W Frequency Synthesizer



- Fixed LO Output: 2,000MHz
- Fixed LO Output Level: +13dBm
- Phase Noise:
90dBc @1KHz, 110 dBc @100KHz,
100 dBc @10KHz, 120 dBc @1MHz



KUKDONG

KUKDONG ELECTRONIC PRECISION CO., LTD.

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KUKDONG Electronic Precision was established in 1998. We specialized in the manufacturing of connectors, cable harness and electronic equipment components. Our products isn't solely use by Korean Army. It is also widely use by local defense equipment manufacturers and the civilian industries. We deliver MS connectors to U.S.A., U.K., Germany, Australia, R.S.A, Brazil and China.

We are one of the leader in the use of localization of parts from development stage to final. We work closely to establish the final product with the defense equipment manufacturers. KUKDONG will put extra ever effort than ever before and grow together with their customers, to become a company acknowledged as a reliable and quality orientated manufacturer.

PRODUCT LINE-UP

Connectors

- MIL-DTL-5015
- MIL-DTL-22992
- MIL-DTL-26482 I, II
- MIL-DTL-38999
- MIL-DTL-55181
- KDB (VG95234)
- Waterproof connector
- High current connector
- EV Connector
- Adapter



Cable Assembly

- EMI Shielded cable assembly
- Engine / Power / Signal cable assembly



Electronic Equipments Components



KUKDONG TELECOMMUNICATION CO., LTD.

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Kukdong is a defense company specialized in the field of radar and communication antennas and its key components. With the founder's motto, "Contribution to the Nation by Radio Technologies", we has been supplying various kinds of radar and communication antennas to Korea defense industries and involved and contributed to a lot of national R&D projects.



Technical Data

Type	CHUN-MA Ant	SPS-95K Search Ant	BI-HO Ant	TPS-830K Ant	PKM Tracking Ant	Navigation Ant
Frequency Band	S-Band	C-Band	L-Band(IFF), X-Band		Ku-Band	X-Band
Polarization	Horizontal	Horizontal	Linear / Circular Selectable		Vertical	Horizontal
Gain	≥24 dBi	≥32 dBi	≥30 dBi	≥33 dBi	≥41 dBi (Differ 39 dBi)	≥32 dBi
3 dB Beamwidth	Azimuth 5.2° Elevation 11°	Azimuth 1.6° Elevation 11°	Azimuth 1.4° Elevation 8°	Azimuth 1.4° Elevation 7°	Azimuth 2.2° Elevation 2.2°	Azimuth 0.6° Elevation 21°
VSWR	≤1.3:1	≤1.5:1	≤1.5:1	≤1.5:1	≤1.2:1	≤1.5:1

Type	CHUNG-KUNG MFR Phase Shifter	3D Search Radar Ferrite Phase Shifter
Frequency Band	X-Band	X-Band
Phase Resolution	4 bit operation	5 or 6 bit operation
Phase Accuracy	≤6.5° rms	≤5° rms
Insertion Loss	≤1.3 db	≤1.2 db
Switching Time	≤50 us	≤70 us



navcours

Navigation & Communication
using Radio and Satellites

NAVCOURS CO., LTD.

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Navcours is a defense company specializing in location and timing technologies with R&D and manufacturing capabilities. Navcours has been a leading company in navigation for the last 20 years and has been on a par with the world's best in the field of anti-jamming for GPS interferences. Navcours has already acquired the AS9100 international quality management system standard, and has certified to the NADCAP PBA division, and has acquired competitiveness for overseas aerospace cooperation.

JRAS("All-in-one" GNSS Anti-Jamming System)

Features

Single enclosure anti-jam antenna system
Easy to integrate, ideal solution for retrofitting
Customization available and compatible with most GPS receivers
Ideal solution for narrow/wide-band jamming
Optional GNSS sensing and Beamforming
SWaP and cost-effective

SPECIFICATION

Frequency	GPS L1
Antenna	CRPA
Elements	4 or 5
Anti-Jamming Protection	Up to 00dB(optional +0db)
Dimension(mm)	[4-array] $\Phi 121 \times 67$, [5-array] $\Phi 156 \times 72$
Weight(kg)/Power	[4-array] 1.5kg, 25W, [5- array] 1.8kg, 30W
Environmental	MIL-STD-810G
Options	GPS/GLONASS Receiver, Beam-forming



GNSS & 통합항법

항재밍/항기만



항공우주



PNT 인프라

Business, Products and Services

- GNSS chip and sensor(GPS/GLONASS/Galileo)
- GNSS/INS integrated system
- Anti-jamming GNSS(Antenna array, Jammer tracking, Pseudolite)
- Aerospace & PNT infra solutions
- Telemetry solutions
- Industrial cooperation(Oversea Offset) for aerospace production
- Others(Navigation M&S/HILS, GNSS antenna/Splitter/Line-amp)



QNION CO., LTD.

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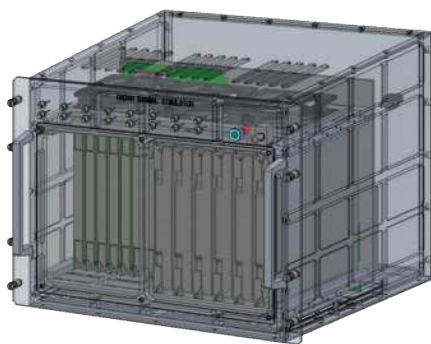
E-mail: martin.park@qnion.com / ywkim@qnion.com

Qnion Co., Ltd. is a specialized defense and space company based on AS9100C Quality Management System. We have contributed to these industries by participating with four sectors such as Defense System, Embedded Solutions, RF Simulators and Space Division. We have developed Embedded Solutions for military aerospace combined with microprocessor, digital signal processing application design technology which are widely used in Army, Navy and Air Force. We are focusing on both military systems of C4I, ISR, EW, PGM, Avionics and Space Program. We always strive to produce high quality products for customer's satisfaction and also we invest consistently to major business which will be foundation of future growth.

Threat-Radar Signal Simulator



DTO



DDS Freq. Synthesizer

Technical Data

- Frequency Range: 2~18 GHz (0.5~40 GHz, Optional)
- Frequency Accuracy: ± 1 MHz (DTO), ± 10 kHz (DDS Freq. Synthesizer)
- PW Range: 20 ns ~ 20.9 sec. and CW
- PRI Range: 1 μ s ~ 2,684 sec.
- RF Output Port: 2~4 ports
- Monitor Output: 2~18 GHz
- Emitters: 64 Complex Emitters (up to 256ea)
- Potable 19" Rack-mounted Format
- Ethernet Control Link

X-Band Output Filter for GEO-KOMPSAT 2A/2B



Technical Data

- Center Frequency: 8,300 MHz
- Bandwidth: 62.2 MHz
- Insertion Loss: 0.49 dB
- Return Loss: 22.3 dB
- Group Delay Variation: 4.88 nsp-p @Fc ± 23 MHz
- Environment: Thermal Vacuum Temperature, Shock, Vibration, Sniff, Multi-pactor Test



SOLVIT SYSTEM CO., LTD.

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Solvit System is one of the most experienced and well known company for modeling and simulation in military and defense communication systems, which is broadening the horizon to embedded software and testing systems in Korea. Field of Solvit System's business is "Defense M&S (Modeling and Simulation)", "Embedded Software Development", "Testing Automation".

RCS (RF Channel Simulator)

- Simulates RF environment of field
- Enables performance tests of RF equipment in lab environment

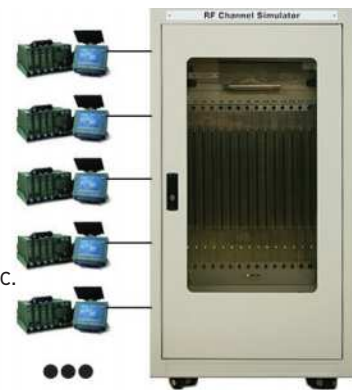
The application areas of RCS

are "Development tests", "Evaluations", "Performance analysis and contingency planning", and "Training".

- Combat Network Radio, JTRS, Tactical Data Link, UAV Link, USN, Mesh system, etc.
- Currently used successfully in Korean TMMR (similar to JTRS) developments and tests

Benefit

- Save in time, money, human resources, and space for developments and tests
- Risk mitigation, quantified test and evaluation, practical operation planning and training



H/W Specifications

Weight	120 kg
Dimensions	600 × 760 × 1,127 (mm)
Chassis	19" rack size (EMI shielding structure)
In / out impedance / Connector	50 ohm / N-Female Type
Operating frequency	VHF: 30~512 MHz (UHF to 6 GHz, Optional)
Number of in / out ports	16
Number of RF path	120 (Full mesh)
Path loss control range	0 ~ 126 dB / 0.5 dB step
Port isolation	Min. 120 dB*
VSWR	1 : 1.6
Insertion loss	45 dB
Max. operating RF input / output power	30 dBm / -15 dBm
Control interface	RS-232, Ethernet 100 Base-T
Operating temperature / Max. humidity range	-20°C ~ +50°C / 95%
Max. power consumption	15W
Path loss control error calibration	Compensates path loss errors caused by device characteristics

* The technique to achieve the level of isolation is Solvit System's proprietary and in the process of patent application



SUNGSAN

Electronics & Communications Co., Ltd.

SUNGSAN ELECTRONICS & COMMUNICATIONS CO., LTD.

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E-mail: sungsan@rfzone.com

RF Leader in Korea and Export-oriented Company

Since its establishment in 2001, Sungsan has been developing and exporting broadband amplifiers using GaN device and linear HPAs using several linearization technologies such as Analog predistortion and feedforward. Since 2010, in an effort to shift their focus from amplifier modules to amplifier systems, Sungsan has been successfully proposing broadband high power amplifier solutions for EMC lab testing and for heavy-ion accelerator fields.

MAIN PRODUCTS

General Amplifier (Jamming, UAV, Interception)

- FM, AM, CW Boosting
- Jamming System
- RF Passive Test System
- RF Energy System



Linear Amplifier (Repeater, DAS, Base Station)

- LTE, WCDMA Signal Amplifier
- RF Repeater
- Distributed Antenna System
- Line Amplifier
- Amplifier for Digital Television



Special Purpose Amplifier (Radar, EMC Testing, Accelerator)

- EMC Testing
- Experiment for Laboratory
- Radar for Marine
- HPA for Aerospace





U-TEL CO., LTD.

www.u-tel.co.kr/eng/

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Tel: +82-31-427-1020

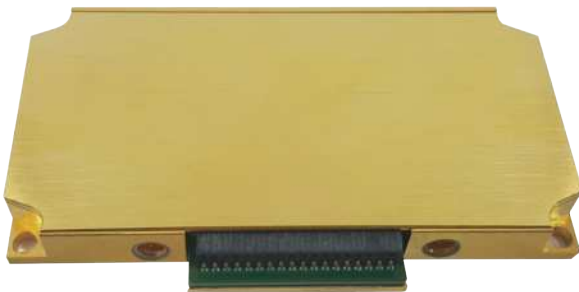
Fax: +82-31-427-1030

E-mail: bgkang@u-tel.co.kr

U-Tel Co., Ltd. was established in 2000 as an organization specialized in design, development and manufacture of microwave and millimeter-wave module and subsystem. With our cutting-edge technology, we utilize our expertise to design, develop, measure and manufacture professional and cost-effective solutions for clients worldwide.

MAIN EXPORT ITEMS

X-Band TRM (4CH)



Specifications

- 10 W Tx Output Power
- 3.5 dB Noise Figure
- 6 Bit Serial Phase and Amplitude Control
- 35.0 × 67.5 × 7.0 (mm)

Characteristics

- Brick Type 4 Channel Structure
- High Efficiency GaN Technology
- Low Cost / Weight Packaging Technology

S-Band High Power Amplifiers



Specifications

- 200 W Output Power
- 9.0 dB Power Gain
- 55% Typical PAE
- 85.9 × 38.9 × 10.5 (mm)

Characteristics

- High Efficiency IM-FET GaN Technology
- Single 38V Pulsed Bias



ZHT CO., LTD.

www.zht.co.kr

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Fax: +82-2-6499-1912

E-mail: hongsik.kim@zht.co.kr

ZHT is a specialized company established in 2004 that develops and produces advanced core modules of military systems in the field of parts and materials.

ZHT has the ability of research and development of Military Systems such as Microwave modules, HVPS and Power system by leading technologies in RF, power, and Digital systems.

ZHT is specialized in producing and servicing core components and modules of Military systems by high level of facilities in PCB, testing and system assembling.

BUSINESS, PRODUCTS AND SERVICES

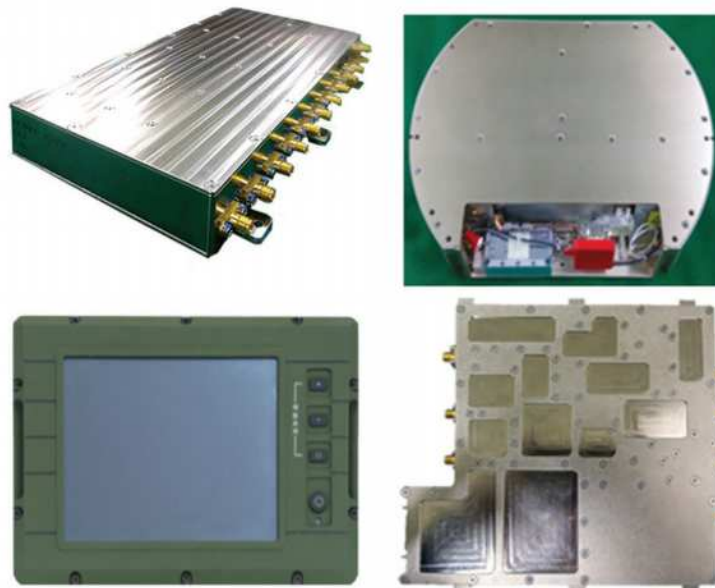
Missile / Radar / Communication Equipment Modules

RF Module: Transmitter-Receiver, Frequency Synthesizer,
TWTA (Traveling Wave Tube Amplifier) / HVPS (High Voltage Power Supply)
for MPM (Micro Power Module) etc.

Electronic Warfare / C4I* / Avionics Modules

Tactical Computer, Display Unit, Supply Power System etc.

*C4I: Command, Control, Communication, Computer and Intelligence]





AIRCRAFT

KOREA AEROSPACE INDUSTRIES, LTD.	130
KOREAN AIR LINES CO., LTD.	134
UCONSYSTEM CO., LTD.	138
FINE KOWAC CO., LTD.	139
HANWHA AEROSPACE CO., LTD.	140
UI HELICOPTER CO., LTD.	142
ASIA PACIFIC SATELLITE INC. (APSI)	143
SATREC INITIATIVE CO., LTD. (SI)	144
SI IMAGING SERVICES CO., LTD. (SIIS)	145
NAVIWORKS CO., LTD.	147
AERO PEACE INC.	148
KENCOA AEROSPACE CORPORATION	149
FIRSTEC CO., LTD.	150
AERO MASTER CORPORATION	154
DACC CARBON CO., LTD.	155
DAWIN FRICTION CORPORATION	156
KOLON DACC COMPOSITE CO., LTD.	158
KOMACO CO., LTD.	160
KOREA LOST-WAX CO., LTD.	161
PSIONDSP CORPORATION	162
FOREX	163
FINE PRECISION IND., LTD.	164
HYOSUNG HEAVY INDUSTRIES CORPORATION	165



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KAI (Korea Aerospace Industries, Ltd.) is the sole unified aircraft manufacturer in Republic of Korea today, leading the development of national industry for tomorrow.

KAI has successfully completed the initial KFP (Korean Fighter Program) and received additional production orders from its customer. Meanwhile, KAI has started the serial production of KT-1, a basic trainer aircraft indigenously developed with Korean technologies and currently received export orders and successfully delivered them to the international customers.

KAI has successfully completed the T-50 multi-role aircraft based on its extensive experience and knowledge. Further, KAI has outcome of the successful exports of T-50 to Indonesia, Philippines, Thailand and Iraq.

KAI succeeded in developing the Korean Utility Helicopter project, the Korean first home-grown helicopter currently operated by RoK Army. Meanwhile, KAI was contracted as the integrator of KF-X (Korean Fighter Program) & LAH / LCH (Light Armed Helicopter / Light Commercial Helicopter) program. KAI is expanding its commercial business by strengthening its partnerships with global airframe manufacturers such as Boeing and Airbus.

KT-1 Multi-Role Aircraft

KT-1, developed with Korea's indigenous technology, started its operation in the ROK Air Force for the Pilots' basic flight training course from year 2000. The KT-1's safety and performance was proved by its outstanding flight records. In particular the excellent spin recovery characteristics as well as reliability and safety features are the best value in its class. Based on aforementioned advantages, the KT-1 has been exported to Indonesia, Turkey, Peru and Senegal. KAI develops more prospective customers by further upgrades and modifications to meet customer's specific requirements.

Performance	Dimensions
<ul style="list-style-type: none"> · Turbo-Prop Engine (P&W PT6A-62) · 0-0 Ejection Seat (Tandem) · Full Glass Cockpit (MFD, HUD) · Jet-Like Flying Quality (ARTS) · Night Vision Imaging System (NVIS) · OBOGS, Anti-G, Pressurization · Weapons Capability (Bomb, Rocket, HMP) 	<p>10.3m (33.7ft)</p> <p>4.2m (13.7ft)</p> <p>10.6m (34.8ft)</p> <p>3.7m (12.0ft)</p>

Specification		Weapon Capability	
Max. TO Gross Weight	Power Plant		
7,300 lbs	950 shp		
Max. Speed	Service Ceiling		
350 keas	35,000 ft	Max. To Gross Weight 7,300 lbs	
Design Load Factor	Max. Rate of Climb		
-3.5/+7 g	2,900 ft/min		

T-50 Multi-role Aircraft

Developed under the partnership with Lockheed Martin Aeronautics, the T-50 has demonstrated its outstanding performance and excellent training efficiencies as an optimized supersonic advanced jet trainer aircraft. With the successful development of the T-50 in 2005, Korea became the world's 12th country to produce indigenous supersonic aircraft and the 6th country to export it with signing the contract with Indonesia in 2011. In particular, the T-50 family has been highly recognized for their competitiveness in the world which advanced jet trainer and light combat aircraft market via follow-on exports contracts to Iraq in 2013, the Philippines in 2014 and Thailand in 2015. With its high energy maneuvering and multipurpose mission capabilities, KAI has been strengthening its position to the United States trainer market, value of about 20 billion USD to become a solid leader in the trainer aircraft market in the world.

T-50 is a true multi-role aircraft that fulfills requirements of advanced pilot training and light combat missions in a single platform.

Weapon Capability

- A to G: GBU-38/B JDAM, CBU-105 WCMD, BDU-33D/B (under SUU-20), MK-82 500-LB LDGP, AGM-65 A/B/D/G MAVERICK Missile
- A to A: AIM-9L/M/S SIDEWINDER, AIM-9N/P SIDEWINDER, INTERNAL GUN (200 rounds)

Dimensions

- Wingspan: 13.14m (43.1ft)
- Length: 9.45m (31.0ft)
- Height: 4.81m (15.8ft)

Specification

Max. Design Weight	Power Plant	Thrust-to-Weight	Max. Speed	Design Load Factor	Service Ceiling (Designed)	Max. Rate of Climb
27,300 lbs (12,383kg)	17,700 lb (78.7kn)	1	mach 1.5	-3/+8 g	55,000ft (16.7km)	37,000 ft (11.3km/min)

KOREA AEROSPACE INDUSTRIES, LTD.

KUH-1 Multi-Purpose Helicopter

KUH-1 was developed as the first Korean indigenous helicopter to replace the aged helicopters of RoK Army such as UH-1 and 500MD. The successful development of KUH-1 led Korea as the 11th country in the world to develop a helicopter. The KUH-1 has been deployed and in operation by the RoK Army since 2012. KAI is in the process to develop its variants such as amphibious, police, MEDEVAC and etc.



- Internal Aux. Fuel
- Emergency Floating
- TACAN/HF Radio
- 7.62mm Machine Gun
- Rotor Folding

AMPHIBIOUS



- 6 Electric Stretchers
- EMS Equipment
- Weather Radar
- Rescue Hoist
- Wireless ICS

MEDEVAC



- Weather Radar
- External Fuel Tank
- Search Light
- Loud Speaker
- Video transmitter
- Fast Rope/Rappel

POLICE



- Search Radar
- External Fuel Tank
- Rescue Hoist
- Air Conditioning
- SAR-DF/ELT/AIS
- GARMIN Avionics Suite

COAST GUARD



- Fire Fighting Belly Tank
- Stretcher/EMS Equipment
- Rescue Hoist
- Weather Radar
- Air Conditioning
- SAR-DF/ELT/AIS

FIRE FIGHTING



- Fire Fighting Belly Tank
- Rescue Hoist
- Emergency Floating
- HTAWS
- ELT

FORESTRY

KUH-1 Derivatives

Based on KUH-1 utility platform, diverse derivatives such as military (Amphibious, MEDEVAC) and parapublic (Police, Coast Guard, Fire Fighting, Forestry) are offered

Key Features

- Full Digital Glass Cockpit
- 4-axis Automatic Flight Control System
- Advanced Articulated Rotor System
- 1800 Shp+ GE T700 Engine with FADEC
- Crashworthy Design
- Advanced Electronic Warfare System
- Auxiliary Power Unit
- Crashworthy and Self Sealing Fuel Tank

Dimensions



Characteristics (Utility configuration, ISA, SL, Max Weight)

Max Weight 19,200 lb (8.7t, INTERNAL LOAD)	Max Cruise Speed 152 kts	Max Range 433 nm (801km, INTERNAL AUX.FUEL)	Hover Ceiling 6,500 ft+
Service Ceiling 15,000 ft+	Max Endurance 4 hr 11 min (INTERNAL AUX.FUEL)	Useful Load 8,000 lb+ (3.6t+)	External Load 6,000 lb (2.7t)

Aerostructures

KAI is a partner of global commercial aircraft manufacturers such as Airbus and Boeing and KAI has participated in various international joint development projects from design and analysis to production and delivery. KAI has involved in the development of B787-9 composite wing structure with Boeing, and A350XWB with Airbus. KAI's performance has been awarded the Top 20 Supplier of Airbus and the Supplier of the year 2010 and 2012 from Boeing. Also, KAI acquired Airbus' approval of designing the aircraft wing structure first time in 2015. KAI has strengthened to seek its role as a joint development partner for new commercial aircraft program in the future.

Space Program

KAI has been actively participating in the entire fields of satellite development in accordance with National Space Development Plan such as KOMPSAT-1 to KOMPSAT-7, CAS-500 and Geo-KOMPSAT series. From its experiences, KAI has secured key technologies for satellite development. Especially, one of the national policies, transfer technology of CAS-500 owned by government to space industry, allows KAI to be a leading company for industrialization stage from 2nd satellite of 1st phase (including 2nd phase). KAI is playing a key role to develop the CAS-500 and to have indigenous standard satellite platform. In the Korea Space Launch Vehicle (KSLV) program, KAI was selected as a leading company to develop subsystems as well as final assembly. Moreover, KAI is implementing co-design of lunar probe development with KARI. With a continuous challenge and dedicated efforts through successful achievement of those activities, KAI will be a leading and representative space company in Korea.

Training System

KAI provides comprehensive training programs for pilots and mechanics along with aircraft and logistics support system for the complete lifecycle of aircraft in Korea. Training systems offered by KAI are recognized as the most sophisticated solution for its high training efficiency, cost effective, and time-saving effects. KAI is planning to establish a comprehensive training center in the future to offer systematic training services to domestic and foreign organizations by utilizing KAI brand aircraft. It will also take the lead in the establishment of a Live-Virtual-Constructive model, which is coming into the spotlight nowadays, for sustainable future growth.

UAV

Co-developed by KAI and the Agency for Defense Development (ADD), the RQ-101 is the first tactical reconnaissance UAV in Korea and it has been in operation by the RoK Army for wide area surveillance, reconnaissance, and target acquisition. Through our advanced in-house R&D effort, KAI holds core technologies and infrastructures for developing diverse types of UAVs such as precision strike, combat, etc., and KAI is currently developing the next generation corps-level UAV of the RoK Army. The next-generation corps-level UAVs can be developed for various purposes and KAI will actively carry our overseas UAV export marketing.

MRO

Along with aircraft development, production and test, KAI performs maintenance, repair and overhaul (MRO) to fulfill our responsibility as a leading aircraft manufacturer and total solution provider. With our accumulate MRO experience in various military aircraft such as F-16, KAI has carried out maintenance services for the US Navy's H-53 helicopters as well as MRO business for the stable operation and maintenance of aircraft developed by KAI, including KT-1, T-50 series and the UAV. KAI has been expanding our MRO business to commercial airline maintenance business back in 2012. KAI plans to promote the MRO business as a future growth engine.



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Korean Air is the largest airline and flag carrier of the Republic of Korea. In addition to the commercial airline business, we also maintain a division that generates revenue from researching, developing, and manufacturing Aerospace products.

Korean Air aerospace Division, leading the future of the Korean aerospace industry, is the best domestic total solution provider. Korea Air Aerospace Division continues to excel in area such as UAV, manufacturing and exporting aircraft parts; reconstruction and maintenance of aircraft; and designing and developing aircraft.



Multi-purpose Tactical UAV (KUS-FT)



Technical Data

Size (m)	3.7(L) × 4.5(W) × 0.9(H)
MTOW	150 kg
Power plant	35hp Rotary Engine
Take-off	Launcher (automatic)
Landing	Arrest hook & net
Speed (max.)	000 km/h
Altitude (max.)	00,000 ft
Endurance	0 hrs
Operation range	000 km (LOS)

Key Features

- Deep dive & steep landing
*Approach angle 8°~12° / Stops within 30m
- Autonomous takeoff & landing
(day/night and unpaved road)
- Continuous 24/7 mission capability with multiple UAVs
- Extend the operation range through additional communication relays
- Fail-safe system (flight-critical equip.)
- Airworthiness type certification awarded by ROK

KOREAN AIR LINES CO., LTD.

High Performance Strategic MALE UAV (KUS-FS)



Technical Data

Size (m)	13(L) × 25(W) × 3(H)
MTOW	0,000 kg
Power plant	1,200hp Turboprop
Speed (max.)	000 km/h
Altitude (max.)	00,000 ft
Endurance	00 hrs
Operation range	000 km (LOS), 000 km (SATCOM)

Key Features

- Fully Automated Precision Landing
 - * No external pilot required (night / fog / rain / wind)
- Dual Redundancy for flight critical system (Dual flight control computer, dual navigations systems)
- Developed in accordance with STANAG-4671
 - * Military UAV system airworthiness requirement satisfied
- Ground LOS and SATCOM communication relay

Unmanned Helicopter (KUS-VH)



Technical Data

Key Features

- Multi-purpose system (Attack and air delivery)
- Economical fielding cost
- Maximization of Payload

Tilt-rotor UAV (KUS-VT)



Technical Data

Size (m)	3.5(L) × 5.2(W)
MTOW	200 kg
Power plant	55hp Rotary
Payload	30 kg
Speed (max.)	250 km/h
Altitude (max.)	15,000 ft
Endurance	6hr
Operation range	60~200km

Key Features

- Autonomous VTOL (No runway required)
- Provides similar flight performance to fixed wing UAVs
- Shipboard operation capability
- Duplex system redundancy
- Continuous 24/7 mission capability with simultaneous C2 of multiple UAVs

NextGen stealthy UCAV (KUS-VC)



Technical Data

Size (m)	10(L) × 16(W) × 3(H)
MTOW	0,000 kg
Power plant	Turbo-jet
Speed (max.)	000 km/h
Cruise Speed	000 km/h
Endurance	6 hr
Operation range	000 km

Key Features

- Stealthy performance
- Tailless configuration flight control
- Internal weapon bay for precision guided bombs and missiles



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Uconsystem Co., Ltd. was founded in 2001 by the leading research engineers who developed the first Korean first Korean tactical UAV system which is in service now. Uconsystem has focused on the UAV business since establishment. Uconsystem have led localization of UAV subassemblies through this "Choice & Focus" strategy and we supplied the UAVs of battalion class in 2008, which are the second localized UAV system for Korean Military. We have also been trying efforts to develop overseas markets since we exported ground control stations for UAE Air Force in 2004 for the first time in Korea.

We entered into civil UAV business with selling unmanned helicopters for agricultural crop dusting in 2008. We have also joined the Korean MUAV project which is led by DAPA & ADD and we are developing ground control stations for big UAVs.

MAIN EXPORT ITEMS

Long-Endurance UAV

- Border control & port security
- Federal and local law enforcement
- Anti-terror activities
- Critical infrastructure / Facility protection
- Mega event protection and crowd control
- Special forces, Infantry and Naval operations

Specifications

- Wing span: 1.8 m
- Length overall: 1.8 m
- Endurance: 24 hrs+
- Max. take off weight: 30 kg
- Max. payloads weight: 6 kg
- Operational altitude: 50~100 m

Feature

- Automatic takeoff and landing
- Advanced flight management system
- User friendly operation
- Low lifecycle cost
- Large variety of payloads



T-ROTOR (Tethered Rotor)

Over 24 Hours Endurance
Day & Night Surveillance
Easy Move to the designated Site



FINE KOWAC

FINE KOWAC CO., LTD.

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What We Do

Fine Kowac is a Korean engineering company established in the year 1992. Presently, it is renowned as a leading company in the field of military UAVs in Korea. Fine Kowac products, services and systems are specified to support armed forces target drone for weapon training systems. Currently, with the basis of the outcome from the military UAV in Korea, we are in the process of promoting export to the world market.

Business Performance

Jun. 2016 The development of high speed target drone for ROK Air force

May. 2013 To develop the new target drone with autopilot for ROK Army

Apr. 2013 To finish the development of remote type hydraulic & pneumatic Launcher and Recovery system for ROK Army reconnaissance

Apr. 2013 To submit export quotation to Thailand defense department for target drone system

Dec. 2010 To start the turn key target drone service for ROK Army

Dec. 2009 To finish the development of UAV research project for ROK Army reconnaissance

AERIAL TARGET DRONE & CATAPULT (LAUNCHER)

FDS-LH 2000 (Launcher system)



Specifications

- Length: 13 m (Acceleration 10 m)
- Launch speed: 100~120 km/h
- Launch angle: 0~10 degree
- Launch weight: 80~250 kg
- Acceleration: Max. 10G
- Power source: Pneumatic (N2) & Hydraulic
- Transportation: Folding 3 layer

FDS-TAPM 2000 (Aerial target system)



Specifications

- Length: 2.0 m
- Wing span: 2.2 m
- Engine: 24 hp
- MTOW: 60 kg
- Speed: 150~300 km/h
- Altitude: 100~5,000 m
- Operating range: 20 km (Option 50 km)
- Endurance: 50 min.
- Recovery: Parachute
- Payload: IR emitter(4), MDI, Radar reflector, IR enhancer



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As the only gas turbine engine manufacturer in Korea, Hanwha Aerospace has become a leader in the cutting-edge machinery industry, specializing in the development, production, and maintenance of gasturbine engines.

Hanwha Aerospace was established in 1977 to develop gasturbine engine business in Korea and has expanded its business to various fields and also Hanwha Aerospace provides Gasturbine Engine AIT(Assembly Inspection & Test), MRO services for domestic and overseas military customers.

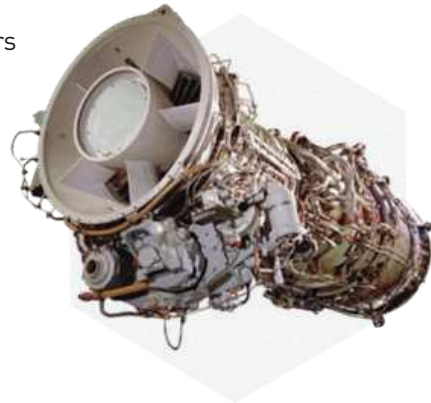
MAIN EXPORT ITEMS

LM2500

- Main gas turbine engine propulsion for ROK Navy destroyers
- Proven reliability and most widely used gas turbine engine by Naval forces around the world

Technical Data

Type	TURBO SHAFT
Power	33,600 shp
Size(L×W×H)	652cm×190cm×204cm
Weight	4,674 kg
Application	DDh/DDG, FF/FFG, PCC



LM500

- Main gas turbine engine for ROK Navy patrol ships
 - Successful completion of PKG_A in 2013
 - Confirmed for PKG-B
- Implementation of stable ILS system

Technical Data

Type	TURBO SHAFT
Power	6,134 HP
Size(L×W×H)	219cm×79cm×97cm
Weight	617 kg
Application	PKG



Ship-to-Ship Missile Engine

- Main gas turbine engine for ship-to-ship missile

Technical Data

Type	TURBOJET
Power	970 Lbf
Size(L×W×H)	138cm×270cm×310cm
Weight	80 kg
Application	DDG, FFG, PKG-A



KUH APU

- Auxiliary engine for KUH(can also be used as Navy's LSF generator)

Technical Data

Type	TURBO SHAFT
Power	130kW
Size(L×W×H)	82cm×49cm×47cm
Weight	50 kg
Application	KUH

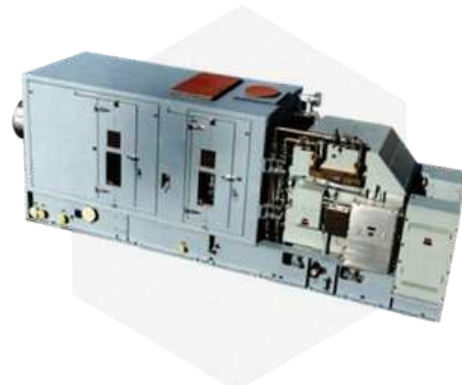


AG9140

- ROK Navy's first gas turbine type on-board ship generator
- Proven reliability and provides stable power supply for ROK Navy ships

Technical Data

Type	501K-34
Power	3,229 kW
Size(L×W×H)	856.5cm×254cm×337.8cm
Weight	30,345 kg
Application	DDG



MRO of Engines

“ Hanwha Aerospace is your dedicated partner for engine MRO, as we contribute to successful completion of missions. ”





UI HELICOPTER CO., LTD.

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UI Helicopter Co., Ltd., founded in 1986, is a premier helicopter MRO (Maintenance/Repair/Overhaul) services & parts provider; Bell's Customer Service Facility, Leonardo's Service Centre & Sikorsky's appointed Customer Support Center. UIH successfully delivered 331 UH-1H's with Depot Level Maintenance completed to the ROK Army. With the professional experience and technologies accumulated over the past 30 years on helicopter MRO and CR&O, UIH can help your helicopters to keep flying.

MAIN BUSINESS AREAS



Airframe

- PDM (Programmed Depot Maintenance)
- Structural Repair
- Modification
- Rebuilding Accident Helicopters
- Schedule Inspection
- Field Maintenance
- Corrosion Treatment & Painting
- Electrical Wiring



Components

- M/R & T/R Blade
- M/R & T/R Hub
- Transmission
- M/R Mast
- Quill
- Intermediate & Tail Gear-Box
- Servo Actuator
- Emergency Float
- Fire Fighting Equipment





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APSI(Asia Pacific Satellite Inc.) is a leading mobile satellite communications company that empowers people with tools to bring the organizations and communities they serve closer together. We have worldly renowned technological competitiveness in specialized area of total satellite technology and satellite communication devices. APSI is also one of Korean frontiers dominating technologies in the aerospace sector. Particularly, our remarkable growth for the over decade is based upon the successful achievement of huge aerospace R&D projects regarding satellite and aircraft.

MAIN EXPORT ITEMS

XT-PRO DUAL (Satellite Communication Terminals)



- Size: 138×57×27 (mm)
- Weight : 222 g
- Call and messaging services: Calls, SMS to email, Fax, PTT GSM / 3G:Calls, SMS
- Data services: SAT gmpers up to 60 / 15 kbps (down/up)
- Languages: English, Arabic and 11 foreign languages

IDHU (Image Data Handling Unit)



- Input data: Wizard link (MGT I / F)
(2 Gbps per channel) × 5
- Output Data: Serial LVDS
(640 Mbps per channel) x 2
- Memory Capacity:
 - 256 Gbits per memory module × 5 : 1 Tb (EoL)
 - 128 Gbit per memory module × 10 : 1 Tb (EoL)
- Encryption: T-DES

Standard OBC (On-Board Computer)



- Main Processor: LEON2 Processor @ 80 MHz
- Internal I / F: CA BUS
- Mass Memory Capacity: 4 Gbit
- Uplink Data Rate: 4 kbps
- Downlink Data Rate:
 - Real-time mode: 4.096 kbps
 - Play-back mode: 1.666 Mbps



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Satrec Initiative is a world-leading solution provider for Earth observation missions. It was founded in 1999 by engineers who developed the first Korean satellite and a series of advanced small satellites in KAIST for 10 years. Since foundation, it has contributed to the success of over 27 domestic and international space programs.

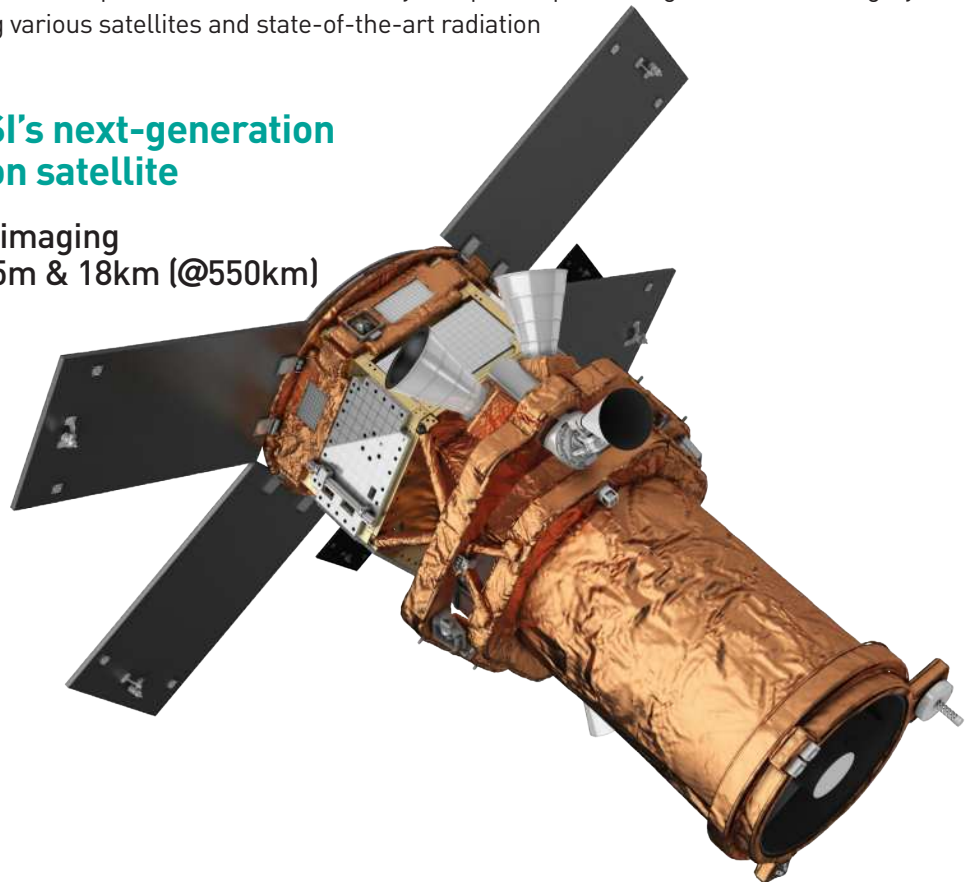
MAIN EXPORT ITEMS

The technology and 27-year experience of Satrec Initiative covers the whole spectrum for Earth observation (EO) missions including high-performance satellite platforms, high-resolution electro-optical payloads, and flexible and scalable ground systems. It offers reliable and cost-effective products for EO missions as well as sophisticated defense products. Its two subsidiary companies provide high-resolution imagery and related services using various satellites and state-of-the-art radiation monitoring solutions.

SpaceEye-X, SI's next-generation high-resolution satellite

High-resolution imaging
PAN + 4MS in 0.5m & 18km (@550km)

- High performance
- Small satellites
- High reliability
- Cost-effectiveness





SI IMAGING SERVICES CO., LTD. (SIIS)

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SI Imaging Services (SIIS) is the exclusive worldwide marketing and sales representative of KOMPSAT series: KOMPSAT-2, 3, 3A, and 5. SIIS contributes Remote Sensing and Earth Observation industries and societies by providing very high resolution optical and SAR images through over 90 sales partners worldwide. Customers from industries as well as government and international agencies are using KOMPSAT imagery for their missions and researches.

MAIN EXPORT ITEMS

KOMPSAT-3A

(KOMPSAT Satellite Imagery)



KOMPSAT-3

(KOMPSAT Satellite Imagery)



KOMPSAT-5

(KOMPSAT Satellite Imagery)



Technical Data

Products	Sensor Type	Highest Resolution	Widest Swath	MLTAN (Local time)
KOMPSAT-3A	Optical	0.4 m	13 km	13:30
KOMPSAT-3	Optical	0.5 m	16 km	13:30
KOMPSAT-2	Optical	1 m	15 km	10:50
KOMPSAT-5	Radar	0.85 m	100 km	06:00, 18:00



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E-mail: overseas@naviworks.com

VR Software platform and Contents Professional

Naviworks has taken the lead in making technological innovations in the world's virtual training system field and has provided VR-based IT convergence simulation products and technical services to the military, government, and private sectors. Its areas of expertise include virtual training simulations for tactical and mission procedures, disaster and safety management simulations aimed at improving the capability of coping with various disasters and emergency situations, medical training simulations intended for providing virtual surgical training, all of which will maximize training results through case studies that can't be easily experienced in a real life, so as to produce such effects as making up for live training, reducing training expenses, and lessening training periods.

MAIN EXPORT ITEMS

REALBX (Virtual Battle Training Platform)

The virtual battle training platform is an effective training method gaining attention from all over the world because it enables maximization of operation ability and force improvement by supplementing the limitations of field training with individual and group mutual tactical training of the military, police, and Special Forces.

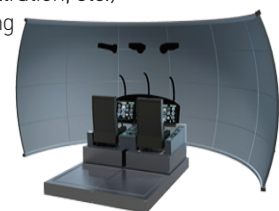
- Individual / comprehensive combat skills training and mission rehearsal exercise
- Team tactical training exercise
- Mission rehearsal of special forces (invasion, explosion, helicopter repel, bomb sensing, sniping, headway, operating radiophone, removing time bombs, putting out aircraft terrorism training, sensing explosives, etc.)
- UAV (Unmanned Aerial Vehicle) operation process exercise
- Maneuvering equipment process exercise
- Combined arms exercise
- Cultural perception exercise



RTTP (Reconfigurable Tactical Training Platform)

The reconfigurable tactical training platform focuses on flight training and tactic training of rotors and fixed-wing aircrafts and air lifts used in the military, air forces, and militia. With cockpits of every type and similar formats and functions, it provides realistic training and mutual interlocking of pilots (6 helicopters). It is a differentiated platform that enables unit commands / tactic training in team units.

- One Simulator Multi Tactical Training
 - Diverse types of training possible on a single simulator through hardware and software reconfiguration
- Team Level Tactical Training
 - Interlock between several simulations enabling squadron-unit tactic training
- Fields of Application
 - Familiarity exercise of control of weapons system
 - Training of squadron-level tactics / command procedure
 - Training of helicopter missions (battle scenarios, search missions, air raids, rear infiltration, etc.)
 - Combined arms tactic training with infantry / armed / air troops
 - Education training system of weapon systems introduced from overseas





AERO PEACE

AERO PEACE INC.

www.aeropeace.co.kr

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Tel: +82-31-999-2931

Fax: +82-31-999-2929

E-mail: askang@aeropeace.co.kr

Aero Peace, Inc. operates helicopter fleets for firefighting, Cargo transport and aerial photography and provide MRO services for Korean civilian, law enforcement & military market. As a system integrator, it modifies and installs avionic systems for civilian, military & law enforcement rotary / fixed wing upgrade programs. It operates exclusive FLIR EO / IR system CSC for ROK Navy & law enforcement users and Turbomeca engine CSC for government users.



AERO PEACE



MAIN EXPORT ITEMS

System Integration for Rotary / Fixed Wing and Airworthiness Certification Solution





KENCOA AEROSPACE CORPORATION

www.kencoa.com

Add: 152-44 Oegukgieop-Ro, Sanam-Myeon, Sacheon-City, Gyeongsangnam-Do, 52530, Republic of Korea

Tel: +1-562-270-0682

Fax: 0505-317-0008

E-mail: defense@kencoa.com

Total Solution Provider Performing as Total Solution provider, offering raw materials supply, parts machining, final assembly and MRO through cooperation system of KENCOA AEROSPACE Corp.

MAIN EXPORT ITEMS

B737Max Main Track



- Size: 3ST×18LT×103L (inch) / 76.2ST×457.2LT×2616.2L (mm)
- Material: Aluminum

P&W Engine Part (Inner Cowl & Outer Cowl)



- Material: Stainless

KUH Wheel Tower



- Size: $\varnothing 360$ mm / $\varnothing 14.17$ inch
- Weight: 80 kg / 173 lbs
- Material: Stainless

B777 Fixed Leading Edge Inboard



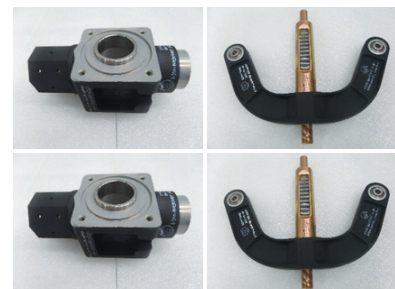
- Size: 8.46L×1.8W×2.36H (m) / 333L×70W×92H (inch)
- Weight: 272 kg
- Material: Aluminum, Steel & Composite

KUH AFT Fuselage



- Size: Total Length 8 m / 314 inch
- Weight: 300 kg / 661 lbs
- Material: Aluminum, Steel & Composite

KUH Mechanical Flight Control System



- Material: Aluminum, Steel



FIRSTEC CO., LTD.

FIRSTEC CO., LTD.

www.firstecom.co.kr

Add: 4F Foosung Building, 48, Dolma-ro, Bundang-Gu, Seongnam-Si, Gyeonggi-Do, 13630, Republic of Korea

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Fax: +82-31-627-4599

E-mail: scbak@firstecom.co.kr, scbak@fst.foosung.com

Since established in 1975, FIRSTEC has been a leading-edge engineering company and the backbone of Korea's defense industry.

Based on technological superiority, FIRSTEC has developed and produced missile fire control and guiding systems, various arms control and operating systems, and maintenance parts for specific areas with complete manufacturing and R&D facilities and logistics support. FIRSTEC has advanced into the aviation business.

With our commitment to technological superiority and quality, FIRSTEC will keep moving forward to be a global leader in the industry.



AEROSPACE

FIRSTEC has successfully conducted design, manufacturing and performance testing of various precision products such as pivot shafts for the hightech fighter and the wiring harness assembly of helicopters. In addition, FIRSTEC successfully executed the full-scale load test of jet trainers and their simulation system. In the field of space rockets, FIRSTEC has localized the manufacture of the attitude control system that used to be imported abroad. This has resulted in technology upgrade and contributed local space rocket industry. Core components are also developed, including ADS (air data system) and TQS (throttle quadrant system) of the Korea Helicopter Program (KHP).

Manned Aircraft

- Wire harness
- Cockpit control panel (NVIS)
- Air data system
- Throttle quadrant system
- Fire extinguisher system
- Landing / Search lights

Unmanned Aircraft

- Fuel system
- Anti / De-icing system
- Propulsion system
- Environmental control system

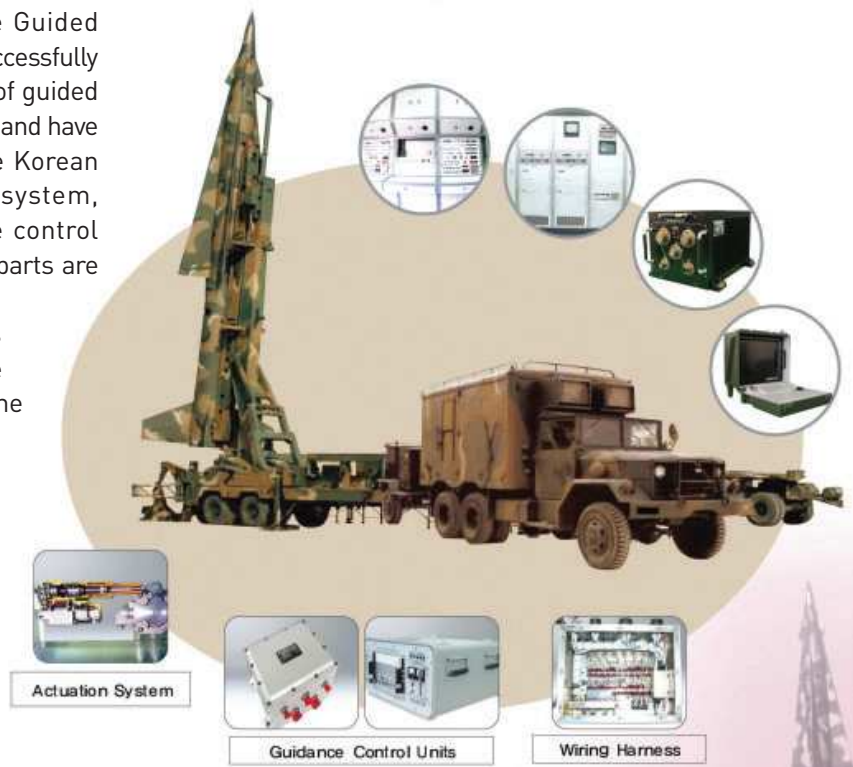




GUIDED WEAPONS

FIRSTEC has focused on the Guided Weapons business. We have successfully conducted R&D and production of guided weapons for more than 20 years and have been highly recognized by the Korean government. Our actuation system, guidance control system, fire control system, and cable & electrical parts are our representative products. Through ceaseless investments and R&D, we try hard to provide state-of-the-art technology to the world.

- Fire control system
- Actuation system
 - Electro mechanical type
 - Electro pneumatic type
- Guidance control unit
- Control valve
- Wire harness



Fire Control System



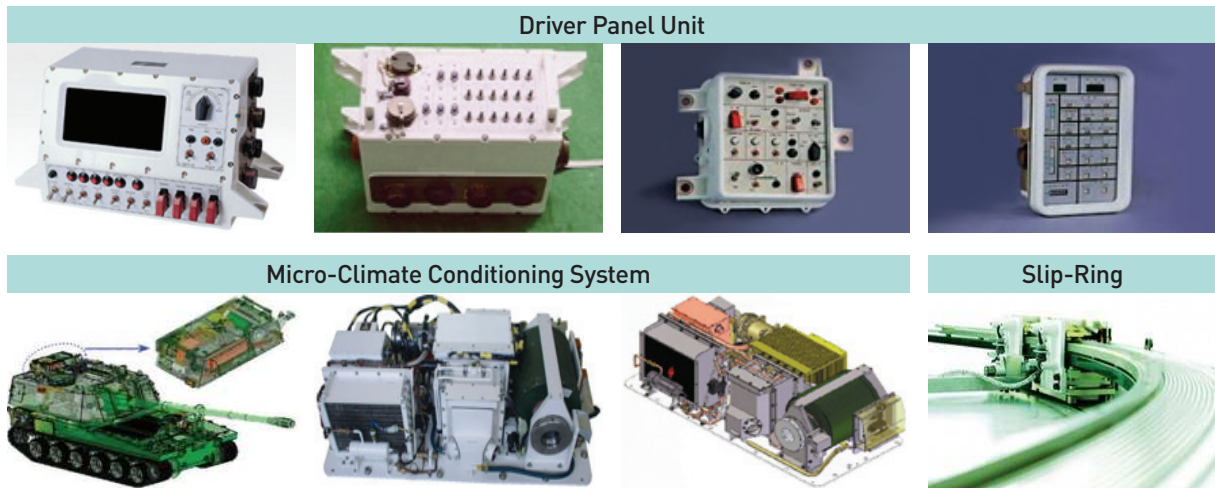
AIRCRAFT

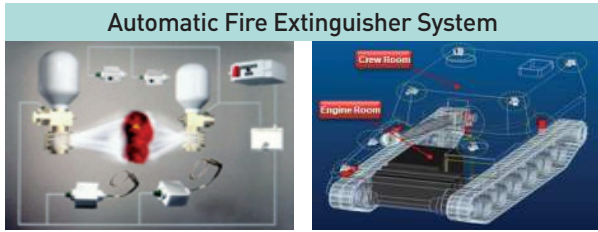


GROUND WEAPONS

FIRSTEC has produced control / instrument panels and cables for howitzers, tanks, and armored vehicles. We have converted the conventional analog system into high-tech digital systems, thereby improving the product's reliability and the efficiency and success rate of military operations. In addition, FIRSTEC has localized the segment-type slip ring which used to be imported. This fact proves FIRSTEC's technological excellence.

- Control & instrument panels
- Actuation system
- Cables
- Micro-climate conditioning system
- Slip-ring
- Electrical kits





UNMANNED SYSTEMS

VTOL (Vertical Take-off and Landing) Aerial Robot System is a multi-purpose, tilt-ducted type, unmanned aerial vehicle. It is automatically taking off and landing from the docking station in ground control station. It hovers and loiters with low speed and lock on multiple objects and transfer video in real time. It can be utilized at various purpose such as monitoring of disastrous area, traffic system, and important infrastructure and facility protection.



System Configuration



Application: Monitoring of disaster, environment, maritime, and traffic

AIRCRAFT



AERO MASTER CORPORATION

www.amc21.co.kr

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E-mail: gilsion@amc21.co.kr

Aero Master Corp. is a technology leader that develop and produce avionics system and embedded & application software in South Korea. Our main products are Flight Data Processing Systems, Subsystem Control Units, Wire Harness and etc. in hardware field and ASIP (Aircraft Structure Integrity Program), aircraft engine maintenance management program, onboard OFPs (Operational Flight Programs) and etc in software field.

MAIN ITEMS

Avionics



DTRS

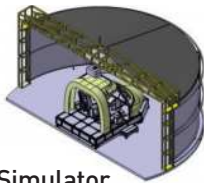


DTS



RIU

Ground Station



Simulator

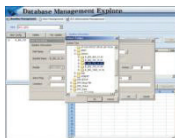


UAV GCS

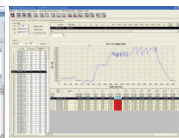


UAV Pilot Box

Software



DPS



SLM2000



MDAS



CFDAS

Strengths

- Flight data processing and recording
 - MIL-STD-1553, ARINC429, RS422, Analogue sensor signals
- Application software development
 - Aircraft Structure Integrity program (MIL-STD-1530) for KT-1 and T-50
 - Aircraft Engine Maintenance Management program for T-50
 - Aircraft mishap analysis program for T-50
- Handling Quality Simulator, UAV GCS and LCS and Pilot Box development & etc.
- Remote Interface Unit
 - MIL-STD-1553, ARINC429, AFDX, RS422, Analogue sensor signals, Discrete signal

KUH

Avionics

- CUCH (Cargo Hook Control Unit), DTS (Data Transfer System)

Ground System

- ATE TPS, Handling Quality Simulator

T-50(FA-50)

Avionics

- DTRS (Data Transfer and Recording System), IUFC OFP (Integrated Up-Front Control Panel)

Ground System

- Signal ATE for the IMDC, OTC for the IMDC

Software

- DPS (ASIP Software), IEMMS (ENSIP Software), MDAS (MISHAP Software)

KT-1

Avionics

- EFDR (Enhanced Flight Data Recorder), DAPU (Data Acquisition Processing Unit)

Software

- ASIP (SLM2000, KUVAS), MISHAP (CFDAS), ENSIP (ELMS)

UAV

Embedded Software

- Mission Control OFP (Prototype)

Ground Station

- GCS and LCS for RQ-101, CGS for the Technical Demo UAV



DACC CARBON CO., LTD.

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With design and manufacturing experience since 1990, DACC Carbon has innovated and produced high value composites. Our main products are carbon-carbon brake disc for aircraft, carbon-ceramic brake disc for automobile and industrial carbon composites. As a leading developer of carbon composite materials in South Korea, DACC Carbon will continue to develop and provide products and services of high quality for our customers.

MAIN EXPORT ITEMS



After research and development in 1990's, we have successfully localized carbon-carbon brake discs for aircraft. Our products are applied to several ROKAF fighter jets since 1998. The performance of our brake disc have been approved by WPAFB (Wright-Patterson Air Force Base) in 2010. Our carbon brakes have been exported to Europe and Asia and we aim to expand markets worldwide.

Capability list: F-16 Block 32 / Block 52, T/A-50





DAWIN FRICTION CORPORATION

www.dawinf.co.kr

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Tel: +82-32-821-4621 / +82-10-6358-7701

Fax: +82-32-712-2890

E-mail: john@dawinf.co.kr

Over 20 years of development, Dawin has independently secured high-tech friction materials / system for aircraft / high speed trains requiring the most sophisticated equipment and advanced engineering techniques. Dawin secured various technologies those equivalents to world-class level in the field of bonding such as diffusion bonding technology of dissimilar material, melted bonding technology, metal-ceramic bonding technology and pre- treatment of bonding.

Dawin is committed to creating and maintaining powerful customer relationships built on a foundation of excellence. From the products we manufacture to our dedicated customer service and support, we know what's important to our customers.



Technical Competitiveness

- Design technology friction materials
- Bonding Technology of Dissimilar Materials
- Non-destructive Test & Evaluation Technology of Friction Materials
- Design Technology of Brake Related Components
- Manufacture sintered brake discs, pads, for various High Speed Train, Fixed & Rotary Wings and Military Ground Vehicles
- Design Technology of Wheel Related Components
- Capable of testing wheels and brakes with Full Scale Dynamometer for Aircraft Brake System

PRODUCT INFORMATION

High Speed Train Sintered Brake Pads

- Sintered Brake Pads
- KTX: Max. Speed 300km/h
- KTX (Sancheon): Max. Speed 350km/h
- TTX: Max. Speed 200km/h



Wheels & Brakes for Rotary and Fixed Wings

- Brake Discs (Rotor, Stator, Pressure / Back Plate)
- Wear Pads
- Wheels (Main & Nose)
- Brake Assemblies



Brake System for Wind Turbine

- Braking Torque: 11.0 / 13.4kNm (min/max)
- Pressure for Operation: 40bar
- Disc Thickness: 30mm
- Pad Material: Sintered Metal
- Piston Area: 81.9cm²



Cylinder Blocks for Hydraulic Pumps & Motors

- High Bonding Strength
- Reliable Diffusion Bonding Process
- Maximum Applicable Pressure (450bar)



KOLON DACC COMPOSITE

KOLON DACC COMPOSITE CO., LTD.

www.kolondacc.com

Add: 26-23, Hamansandan 1-gil, Gunbuk-myeon, Haman-gun, Gyeongsangnam-do, 52061, Republic of Korea

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Fax: +82-55-713-2487

E-mail: khjung@kolon.com

KOLON DACC COMPOSITE Co., Ltd. (KDC) was created as a spin-off from Korea Aerospace Industries Ltd. and has applied hi-tech composite to develop core technologies in Aerospace, Defense sector since 2001. KDC has grown into a total solution provider to provide products and services by selecting excellent materials and application of optimal design and analysis, and applying economical manufacturing technologies.

By the end of 2015, KDC was incorporated into the KOLON Group and changed the name to KOLON DACC COMPOSITE.

MAIN EXPORT ITEMS

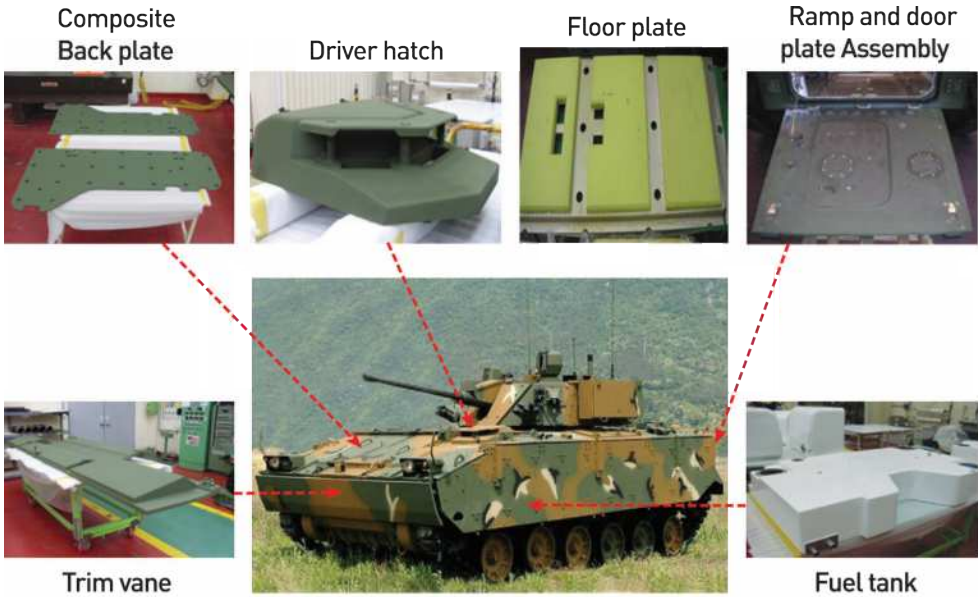
T/FA-50 EFT (External Fuel Tank)



Specifications

Material	CFRP / GFRP composite	
Dimensions (mm)	Tank	Ø555.8 × 4,108.5(L)
	Fin	414.2(W) × 320.1(H)
Capacity	155 ± 5 Gal	
Weight	172.0 lb ± 5%	
Center of Gravity	80.61 inch	

Composite Parts of K-21 Fighting Vehicle



Driver Hatch



Materials	Skin	Stitched S2 Glass
	Core	SiC Ceramic
	Spool Cover	E GLASS
Dimensions (mm)	632.9(L)×740(W)×156.4(T)	
Process	VARTM	

Enhanced Applique Armor Kit



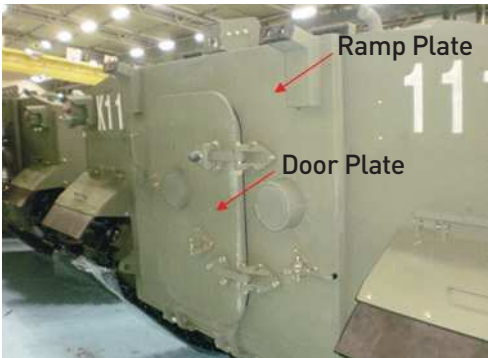
Materials	Stitched S2 Glass	
Dimensions (mm)	1,568.6(L)×404(W)×19(T)	
Process	VARTM	

Fuel Tanks



Materials	E Glass	
Dimensions (mm)	1,497(L)×940(W)×240(T)	
Process	VARTM	

Ramp and Door Plate Assembly



Materials	Skin	Stitched S2 Glass
	Core	Alumina Ceramic
	Spool Cover	E Glass
Dimensions (mm)	Ramp: 1,519.8(L)×1,306(W)×55(T) Door: 730.2(L)×1,048.4(W)×46(T)	
Process	VARTM	

Trim Vane



Materials	Skin	E Glass
	Core	Urethane Form
Dimensions (mm)	3,330(L)×737.9(W)×125.3(T)	
Process	VARTM	



KOMACO CO., LTD.

www.komaconvis.com

Add: 1013, 142, Ilsan-ro, Ilsandong-gu, Goyang-si, Gyeonggi-do, 10442, Republic of Korea

Tel: +82-70-7835-4167

Fax: +82-31-932-0345

E-mail: kino@komaconvis.com

KOMACO's one of top priorities is the solution being optimized to each different types in military and civil section through quality and service for customer satisfaction on safety.

NVIS compatible lighting system is usable during all phases of operation, especially night duty with NVG. It also provides effective and crucial lighting for aircraft whether it is NVIS modified or standard lighting.

We will make better environment of Korea Defense Program through mass production of KUH, FA-50 and KT-1 with prearranged schedule of LAH / LCH, KFX business.

We expect you to be with us, KOMACO is providing new lighting panel solution.

MAIN EXPORT ITEMS



Technical Data

Item	Specification	Standard	Remark
General	Compatible type II, class B	MIL-STD-3009	
	1-NVIS green A, type VII	MIL-DTL-7788H	
Decal class	Class 1-NVIS green A	MIL-DTL-7788H 1.2.1	
Decal materials	Acrylic sheet finish A	MIL-DTL-7788H 3.3.1	
Luminance	1.0 ± 0.5 FL with 5.0 ± 0.05 Vdc	MIL-DTL-7788H 3.7.3	
Legend type	Typical or true type per MIL-M-18102	MIL-M-181023.2.2	
NVIS radiance	Under 1.7 × 10 ⁻¹⁰ Nra (at 0.1 FL)	MIL-STD-3009 table 3	
Color	U'1 = 0.088, v'1 = 0.543, r = 0.037 (at 0.1 FL)	MIL-STD-3009 table 2	
Circuit continuity	All installed LED works with power	MIL-DTL-7788H 3.4	

KOREA LOST-WAX

KOREA LOST-WAX CO., LTD.

www.lostwax.co.kr

Add: 220, Sihwa-ro, Danwon-gu, Ansan-si, Gyeonggi-do, 15416, Republic of Korea

Tel: +82-31-499-8485 / +82-10-5589-0006

Fax: +82-31-431-6091

E-mail: capman@lostwax.co.kr

Korea Lost-Wax Co., Ltd. (here after KLW) as a leading company of investment casting manufacturer. KLW has advanced manufacturing equipment with high vacuum induction furnace, accurate test, inspection and evaluation equipment and doing supply various commercial casting parts, automobile parts as well as core casting parts for aerospace, power generation and marine industries to all over the world.

MAIN PRODUCT

Investment castings are used in various industries, particularly where high quality series parts are required with close tolerances from materials which are difficult or even impossible to be machined.

Product Categories

- Aerospace Castings
- Power Generation Castings
- Automobile Castings
- Marine Castings
- Any Other Commercial Castings

Aerospace Castings



Power Generation Castings



Others



PSION_{DSP}

PSION_{DSP} CORPORATION

www.psiondsp.com

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Fax: +82-42-863-1178

E-mail: sales@psiondsp.com

PSIONdsp has specialized at rugged display, computer and other products for harshest environment. With various knowledge, experience and highly skilled performance accumulated since 2005 by participating in many development projects of displays, optics and signal interfaces for avionic, land-based as well as naval application, we guarantee to provide most reliable quality and service.

PSIONdsp designs and develops the ruggedized solution 100% in house and has been striving to lead the trend of technology and establish state of the art technologies for ruggedized products.

MAIN EXPORT ITEMS

RSAQ240M



- Screen size: 2.4" × 2.4" (3.4" Diagonal)
- Active area (mm): 61.0(H) × 61.0(V)
- Resolution: 300 × 300 × RGB (QVGA)
- Input signal: TTL, 6 bit and 8 bit
- Color: 262k, 16M colors
(6 bit FRC gray scale display)
- Contrast ratio: ≥300:1
- Brightness: Day mode: >150 fL (option 200 fL)
- Night mode: 0.05 fL to ≥6.713 fL
- Dimension (mm): 77.9(W) × 77.9(H) × 61.7(D)
- Weight: The unit shall not exceed 0.4 kg
- Power: 28 Vdc (typical), ≥10 W
- Environmental: Top: -45°C ~ +70°C (MIL-STD-810E)
- Tst: -55°C ~ +85°C (MIL-STD-810E)
- Humidity: 95 RH% @ +30°C (MIL-STD-810E)
- Vibration: MIL-STD-810E
- Shock: MIL-STD-810E
- EMI / EMC: MIL-STD-461E
- Backlight: White LED, NVIS compatible
- Type: Possible to supply in 3 type
- RSAQ240M: Module + LED BLU
- RSAQ240L: LCD glass
- RSAQ240T: T-Con board
- Option: EMI shield window, Heater

RSAQ300M



- Screen size: 3.0" × 3.0" (4.2" Diagonal)
- Active area (mm): 74.9(H) × 74.9(V)
- Resolution: 480 × 480 × RGB (VGA)
- Input signal: TTL, 6 bit and 8 bit
- Color: 262k, 16M colors
(6 bit FRC gray scale display)
- Contrast ratio: ≥300:1
- Brightness: Day mode: >150 fL (option 200 fL)
- Night mode: 0.05 fL to ≥6.713 fL
- Dimension (mm): 97.9(W) × 97.9(H) × 63.1(D)
- Weight: The unit shall not exceed 1.0 kg
- Power: 28 Vdc (typical), ≤12 W
- Environmental: Top: -45°C ~ +70°C (MIL-STD-810E)
- Tst: -55°C ~ +85°C (MIL-STD-810E)
- Humidity: 95 RH% @ +30°C (MIL-STD-810E)
- Vibration: MIL-STD-810E
- Shock: MIL-STD-810E
- EMI / EMC: MIL-STD-461E
- Backlight: White LED, NVIS compatible
- Type: Possible to supply in 3 type
- RSAQ300M: Module + LED BLU
- RSAQ300L: LCD glass
- RSAQ300T: T-Con board
- Option: EMI shield window, Heater

LAD2008DA



- Screen size (Inch): 8(H) × 20(W) (21.5" Diagonal) (Landscape)
- Dimension (mm): 546.1(W) × 243.8(H) × 228.6(D)
- Resolution: 2,560 × 1,024
(1,280 × 1,024 + 1,280 × 1,024)
- Weight: 7 kg
- Brightness: Day 6 ~ 270 fL / Night 0.025 ~ 10 fL
- Contrast ratio: 1,000:1(in dark room), 20:1(under sunlight)
- Color: 8bit (Option : 10 bit)
- Viewing angle: +/-60°(Horizontal / Vertical)
- Power: +28 VDC
- Temperature: Top -45°C ~ +71°C
- Tst: -54°C ~ +90°C (MIL-STD-810G)
- Shock: MIL-STD-810G
- EMI / EMC: MIL-STD-461F
- Option: Touch Screen Modify outline dimension, Bezel control key design



FOREX

www.forexaero.com

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Tel: +82-55-274-4804

Fax: +82-55-274-4805

E-mail: Forex2@forexaero.com

FOREX specializes in the machining complex machined parts used in both the domestic and international defence & aerospace industry. We excel in 5 axis machining work utilizing the latest in computer aided design and manufacturing (CAD/CAM). All customer products are thoroughly inspected using a coordinate measurement machine (CMM). FOREX produces parts for such names as Korea Aerospace Industries, the Boeing Company, Airbus Industries and Embraer.

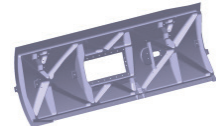
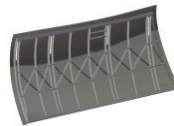
Main Item

T-50 Program



T-50 Bulk head		T-50 Wing skin	
MATERIAL	ALU PLAET	MATERIAL	ALU PLAET
SIZE	0.8~1.0 M	SIZE	4.3 M

F-15 Program



F-15 Door(Avionics)		F-15 Door(Landing Gear)	
MATERIAL	ALU PLAET	MATERIAL	ALU PLAET
SIZE	1.5 M	SIZE	4.3 M

LAH/LCH Program



LAH/LCH Support		LAH/LCH Frame	
MATERIAL	ALU PLAET	MATERIAL	ALU PLAET
SIZE	0.7 M	SIZE	1.3 M

EMBRAER KC390 Program



KC390 LOWER STRINGER		KC390 UPPER STRINGER	
MATERIAL	ALU Ext	MATERIAL	ALU Ext
SIZE	2.3~17 M	SIZE	2.3~17 M



FINE PRECISION IND., LTD.

www.fineind.koreasme.com

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Tel: +82-51-301-1213

Fax: +82-51-301-1215

E-mail: fineind@korea.com, fineind@finei.kr

30 years old of the aircraft parts and auto parts manufacturers. Respond to any needs that you can design, analysis, manufacture, total engineering solution provider Recognized by the government and the KAI, aircraft wiper systems analysis and design of aircraft parts and manufacturing technology. AS 9100 Rev D & ISO 9001:2015 Certificate, Certificate of Defense industry, Tear 1 of KAI. All aircraft components were tested and passed the environmental performance, durability tested according to MIL-STD-810F.

MAIN EXPORT ITEMS

Wiper / Washer System for Aircraft

- Application: KUH-1/ MUH-1, KAI all Helicopter
- Product composition: Motor (BLDC), Converter, Arm, Link, Blade, Flexible driver(L/R), Reservoir tank, Wash pump, ※MIL-STD-810F/461E, Performance test.

Specifications

- Fast/Slow : 160/120 Strokes/min
- Auto Parking / Built-in Sensor(temperature, overheat prevention , over current prevention)
- High accuracy +/- 1 degree, No lubrication for 30 years (Converter)
- three layers for windshield adhesion (Blade)
- Weight: 6.91 Kg / 1.54 Kg
- 28 VDC 11 Amp



Producing Aircraft parts

- ECS Auxiliary heater for cabin.
- ECS Pneumatic Muffler.
- Outlet Louver ECS Air vent
- Outlet Louver Flanged type ECS Air vent.
- Fitting Tie down(Cargo Ring)
- Shutoff Valve ECS Air
- Latch (Toggle/Hook/Push bottom)
- Nozzle (OBIGGS)
- Toilet drainage FD(Flush discharge) Valve





HYOSUNG HEAVY INDUSTRIES CORPORATION

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Tel: +82-55-268-8572

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E-mail: dsp@hyosung.com

Hyosung Heavy Industries is in possession of the world's best technology in heavy electric equipment. In addition to electric equipment such as transformers and circuit breakers, its motors, generators, gears and industrial pumps receive high regard in the industry.

With the capability to manufacture all types of motors, ranging from general industrial motors to special-purpose, Hyosung is able to deliver optimum motors suitable for any place and purpose including propulsion motors applied to underwater weapons, submarine and warship.

Scope of Service

- Research and Development
- Design and Analysis
- Manufacture

Major Products

- Propulsion motor for the underwater weapons
- Propulsion motor for the submarine and warship
- Electric motor for the missile actuator

Propulsion motor for the underwater weapons (light weight torpedo)

Wiper / Washer System for Aircraft

- Permanent magnet type BLDC motor mounted reducer and power modules
- High power density through high speed rotation and effective cooling
- Precise speed control and monitoring function of the propulsion motor
- High hydraulic pressure of structure



SPECIFICATION

Type	permanent magnet synchronous motor
Cooling type	water cooling
Max. power	000 kW
Voltage	DC 000 V
Speed	00,000 rpm
Weight	00 kg

Propulsion motor for the submarine

- High reliability and availability, based on redundant design
- Compact design, applying integrated inverter
- High efficiency, due to optimized design, control and cooling system
- Easy maintenance, applying replaceable modular inverter
- Low level of noise and vibration

SPECIFICATION

Type	permanent magnet synchronous motor
Cooling type	water cooling
Voltage	DC 000~000 V
Max. power	0 MW
Speed	000~000 rpm
Weight	00 ton



Propulsion motor for the warship

- High reliability and availability, based on redundant design
- Bearingless type rotor(bearings are applied to propeller systems)
- High efficiency, due to optimized design, control and cooling system
- Quick start-up
- Low level of noise and vibration

SPECIFICATION

Type	permanent magnet synchronous motor
Cooling type	water cooling
Max. power	0 MW
Voltage	AC 000 V
Speed	000~000 rpm
Weight	00 ton





NAVAL VESSELS

DAEWOO SHIPBUILDING & MARINE ENGINEERING CO., LTD.	168
HYUNDAI HEAVY INDUSTRIES CO., LTD.	172
HANJIN HEAVY INDUSTRIES AND CONSTRUCTION CO., LTD.	176
KANGNAM CORPORATION	180
FINE INC.	184
VOGO CO., LTD.	186
WOOSUNG I.B. CO., LTD.	188
WOORI OCEANTECH	189
KOREA T.E.S CO., LTD.	190
JINYOUNG TBX Co., LTD.	191



DAEWOO SHIPBUILDING & MARINE ENGINEERING CO., LTD. (DSME)

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Daewoo Shipbuilding & Marine Engineering Co., Ltd. (DSME) has made a remarkable impact on the global market since its foundation in 1973. Since its entry into the naval ship market, DSME has designed and built a wide range of advanced naval ships such as submarines, destroyers and frigates for Republic of Korea Navy. DSME is successfully expanding its business area over the world with the total services of design, construction, ILS, crew training and local construction with technology transfer.

Recently, DSME is entering into a top-tier of solution provider in naval ship business as a world-class engineering company as well as the most efficient shipbuilder in the world. We promise to do our utmost to establish the tradition of excellence.



FRIGATE

DW 3000F Frigate



Specifications

- Dimensionl (m): ABT. 124(L) × 14(B) × 8(D)
- Displacement: ABT. 3,650 tons
- Speed: ABT. 30kts (Max.)
- Propulsion: CODAG system with twin CPP
- Armament: 1 × 76mm Gun / 2 × 30mm Guns / 1 × CIWS / 8 × SSM / 8 × VLS / 6 × Torpedoes / Decoy Launchers

FFX BATCH-II



Specifications

- Dimensionl (m): ABT. 122(L) × 14(B) × 7(D)
- Displacement: ABT. 3,600 tons
- Speed: ABT. 30kts (Max.)
- Propulsion: CODLOG system with twin CPP / 2 × Propulsion Motors
- Armament: 1 × 5" Gun / 1 × CIWS / 8 × KSSM / 16 × KVLS / 6 × Torpedoes / Decoy Launchers

DAEWOO SHIPBUILDING & MARINE ENGINEERING CO., LTD. (DSME)

CORVETTE

DW1800T Corvette



Specifications

- Dimensionl (m): ABT. 85(L) × 13(B) × 7(D)
- Displacement: ABT. 1,880 tons
- Speed: ABT. 26kts (Max.)
- Propulsion: CODAG system with twin CPP
- Armament: 1 × 76mm Gun / 2 × 30mm Guns /
2 × SSM / Decoy Launchers

LOGISTIC SUPPORT VESSEL

Logistic Support Vessel



Specifications

- Dimensionl (m): ABT. 201(L) × 29(B) × 14(D)
- Displacement: ABT. 40,300 tons
- Speed: ABT. 21kts (Max.)
- Propulsion: CODAD with twin CPP
- Major System: 2 × CIWS / 2 × 30mm Guns /
RAS 7 FAS system (3 Station) /
2 × Deck Cranes

SALVAGE & RESCUE SHIP

DW 4700S Salvage & Rescue Ship (ATS-II)



Specifications

- Dimensionl (m): ABT. 108(L) × 17(B) × 8(D)
- Displacement: ABT. 4,700 tons
- Speed: ABT. 21kts (Max.)
- Propulsion: CODAD with twin CPP
- Major System: Mixed Gas & Air & Scuba / Diving
system / Dynamic positioning system
/ 4-point mooring system / Stranded
ship pulling & lifting system / Towing
system / Underwater searching
system

DIESEL SUBMARINE

DSME 1400 Class Submarine



Specifications

- Dimensionl (m): ABT. 61(L) × 7(B) × 12(H)
- Displacement: ABT. 1,450 tons [Surfaced]

SUBMARINE OVERHAUL AND MODERNIZATION

Submarine Overhaul and Modernization



Specifications

- Weapon control system
- Navigation system
- Surveillance system (Radar, ESM)
- Sonar
- Periscope
- Etc.



HYUNDAI HEAVY INDUSTRIES CO., LTD.

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Hyundai Heavy Industries (HHI) is strategically situated in Ulsan, which is on the southeastern tip of the Korean peninsula. Its location providing easy access to and from the open sea, mild weather, and a dry climate with little precipitation throughout the year constitutes an ideal geographical environment for shipbuilding.

With such blessings coupled with Hyundai spirit of diligence, creativity and positive outlook, HHI has developed itself as one of the world's leading shipbuilders since its commencement of shipyard operation in 1973 to enjoy an excellent reputation as a top notch shipyard throughout the world.

HHI is also an experienced naval shipbuilder with construction of a variety of modern, sophisticated naval and auxiliary service vessels ever since 1975 when the Korea Ministry of National Defence

nominated HHI as the designer and builder of the first indigenous Korean frigate.

The Special and Naval Shipbuilding Division(SNSD) has been entrusted with the special task, having specialized manpower and streamlined modern facilities.

As a licensed National Defence Industrial Shipbuilding Company and engineering consultant, SNSD of HHI has the advanced technology to design and build modern, reliable naval ships and auxiliary service vessels of various proven and advanced hull forms.

With round-the-clock intensive R&D activities, HHI is now ready to provide the customers with comprehensive services from initial feasibility study for top level requirement to integrated logistic support as a life time after sales service.



SCOPE of SERVICE

- Design & Engineering
- Construction
- Integrated Logistic Support
- System Integration
- Training & Simulation
- Technical Assistance
- Spare & Test Equipment
- Technical Data Package
- Warranty Services
- Maintenance Management
- TLS Management

MAJOR PRODUCTS

- Destroyer
- Frigate
- Corvette
- Fast Attack Craft
- Submarine
- Logistic Support Vessel
- Multi-purpose Support Vessel
- Amphibious Vessel
- Training Vessel
- Patrol Vessel
- Midlife Upgrade

HDD-10000 Destroyer



- Length: 165m
- Displacement: 10,000 tons

HDD-5000 Destroyer



- Length: 150m
- Displacement: 5,000 tons

HDF-3500 Frigate



- Length: 120m
- Displacement: 3,500 tons

HDF-3000 Frigate



- Length: 115m
- Displacement: 3,000 tons

HYUNDAI HEAVY INDUSTRIES CO., LTD.

HDF-2500 Frigate



- Length: 105m
- Displacement: 2,500 tons

HDS-3000 AIP Submarine



- Length: 85m
- Displacement: 3,000 tons

HDC-1400 Corvette



- Length: 85m
- Displacement: 1,400 tons

HDS-1800 AIP Submarine



- Length: 65m
- Displacement: 1,800 tons

HDC-500 Fast Attack Craft



- Length: 65m
- Displacement: 500 tons

HDA-24000 Logistic Support Vessel



- Length: 190m
- Displacement: 24,000 tons

HDM-4000 Multi-purpose Support Vessel



- Length: 115m
- Displacement: 4,000 tons

HDP-3000 Offshore Patrol Vessel



- Length: 110m
- Displacement: 3,000 tons

HDL-7000 Amphibious Vessel



- Length: 125m
- Displacement: 7,000 tons

HDP-1500 Offshore Patrol Vessel



- Length: 100m
- Displacement: 2,700 tons

HDT-5500 Training Vessel



- Length: 145m
- Displacement: 5,500 tons

HDP-1000 Patrol Vessel



- Length: 90m
- Displacement: 1,000 tons

HDP-5000 Offshore Patrol Vessel



- Length: 150m
- Displacement: 6,500 tons

HDP-500 Patrol Vessel



- Length: 60m
- Displacement: 500 tons



**HANJIN HEAVY INDUSTRIES
& CONSTRUCTION CO., LTD.**

HANJIN HEAVY INDUSTRIES AND CONSTRUCTION CO., LTD.

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Founded in 1937 as the first steel ship builder in Korea, HHIC, with our unrivalled technology and broad field of experiences, has built a wide range of special ships for the nation from Korea's first patrol boat in 1972 to high-speed patrol vessels, large landing ships, hovercrafts, and the next generation missile/gun boats. We have also exported naval vessels to the Middle East, Asia and Latin America.



LPH (Landing Platform Helicopter)



Main Particular

- Length: Abt. 200m
- Displacement: Abt. 19,000 Tons
- ※ The Source of Technical Data: Jane's Fighting Ship



HANJIN HEAVY INDUSTRIES AND CONSTRUCTION CO., LTD.

PKG (Patrol Killer Guided-Missile)



Main Particular

- Length: Abt. 63m
- Displacement: Abt. 570 Tons
- ※ The Source of Technical Data:
Jane's Fighting Ship



LST (Landing Ship Tank)



Main Particular

- Length: Abt. 130.0m
 - Displacement: Abt. 7,100 Tons
- ※ The Source of Technical Data: Jane's Fighting Ship



KANGNAM CORPORATION

KANGNAM CORPORATION

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Kangnam's endless challenge to move forward into the 21C has already begun.

Kangnam Corporation (KNC) is the top of the Korean leading GRP hull ship builders since its commencement of shipyard operation in 1968.

KNC has built all type of GRP hull naval ships and special purpose vessels. KNC has successfully built and delivered MSH (Mine Sweeping hunter), MHC (Mine Hunting Craft) and various high speed patrol boat to Korean Navy.

KNC has successfully and continually extended its building area to steel / aluminium hull vessels such as 500 tons class patrol craft and 100 tons class fast attack boat.

As the best partner, Kangnam Corporation is ready to satisfy customer's demand in various MCMVs and high speed patrol crafts.



MINE SWEEPING & HUNTING CRAFT (KMSH)



Specifications

Displacement	910 tons at full load
Dimensions (m)	59.4(L) × 10.5(B) × 3.0(D)
Main machinery	2 MTU diesels; 4,000hp (m) (2.98MW) sustained; Voith-Schneider props; bow thruster; 134hp (m) (100kW)
Max. speed	15 knots
Cruising range	3,000 N.M at 12kts
Complement	56 (6 officers) plus 8 divers
Guns	1~20mm Sea Vulcan. 2~7.62mm MGs
Countermeasures	Mechanical and Combined Influence Sweep System and 2 ROVs
Combat data system	Tactical Data System or Command & Control System
Radar	Navigation: X-band
Sonar	Variable Depth Sonar, Side Scan Sonar

KANGNAM CORPORATION

MINE HUNTING CRAFT (KMHC)



Specifications

Displacement	500 tons at full load
Dimensions (m)	50(L) × 8.3(B) × 2.6(D)
Main machinery	2 MTU diesels; 2,040hp (m) (1.5MW) sustained; 2 Voith-Schneider props; bow thruster; 102hp (m) (75kW)
Speed	15 knots
Cruising range	2,000 N.M at 10kts
Complement	44 (5 officers) plus 4 divers
Guns	1 Oerlikon 20mm, 2-7.62mm MGs
Countermeasures	MCM: 2 Gaymarine pluto remote-control submersibles, Mechanical sweeping gear
Combat data system	Racal MAINS 500
Radar: Navigation	Raytheon SPS 64; I-band
Sonar	GEC-Marconi 193M

500 TON CLASS PATROL CRAFT



Specifications

Displacement	595 tons at full load
Dimensions (m)	62.8(L) × 8.9(B) × 5.3(D)
Main machinery	MTU 2,720kW at 2,100rpm × 1 MTU 4,440kW at 1,350rpm × 2 MJP Water Jet × 3
Speed	31.5 knots
Cruising range	2,000 N.M at 15kts
Complement	39 persons
Guns	20mm Vulcan × 1, 2-7.62mm MGs × 2
Radar	Nucleus 3 5000A
Auto pilot	PR-6112A-E2-SS1
MCAM system	MAA-M

PATROL BOAT

Harbour Patrol Boat



Specifications

L.O.A	26.10m
Beam	5.60m
Depth	3.00m
Displacement	67 tons
Max. speed	30 kts
Main engine	1,890hp × 2 sets
Cruising range	300 N.M
Complement	12 persons
Hull	G.R.P

Fast Attack Boat



Specifications

L.O.A	30.30m
Beam	6.10m
Depth	3.20m
Displacement	95 tons
Max. speed	45 kts
Main engine	2,720hp × 2 sets
Cruising range	300 N.M
Complement	13 persons
Hull	Aluminium

Coastal Patrol Boat



Specifications

L.O.A	28.70m
Beam	5.40m
Depth	2.50m
Displacement	90 tons
Max. speed	28 kts
Main engine	1,779hp × 2 sets
Cruising range	300 N.M
Complement	10 persons
Hull	Steel



FINE INC.

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FINE Inc., established in 1989, has expanded its business scope onto the area of manufacturing Military standard boats for Navy, Coastguard, Marine and Rescue Department of Government.

Based on the extensive sales experience and competitiveness in the defense industry, FINE Inc. holds credible partners around the world as well as domestic market to satisfy the customer's demand.

MAIN EXPORT ITEMS

FR1400



Specifications

Material	FRP
L.O.A	13.9m
Width	3.9m
Depth	1.46m
Passenger	16 Person

FR1000



Specifications

Material	FRP
L.O.A	10.4m
Width	3.12m
Depth	1.12m
Passenger	10 Person

FR900



Specifications

Material	FRP
L.O.A	9.4m
Width	3.12m
Depth	1.12m
Passenger	10 Person

FR850



Specifications

Material	FRP
L.O.A	8.5m
Width	3.0m
Depth	1.15m
Passenger	10 Person

AL1600



Specifications

Material	Aluminum
L.O.A	16.1m
Width	4.8m
Depth	1.55m
Passenger	25 Person

AL1200



Specifications

Material	Aluminum
L.O.A	12.2m
Width	3.8m
Depth	1.45m
Passenger	13 Person


VOGO

VOGO CO., LTD.

:www.vogoeng.com

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VOGO designs and manufactures customized special purpose vessels [Swimmer Delivery Vehicles, Diver Propulsion Device and more]. They are made under strict ISO 9001 quality control and Korean Register certified manufacturing process ensuring them to fulfill the requirement under harsh conditions. Over 240 vessels are in operation with Korean and overseas Para Military forces.

MAIN EXPORT ITEMS

SDV 340



- Silent propulsion with gearless speed variation
- Reliable Li-polymer battery with management system
- Over 1500 cycles battery usage
- Pre-programmable route using way points
- Record and review mission with route replay
- U/W communication between mother craft and divers
- U/W position accuracy of 5 m @ 1 NM cruise
- KR classification
- SDV recovery vessel
- Redundancy in navigation, steering, ballasting, BIBS

Specifications

Length O.A.	7.9 m
Crew	3
Max. speed	5+ kts
Propulsion	AC elec motors
Diving depth	150 MSW
Range	45 NM @ 3.5 kts
Navigation system	INS, DVL, DGPS, ECDIS

SDV 1000W



- High speed & long range on surface with diesel engine + waterjet
- Silent underwater propulsion with Li-polymer battery + elec motors
- Field proven navigation with U / W position accuracy of 5 m @ 1 NM cruise
- 1500+ cycles Li-polymer battery with battery management system
- Air drop from C-130 or C-17
- Individual built in breathing system
- Shock mitigating seats

Specifications

Length O.A.	12 m
Surface speed	35 kts
Submerged speed	6+ kts
Propulsion	Diesel engine & elec motors
Surface range	200 NM
Submerged range	25 NM
Payload	1.5 tonnes
Crew	10
Navigation system	INS, DVL, DGPS, ECDIS

DPV 200



- Proven Li-polymer battery (24 V 150Ah) with over 4,000 life cycles
- Patented propulsion system allows diver to steer and control the speed with one hand
- Standard navigation system is equipped with compass depth gauge & GPS. An optional version with Electric Chart Display (ECDIS) map built in Navigation system can display multiple way points, current speed, battery capacity, heading depth, depth to bottom, pitch, roll, and obstacles in front
- Extension body: Standard or customized extension parts available for extra load or battery
- Accessory included: Credle, Case, Charger with Cable, Bag Spare Prop.

Specifications

Length O.A. / Beam O.A.	Operational: 2,400 × Ø525 mm / Stowed: 1,505 × Ø525 mm
Material	Marine grade aluminum AL5083 type
Max. operating depth	30 m
Speed	3.0 knots
Range	6.5 NM
Buoyancy	Neutral
Divers	2
Speed control	Fwd + Reverse dial control
Storage	100 L

RIBs (Rigid Inflatable Boat) 770



- Over 40 units in Service with ROK Navy and Coast Guard
- Mission capabilities: patrol, search and rescue, anti-terror anti-piracy
- Korean Register certified manufacturing process
- Material: GRP with CORE hull + hypalon tube
- Durability: 8 yrs for hull and 4 yrs for tube
- Sea State: operational upto SS 4 with limited performance
- Self righting system
- Variation models
 - a. M60 gun mount with Dot sight and shield + side bullet proof panels
 - b. Fire pump with Fire monitor as a non-lethal weapon
 - c. One point lift or four point lifting system
 - d. Hypalon tube or Foam type fender

Specifications

Length O.A.	7.7 m ±5%
Beam O.A.	2.9 m ±5%
Light weight	Less than 2.5 tonnes
Max. speed	45+ kts
Propulsion	Twin 250 hp O.B. motors
Complement	Max. 15 ppl
Range	120+ NM
Fuel Tank	480 ℓ

Aluminum Patrol Boat



- Built for patrol within 10 nm from shore
- Marine grade aluminum hull with foam fender
- Self righting boat
- Rescue cabin at bow
- AIS, 10.4 in Color LCD DGPS Plotter, DSC built in VHF 4 kW RADAR W / 6.4 in Color LCD, TRS
- Non slip deck
- Classification Certificate

Specifications

Length O.A.	14.285 m
Breath.	4.244 m
Depth	1.980 m
Draft	0.900 m
Light weight	16 tonnes
Loaded weight	18.3 tonnes
Range	250 NM @ 15 knots
Max. speed	35 knots @ 2,300 rpm



WOOSUNG I.B. CO., LTD.

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We, Woosung I.B. founded in 1983, we pride ourselves on our continuing pursuit of advanced business and technological innovation in the inflatable-boat industry.

We have developed over 100 types of inflatable boats that have been exported to 75 countries around the world. Now, by the renovation of our factory in Korea, Vietnam, China with HVAC system (Heating, Ventilating, and Air Conditioning), we now have the production capacity to manufacture over 180,000 inflatable boat per year.



INFLATABLE-BOAT

Rescue X

- Can save more than 30 people at once.
- Can drop by helicopter or on the shipboard.
- Can choose to unfold on the water by automate or manual.
- Center of Rescue system there is safety mesh for the aged or injured person.
- There is GPS location transmitter and LED light for the rescue.





WOORI OCEANTECH

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WOORI OCEANTECH specializes in small and medium size of special purpose vessels which fully meet the various needs customers especially for ROK Navy, ROK Coast Guard. These vessels are built using advanced composites technology and it serves high-performance reliability on vessel's speed, strength of hull structure.

Business, Products and Services

Development & Building of High performance small craft

- Fast interceptor craft
- SAR (Search And Rescue) boat
- Self-righting RIBs

Company Main Export Items



Technical Data

High Speed interceptor craft (20Ton Class)	
Length Overall	21.1m
Crew	12
Max. Speed (@25T)	66Knots
Cruise Speed	38Knots
Endurance Full speed	300NM
Propulsion	-3 x Seatek V12 Marine Diesel 1500HP -3 x water Arneson ASD 12 Surface drive
Construction	Carbon Epoxy Composite Sandwich



KOREA T.E.S CO., LTD.

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“Customized Military System Up-Grade such as Combat System & SONAR control Console etc.”

KTES Company specializes in developing and supplying main part and equipment of electric, electronic and communication system for 209 Submarine, Surface vessel etc. We have the special strength in case of the equipment not serviced due to discontinued spare parts supply from original manufacturers. We have been providing ROK Navy with many parts such as Digital LCD for CRT, Power supply etc. since 2005.

MAIN EXPORT ITEMS

- Distributor of Multi-function console display for electric system maintenance company
- Electronic Equipment Up-Grade Display System

& Power Supply for Operation Console of Submarine (209), Battle ship etc.

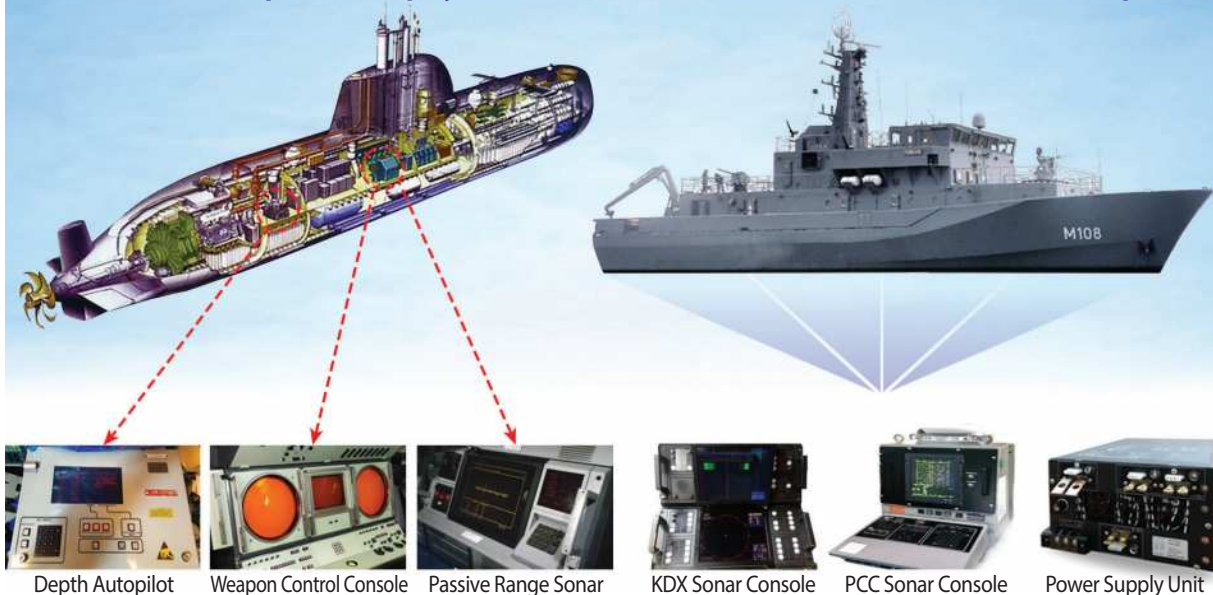
Application / Use

- **Substitute for 209-Class Submarine**
 - 1) Integrated Combat System (ISUS83-4) Display
 - 2) Depth Autopilot (DAP) Display
- **Substitute for Surface Vessel**
 - 1) KDX (Korea Destroyer) Sonar (DSQS-21BZ) Console
 - 2) PCC (Patrol Class Corvette) Sonar (AN/SQS-58) Console
 - 3) Control / Power Supply Unit

Characteristics

- MIL-STD spec.
- Technological aspect (Low-power, high-efficiency, Lighter weight)
- Cost savings effect

Electronic EQUIP' Up-Grade Display SYS' & P/S for OP Console of Submarine (209), Battle Ship etc.



Depth Autopilot

Weapon Control Console

Passive Range Sonar

KDX Sonar Console

PCC Sonar Console

Power Supply Unit



JINYOUNG TBX Co., LTD.

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Since 1982, JINYOUNG TBX Co. has been producing Turbine Blade that are the part of Turbine Power plant. We also have been striving continuously to obtain the advanced technology which would help the company develop local industry as well. Certified with ISO9001, our company provides our customers needs by investing in the latest technology and quality at the beginning of the 21st century. We make every effort to satisfy the customers need through highest quality products and best possible services.

Strength

- One of a kind parts to mass production
- The power of various turbine blade machine tools (About 200EA)
- 30 years of successful experience in domestic & overseas Projects
- Experience and know-how of Artisans



Turbine Blade



Rotor

1. Gas Turbine

- Compressor Blade / Vane / IGV/ OGV/ VSV

2. Steam Turbine

- Rotating / Moving / Rotor / Fan Blade
 - Stationary / Fixed / Stator Blade / Profile / Partition
 - Bucket / Airfoil
 - Nozzle for diaphragm / Spacer

3. Turbo Machinery

- Impeller / Bisk / Diffuser / Blade



NBC EQUIPMENT PROTECTIVE

HKC CO., LTD.	194
HANCOM LIFECARE INC.	195
SG SAFETY CORPORATION	197



HKC CO., LTD.

www.hkci.co.kr

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Based on its technologies accumulated through 50 years' experience and intensive R&D investments, HKC has taken the lead in Korea's defense industry. Now, HKC is contributing to improving Korea's defense power with its advanced NBC, weapon systems, telecommunication & electronic systems and control equipment. Furthermore, HKC will continue to create brand-new value for its customers by training its talented research engineers and making pre-emptive investments in core technologies

RADIATION DETECTOR

VDR-1K



Measures the dose rate of nuclear gamma and beta ray, and their degree of radioactivity to protect people, equipment, and materials; can also be used in vehicles, battleships, and base stations, and by soldiers.

Features

- Detectable all kinds of ray (α / β / γ / n)
- Vehicle and personal, self failure test
- Expandable probe / Connectable external detect sensor

Specifications

Detect range

Alpha (Dose rate)	0~350kcps	Detect ray	α / β / γ / n
Beta (Dose rate)	1.0uGy/h~1.0cGy/h	Size	220×170×70mm
Gamma Dose	1.0uGy~1.000cGy/h	Weight	Under 2.0kg
Dose rate	1.0uGy/h~1.000cGy/h	Operating temp	-32~50°C
Neutron (Dose)	1cuGy/h~1.000cGy	Power supply	Battery

ANR CVC HELMET

KHH-80A2



The ANR helmet is an active noise reduction helmet that cuts off noise in track vehicles or armored tanks during communication and improves communication quality to allow better understanding between parties.

Characteristics & Usage

- Improve communication clarity, protect operator's auditory sense.
- Cut off low frequency band noise.
- Use silicon cover for receiver unit

Specifications

Frequency range	300Hz~3,500Hz
Microphone impedance	150 Ω ±10% (at 1KHz)
Receiver impedance	1,000 Ω ±10% (at 1KHz)
Input voltage	DC 24±2V
Noise reduction	10dB~24dB

HANCOM LIFECARE

HANCOM LIFECARE INC.

www.global.hancomlifecare.com

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Since its foundation in 1971, HANCOM LIFECARE has been providing a comprehensive line of protective equipment such as gas mask, SCBA, Chemical suit and other PPE in the area of military, law enforcement, fire service and chemical industries.

HANCOM LIFECARE developed the next generation gas mask K5 for the Ministry of National Defense of Korea and now the company provides K5 mask to the entire Korean armed forces as the sole provider.



HANCOM LIFECARE INC.

MAIN EXPORT ITEMS

K10 CBRN Gas Mask

K10 is a variant of K5 (Next generation standard issue gas mask for Korea armed forces) and so it is not only sharing core technologies with K5 but customized to outperform the requirement of NATO Triptych D103 and to be suited to future

battlefield environment.

K10 provides complete protection against the most potent threats such as CBRN agent and Toxic Industrial Chemicals (TICs), ensuring maximized operational capability with continuous comfort.

Components



Features



Single visor

- Wide field of vision and with enhanced user recognition
- Flexible, scratch and impact resistant
- Integration with gun sights and night vision



Dual canister

- Reduced inhalation resistance in half
- Compatible with single CBRN canister with DIN 40 thread
- No interference with shooting



Compatibility

- Compatible with any military helmets
- Improved integration with corrective vision, voice amplifier or communication sys.



Hydration

- Self-locking high flow drinking system
- Easy operation with lever
- Fit to canteen & back worn hydration system



SG SAFETY CORPORATION

www.sgsafety.net

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Tel: +82-70-4992-8541

Fax: +82-31-651-3027

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Since foundation in 1950 and then designated as national defense company (No. 1), SG Safety Corporation is playing a pivotal role in national defense industry through development and production of key national defense products such as K-1 gas mask, permeable protective clothing, human decontamination kit, Air bag for K21 armored vehicle, total protective equipment and shield-liner for K2 Tank, Operational rubber boat and various kinds of filters. Samgong specialized in NBC products and industrial safety products considers the life of the military and the people first.



SG SAFETY CORPORATION

MAIN PRODUCTS

Korean K-1 Gas Mask for Military



Product Info

NBC gas mask jointly developed with Agency for Defense Development is recognized for its excellent quality, Consists of mask assembly and canister, Intended to protect individual's respiratory organ in NBC warfare, Wearer can converse and drink with the mask worn.

Specifications

Item	Description	
Gross weight	1,750g	
Weight	510g	
Mask assembly	Inhale resistance	Less than 55 mmH2O
	Exhaust resistance	Less than 32 mmH2O
	Weight	285g
Canister	Air resistance	Less than 75 mmH2O
	DOP smoke permeability	Less than 0.001%
	PS life	Approx. 28min

Permeable Protective Clothing



Product Info

SG Safety Corporation's own developed product with very great performance, Consists of permeable protective clothing, protective gloves and protective boots, Intended to wear over combat uniform, combat boots to protect from the chemical agents in NBC warfare, Various sizes are available ranging from Extra No. 1 to No. 6.

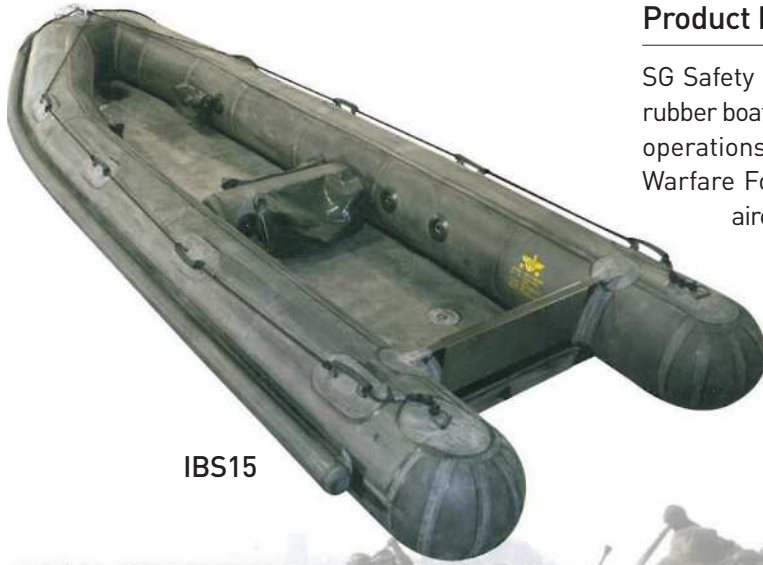
Specifications

Item	Description
Gross weight	2,960g
CCl4 absorption ability	Approx. 1.8mg/cm ²

Operational Rubber Boat

Product Info

SG Safety Corporation's own developed inflatable rubber boat KM7 is capable of high mobility in landing operations by the Navy, Marine Corps or Special Warfare Forces Team, and also airdrop from the aircraft, IBS15 is rubber boat mainly crossing operation.



IBS15



KM7



Specifications

Item	Specification					
	Full length (mm)	Body		Weight (kg)	Max. on board (person)	Optimum engine (Hp)
Width (mm)		Dia. (mm)				
KM7	4,700	1,900	510	1,235	7	35, 55
IBS15	5,300	1,760	470	1,450	15	15, 30

SG SAFETY CORPORATION

SGK-7 Gas Mask for Polish



Product Info

Frontal clear lens is applied for wide field of view to perform safer mission in the anti-riot or operational site

- Improved long hour's wearability
- Ergonomic design / Reduced weight of full faced mask assembly.
Furnished with mesh type hairband
- Fitted with microphone-dedicated cap for use communication network with mask worn in polluted area

Specifications

Item	SGK-7	Note
Weight	570g	Weight loss 10% compared to existing commercial products
Hairband	Mesh type 6 dot	Reduced long hour's press and 6 dot style horizontal balance correction
Canister attachment system	Both side available	Left-handers considering design
Communication module	Communication ear phone-fitted cap	Communication available with mask worn
Purification gas	Canister attachment by model	Standardized screws-applied



MISCELLANEOUS

SAMSUNG S-1 CORPORATION	202
D-ECO ENERGY CO., LTD.	205
EHWA TECHNOLOGIES INFORMATION	206
SAMJEONG TURBINE CO., LTD.	208
KOREA SPECIAL BATTERY CO., LTD.	209
SUNTECH CO., LTD.	210
VITZROCELL CO., LTD.	211
DAE-SUNG TECH CO., LTD.	212
KOLON GLOBAL CORPORATION	213
LOTUS INTERNATIONAL CO., LTD.	216
KYUNGCHANG INDUSTRY	217
JAIN TECHNOLOGY	218
TAEKYUNG	219
WINTEK CO., LTD.	220
GROUND CO., LTD.	221
TBT SYSTEM	222
GREEN OPTICS CO., LTD.	225
KOREA ELECTRO-OPTICS CO., LTD.	226
KODUCT CO., LTD.	227
ZIWOO INFORMATION & TECHNOLOGY INC.	228
JD SOLUTIONS CO., LTD.	231
CONET SYS CO., LTD.	232
U2SR	233
SHIELDK CO., LTD.	234
KANGWOON INDUSTRY CO., LTD.	235



S-1

SAMSUNG S-1 CORPORATION

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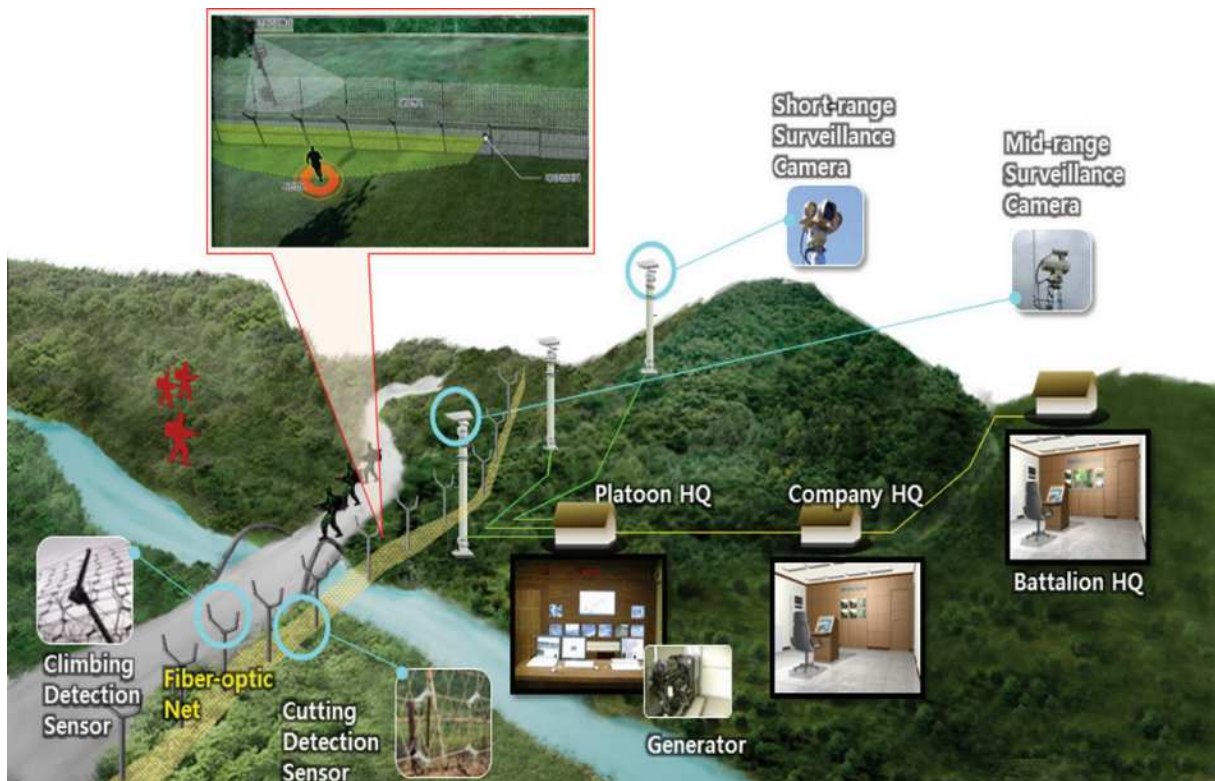
Samsung S1 is a security leading company in Korea and strive to be the global leader. Ever since its foundation in 1977, S-1 has been safely protection its customers' assets with system security. We provide a wide range of security solutions including building solutions, information security, and MVNO (personal security phone) delivered by specialists equipped with cutting-edge technology and expertise.

More than just safety, S-1 is a total security solutions company that guarantees security and peace of mind.

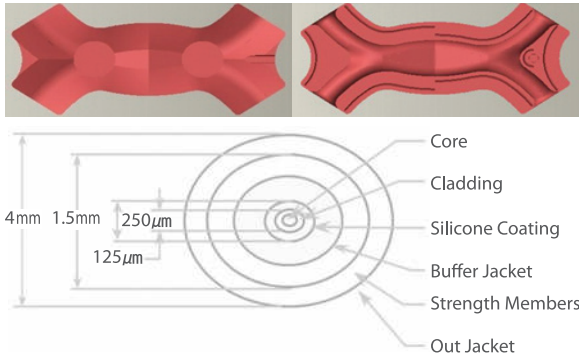
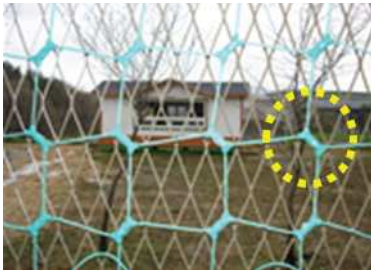
SCIENTIFIC PERIMETER DETECTION SYSTEM

SPDS (Scientific Perimeter Detection System)

Samsung S-1's scientific perimeter detection system provides high level performance (with very low false alarm) though integrated operation by full HD CCTV and Fiber-Optic Net



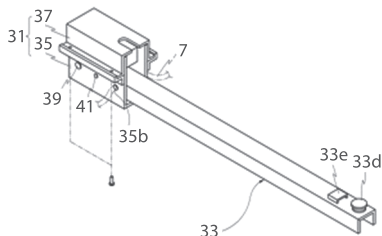
Fiber Optical Net



Technical Data

- Structure: Net made of one single twisted cable
- Material: PBT + PC
- Grid size: Bottom 18cm×18cm, Top 20cm×20cm
- Transmission method: Single mode 1,310nm, 1,550nm
- Cable diameter: 4mm
- Optic signal decay rate: 1.3dB/Km
- Operation temp: -40°C ~ +80°C

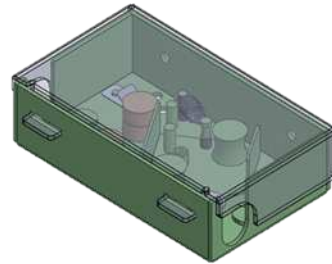
ROD (sensing intrusion over the fence)



Technical Data

- Material: A galvanized steel sheet
- Cutting intensity: 15~20kg
- Length: 150~155cm
- Remark: Installation to be customized according to geography and fence structure

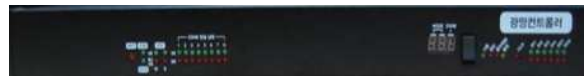
Bottom Bracket



Technical Data

- Material: Electrolytic galvanized ssteel
- Sensing weight: 2.0kg
- Size (mm): 125(W)×75(H)×30(L)
- Weight: 0.6kg

Optical Net Controller



Technical Data

Zone detection	Max No. of zone	8 (Default 4, Expansion 4)
	Distance	50M per a zone
Power	Power type	AC 100V, 220V (90V~264V)
	Current consumption	Up to 100mA @220VAC
Communication	Optical communication	- Type: Ethernet - Speed: Max. 100Mbps - Connection type: Dual (WEST, EAST)
	Serial (Debugging)	- Type : RS-232 - Speed : 57,600bps - Interface : RJ-45
Output	LED	- Power LED 1EA / CPU LED 1EA
		- Optical module status display (In use / error) 4EA
		- Zone Status Display (in use / error) 16EA
		- Zone Detail Status Display 4EA
		- D1 Status Display (in use / error) 8EA
		- DO Status Display (in use / set / unset) 4EA

SAMSUNG S-1 CORPORATION

Optical Communication Convertor



Technical Data

No. of connection with controller		Max. 32
Power	Power type	AC 100V, 220V (90V~264V)
	Current consumption	Up to 100mA @220VAC
Communication	Optical communication	- Type: Ethernet - Speed: Max. 100Mbps - Distance: Max. 10km - Connection type: Dual (WEST, EAST)
	Serial (Debugging)	- Type : RS-232 - Speed : 57,600bps - Interface : RJ-45
Output	LED	- Power LED 1EA / CPU LED 1EA
		- Optical module status display (In use / error) 4EA
		- Zone Status Display (in use / error) 16EA
		- Zone Detail Status Display 4EA
		- D1 Status Display (in use / error) 8EA
		- DO Status Display (in use / set / unset) 4EA

Network Camera (Close Range)



Technical Data

- Image sensor: 1/2.8" Exmor Progressive scan CMOS
- Zoom: ×30 optical zoom
- Frame rate: 60fps @ 1,920×1,080
- Compression: H.265 / H.264 / MJPEG
- Minimum illumination
Normal: 0.1Lux / High Sensitivity: 0.01Lux
- Lenz mount: N/A
- Resolution: 1,920×1,080 (Full HD) / 1,280×1,024, 1,280×720 (HD) / 1,024×768, 800×600, 640×480, 320×240

- Focal length: 6mm ~ 180mm
- Max. aperture: F1.6 ~ 4.7
- Angle of view: H: 61.2° (Wide) ~ 2.32° (Tele)
- Power consumption: 12VDC / PoE, 8.76W
- Dimension (mm): 74(W)×188.1(L)×73(H)

Network Camera (Close Range-PTZ)



Technical Data

- Operating angle
Horizontal: 360° endless, Vertical: -90° ~ +40°
- Speed
Horizontal: 0.012° ~ 120°/s, Vertical: 0.036° ~ 40°/s
- PTZ functionalities:
Preset, Auto-Pan, Group, Swing, Trace
- Certification: IP66
- Protocol: Samsung-T/W, Pelco-D/P, SHINWOO
- Power supply: AC 24V ± 10% / DC 36V ± 10%
- Power consumption: Max. 195W
- Dimension (mm): 360(W)×537(L)×540(D)

High Resolution Thermal Camera



Technical Data

- Resolution: 640(H)×480(V)
- NETD: <50mK @ f1.0 30Hz 300K
- Spectral response: 8~14μm
- Zoom: Digital Zoom 4×
- Lenz: 100mm f1.0
- Power supply: 12VDC



D-ECO ENERGY CO., LTD.

www.d-eco.net

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E-mail: to4272@gmail.com

Since starting life as D-ECO ENERGY Co.,Ltd. (DAEJIN GENERATOR SYSTEMS) in 1991, has now become one of the leading generator manufacturers in Korea by constantly developing new technology and improving the quality of its products.

These continued efforts have helped us develop an excellent reputation in both domestic and overseas markets. To become a major industrial player in the 21st century, we are expanding our international partnerships by increasing overseas investments and offering a first-class product range (including open and sound-proof generator sets, natural gas generator sets, secondhand generator sets).

To help protect the world's environment, we are focusing every management resource on developing environmentally-friendly products and establishing more efficient service systems. We call our new vision "Humanized Mechanical Convergence leader" to emphasize how human ingenuity and mechanical know-how are brought together to create a leading world-class brand.

MAIN EXPORT ITEMS

Diesel / Gasoline / Gas Generator Set Solar Energy

Full Range of Generator Sets



Open Skid Type



Weather Proof Enclosure Type



Container Type



Sliding Door Type



Sound Proof Enclosure Type

Gas Generator Set
(Natural, LPG, LNG, BIO)



Trailer Type



Generator Set Truck



Motor Generator Set



EHWA
TECHNOLOGIES
INFORMATION

P O W E R S Y S T E M S

EHWA TECHNOLOGIES INFORMATION

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EHWA Technologies Information provides power protection for a wide range of applications. EHWA was founded in 1956, and has been one of the global leaders in designing, manufacturing, and marketing of power protection equipments including UPS (Uninterruptible Power Supply), Transformer, Rectifier, and Computer-related software and other various equipments.

EHWA has earned great reputations from their customers locally and globally through their high-reliability and qualified products which are manufactured by the state-of-the-art technology. The mission of EHWA is to meet customers' requirements and expectations by continuously developing innovative solutions and solve real world problems. All EHWA products are ISO9001 certified and complied with applicable international standards. The EHWA Digital UPS Series is one of the best performing and most reliable system providing power protection for mission-critical industrial equipments.

EHWA is committed to conduct its business with fulfilling responsibility of protecting and improving global environments. EHWA promises to listen to all customers' requirements and offers products to enhance customers' benefit. EHWA is always willing to serve all customers to the fullest possible extent.

PATRIOT POWER SUPPLY SYSTEM



150kW Frequency Converter (FCSM-150K)



Power range	150kW
Input	3PH, 380V, 60Hz
Output	3PH, 208V \pm 1%, 400 \pm 2Hz
Environmental	MIL-STD-810F
E.M.I	MIL-STD-461D

60kW Frequency Converter (FC-754)



Power range	75kVA (60kW)
Input	3PH, 240/416V, 60Hz
Output	3PH, 240/416V±0.5%, 400Hz±0.25%
Environmental	MIL-STD-810F

CHEONGOONG (Multi Function Radar) POWER SUPPLY SYSTEM



100kW Frequency Converter (OU-100K)



Power range	100kW
Input	3PH, 380V, 60Hz
Output	3PH, 220V±0.5%, 400Hz±0.25%, 28VDC 50A
Environmental	MIL-STD-810F
E.M.I	MIL-STD-461D

EARLY WARNING RADAR POWER SYSTEM



Power range	DGS: 1,250kVA / NBS: 1,250kVA / DRC: 330kW
Input	3PH, 400V, 60±0.2Hz
Output	DGS: 3PH, 400V±1%, 60±0.2Hz NBS: 3PH, 400±1%, 60±0.2Hz DRC: 320VDC 1031A
Environmental	MIL-STD-810F
E.M.I	MIL-STD-461F

MISCELLANEOUS



SAMJEONG TURBINE

<http://turbine.co.kr>

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E-mail: sakang@turbine.co.kr

IRD is a professional turbo machinery company. We have We have unique know-how and technology to provide a 'one-stop total solution' to all processes related to turbo system design, manufacturing, parts production and maintenance.

In addition, we have received a good reputation for developing innovative and competitiv aircraft ground support equipment and will open new markets in this area.

MAIN EXPORT ITEMS

GTGA
(Gas Turbine Generator,
Combined Air-conditioner)



GTG
(Gas Turbine
Generator)



Air-conditioner



Technical Data

Item	GTGA	GTG	Air-conditioner
Size (mm)	3,270(L)×1,420(B)×1,810(H)	2,740(L)×1,420(B)×1,810(H)	1,610(L)×1,590(B)×1,450(H)
Weigh	1,940 kg	1,540 kg	640 kg
Electric power	115 / 200 VAC, 3 ∅, 400 Hz, 60 Kw		—
Bleed air	Pressure 49 psia, Flow 155 ppm		—
Cooling air	Temperature 10~93°C, Flow 95 ppm	—	Temperature 10~93°C, Flow 95 ppm



KOREA SPECIAL BATTERY CO., LTD.

www.ksbatteries.com

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Tel: +82-55-239-5800

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E-mail: sht@ksbatteries.com

Korea Special Battery Co., Ltd. established in 1961, is the sole defense manufacturer, specialized in providing propulsion batteries for submarine and torpedo in Korea Navy. Backed by long-term large investment and accumulated experience, Korea Special Battery's different types of highly-sophisticated batteries strengthen and enhance the operational performances of the naval forces' advanced submarines (HDW's 209 / 214 type & Korea 3,000 ton class type) and torpedoes (Heavyweight and lightweight).

The most modern production and R&D facilities along with strict quality standards will assure domestic and overseas customers satisfaction of requirement with reliability and safety.

SUBMARINE BATTERY

209 Class (K45PS13K)



Technical Characteristics

Model	K45PS13K	K30PS15
Dimensions (mm)	450(W)×290(L)×1,336(H)[1,421(TH)]	297(W)×290(L)×1,426(H)[1,511(TH)]
Weight (kg)	517kg ±2%(Wet), 395kg ±3%(Dry)	350kg ±2%(Wet)
Inclined Position	45° tiltable in all directions, electrolyte does not escape	
Working Temperature (°C)	Max. 45, 55 for short time	
Shock Resistance	BV 043	

Electrical Characteristics

Time of Discharge (h)	Capacity of Discharge (W)	Working Capacity (Wh)	Initial Voltage (V)	Medium Voltage (V)	Final Voltage Average Value		Final Voltage Lowest Value (V)
					80% (V)	100% (V)	
1.25	9,845	12,310	1.83	1.72	1.63	1.44	1.17
1.5	8,605	12,910	1.865	1.75	1.67	1.49	1.25
2	6,950	13,900	1.905	1.795	1.72	1.55	1.355
3	5,145	15,435	1.95	1.84	1.77	1.615	1.46
5	3,486	17,430	1.99	1.89	1.815	1.67	1.56
10	2,005	20,050	2.03	1.93	1.85	1.72	1.645
20	1,102	22,040	2.05	1.95	1.875	1.75	1.69
50	478	23,890	2.065	1.965	1.89	1.765	1.725
100	248	24,800	2.07	1.97	1.895	1.77	1.73
1.25	5,960	7,450	1.79	1.70	1.64	1.49	1.27
3	3,549	10,847	1.92	1.82	1.76	1.64	1.51
5	2,487	12,436	1.97	1.87	1.80	1.69	1.585
20	818	16,360	2.04	1.94	1.87	1.77	1.69
50	363	18,150	2.06	1.96	1.89	1.79	1.725
100	190	19,000	2.07	1.97	1.90	1.80	1.73

214 Class (K30PS15)





SUNTECH CO., LTD.

www.sun-tech.co.kr

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Tel: +82-61-721-2222

Fax: +82-61-722-3388

E-mail: suntech.ellie@gmail.com

- Developed permanent magnet power generation technology for 28 years and succeeded in practical use of weapon system
- Acquired 12 patents of permanent magnet rotor generator and obtained Korea new technology certificate (NEP)
- Awarded three gold medals at the International Invention Contest for the world's best permanent magnet power generation technology
- Certified as a manufacturer specializing in generators for radar weapons systems of the Ministry of Defense.

MAIN EXPORT ITEMS

Local Air Defense Radar 50kw Generator



Counter Battery Detection Radar 80kw Generator



Technical Data

- Phase & Wire: 3 Phase & 4 wire
(Permanent magnet rotor)
- Fuel: Diesel (Vehicle fuel)
- High efficiency: 98%
- Outstanding fuel consumption: 13L / 1h (at max. load)
- Rated voltage / Frequency: 220 / 380 VAC, 50 / 60 Hz
- Low noise: less than 69 db (At a distance of 7 m, max. load)
- Voltage regulation: within $\pm 2\%$
- Operating temperature: $-32^{\circ} \sim +50^{\circ}$
- Continuous operation: more than 100 h
- Protective function:
low oil pressure, over temperature / speed, fire alarm, over / low voltage, over current, overload protector, etc.

※ Due to Excellent power quality, permanent magnet generator is suitable for radar generator.
And it was confirmed by Agency For Defense Development.

VITZRO CELL

VITZROCELL CO., LTD.

[www.vitzrocell.com / index.php](http://www.vitzrocell.com/index.php)

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Fax: +82-2-2024-3298

E-mail: gerald@vitzrocell.com

Vitzrocell has been one of the leading companies in designing and manufacturing Lithium Primary Batteries for Defense Applications, Utility Meter, Asset Tracking and Security, etc for more than 30 years. Vitzrocell was nominated as a sole supplier for Korean Military in 1993 and has been supplying with battery packs for Korean military applications such as radiotelegraph, electric shells, inductive weapon, others electric equipment over 20 years. Vitzrocell has been also manufacturing the lithium-based Ampoule, Thermal Reserve Batteries and Military Packs for defense applications such as missiles, electronic fuzes for artillery, ammunition and communication devices.

BUSINESS, PRODUCTS AND SERVICES



Ampoule Reserve Battery
(for Electronic Fuze systems)



Thermal Reserve Battery
(for Guided Missile Systems)



Li-SOCL2 Battery
(for Communication / Optical Devices)



High Temperature Battery
(for Oil & Gas Exploration)



DAE-SUNG TECH CO., LTD.

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E-mail: webmaster@milpol.co.kr

We have been successfully supplying products to Korean Army as well as exporting to foreign customers. Since the establishment in 1974, we have dedicated ourselves to perfection in the quality of our products. With continuous developments based on accumulated technical know-how, we have been providing our customers with higher quality products which exactly fits to each customer's various needs, which is the most competitive in all of quality, price, and delivery.

Pursuing perfect and highest quality products, Dae-Sung Tech Co., Ltd. shall be the second to none.

Ballistic Helmet (DSF)

- **Size:** Small, Medium, Large, X-Large
- **Material:** Aramid, UHMW PE
- **Protection Level:** NIJ Level I~ NIJ Level IIIA



Protect wearer's head from bullets or fragments of the bomb and grenade

- Constructed with multi-layers of high ballistic cloth impregnated with a thermoplastic resin, DSF helmet is designed to provide the protection against ballistic and fragmental threats.
- Ideally designed for communication system and head-set.
- Three types of DSF shall be provided as followed (Noya, Mir, Goma)

Body Armor

- **Size:** Small, Medium, Large
- **Material:** Aramid, UHMW PE
- **Protection Level:** NIJ Level II~ NIJ Level IV



Protect wearer's body from bullets or fragments of the bomb and grenade

- Body armors are comprised of front protector, back protector, neck & shoulder protector, groin protector and plate pocket.



KOLON GLOBAL CORPORATION

KOLON GLOBAL CORPORATION

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KOLON Group was first established in 1954 and became a world-class enterprise that leads growth and development of economy in Korea. As a core partner of MODs in many countries, KOLON possesses more than 50 patents as a result of its development for our clients.

Presently, we are striving to be the best defence solution provider through the technology we developed by participating in defence contracts in Saudi Arabia, South Korea, Singapore, Turkey, etc.

MAIN EXPORT ITEMS

Bulletproof Vest



Ballistic Protection

- Various design suitable for a mission
- Applied Kolon patented Quick Release system
- Integrated with MOLLE system
- Only company in South Korea complying to NIJ requirement

Bulletproof Vest Features

Product type	MOLLE QUICK RELEASE VEST
Ballistic area	Front, Back, Neck, Shoulder, Side, Groin and Thigh
Basic protection level	NIJ Level III A (NIJ-STD-0101.06)
Ballistic material	P-Aramid or UHMWPE
External material	Polyester fabric or Nylon with PU coating
Weight	Approx. 4 kg

* Anti-stab Vest, Floatation Vest also available



KOLON GLOBAL CORPORATION

Anti-stab Bulletproof Vest



Anti-stab Bulletproof Vest

- provides ballistic and anti-stab protection for front, rear and sides.
- Includes front and rear pockets to hold Level III & IV armor plates.

Anti-stab Vest Features

	Ballistic Resistance	Stab Resistance
Protection level	NIJ-STD-0101.06 Level IIIA	NIJ-STD-0115.00 Level II * P1, S1, Spike Level II
BFS	Less than 44 mm	Less than 7 mm for E1 Less than 20 mm for E2
Ballistic material	Aramid or P.E.	
Weight	Large – Approx. 2.8 ± 0.2 kg	
Outershell fabric	Nylon or Polyester fabric	

* Size, Color and Weight adjustable upon demands.

Bulletproof Helmet



Ballistic Protection

- Meet the requirements for US military and HP white specifications
- PASGT, MICH, ACH, Boltless available
- Accessories available upon demands

Bulletproof Helmet Features

Place of origin	South Korea
Brand name	KS-411, BOLTLESS HELMET
Model number	KS-411
Ballistic specifications	NIJ-STD-0106.01, HPW-TP-0401.01B 9 mm FMJ, RN: 425 ± 15 m/s
Basic protection level	NIJ Level III-A
Ballistic material	Aramid fabric or UHMWPE
Weight	Approx. 1.3~1.4 kg
Colors	Black, Olive Green or Sand Color

Hard Armor Plate



Ballistic Protection

- NIJ Level III & IV available
- Specifically designed to be used by special operation
- Complies to NIJ requirement
- PE or Ceramic used considering Protection Level or Required Weight

Armor Plate Features

	Level IV	Level III
Ballistic Protection level	NIJ Level IV (NIJ-STD-0101.04) in conjunction with NIJ III-A Vest	
Test Method	30 caliber M2 AP: 878 ± 9 m/s (1 shot)	7.62 mm NATO FMJ : 847 ± 9 m/s or 7.62×39 API : 847 ± 9 m/s (3 shot)
BFS	Less than 44 mm	
Material	Alumina Ceramic panel backing with aramid fiber composite	Polyethylene or Alumina Ceramic panel backing with P.E.
Weight	Approx. 3.1 kg	Approx. 1.5 ~ 2.6 kg

Aramid Fabric “HERACRON”

HERACRON Features

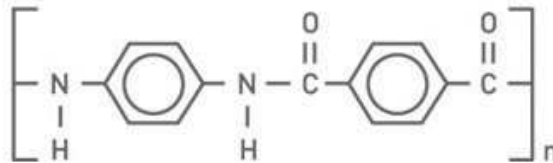
Heracron is the registered trademark for Kolon’s high tenacity, high modulus aramid fiber Heracron fiber, with excellent strength, thermal resistance and chemical resistance, can be used in various industries.

Importantly, Kolon’s continuous production system from polymerization to spinning improves its strength and quality consistency. Therefore, Heracron can satisfy customers worldwide.

The company will continue to upgrade Heracron, which maintains its original properties under the toughest of circumstances.



PPTA (P-PHENYLENE TEREPHTHAL AMIDE)



Development History

R&D History

- 1979 Aramid R&D started
- 1983 Pulp patent received in U.S.A
- 1995 Aramid R&D completed

Project History

- 2002 Project started
- 2003 Production technology developed in pilot facility
- 2005 Mass Production to start



LOTUS INTERNATIONAL CO., LTD.

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LOTUS INTERNATIONAL is specialized company for Defence, Anti Terrorism, Police & Military Equipment, Rescue Tools and Special Vehicle.

Associated with UN forces for supplying rescue vehicles and military equipment in warareas, victim regions, infrastructure security required states and poverty regions.

LOTUS is manufacturing ulhazardous tasks equipment for EOD squad, anti riot equipment and bulletproof equipment for military and police to fulfil their desired design and quaility.

LOTUS designing and developing products through field experts that absolutely fit to enduser equipenents.

LOTUS is providing the best value beyond the nations and human race expectations for achievement to become front company for peace human welfare.

BUSINESS, PRODUCTS AND SERVICES



Ballistic Face Shield



Special Task Force Armored Vest



Anti Riot Suit



Comfortable Armored Vest



PASGT Bulletproof Helmet



Kyung Chang

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KCI (Kyungchang Industry) is ...

- A renowned manufacturer of personal equipment for Military and Police
- A reliable company established in 1984 with ISO 9001 and 14001 certifications

Company Main Export Items



MAGAZINE



BALLISTIC HELMET



ANTI-RIOT SUIT



BALLISTIC VEST



ANTI-RIOT SHIELD



ANTI-RIOT HELMET

Technical Data

CATEGORY	ITEM	SPECIFICATION
Military	Ballistic Helmet	NIJ Level IIIA
	Magazine	For Pistols and Rifles
	Ballistic Vest & Plate	NIJ Level IIIA, III, and IV
	Ballistic Shield	NIJ Level IIIA, III, and IV
	Backpack & Field Bed	
	Byonet	M7, M9
Police	Cleaning Kit	AR15 (M16)
	Anti-riot Helmet	
	Anti-riot Suit	Flame Resistant
	Anti-riot Shield	
	Batons	PC, Aluminum, Steel
	Handcuffs	Plastic, Aluminum, Steel, and Stainless Steel

JAIN TECHNOLOGY

JAIN TECHNOLOGY

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E-mail: nsl@jain.co.kr

JAIN TECHNOLOGY is specialized company for sound related instruments. Especially JAIN TECHNOLOGY make fully digitalized various kind of ultrasonic flow-meters for liquids and gas. Also, Jain Technology has CERTIFIED CALIBRATION LABORATORY for liquid flow in accordance with the recognized International Standard ISO/IEC 17025:2005.

In addition, JAIN TECHNOLOGY involved in DEFENSE projects using sound localization technologies for sniper localization and bullet detection.

Scope of Service

- Counter Sniper Detection for Vehicle
- Counter Sniper Detection for Robot
- Sniper Training

Major Products

- SODA-v
- SODA-r
- SPLUS-s



Counter Sniper Detection System : SODA-v



- 7 Detection Microphones and Automatically detect within 1 second
- Detect Shock-Wave from speeding bullet
- Shot Direction and Full 360deg Coverage
- Shooter Location Reports and Visual Alert Plus Audio Alert
- Operates In Any Environment

SPECIFICATION

Length(m) / Weight(kg)	0.63(H) × 0.47(W) × 0.47(D) / 8.0
Detection Range	1,500m (max)
Detection Accuracy (direction)	±2.2deg
Detection Accuracy (distance)	±5%
Probability of Detection	98%+
Environmental Adaptability	MIL-STD-810G / MIL-STD-461F



TaeKyung

www.etaekyung.com

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TaeKyung specializes in LED Lights with special purpose Drone Search Light. The company has designed, built and will deliver to South Korea Military. Drone Search Lights covers flares. These drone search lights are flashes longtime much more than light-bombs. These can be used during military operations at any places needed like Army, Navy, Air Force, Coast Guard, Police and Fire Fighters.

Drone Search Light



SPECIFICATION

Item	Specification
Power	60~180w(TBD)
Beam Angle	6~30°(TBD)
Coverage	30~100m(TBD)
Input Voltage	28vdc(via Drone Battery)
LED	High Power LEDs



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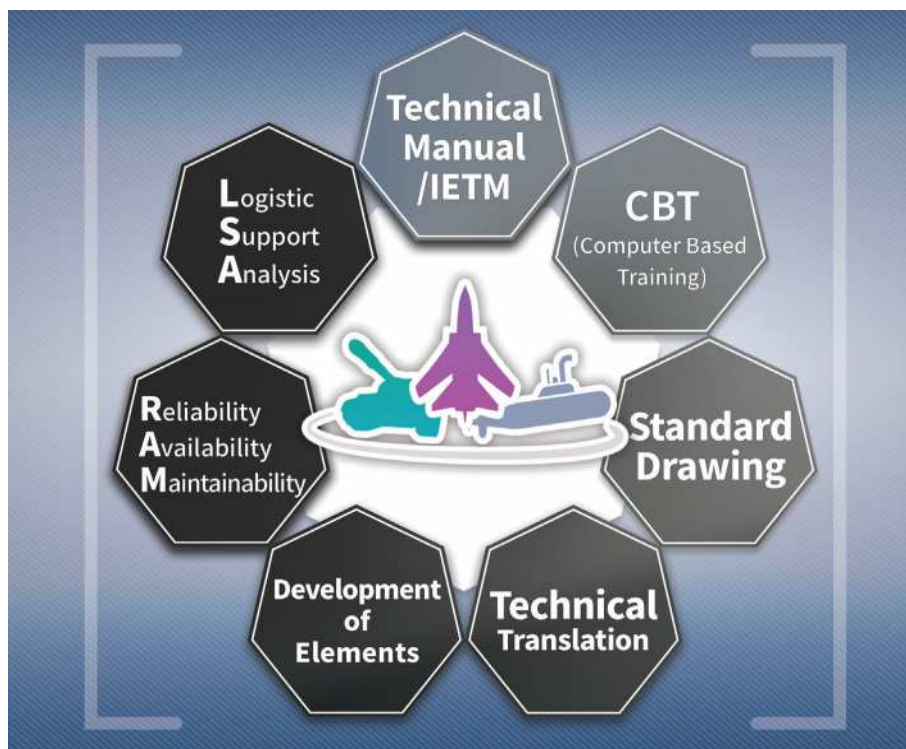
Wintek Co., Ltd. Was established in 2000, and becomes one of leading Integrated Logistics Support (ILS) companies in Korea with 100 professional employees. It contributes to development of weapon and non-weapon system through expertise in RAM (Reliability, Availability and Maintainability) analysis, Logistics Support Analysis and development of 11 principal elements. Based on the expertise of long-experienced engineers in the development practices and site activities, Wintek provides the most optimum life cycle of the system and exerts its efforts to allow customers operate and maintain the system under the best operational availability.

References of development of major ILS programs

- Land system: 36 ILS programs - Naval system: 29 ILS programs - Airborne system: 11 ILS programs

Function and Special Features

Wintek performs the RAM analysis and logistics support analysis according to customer's requirements (Concept of operation and maintenance, maintenance system, level of maintenance, etc) and provides the products after analysis of 11 principal elements.





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E-mail: ceo@ground.co.kr / woozeus@gmail.com / kimjeongbin@empas.com

Since 1999, (GROUND Co., Ltd.) has provided US patented total lightning protection solutions pursuing 100% perfect protection guarantee, and has implemented remarkable successful performances for 18 years at 4,000+ sites, mostly national security facilities, and now supply to Malaysia, Thailand, India, Indonesia, Brazil and Turkey with local partners during past 8 years.

eca3g is our product brand name, US patented Digital Grounding Device which not need to be buried in ground, can protect PCB, IC Chips, Electronic components, digital-network-IP communication devices from various surges including multi-pulse lightning, indirect lightning, GPR.

eca3g does not require secondary grounding rods & low earthing resistance, provide ideal lightning protection for advanced networked digital systems with common grounding, equi-potential with energy conversion surge elimination function. It is also suitable for mobile vehicle stations to provide grounding without buried rod.

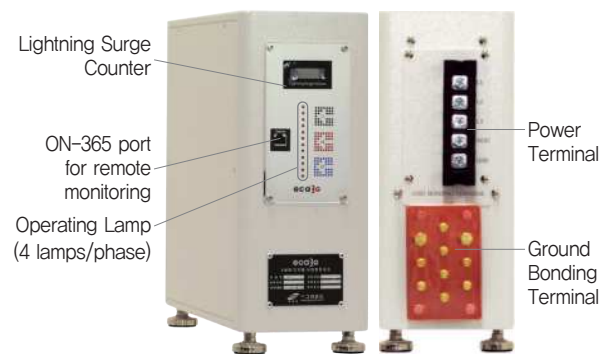
eca3g has many success stories for perfect lightning protection which conventional solutions (lightning terminal, grounding rod, SPDs) cannot protect.

US Patent No 7,652,865 B2
Grounding Device which not need to be buried in Ground

Proven performances at various national security sites :
Over 4,000 sites for 18yrs, Protection Success rate : 99.88%
Registered product at US Army Foreign Technology Database (GSTW)



Perfect Digital Grounding System



LM-Series

Model	LM-1P	LM-3P
Specification	1 ϕ 2w / 220V / 160KA 1 ϕ 3w / 220V / 320KA	3 ϕ 4w / 220V / 480KA 3 ϕ 4w / 380V / 480KA
Dimension (mm)	150(W) × 360(H) × 450(D)	
Weight (kg)	13	

US Patented Digital Grounding System

Application

Total Lightning Protection for Military communication, Radar, Broadcast, IP based border-coastal surveillance, Remote monitoring system, mobile radar, C4I vehicles, airport ILS, Meteorological radar, PCB., digital-network communication devices

Characteristics

Total Lightning Protection with grounding element and equi-potential, common ground function (near zero N-G potential)

- Need NOT Additional grounding rod
- Need NOT low earthing resistance
- Grounding device without burying in Ground
- Multi-Pulse lightning surge protection



TBT system

www.tbtsys.com

Add: 402Dong-1501Ho, 655, Pyeongcheon-ro, wonmi-gu, bucheon-city kyunggi-do 14502, KOREA

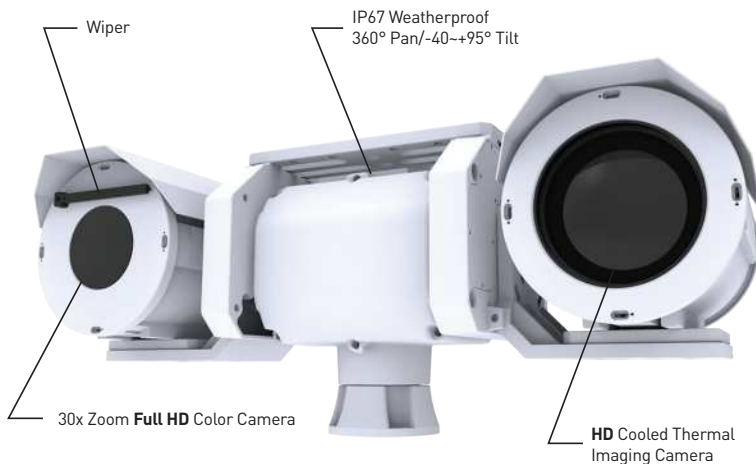
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E-mail: sales@tbtsys.com

TBT is a thermal imaging camera develop and manufacturer in Korea. Its products are ranging from military applications to commercial civil engineering applications with LWIR uncooled camera, MWIR cooled camera, security camera system and radiometric safety camera and its thermography systems. Its products in military applications are mostly based on MWIR cooled camera as camera modules supplying to EO/IR system maker with various lens options.

Multi sensor PTZ camera system



Mechanism

- Random vibration MIL-STD-810G, 5~2000Hz/5.9Grms
- Sine vibration MIL-STD-810G, 9~300Hz, 4~2G
- Shock MIL-STD-810G, 40G/6msec
- PAN/TILT
- Pan 0° ~ 360° Endless
- Tilt -40° ~ +95°
- Speed : Pan(0.0037°/Sec~70°/Sec), Tilt (0.0037°/Sec~70°/Sec)
- Accuracy : ± 0.027 mrad (< 0.00156°)

Thermal

Detector	Cooled InSb
Pixel Pitch	15μm
Pixel Array Format	640×512
Wave Length	3 ~ 5μm
NETD	<20mK typical(without lens)
Video Output	NTSC/PAL 1Ch
Cooler	10,000 hours MTBF, Sterling Cooler, <7 Minute @ 20°C Cool Down Time

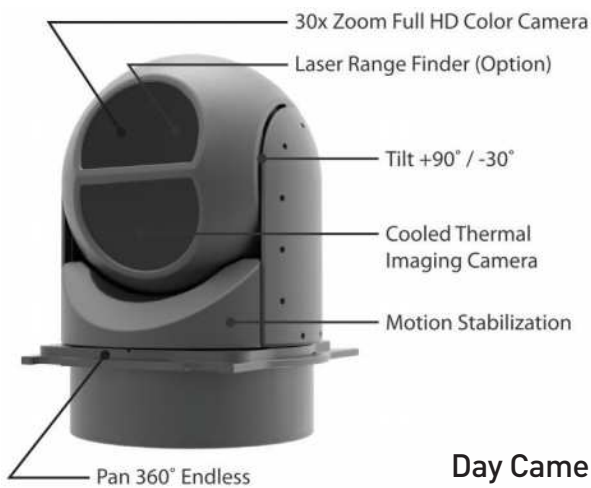
Day Camera

Detector	1/2" 2MP Sony CMOS sensor
Resolution	1920×1080@30p
Min. illumination	Color DSS(1/1s) : 0.001 lux BW DSS(1/1s) : 0.0002 lux
S/N Ratio	More than 50dB
Lens	EFL-6~216mm (Optical 36X), HFOV-62.8° ~2.23°

Distance Range



Gyro stabilized dome



Thermal

Detector	Cooled InSb
Pixel Pitch	15 um
Pixel Array Format	640x512
Wave Length	3 ~ 5 um
NETD	<20mK typical(without lens)
Video Output	NTSC/PAL 1Ch
Cooler	5,000 hours MTBF, Sterling Cooler, <7 Minute @ 20°C Cool Down Time

Day Camera

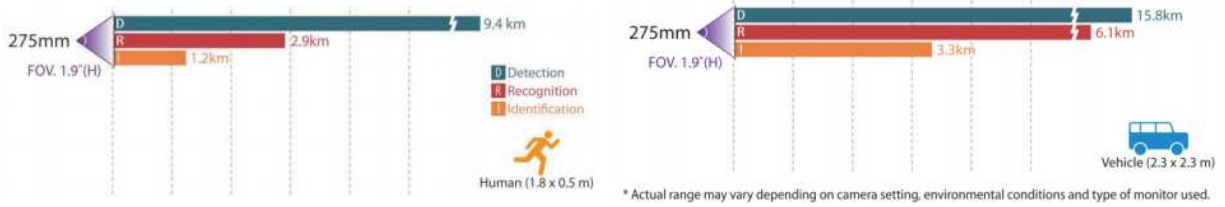
Detector	1/2.8" 2.38CMOS Sensor
Resolution	1920X1080@30p
Min. illumination	ICR Off : 0.3lux (1/30 sec, F1.6, 50IRE) / ICR On: 0.03 Lux (1/30 sec, F1.6, 50IRE)
S/N Ratio	More than 50dB
Lens	EFL-4.3~129mm (Optical 30X), HFOV-63.7° ~2.3°

Mechanism

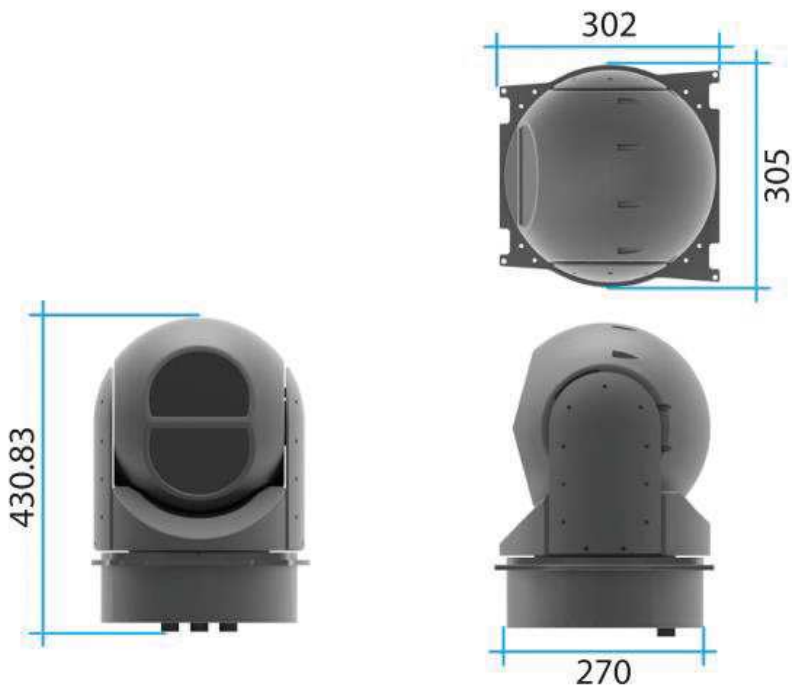
- Random vibration MIL-STD-810G, 5~2000Hz/5.9Grms
- Sine vibration MIL-STD-810G, 9~300Hz, 4~2G
- Shock MIL-STD-810G, 40G/6msec
- PAN/TILT
- Pan 0° ~ 360° Endless
- Tilt 90° ~ -20 °
- Slew Rate Pan : 90°/s, Tilt : 90°/s
- Stabilizer Feature 2 Axis / 3 Axis Gyro Stabilization System
- Stabilization Accuracy(RMS) 1mrad

TBT system

Distance Range



Dimension





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Green Optics is a corporation with a new approach to optics service to fulfill demands of customers ranging from the optical and lighting design to actual part manufacture optical system evaluation.

Based on the ability to manufacture optics-related items, Green Optics Corporation has established a firm foundation in the field of semi-conductor and flat panel display and is currently expanding the scope of business to energy and bio-related fields – the core element in the next – generation of the optic industry.

In order to achieve these goals, Green Optics Corporation is participating in various optics module consortiums.

Company Main Export Items

Long Wave Infra-Red Optical module (Thermal Camera)



Technical Data

Focal Length	25 ~ 225 mm
F-number	1.5
MTF	40% @ 20lp/mm
Distortion	< 8.6%
Objective Lens dia	168mm
TTL	251mm
Zoom mechanism	Motorized adjustable
Focus mechanism	Motorized adjustable
Weight	4.1Kg

Application

- Surveillance
- Reconnaissance

HMD(Head Mounted Display)



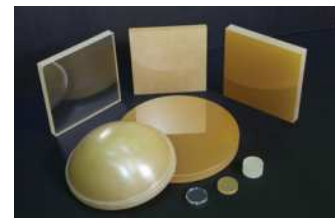
Technical Data

Type	Active Matrix OLED
Resolution	XGA(1024×768)
Virtual screen size	49 Inch (2m Away)
Weight	<95g
Size	205×180×60mm
Power interface	Micro USB
Video interface	Micro HDM

Application

- Interface with scope
- Industry
- Augmented reality

CVD-ZnS (Chemical vapor deposition Zinc Sulfide) MS-ZnS(Multispectral Zinc Sulfide)



Technical Data

Transmission	>70% (8~10μm)
Refractive Index	2.192 (10.6μm)
Knoop Hardness	220 kg/mm ²
Flexural Strength	113 MPa
Chemical Purtyiy	≥ 99.9996%
Density	4.09 g/cm ³

Application

- Visible/IR Window for Tank
- Missile Dome lens
- Infra-Red camera lens

KEOC

Korea Electro-Optics Co., Ltd.

KOREA ELECTRO-OPTICS CO., LTD.

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Korea Electro-Optics Company specializes in the design and manufacture of high performance optical products. We provide a large offering of standard and custom items, especially with high-tech precision optics components.

MAIN EXPORT ITEMS**Dual Band Window****Visible light and MWIR transmission and optical component protection window**

- Material: ZnS-Cleartran
(Multi-Spectrum type)
- Size: 420mm × 330mm × 15mmT
- Surface accuracy: 30nm (rms) at 633nm
- Surface coating: Anti-Reflection Coating at Visible and MWIR

Infrared Optical Component**Manufacturing Infrared Optical Components which are applied for night vision devices
Production available for Spherical / Non-spherical**

- Material: Ge, Si, Znse, Zns, Sapphire, Chalcogenide
- Size: 5mm~300mm dia
- Surface accuracy: 10nm rms at 633nm
- Coating: Anti-Reflection Coating at MWIR / LWIR Processing Products of various sizes



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We were established in 1987 and developing industrial and defense equipment. At present, smart weapon storage and power ascender have been developed and participated in the exhibition. If you do business with us, we are sure it will be useful for military weapon management and tactical operations.

MAIN EXPORT ITEMS

KPA-Series (Korea Power Ascender)



KEA-REV.01

KMA-REV.01

Technical Data

Classification	KEA-REV.01	KMA-REV.01
Weight	15 kg (incl.fuel)	15 kg
Power	Gasoline engine	Electric motor
Ascending speed	0.45 m/s (Payload 120 kg)	0.5 m/s (Payload 120 kg)
Descending speed	1.3 m/s (Payload 120 kg)	
Payload	Max. 250 kg	Max. 250 kg
Voyage distance	700 m (Payload 120 kg)	550 m (Payload 120 kg)
Feature	- RF control - Speed fixed device	- Low noise - Compact
	- World's first fail safe function - Emergency descending by 2nd safety device	

RSWS (Revolver Smart Weapon Storage)



Normal State (Rifle Stored) Normal State (Rifle Take in/out) Emergency State (Cover Release)

RSWS

Technical Data

Contents	RSWS
Size (cm)	130(H)×65(W)×65(L)
Weight	80 kg
Method of ID recognition	Fingerprint / Dog tag (RFID)
Warning function	Warning light / Siren
Sensing	Vibration / Shock / Temperature / Cover open
Emergency	Opening the cover by assigned key
Ordinary	To weapon entry door
Monitoring function	Monitoring program / Smartphone App.
Information	Voice & LCD text (english) information
Smartphone App.	Real time weapon check in RSWS RSWS monitoring
Power	Normal: AC 220V Blackout: Battery DC 12V operation (over 24 hr)
IP(Ingress Protecting rating)	55



Ziwoo Information & Technology Inc.

www.shooting-guide.com

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Tel: +82-31-777-5070

Fax: +82-31-777-5071

E-mail: brian@ziwooit.com

ZIWOO I&T is producing a virtual tactical engagement simulation system(V-TESS) aimed at the global market, and made contracted with the DND of Philippine April 2017 (Project name : V-TESS System for ' 7 year defense modernization project in Philippine) And completed the establishment of the whole system (5 systems : one system of 12 lane fixed type and 4 systems of 4 lane stationary type) in May 2018, and started operation.

Business, Product and Services

ShootingGuide™ is the tactical engagement simulation system, i.e. simulation system to generate the same training effects from the real situation by setting the similar environment and situation to the real ones.

By replacing the real assembly bolt and magazine with the tetherless simulated assembly bolt and magazine working on CO2 gas and putting laser module onto real gun, trainee can obtain very effective and productive training capability which consists of marksmanship, shooting training course on each scenario on the screen, and contingent reaction combat in downtown and other environment to be expected.

Fixed Simulated Training System



- Available to support even up to 20 lanes(10/15/20 lanes)
- Providing marksman/moving target/combat scenario
- More than one monitr or two monitors is connected via a network device to accommodate a large number of users for the request of the client

Mobile Simulated Training System



- Available to support even up to 6 lanes
- Providing marksman/moving target/combat scenario
- The proposed system is centralized and portable where it can be mounted and installed anywhere that meets the training and presentation standards.

Simulated Weapon Design

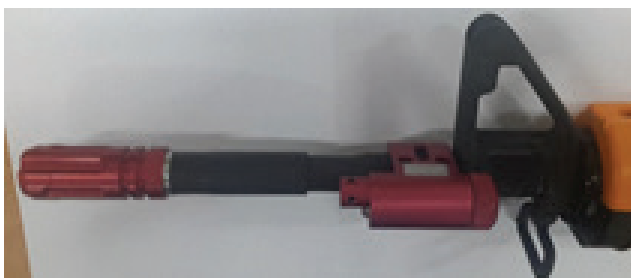
ZIWOO I&T has the ability of designing various kinds of simulated weapon kits.



	Type of gas	CO2
Magazine	Round	100~120 Rd per one time charging
	Capacity	30~50ml
	Size	79 x 170 x 22.4 mm
	Charging type	Gas charging
	Weight	535g
Assembly bolt	Size	25.2 x 26.7 x 160 mm
	Weight	338g

IR Laser Module Design

In terms of simulation weapons, the recognition of right impact point is very important. To do it, ZIWOO I & T has the ability of designing various kinds of IR laser module and other modules for simulated weapon kits. ZIWOO's laser modules are really proud of very high reliability like accuracy, stability and durability.



MISCELLANEOUS

Charging System

- ▶ "Tetherless" weapon charging station : Charged by CO2 charger





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JD SOLUTION firstly developed the directional sound wave transmitter with technologies of directional sound wave transmission and remote control, and additionally developed core technologies including laser system, digital image processing system and intelligent system. With these state-of-the-art technologies, JD SOLUTION has developed various security solutions such as Anti-Pirate System, Anti-Intruder System and Bird Expel System.

JD SOLUTION is doing all effort to provide various SECURITY SOLUTIONS which originally prioritize the security of mankind and peace of mind. Please keep your eyes to JD SOLUTION's vigorous flapping to the future.

MAIN EXPORT ITEMS

High-Powered Directional Speaker (LRAD : Long Range Acoustic Device)



Technical Data

Model	DIXXEN-S2T	DIXXEN-S3R	DIXXEN-S4	DIXXEN-S4R
dB	136 dB	140 dB	154 dB	154 dB
Delivery Distance	~ 500 m	~ 1,000 m	~ 3,000 m	~ 3,000 m
Type	Pan	Pan / Tilt (PTZ)	Manual	Pan / Tilt (PTZ)
Optical Device	Various Audio Inputs	Video & Thermal Cameras	Various Audio Inputs	Video & Thermal Cameras
Certificate	-	-	MIL-SPEC	MIL-SPEC
Size (W×H×D)	540×270×360 (mm)	680×590×360 (mm)	586×1,511×719 (mm)	874×1,219×757 (mm)



CONET SYS CO., LTD.

www.conet-sys.co.kr

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CONET SYS is expert for Korean Naval Display (Console Type) based on communication equipment since the company foundation at 1994. We have been trusted by Korean Navy and Army through the products planning, production and distribution. Furthermore, we have been producing thermal sensor target as the first time in Korea for Korean Army with application of those technologies.

BUSINESS, PRODUCTS AND SERVICES

We concentrate production and distribution on communication equipment as world best products. CONET SYS is qualified Quality / Environmental Management System (ISO 9001 / 14001), new technology award and excellent invention award are speaking for CONET SYS technical ability, our endless challenge and passion in order to customer satisfaction. Furthermore, CONET SYS is aiming for oversea business strategy and networking by utilize domestic business experience regarding world best communication equipment.

Thermal Sensor Targets



Thermal Sensor Targets (for Rifle / Tank)

	Items	Target Size (mm)	Heat Source Size (mm)	Power
Rifle	For 100m	660×530	300×300	
Target	For 200m	440×700	400×390	DC 12V, 24V
Tank	For Fixed	3,500×2,400	1,000×1,100	AC 110V, 220
Target	For Moving	6,500×2,400	1,000×1,100	

Console and Cabinet



Console

Cabinet

Items	Specifications	Remarks
Shock	MIL-STD-901 D	• Shipboard and Land Base Purpose
Vibration	MIL-STD-167 1A	• Fully Military Specifications Compliance
EMI / EMC	MIL-STD-461 F	• Can be design and manufacture depend on user's needs and requirements.
Temperature / Humidity	MIL-STD-810 G	
Dimension / Weight	As required	

U2SR

U2SR

www.u2sr.com

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Fax: +82-31-977-1085

E-mail: hyojong@u2sr.com

The U2SR develops unmanned systems and participates in private projects for industrial facilities, public facilities, and defense industries such as integrated control and monitoring systems, laser, radar, and various precision optics.

Scope of Service

- Research and Development
- Design and Analysis
- Manufacture

Major Products

- HawkeyeV2S/V3K
- HawkeyeV4IP
- HawkeyeV4VTS
- High performance surveillance equipment
- MFC-3C (Fog penetration multi-changer)

HawkEye series



- Long-distance monitoring
- Target Tracking (manual, Auto Video target tracking function)
- Accommodate user needs through a variety of options
- military : Borders and coastline accessible areas, Air Force runway monitoring etc.

SPECIFICATION

Target Detection	
Pan/Tilt (Fork)	Azimuth: 360° / Elevation ±30° (Optional)
Pan/Tilt (Wing)	Azimuth: 360° / Elevation ±60° (Optional)
Day	Spotter Lens, Zoom Lens and Camera (User Option)
Night	Thermal Camera (User Option)
LRF / Laser Light	Option
Program	Target Tracking, Panorama, Control, Interlocked with other equipment (option)
Potable controller	Built in Joystick, Video Recoding (User Option)



SHIELDK CO.,LTD.

<http://www.shieldk.com>

Add: 12, Opaesan-ro 3 gil, Seongbuk-gu Seoul, 02738 KOREA

Tel: +82-2-3292-0531

Fax: +82-50-8090-7788

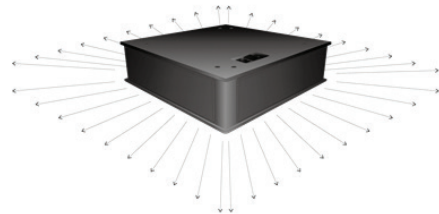
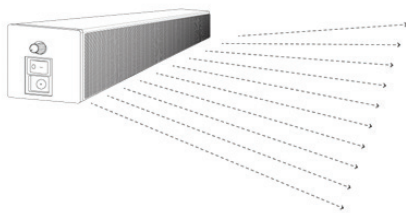
E-mail: shieldk77@naver.com

SHIELDK CO.,LTD. is a manufacturer of security equipment related to wireless communication security illegal Recording Protection, illegal call guard, Anti-Drone, Manufacturing and selling company

Company Main Export Items

Recording / Eavesdropping Prevention System

- Security equipment that can block illegal eavesdropping and secret recording
- It is safe to use where you are worried about tape recording
- Convenient and easy to use the systems in multiple locations



SPECIFICATION

Model	SHK-BKBT-A (Directionality)
Product size	411×40×42mm
Case material	Aluminum
Voltage	DC 12V{3A} / DC5V{5}
Weight	0.71kg
color	Black

SPECIFICATION

Model	SHK-BKS (Four Directions)
Product size	164×164×44mm
Case material	Aluminum
Voltage	DC 8.4V{1.5A}
Weight	0.29kg
color	Black



KANGWOON INDUSTRY CO.,LTD

www.kwfinex.com

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Fax: +82-31-996-7222

E-mail: freewind@kwfinex.com

Our company, KangWoon Industry Co.,Ltd., is a promising medium and small enterprise which has been performing like as design, manufacture, transportation, installation, test, and education for Clients. We have been delivering a lot of products to our customers on Factory Automation Facilities such as fields of chemistry, gunpowder, electronics, assembly of automobile parts. We have also sufficient production technology to solve problems of your manufacturing process through our affluent experiences and accumulated know-how since our company established in 1979.

Scope of Service

- Factory Automation
- Manufacture
- Manufacture

Major Products

- Extinguishing system
- Equipment of electrical wire manufacture.
- Optical fiber cable tester.

FineX Condensed aerosol self-operating extinguishing system

FineX is the first independently developed self-operating condensed aerosol fire extinguishing device, sold by Kangwoon CO., LTD with acquired technology and patent based on Hanwha's advanced technology in the field of defense and aerospace. This fire extinguishing system uses high densified extinguishment ingredient which is generated when combusting a solid material made from the application of rocket propellant technique and is particularly excellent in initial fire suppression. As a result of overcoming previous international technical disadvantages, Fine-X obtained a national patent related to excellent extinguishing capacity and operating system of high reliability, and acquired KFI recognition of The Korea Fire Institute and also obtained an oversea patent.

FineX Feature and Technology

- Environmental products with zero ozone depletion potential (ODP) or global warming potential (GWP)
- Fire extinguisher capacity : 1m3 per 65gr, the most powerful effect (e.g. 5 times more powerful than halon fire extinguisher (1m3 per 330gr) and better than any other environmentally friendly products)
- No need for pressure container or pipe
- Highly reliable: not requiring regular repair or maintenance ---- significant cost reduction
- Easy to move, carry, install and use for everyone



INDEX OF COMPANIES

AERO MASTER CORPORATION	154	FS CO., LTD.	114
AERO PEACE INC.	148	GIGALANE CO., LTD.	118
ARCONIC KOREA LTD.	56	GREEN OPTICS CO., LTD.	225
ASIA PACIFIC SATELLITE INC. (APSI)	143	GROUND CO., LTD.	221
BA SOLUTIONS CO., LTD.	109	HANJIN HEAVY INDUSTRIES AND CONSTRUCTION CO., LTD.	176
BOLYUNG ENGINEERING CO	29	HANWHA AEROSPACE CO., LTD.	140
BOSUNG INDUSTRY	92	HANWHA CORPORATION	40
BS AUTOPARTS CO.,LTD.	94	HANWHA DEFENSE	20
CONET SYS CO., LTD.	232	HANWHA DEFENSE	70
D. I. OPTICAL CO., LTD.	33	HANWHA SYSTEMS	100
DACC CARBON CO., LTD.	155	HKC CO., LTD.	194
DAEJI PRECISION & INDUSTRIES CO., LTD.	81	HUMEDIA CO., LTD.	119
DAEKWANG CHEMICAL CO., LTD.	48	HUNEED TECHNOLOGIES CO., LTD.	102
DAE-SUNG TECH CO., LTD.	212	HYOSUNG HEAVY INDUSTRIES CORPORATION	165
DAEWOO SHIPBUILDING & MARINE ENGINEERING CO., LTD.	168	HYUNDAI HEAVY INDUSTRIES CO., LTD.	172
DAEWOO TRUCKS	78	HYUNDAI J.COMM CO., LTD.	106
DASAN MACHINERIES CO., LTD.	18	HYUNDAI ROTEM COMPANY	66
DAWIN FRICTION CORPORATION	156	HYUNDAI-WIA CORPORATION	24
D-ECO ENERGY CO., LTD.	205	INSOPACK CO., LTD.	105
DONGSUNG ELECTRIC MACHINE CO., LTD.	89	IONES CO., LTD.	30
DOOSAN INFRACORE CO., LTD.	86	IPEC HIGH PRECISION INC	35
DOOWON HEAVY INDUSTRIAL CO., LTD.	57	SAMJEONG TURBINE CO., LTD.	208
DUSITECH CO., LTD.	115	JAIN TECHNOLOGY	218
EHWA TECHNOLOGIES INFORMATION	206	JD SOLUTIONS CO., LTD.	231
EO SYSTEM CO., LTD.	34	JINO MOTORS CO., LTD.	82
EOS CORPORATION	116	JINYOUNG TBX CO., LTD.	191
FINE INC.	184	KANGNAM CORPORATION	180
FINE KOWAC CO., LTD.	139	KANGWOON INDUSTRY CO.,LTD.	235
FINE PRECISION IND., Ltd.	164	KYUNG CHANG INDUSTRY	217
FIRSTEC CO., LTD.	150	KENCOA AEROSPACE CORPORATION	149
FOREX	163	KIA MOTORS CORPORATION	76
FOSTEC INC.	117	KODUCT CO., LTD.	227

KOLON DACC COMPOSITE CO., LTD.	158	SAMSUNG S-1 CORPORATION	202
KOLON GLOBAL CORPORATION	213	SANCHEONG CO., LTD.	195
KOMACO CO., LTD.	160	SATREC INITIATIVE CO., LTD. (SI)	144
KOREA AEROSPACE INDUSTRIES, LTD.	130	SEGI PRECISION ENGINEERING CO.	91
KOREA CNO TECH CO., LTD.	49	SG SAFETY CORPORATION	197
KOREA ELECTRO-OPTICS CO., LTD.	226	SHIELDK CO., LTD.	234
KOREA LOST-WAX CO., LTD.	161	SI IMAGING SERVICES CO., LTD. (SIIS)	145
KOREA NON-FERROUS METALS CO., LTD.	64	SOLVIT SYSTEM CO., LTD.	124
KOREA SPECIAL BATTERY CO., LTD.	209	SOOSUNG DEFENSE INDUSTRIES LTD.	31
KOREA T.E.S CO., LTD.	190	SU OPTICS	36
KOREAN AIR LINES CO., LTD.	134	SUNGSAN ELECTRONICS & COMMUNICATIONS CO., LTD.	125
KORYO PYROTECHNICS CO., LTD.	51	SUNTECH CO., LTD.	210
KPC METAL CO., LTD.	60	TAEKYUNG	219
KS SYSTEM CO., LTD.	112	TBT SYSTEM	222
KUKDONG ELECTRONIC PRECISION CO., LTD.	120	U2SR	233
KUKDONG TELECOMMUNICATION CO., LTD.	121	UCONSYSTEM CO., LTD.	138
LC-TEK CO., LTD.	62	UI HELICOPTER CO., LTD.	142
LIG NEX1 CO., LTD.	96	UTECH CORP., LTD.	38
LIG POONGSAN PROTECH CO., LTD.	63	U-TEL CO., LTD.	126
LOTUS INTERNATIONAL CO., LTD.	216	VICTEK CO., LTD.	110
LS MTRON LTD.	88	VITZROCELL CO., LTD.	211
METANETWORKS CO., LTD.	113	VOGO CO., LTD.	186
NAVCOURS CO., LTD.	122	WINTEK CO., LTD.	220
NAVIWORKS CO., LTD.	147	WOO KYUNG OPTICS CO., LTD.	28
POONGSAN CORPORATION	44	WOORI OCEANTECH	189
POONGSAN FNS CORPORATION	52	WOORIBYUL CO., LTD.	108
POSCO INTERNATIONAL Corporation	84	WOOSUNG I.B. CO., LTD.	188
PSIONDSP CORPORATION	162	YEONHAB PRECISION CO., LTD.	107
QNION CO., LTD.	123	ZHT CO., LTD.	127
RFHIC CORPORATION	111	ZIWOO INFORMATION & TECHNOLOGY INC.	228
S&T DYNAMICS CO., LTD.	14		
S&T MOTIV	10		

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