



Available on the
App Store



Available on
Google Play



Linked in



GLOBAL INDUSTRIAL & DEFENCE SOLUTIONS PAKISTAN

www.gids.com.pk



CONTACT :

Phone: +92-51-9280061-62
Fax: + 92- 51-9281260
Email: info@gids.com.pk
Web: www.gids.com.pk

Complex-II, Chaklala Garrison, Rawalpindi, Pakistan.



COMPANY PROFILE

Global Industrial & Defence Solutions (GIDS) is Pakistan's premier state-owned defence conglomerate represents the country's largest defence manufacturing units and hub of core R&D activities by offering products for multifaceted military applications. By means of offering high-tech defence systems to the international clients – GIDS has emerged as a reliable defence supplier in an ever-changing competitive industry.

We have a wide-ranging product portfolio for current & future defence requirements of our clients. The product portfolio comprises of an extensive range of systems in the domains of Air, Land, Sea, and NBC Defence & Security.

Technology and innovation are the keystones of GIDS success and competitive edge. GIDS companies invest a huge amount in R & D activities making us the leading Pakistani investor in hi-tech sectors. We lay great emphasis on training and development of our human resource.

Our strength is our ability to offer quality with reliable and long-term relationship to our clients.

AIR LAUNCHED SYSTEMS & AIR DEFENCE

- 08 SHAHPAR-II UAV SYSTEM
- 10 UQAB-NG TACTICAL UAV SYSTEM
- 12 SHAHPAR UAV SYSTEM
- 14 SCOUT VTOL UAV SYSTEM
- 16 ZUMR - II DAY / NIGHT SURVEILLANCE & TARGETING PAYLOAD
- 18 NAHL LIGHT WEIGHT HD SURVEILLANCE PAYLOAD
- 20 BURQ AIR TO GROUND MISSILE (AGM)
- 22 AL BATAAR LASER GUIDED BOMB KIT
- 24 RANGE EXTENSION KIT (REK)
- 26 GP SERIES BOMBS
- 28 AB - SERIES ELECTRONIC IMPACT & PROXIMITY FUZES
- 30 AIRBORNE SOLID STATE MISSION DATA RECORDER (SSMDR)
- 32 COUNTER MEASURE SYSTEMS
INFRARED FLARES (CMF 1 & CMF 2)
CHAFF & FLARE DISPENSER SYSTEM (MOHAFIZ)

LAND SYSTEMS

- 36 FATAH - I MULTI LAUCH ROCKET SYSTEM
- 38 BAKTAR SHIKAN ANTI-TANK GUIDED MISSILE WEAPON SYSTEM
- 40 ROCKET LAUNCHER RPG-7
- 41 LIGHT MORTAR M-60MM
MORTAR M-81MM
HEAVY MORTAR M-120MM
- 42 LASER DESIGNATOR & RANGE FINDER (LDR-4N)
- 44 LASER RANGE FINDER (AR3)
- 46 THERMAL IMAGER BIOCLAR (TIB786-1, TIB786-3)
- 48 AIRBORNE LASER DESIGNATOR & RANGE FINDER (ABLDR-2)
- 50 COMMANDER'S SIGHT FOR APC (ABSAR-C)
- 52 DRIVER NIGHT VISION DEVICE (DTI)
- 54 DRIVER'S TI SIGHT FOR APC (ABSAR-D)
- 56 FORWARD ARTILLERY OBSERVATION DEVICE (FAOD-2)
- 58 TI SECURTIY CAMERA (ALHARIS-75)
- 60 TISIGHTFORSMALL ARMS (TISA-3SA50)
- 62 LASER THREAT SENSOR (LTS)
DIGITAL GONIOMETER (DGM)
- 64 MOBILE FIELD KITCHEN (MFK)
- 66 VEHICLE MOUNTED KITCHEN (VMK)
- 68 TANK FIRING SIMULATOR (TSM-II)
- 70 AUTOMATIC FIRE CONTROL SYSTEM
UP-GRADATION OF 37MM ANTI AIRCRAFT GUN
- 72 MILITARY BATTERIES

NAVAL SYSTEMS

- 76 HARBAH WEAPON SYSTEM
- 78 EXPANDABLE MOBILE ASW TRAINING TARGET (EMATT)
- 80 SONOBUOY ACOUSTIC PROCESSING SYSTEM (SAPS)
- 82 SLIM LINE TOWED ARRAY (SLTA)
- 84 SEA SURGE ANTI SUBMARINE
- 86 ESM SYSTEM RIBAT
- 88 ACTION SPEED TACTICAL TRAINER (ASTT)
- 90 ACTIVE & PASSIVE SONOBUOY
- 92 AUDIO SIMULATOR (AUDSIM)
- 94 AUTOMATICDEPLYABLE AND RETRIEVAL SYSTEM (ADRS)
- 96 GENERIC SONAR TRAINER (GST)
- 98 NAVAL COMBAT MANAGEMENT SYSTEM
- 100 SONAR TRANSDUCER & SYSTEMS
- 102 BRIDGE PILOTAGE SIMULATOR (BPS)
- 104 MINE HUNTING SONAR
- 106 TOWED ARRAY SONAR DRY END
- 108 AVIATION MAINTENANCE MANAGEMENT SUITE
- 110 WAR GAMING SIMULATOR (WGS)
- 112 SERVICES MEASUREMENT & TESTING SERVICES
DESIGNING OF SMALL TO MEDIUM SIZE SURFACE VESSEL
- 114 ACOUSTIC RANGING OF NAVAL VESSELS
- 116 NAVAL VESSEL OPS ROOM SIMULATOR

INTEGRATED SYSTEMS

- 120 INTEGRATED COMMAND & CONTROL SYSTEM
- 122 RABTA C4I & AIR DEFENCE AUTOMATION SYSTEM
ACMI SYSTEM AIR COMBAT MANEUVERING INSTRUMENTATION SYSTEM
- 124 PAKFIRE ARTILLERY FIRE CONTROL SYSTEM
- 126 PAKSIM ARTILLERY FORWARD OBSERVER SIMULATOR
- 128 SATELLITE DATA APPLICATIONS AND SERVICES

NBC DEFENCE

- 132 NBC DEFENCE & IPE
- 134 HEADS HIGH EFFICIENCY ADVANCED DECONTAMINATION SYSTEM
WATER PURIFICATION PLANTS

SECURITY & RIOT PROTECTION

- 138 LIGHT WEIGHT COMBAT HELMET
METALLIC MINE DETECTOR
- 140 STUN GRENADE, TEAR GAS SHELL, CS GRENADE, SMOKE GRENADE
- 142 BODY SCANNERS
WALK THROUGH SCANNING GATE
- 144 BULLET PROOF JACKET (BPJ)
- 146 EXPLOSIVE & DRUG DETECTOR
- 148 VEHICLE BASED IED JAMMER (DETJAM-6500)
- 150 BARDA AUTOMATIC FIRE EXTINGUISHER BALL



**AIR LAUNCHED
SYSTEMS & AIR DEFENCE**



SHAHPAR-II UAV SYSTEM

Shahpar-II is a medium altitude, long endurance unmanned aircraft with armed capability. It has a modular airframe structural design comprising of advanced composite and metallic hybrid structure with improved aerodynamic design. Some of the notable features of the Shahpar system include its autonomous take-off and landing system, a robust autopilot scheme, user friendly and a comprehensive mission planning and management software suite, reliable data links and the capability of integrating various types of EO payloads.

Parameters	Surveillance	Armed
Endurance	14 Hrs	07 Hrs
Service Ceiling	20,000 ft	18,000 ft
Max Speed	120 Knots	120 Knots
Take-off Speed	80 Knots	80 Knots
Stall Speed	63 Knots (approx)	63 Knots (approx)
Climb Speed	70 -75 Knots	70 -75 Knots
Cruise Speed	80 - 85 Knots	80 - 85 Knots
Data Link Range	300Km (LoS)	300Km (LoS)
Radius of Action	1050Km (BLoS)	1050Km (BLoS)
Weapon System	Not applicable	2 x AGMs of 45kg under each wing station



Features

- Improved Aerodynamics & Structure
- Enhanced Payload Options (i.e. COMINT / ELINT, SAR, EO/IR)
- SATCOM capable
- Mid-air Engine restart capability
- Equipped with ATC transponder / Provision of IFF
- Provision of Internal Pilot
- Enhanced Propulsion System
- Retractable Landing Gears
- Asymmetric landing

Weapons System (Shahpar II – Armed)

- In Armed configuration, UAV is equipped with 2 x AGMs / weapon of 45kg under each wing station.
- 3rd party AGM can also be integrated with Shahpar-II keeping in view carriage capacity, integration feasibility



UQAB-NG TACTICAL UAV SYSTEM

UQAB NG is catapult launched, net recovered fixed wing tactical UAV system, designed to conduct real time day & night reconnaissance and surveillance missions while offering long endurance, high service ceiling and optimized RCS Signatures. It is a low weight and compact system ideal for real-time surveillance missions up to 150 km with 8 + hrs of endurance. The performance and capabilities of Uqab-NG makes it superior to any other conventional surveillance UAV. Uqab-NG has been precisely designed for the clients requiring an ultimate solution for their operational needs without any runway.

Specification

Launch / Recovery	Hydro-pneumatic launch / Hoisted Net System & Emergency Parachute
Dimension	Wing Span: 6.20m, Length: 4m
Range	150 km LOS
Endurance	>8hrs
Service Ceiling	Up to 18000 ft AMSL
MTOW	100 ± 5 kg
Flight Controller	Dual core DSP Processor, STIM MEMS IMU
Navigation	RTK based Tri Constellation DGNSS, Magnetic Compass based Dead reckoning Day: 27.7x Optical Zoom, 1080p25 FHD Video Sensor Ni: 14x Optical Zoom cooled
Payload	IR, 640x512, 25 Hz Sensor LRF: 12 km, Stability < 25µrads Target tracking AI based Multiple Target Recognition Geo referencing & pointing



Salient Features

- Modular design for mobility & rapid deployment
- Inbuilt redundancies & failsafe provision
- HD day & cooled IR sensors
- Intelligent target classification & tracking with geo referencing
- Dual band encrypted Data / Video links
- Stanag compliant GCS with operator consoles / eqpt & Datalink hardware
- Mission playback & data-log





SHAHPAR UAV SYSTEM

Shahpar is a medium range tactical UAV System with autonomous take-off and landing. It can carry various types of payloads integrated for reconnaissance and day & night surveillance. Other features include accurate lateral, longitudinal trajectory control, mission planning, management & control, geo referencing & geo pointing for terrestrial targets.

Performance Characteristics

Configuration	Canard pusher
Air Vehicle Length	4.2 m
Wing Span	6.6 m (22 ft)
Gross T/O Weight	550 kg
Payload Weight	50 kg
Endurance	> 7 hrs
Max Operating Altitude	15000 ft
Cruise Speed	150km / hr
Maximum Power of Engine	100hp
Data link Range (real time)	250 km
Guidance / Tracking	Autonomous, GPS Based (manual control channel available)
Power Plant	4 - Cylinder, 4 stroke piston
Take-off / Launch	Automatic, Wheel take-off
Landing / Recovery	Automatic Landing, manual pilot and parachute option available

Main Features

- Autonomous take-off and landing
- Various types of payloads integrated for reconnaissance and day & night surveillance
- Accurate lateral and longitudinal trajectory control
- Mission planning, management & control
- Built-in data exploitation and dissemination
- Full mission debriefing & simulation
- Military standard hardware (Environmental Standard 810F)
- Geo referencing and geo pointing for terrestrial targets
- MISB compliant video format





SCOUT VTOL UAV SYSTEM

Scout VTOL is a vertical takeoff & landing Mini UAV System having the hovering capability and requiring crew of 2 x personnel for Ops, offering Real-time Day and Night ISR capabilities. It is a Quad-Copter configuration with four brushless electric motors. The high number of motors gives the UAV requisite thrust to carry a payload of up to 2 kg. Scout-VTOL Mini UAV's light weight and small size make it ideal for quick deployment and portability, giving users an extra edge.

Main Specifications

Airframe	Quadrotor configuration, carbon fiber structure with detachable arms, man portable (single person), tool less assy
Range	5~7 km
Endurance	>65 mins with Day / Ni ISR camera > 40 mins with 2 kg additional payload
Service Ceiling	Up to 3200 m AMSL
Wind Resistance	< 14 m/s
Take-off Weight	11 kg (65 mins for ISR) 13 kg (40 mins for payload dispensing)
Dimensions	1280x1280x500 mm
Payload	Day: 30x Optical Zoom with 1km LRF, 1080p25 FHD Video Ni: 640x480, 25 Hz, 13mm+52mm, 2x, 4x Digital zoom
Telemetry	Flt Modes, Voltage indicator, Signal strength, Flt Altitude / Attitude / Distance & Speed
Maps	Offline, scanned & Google Maps
Failsafe	Auto Return to Base / land in case of low battery & link failure



Features

- Day/Ni Intelligence, Surveillance & Reconnaissance Missions
- Payload Dispensing / Delivery up to 2 kg
- Complete Autonomous Operation with pilot override option
- Modular, man portable
- Handheld GCS consoles for AV & payload operator
- Fast redeployment / turn over





ZUMR – II

DAY / NIGHT SURVEILLANCE & TARGETING PAYLOAD

ZUMR – II is a high performance Multispectral Imaging payload with 24/7 Mission Capability with Enhanced Imagers. It is highly stabilized system with 2 LRUs (Line Replaceable Units)

Features

High performance Multispectral Imaging
24/7 Mission Capability with Enhanced Imagers
Low Weight and Small Size
Highly Stabilized System
2 LRUs (Line Replaceable Units)

Missions

Tactical support
Aerial imagery
High performance EO/IR payload for precision munitions (LGB, Missile) delivery

Sensor Configuration

Enhanced Day Imager (Continuous Zoom)

Resolution 752 x 582
Field of View: Wide 24°H x 18°V
Narrow 0.7°H x 0.5°V
Zoom 34x (Optical)

Thermal Imager

Resolution 640 x 512 FPA
Field of View:

Battlefield Damage Assessment
Search and Rescue, Tactical Support

Technical Characteristics

4 axis gyro stabilized system
Azimuth 360° continuous
Elevation 10° to – 110°
Weight 49Kg
Ø 450 mm (≈17.5")

Power Requirement and Interface

Voltage 24-32 VDC
Power 400 W (600 W max)
Video Interface Analog, PAL
Serial Interface RS232, RS422

Environmental

MIL-STD-810F
MIL-STD-461E

Wide 24.3°H x 19.5°V
Medium-Wide 4.0°H x 3.2°V
Narrow 1.26°H x 1.0°V
Super-Narrow 0.63°H x 0.5°V (E-Zoom)

Laser Designator

Range 20m – 20Km
Energy >85mJ
Code NATO, Custom

Laser Pointer

NVG Compatible (0.7W)

Platforms

UAVs, Aircrafts, Helicopters, Naval Ships





NAHL

LIGHT WEIGHT HD SURVEILLANCE PAYLOAD

NAHL is a Light weight HD Surveillance Payload with Single LRU based surveillance system and highly stabilized Multispectral Imaging. It has 24/7 Mission Capability with Enhanced Imagers; Day and Night surveillance of site (Offshore platforms, industrial and sensitive sites), Border surveillance & homeland security

Features

- Light weight suitable for small UAVs,
- Single LRU based surveillance system
- Highly stabilized Multispectral Imaging
- 24/7 Mission Capability with Enhanced Imagers

Sensor Configuration

Day Camera HD

Resolution	1920 x 1080
Field of View:	
Wide	63.7°H x 47.7°V
Narrow	2.3° H x 1.7°V
Zoom	30x (Optical)

Spotter Scope/NIR HD

Resolution	1920 x 1080
Field of View:	
Wide	24° H x 13°V
Narrow	0.9° H x 0.5°V
Zoom	27x (Optical)

- Day and Night surveillance of site (Offshore platforms, industrial and sensitive sites)
- Border surveillance and homeland security
- Tracking, Tactical support

Technical Characteristics

4 axis gyro stabilized system
Azimuth 360° continuous
Elevation 10° to - 110°
15 Kg
Ø 10.5", Height: 16"

Power Requirement

Voltage 28 VDC
Consumption <200W

Environmental

MIL -STD-810F, MIL-STD-461E

Thermal Imager SD

Sensor	640 x 512 MCT
Field of View:	
Wide	16°H Å~ 12°V
Narrow	1.8°H Å~ 1.35°V
Zoom	9x (Optical)

Laser Range Finder & Laser Pointer

Range	12KM max
LP	NVG Compatible
	(0.3W)

Platforms

UAVs, Aircrafts, Helicopters
Aerostats and Ground Based
Vehicles for area monitoring





BURQ

AIR TO GROUND MISSILE (AGM)

Burq is a Semi Active Laser Guided Air to Ground Missile (AGM). It has the capability to precisely attack the enemy personnel, light and armored vehicles, bunkers and buildings with high integration level, superior fire accuracy and better reliability. The semi-active laser seeker and cutting-edge navigation technologies makes it exceptionally accurate and distinguished weapon system to precisely engage moving and static targets.

Performance Characteristics

Operational

Specifications	Range	2.5 – 8.0 km
	Launch Altitude	500 to 5000 meters (MSL)
	Carrier Launch Speed	150 to 220 km / hr
	Max Missile Speed	Ma ≤ 1.1
	Hit Probability	> 90%

Physical

Specifications	Length	1450 mm
	Diameter	Ø 180 mm
	Weight	≤ 45Kg

Storage

	Storage life	10 years in Standard Conditions
--	--------------	---------------------------------

Laser Seeker

	Laser Wavelength	1064 nm
	Laser Pulse Width	15+ 5ns
	Pulse repetition frequency	19 ~ 21 Hz

Features

- Semi-active laser-guided AGM
- Launched from UAVs and attack helicopters
- Superior strike accuracy and reliability against
- Enemy personnel
- Light & armored vehicles
- Bunkers and buildings
- Lock-on Before & After Launch (LOBL, LOAL)

Launcher Configuration

- Single and Double Launcher for Helicopter
- Single and Double Launcher for UAVs





AL BATTAAR LASER GUIDED BOMB KIT

Al Battaar is a laser guidance bomb kit attached to the nose and tail of the GP (General Purpose) Bombs. It can be carried and launched from all NATO aircraft and is designed for use when attacking soft, hard, slow moving and stationary targets. The weapon will operate from a variety of different launch scenarios (high/ low altitude, level/ dive/ loft deliveries).

Al Battaar is capable of a single or multiple carriage on host aircraft. Guidance is provided by laser energy reflected from the target. Target illumination, may be provided by the delivery aircraft, another aircraft, or a ground designator. Flight can be divided into three phases: Ballistic, Acquisition, and Terminal Guidance.

Performance Characteristics

Feature	Specification
Impact Accuracy / CEP	≤ 10 meter
Max Release Altitude	25000ft
Range	8 nm
Guidance	Laser
Employment Mode	Single
Laser Designated Compatibility	Yes
LSHA FOV	±12deg
Field of Regard	±18deg
Laser Code	Yes
Missing Pulse Logic	Yes
Field Replaceable Electronic Tray	Yes
Carriage Vibration	6.3 g
Carriage speed limit	1.4M
Release speed limit	1.2M
Acquisition Range (NOMINAL)	12000ft
Canard Travel	±10.5deg
Laser Coding	PRF Selection Enabled
Maneuverability (500 KTAS, SL)	2.8 g





RANGE EXTENSION KIT (REK)

REK converts the General Purpose Steel Bombs to guided weapons by simply integrating the Range Extension Kit. The kit includes a Tail Unit integrated with the bomb body that provides both guidance and navigation to the target, and an additional Wing Unit (with deployable wings) for extending the range.

Characteristics Specifications

Range (km)	100
Launch Speed (Mach)	0.6 - 0.8
Launch Altitude (m)	≤ 9000
Weight with 250Kg GP Bomb (kg)	< 300
Interface	RS 422 / Mil-Std-1760
Accuracy (with GPS)	< 10 m CEP
Flight Time	~ 5 min

Main Features

- Autonomous guidance by means of an onboard AHRS System aided by a Global Positioning System (GPS) processor.
- All Weather Weapon.
- Capable to accept precise targeting information in the form of World Geodetic Survey (WGS)-84 coordinates provided either during mission planning or in flight.
- Environmental Test Methods as per MIL STD 810F.
- Specification Practices as per MIL STD 490A.
- Defense System Software Development as per MIL STD 498.
- Control of EMI as per MIL STD 461D.





GP SERIES BOMBS

GP Series Bombs are the standard air delivered ordnance deployable on NATO and Warsaw standard aircrafts. These bombs (PK-81, PK-82, PK-83, PK-84) are available in Steel, Pre-fragmented versions with IM and Thermobaric filling. The bomb will produce blast, fragmentation and 'crater' effects with its main function being determined by the Fuze used.

General Purpose Steel Bombs

- NATO / Warsaw Standards
- High & Low drag Configurations
- Qualified on F-7, A-5, Mirage & F-16
- Supplied to PAF as well as other countries

Pre-Fragmented Bombs

- External profile like GP Steel Bombs
- 6 times more lethal
- Thousands of uniformly shaped steel balls shoot out in all directions
- Anti-personnel and anti-vehicle role
- Burst at 2 to 12 meters height from the ground giving optimal lethality

Thermobaric Bombs

- Thermobaric Weapons are characterized by Large blast and High thermal energy
- These are solid explosives as opposed to FAE (fuel air explosives) which are liquid





AB - SERIES ELECTRONIC IMPACT & PROXIMITY FUZES



Fuzes play a key role in optimizing the performance of air and ground burst bombs. GIDS is one of the few companies in the world that has complete command over the technology for electronic fuzes. GIDS has successfully developed the following fuzes:

Impact Fuzes

AB-100 (For Low Drag Bombs)

AB-105 (For Low/High Drag Bombs)

- Provide instantaneous firing pulse on impact, thus ensuring true surface detonation
- High performance electronic fuzes replacement for M-904 Fuze or equivalent mechanical fuzes.
- Includes E.F.I capability for interface to Russian aircraft pylons.

Proximity Fuzes

AB-103 (For Low Drag Bombs)

AB-104 (For Low/High Drag Bombs)

- Optimizes the performance of air-burst bombs
- Allow a 2-12 meters above ground level burst of the bomb for all types of targets, approach angles and closing velocities
- Have an Impact Detonation Backup System
- Smoke or dust on the terrain does not interfere with the proximity function.
- Includes E.F.I capability for interface to Russian aircraft pylons.

Multi-Role Fuze AL-788

- AL-788 is a versatile Nose Fuze that offers Proximity and impact detonation modes both in high & low drag modes.
- Incorporates all the features of AB -100, AB-103 , AB -104 & AB -105 Fuzes



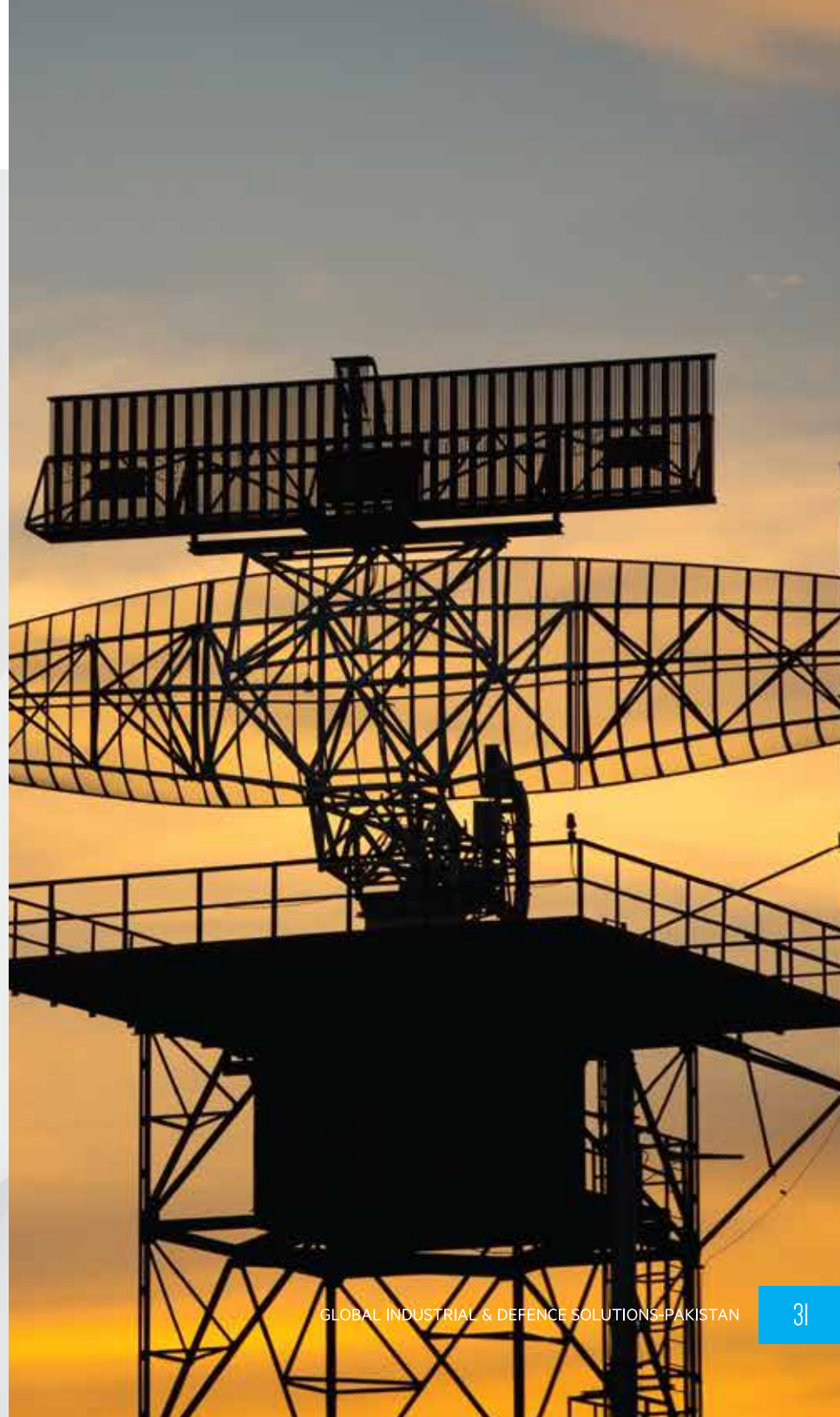
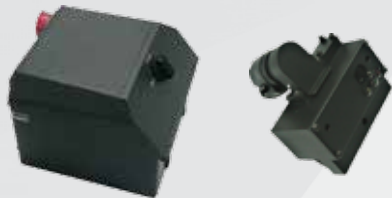


AIRBORNE SOLID STATE MISSION DATA RECORDER (SSMDR)

SSMDR is designed to capture high resolution synchronized videos using state of the art CCD camera technology and high speed data recording on solid state media.

DVR Main Features

- Simultaneous 2 Video / Audio Channel Recording
- Continuous Recording upto 3 hrs
- HUD, REO or MFD Recording
- Records in standard MPEG-4 format
- Supports, NTSC, PAL, composite
- GPS time tagging for synchronized playback
- Trigger event / Event Mark recording, video overlay and audio tone
- Solid State Compact Flash Recording media (current 16 GB, extendable with no hardware / software mod)
- Qualified as per Mil-Std-810E, Mil-Std-461D/E,
- Mil-Std-704





COUNTER MEASURE SYSTEMS

Infrared Flares

(CMF-1, CMF-2, CMF-3)

IR-Flare provides an aircraft airborne countermeasure capability to dispense flare pellets to prevent interception by heat-seeking missiles. Upon actuation electricity, it ejects and ignites a pellet which produces infrared radiation according to black body radiation phenomenon.

Aircraft	CMF 1 NATO	CMF 2 Chinese
Dispensers	ALE 29 A, ALE 39, ALE 47	GT-1, GT-1P
Firing Requirement	05 A pulse for 50 ms	0.7 A pulse for 35 ms
Burning Time	> 4 Sec	> 4 Sec



Chaff & Flare Dispenser System (MOHAFIZ)

- Chaff & Flare dispenser system (Mohafiz) is an electromagnetic (RF) and Infrared (IR) countermeasure self-protection dispensing system for airborne objects
- Chaff gives protection against Radar Guided Missile and Flare protects against infrared guided missiles
- When this system is integrated with radar warning receiver (RWR) and missile approach warning system (MAWS), the Mohafiz CFD system is effective in multiple threat environments.





**LAND
SYSTEMS**



FATAH – I MULTI LAUNCH ROCKET SYSTEM

The MLRS FATAH-I is an advanced guided rocket system characterized by fast reaction, long range, high accuracy and firepower of high density. Its mission is to precisely attack and destroy enemy's group and area targets, such as military bases, massive armored troops, missile launching sites, large airports, harbors and other important facilities

Main Specifications

Range:	≥ 140 Km
Accuracy:	CEP < 50 m
Rockets per MLV:	8
Cap to engage 8 different Tgts:	8km x 8km at max rg
Operating temperature:	-20 to +55°C
Shelf Life :	10 Years

Features

- Fast reaction
- Long range
- High accuracy
- Concentrated firepower
- Various munitions
- Self positioning and orienting
- High mobility
- Integrated fire control system





BAKTAR SHIKAN ANTI TANK GUIDED MISSILE WEAPON SYSTEM

Baktar Shikan is an anti-tank missile weapon system which pursues the principle of optical aiming, IR tracking and automatically generated, remotely controlled and wire transmitted guidance signals.

The system can quickly be dis-assembled into four sub-units, each weighing not more than 25kgs, thus making the system man-portable. It can also be mounted on Cobra attack helicopters and Armored Personnel Carriers (APCs).

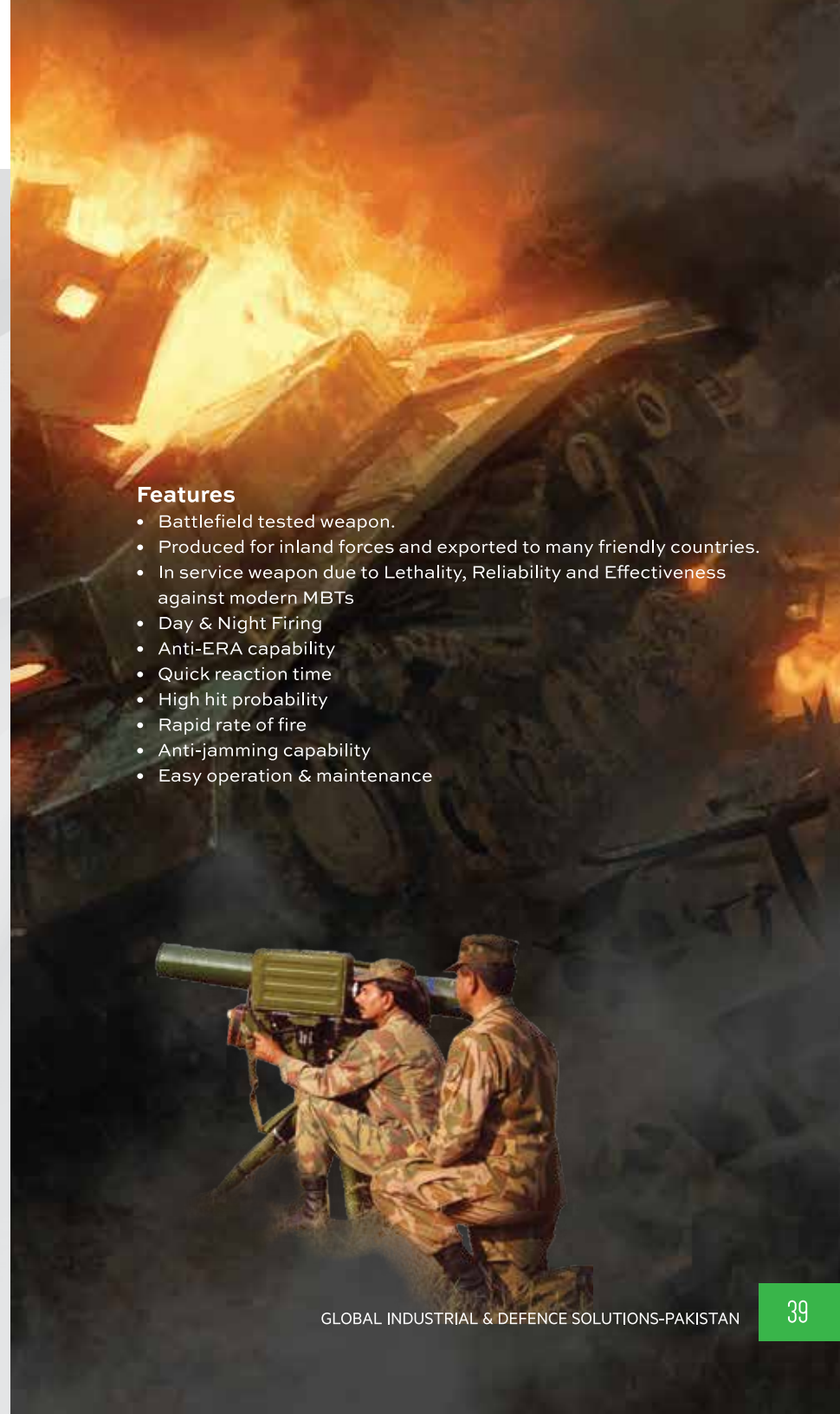
Its long range, penetration power and a powerful anti-jamming capability, the system forms a potent defence against armoured targets. Baktar Shikan family of missiles is in service for more than two decades and a battle tested weapon held with different armies worldwide.

Performance Characteristics

Propulsion	Solid
Effective Range	3000m
Operating Temp	-40 °C to + 50 °C
High Anti jamming capability	
Firing Capability	Day & Night
Hit Probability	90%
Rate of fire	2-3 rounds/min
Telescope	Magnification
	12x
	Field of View
	6°
	Wide IR Field of View
	±49 mrad
	Narrow IR Field of View
	±7 mrad
Range of fire	Elevation
	-7° to +130
	Azimuth
	0° to 3600

Features

- Battlefield tested weapon.
- Produced for inland forces and exported to many friendly countries.
- In service weapon due to Lethality, Reliability and Effectiveness against modern MBTs
- Day & Night Firing
- Anti-ERA capability
- Quick reaction time
- High hit probability
- Rapid rate of fire
- Anti-jamming capability
- Easy operation & maintenance





ROCKET LAUNCHER RPG-7



Technical Specifications

Caliber of Rifle	40 mm
Length of Launcher	950 mm
Weight of Launcher	6.3 Kg
Max Aimed Range	500 m
Rate Of Fire / Minutes	4-6 Round
Armour PenetrationWarhead	Dependent
Shipping Volume	0.21 Cum

Main Features

- A portable, Re-usable shoulder launched anti-tank Rocket-Propelled Grenade Launcher.
- Effective and low cost weapon widely used for anti armor and in irregular operations.

LIGHT MORTAR M-60MM

Technical Specifications

Caliber	60 mm
Length of barrel	623 m
Max range	2000 m
Rate of fire	8 Round/minute
Type of firing mech.	Manual
Total weight	14.8 kg

Main Features

- Effective Support weapon for short & medium range targets
- User friendly, reliable in all weather operations
- Close-in-support for ground troops
- All type of qualified 60mm ammunitions are usable for operations



MORTAR M-81MM

Technical Specifications

Caliber	81 mm
Length of barrel	1.45 m
Max range	5000 m
Type of firing mech.	Manual
Total weight	41.5 Kg

Main Features

- Effective Support weapon for short, medium and extended range targets
- User friendly, smooth bore, muzzle loading, reliable in all weather operations
- All type of qualified 81mm ammunitions are usable for operations.
- Dismantled in 3 loads (barrel, base plate, and bipod) for quick transport



HEAVY MORTAR M-120MM

Technical Specifications

Caliber	120.15 mm
Length of barrel	1.746 m
Max range	8950 m
Rate of fire	8-12 round/minute
Type of firing mech.	Manual
Total weight	402 Kg

Main Features

- Highly Effective Support weapon for medium and extended range targets
- User friendly, reliable with rapid deployment in all weather operations
- All type of qualified 120mm ammunitions are usable for operations
- Quick transportation with towable wheeled carriage for assemble Mortar





LASER DESIGNATOR & RANGE FINDER (LDR-4N)

LDR-4N is a high performance, compact and light weight system. The low mass and volume of the equipment enables the complete system to be carried by a soldier either in its transit case or in the soldier's rucksack. The LDR-4N is capable of designating up to 5 km using any user-defined codes, with excellent beam quality and stable bore sight over the full temperature range.

Features

- Acquires target coordinates by measuring Range, Elevation and Azimuth Angle to the target with respect to LDR-4N
- Designates a target for laser-guided weapon homing on the laser spot

Specifications

Supply voltage	24 V
Field of View of Telescope	4.5°
Magnification of Telescope	X13
Cooling Pump	Liquid Flow
LRF Range	10 Km
Energy	> 70mJ
Laser Beam Collimated Diameter	48 mm
Divergence	≤0.35mrad
DES Frequency	0-21 Hertz
Laser Pulse Width	25nsec
Azimuth	360 Degree (1-6400) mils)
Elevation (Up)	28.5 Degree (0-499 mils)
Elevation (Down)	28.5 Degree (0-499 mils)
Battery Type	Ni-Cd
Lasing Cycle	30 sec
Weight	11.7 Kg
Dimensions (L x W x H)	36 x 34 x 17 cm





LASER RANGE FINDER (AR3)

AR-3 is a compact, high performance laser range finder that is suitable for stand-alone military-based range finding applications. It is ideally suited for end-users requiring installation to externally mounted platforms. It offers true plug and play compatibility within a host of military based environments.

Features

- 0.2Hz repetition rate
- Environmental performance to MIL-STD-810F
- Extensive on-board BITE facilities

Specifications

Laser Type	Nd: YAG (1.064 μm)
Pulse Energy	10 mJ (nominal)
Pulse Width	10 nSec
Beam Divergence	< 1.0 mRad
Pulses / min	15 (30 for short time)
Field of View	2.0 mRad
Aperture	47 mm
Range of Display	4 Digits LED
Range Accuracy	+ 5m
Max / Min range	9995 / 200 m
Range Blanking	200 m – 4000 m
Range update rate	0.5 Hz (max)
Magnification	X 7
Field of view	120 mils
Eye Protection	OD 5
Battery Capacity	Ni Cd 12V 0.5 Ah
Readings / Charge	Over 600 at 20 $^{\circ}\text{C}$
Operating Temp.	-30 $^{\circ}\text{C}$ to +55 $^{\circ}\text{C}$
Dimensions	25 x 20 x 11 cm
Weight	2.2 Kg





THERMAL IMAGER BIOCULAR

TIB786-1

TIB786-1 is a short-range compact and light weight thermal imager-based night vision goggle comprised of 384x288 micro-bolometer FPA detector. This system provides true night vision capability for general area surveillance, perimeter security and border patrol etc. in all weather conditions, both day and night, in the presence of fog, some type of smoke and dust. It is primarily hand-held device but can also be mounted on Helmet for long missions.

DRI

	Vehicle	Human
Detection	1300m	900m
Recognition	500m	350m
Identification	250m	150m

TIB786-3

TIB786-3 is a Long Range compact thermal imager based night vision goggle comprised of microbolometer FPA Detector. It is primarily a hand held device but can also be mounted on Tripod for long missions. It has snap shot and recording feature. It has Light weight and long battery endurance of more than 6h operation.

DRI

	Vehicle	Human
Detection	3000m	2000m
Recognition	2000m	1000m
Identification	1200m	800m

	TIB786-1	TIB786-3
Sensor Type	Uncooled Micro-bolometer	
Sensor Size	384x288, 17 um	640x480, 17 um
TEC	Shutter less Operation Always ON, never blind	
Spectral Response	8-14 um thermal band	
Obj. Lens	35 mm	75mm
Focus	Fixed	Manual
FOV	10.6° x 8° (1x)	8.3° x 6.2° (1X)
Battery	2x Li-Ion rechargeable Cells	4 x AA NiMH Batteries
Media Storage	No	8GB, >4Hrs video recording
Battery Time	>6 hrs.	
Display	Colored AMOLED 800 x 600	
Ingress Protection	IP67	
Weight	< 0.8 Kg	<1.5Kg
Video Out	Standard 3m Composite Video out (BNC/RCA)	
USB	Plug & play USB cable for video and image data	
External Power Supply Options	PC/Laptop PORT, Smart phone power bank, 12Vvehicle battery, 6V-12V AC-DC adopter (12V available in accessories)	



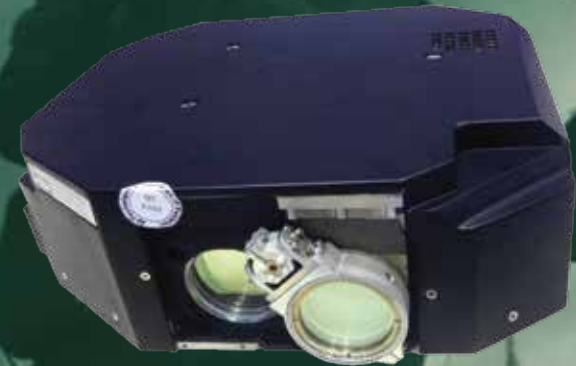


AIRBORNE LASER DESIGNATOR & RANGE FINDER (ABLDR-2)

ABLDR-2 is a long-range high-performance laser-based system. It can measure the range and designate the target for LASER guided weapons.

Specifications

Laser Type	Nd - YAG
Emission Wavelength	1064nm
Range Capability	(200 to 20,000m) + 5m
Output Pulse Energy	≥ 80mJ
Beam Divergence	0.35 mRad
Pulse Width	20 + 5 nSec
Designation Frequency	8 – 21 Hz (NATO & Custom)
Lasing Cycle	90 sec
External Power	+28V + 10%
Power Consumption	450 Watt
Data Communication	RS-422 (Opto coupled)
Mechanical Interface	Integrated in 17" Payload
Operating Temperature	-20 oC to +55 oC
Storage Temperature	-30 oC to +70 oC
Encapsulation	IP67 (Laser Cavity)
Vibration & Shock	MIL-STD-810G & MIL-STD-461E
Weight (without battery)	≤ 7.2Kg





COMMANDER'S SIGHT FOR APC (ABSAR-C)

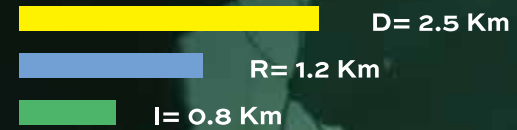
ABSAR-C is a long-range TI sight for APC commander. It enables the Commander to see during night as well as day in pitch dark situations under smoke and adverse weather conditions such as rain and fog.

Specifications

TI Sensor Type	Un-cooled
Sensor Size	640x480, 17um
Spectral Response	8 -14 μ m
Objective Lens	75 mm, Fixed Focus (A-thermalized)
Focus Range	5m – Infinity
FOV	8.2o x 6.2o
NETED	\leq 100 mK
Electronic Zoom	1X, 2X, 3X, 4X
Polarity	WH/BH/Sepia
Display	10.4" LCD Display
Video/PICs Storage	64Gb
Video Output	PAL
Battery Type	24V Li-Ion (Recharge) battery Pack
Endurance Time	> 8 hrs
Operating Temperature	-20o C to + 55o C
Storage Temperature	-30o C to + 60o C
Encapsulation	Camera IP67, LCD IP66
Vibration & Shock	MIL-STD-810G
Weight	< 13 kg (without battery)



Man*



Vehicle*



*For standard NATO Target



DRIVER NIGHT VISION DEVICE (DTI)

Driver Night Vision Device (DTI) is a short range compact thermal imager based night vision system for AK-1 Tank driver. DTI is a very efficient under complete darkness, smoke or adverse weather conditions such as rain and fog.

Specifications

Sensor Type	Un-Cooled
Sensor Size	384x288, 17um
Spectral Response	8 -14 μ m
Objective Lens	13 mm, Fixed Focus (A-thermalized)
Focus Range	3m – Infinity
FOV	28°x21°
Field of Regard	\pm 31o
Electronic Zoom	1X, 2X
Polarity	White Hot /Black Hot
Display	0.8” Color AMOLED (800 x 600)
Eye Piece	Relax View
Video Output	PAL
Battery Type	Li-ion battery Pack (Rechargeable)
Endurance Time	> 8 hrs
Operation	-30o C to + 55o C
Storage Temperature	-400 C to + 70o C
Encapsulation	IP67
Vibration & Shock	MIL-STD-810G
Weight	\leq 8 kg (without battery)



Man*

D = 300 m

R = 150 m

Vehicle*

D = 800 m

R = 400 m

***For standard NATO Target**



DRIVER'S THERMAL SIGHT FOR APC (ABSAR-D)

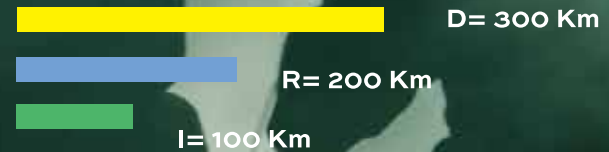
ABSAR-D is a short range compact thermal imager-based night vision system for APC driver sight. It enables the driver to see during night as well as in day under complete darkness, smoke or adverse weather conditions such as rain and fog.

Specifications

Sensor Type	Un-Cooled
Sensor Size	640x480, 17um
Spectral Response	8 -14 μ m
Objective Lens	19 mm, Fixed Focus (Athermalized)
Focus Range	3m – Infinity
FOV	29.8°x23.2°
Electronic Zoom	1X, 2X, 3X, 4X
Polarity	WH/BH/Sepia
Display	8.0" LCD display
Video/PICs Storage	64Gb
Video Output	PAL
Battery Type	Li-ion battery Pack (Rechargeable)
Endurance Time	> 8 hrs
Operation	-20o C to + 55o C
Storage Temperature	-300 C to + 60o C
Encapsulation	Camera IP67, LCD IP66
Vibration & Shock	MIL-STD-810G
Weight	≤ 8 kg (without battery)



Man*



Vehicle*



*For standard NATO target



FORWARD ARTILLERY OBSERVATION DEVICE (FAOD-2)

FAOD-2 is a compact multi-sensor observation device. It is employed for target GPS coordinates calculation on LCC grid, and forward area surveillance with the help of in-built thermal imager, Day sight and associated sensors.

Specifications

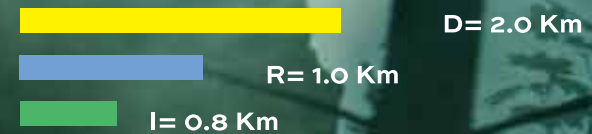
TI Sensor Type	Un-cooled
Sensor Size	640x480,17 μ m
Spectral Response	8 -14 μ m
Objective Lens	100mm (Manual Focus)
Field of View	6.2° x 4.7°
Electronic Zoom	1X, 2X, 3X, 4X
Day sight Type	CCD
Zoom Ratio	30X
LASER Type	Eye Safe (1540nm)
Maximum Range	5Km \pm 2m
Compass Accuracy	\pm 0.5°
GPS Code	P(Y) code or C/A code, LCC
Display	Color AMOLED Display (800x600)
Video Output	PAL
Battery Type	Li-ion battery pack (Rechargeable)
Battery Life	>4 hours
Mechanical Interface	Tripod Mount
Operation	-20oC to +50oC
Storage	-25oC to +55oC
Encapsulation	IP67
Vibration & Shock	MIL-STD-810G
Weight	<4.2 Kg (without battery)

Applications

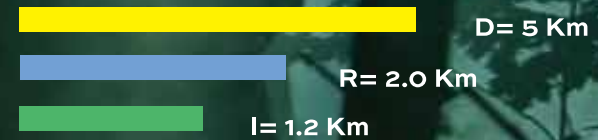
- Forward Observation
- Area Surveillance
- Perimeter Security
- Border Patrol
- Target Acquisition & Ranging



Man*



Vehicle*



*For standard NATO Target



TI SECURTIY CAMERA (ALHARIS-75)

ALHARIS-75 is a long-range thermal imager-based night vision surveillance sight. It can be integrated with any type of high-resolution pan-tilt with video over Ethernet. It can be equally used in the day & night time.

Specifications

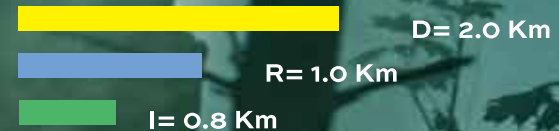
Sensor Type	Un-Cooled
Sensor Size	640 x 480, 17 μ m
Spectral Response	8 -14 μ m
Objective Lens	75mm, Fixed Focus (A-thermalized)
Focusing Range	5m - Infinity
Field of View	8.2° x 6.2° (w/o zoom)
Polarity	WH/BH/Sepia/Fire/Iron/Rainbow
Electronic Zoom	1X, 2X, 3X, 4X
Video Output	PAL, Ethernet
Connectivity	Ethernet (RJ-45), PELCO-D
PTZ	Yes (Optional)
Operating Voltage	12 V DC
Operation	-35°C to 55°C
Storage Temperature	-40°C to +70°C
Encapsulation	IP67
Vibration & Shock	MIL-STD-810G

Applications

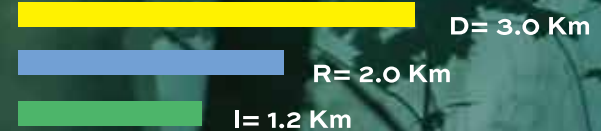
- Area Surveillance
- Perimeter Security



Man*



Vehicle*



*For standard NATO Target



TISIGHT FOR SMALL ARMS

TISA-3SA50

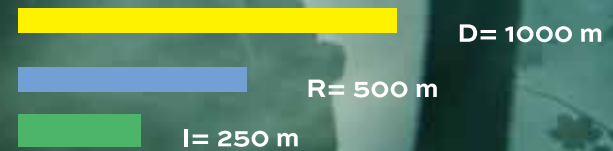
TISA-3SA50 is a compact light weight thermal weapon sight which can be mounted on short range weapons (SMG, G3, M4). It enables the soldiers to aim in the darkness, even in adverse weather conditions.

Specification

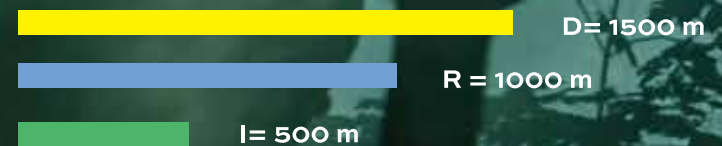
Sensor Type	Un-cooled
Sensor Size	384 x 288,17 μ m
Spectral Response	8 -14 μ m
Objective Lens	50mm, Manual Focus
Focusing Range	5m – Infinity
Field of View	7.4° x 5.6° (1X)
Display	Color AMOLED Display (800x600)
Electronic Zoom	1X, 2X, 4X
Polarity	WH/BH/Sepia/Fire/ Iron/Rainbow
Battery Type	1 x Li-ion (Rechargeable) battery
Battery Life	>5 hours
Mechanical Interface	MIL- STD 1913, STANAG 2324
Operation Temp.	-35oC to +55oC
Storage Temp.	-40oC to +70oC
Encapsulation	IP67
Vibration & Shock	MIL-STD-810G
Weight	<0.7 Kg (without battery)



Man*



Vehicle*



*For standard NATO Target



LASER THREAT SENSOR (LTS)

LTS786P is an early warning device which gives audio and visual alarms of threat by sensing a laser beam aimed at it from any direction. The exact location of the threat is indicated by nine LEDs and has the capability to differentiate between a Laser Range Finder, Laser Target Designator or a Laser Target Tracker Signals. It can be used on stationary or moving objects of any size or shape.



- Wave length response 0.8 ~1.06 microns
- Can be fitted on tanks, bridges and installations

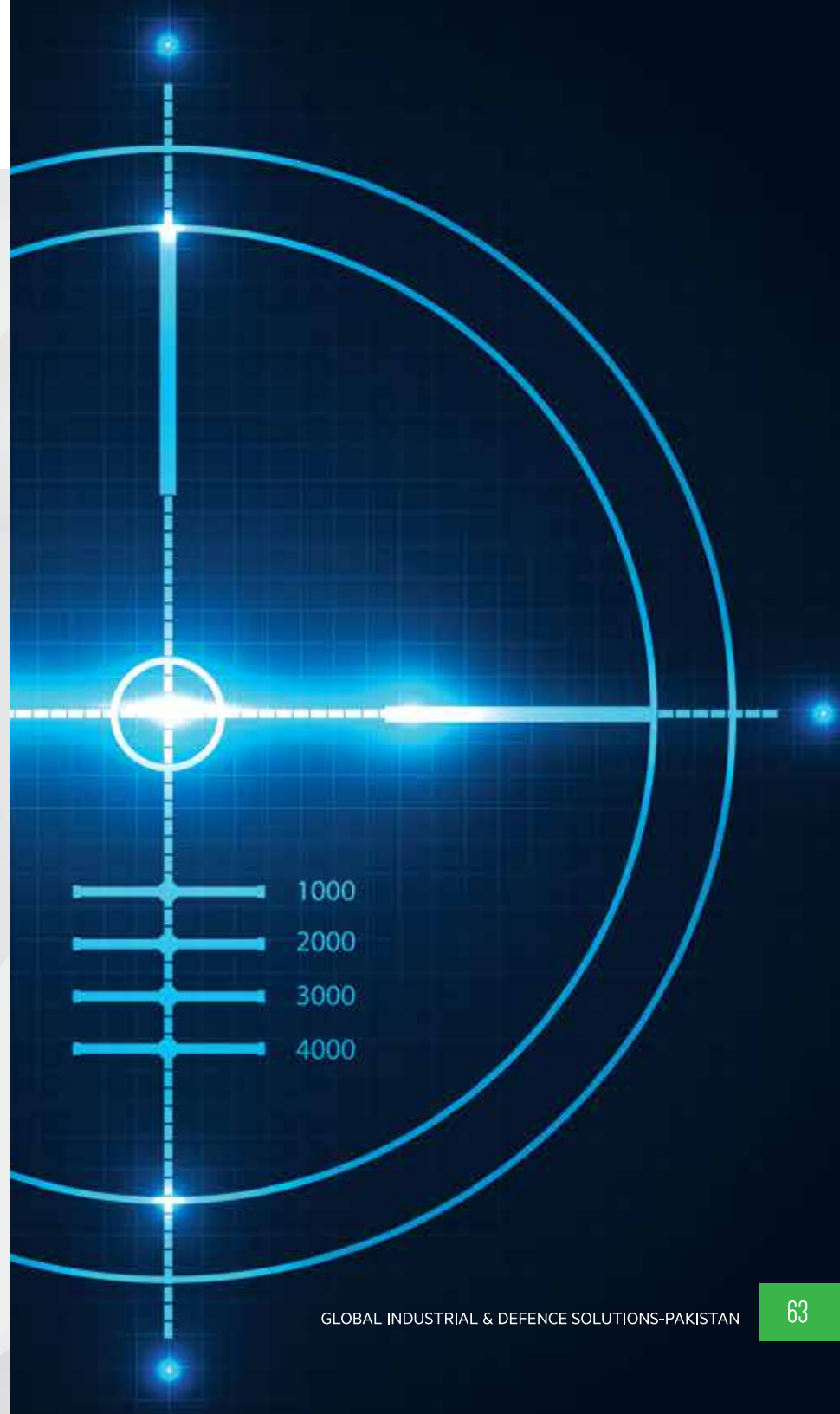
LTS 1 can be coupled with acoustic alarms, smoke generators and other counter-measures.

Digital Goniometer (DGM)

The Digital Goniometer (DGM-1) is used with Laser Range Finder to precisely measure the coordinates of the target. It can be interfaced to any aiming device through a dovetail. Interface for mounting on tripod is provided by TPI 11 and diameter of 5/8 inch.



- Digital display
- Measuring accuracy
- Azimuthal 1Mil (360 deg) Elevation 1 Mil
- Weight : 4.2 kg





MOBILE FIELD KITCHEN (MFK)

Mobile Field Kitchen is a trailer-based kitchen, towable with a 25 ton vehicle. It has independent suspension system with the capability of cross country mobility. It can provide healthy and hygienic food to troops in field exercises. It has been specifically designed for Pakistan Army. It can be cooked Food for 150 personnel in 2 hours. It is equipped with three cooking modules, one multipurpose module and one tandoor module. Each module has its independent multifuel burner. These multi fuel burners are operable on diesel, kerosene oil and liquified petroleum gas. The cooking modules are made of food grade material SS 304.

Features

- 3x Cooking modules of 75 liters each
- 1x Multipurpose module
- 1xTandoor module
- 5x multifuel burnes and 2x solid fuel burners
- Each module is made from food grade material (SS 304)
- 1x Tea kettle of 50 liters

Specifications

Total weight	2500 Kg
Length	4082 mm (transportation mode) 2156 (non transportation mode)
Width	2457 mm
Height	2179 mm





VEHICLE MOUNTED KITCHEN (VMK)

VMK is indigenously developed kitchen equipment for mobile application of security forces. All components of kitchen have been fitted into a container making it flexible for transportation to desired locations. The container can be unfastened easily for detaching from carrying vehicle with the use of crane/5-ton lifting truck. VMK has capacity to cook food for 400 persons (single dish) in two hours. The container has been fitted with various kitchen equipment like microwave oven, refrigerator, dough mixer, instant geyser, seating arrangements for crew, central exhaust system, kitchen hood and pressure pump water tank. The heating source of VMK is Multi Fuel Burners.

Features

- Provides healthy and hygienic food
- Compact vehicle mounted with good cross country mobility
- Can cook Pakistani food for 150 personnel in 2 hours
- Uses multi fuel burners (kerosene, diesel and LPG)
- Carries 3 days ration & 1000 liter water
- Setting up time is 10 minutes

Specifications

Length	5300 mm
Width	2440 mm
Height	2130 mm





TANK FIRING SIMULATOR (TSM-II)

TSM-II tank firing simulators for T59/T69 Tanks are used by Army for the training of their gunners. The simulators are upgraded through industrial grade DAQ system and software with enhanced training features. These simulators provide realistic firing practice in simulated 3D battlefield environment to equip the trainee with requisite tactics and assume high value in view of conservation of actual equipment and ammunition

Features

- Realistic 3D battlefield environment for trainee through customizable scenarios based on various static and moving targets
- Real time electronic monitoring of all controls via Instructor Console
- Electronic logging of all trainees' actions
- Induction of faults and emergencies to analyze trainee's response
- Basic, intermediate and advanced level exercises
- Performance record and graphical analysis of trainees' performance
- Automation of controls with state of the art industrial grade Data Acquisition System (DAQ)
- Sound simulation for realistic training

Main Specifications

Power Supply	220 V±10%,50H
Power Consumption	Less than 5KW
Controls	Replica controls for simulated response
Type of Platform	Moving platform for gunner



Inner view of Gunner Cabin TSM-II



Instructor Console TSM-II Sml



AUTOMATIC FIRE CONTROL SYSTEM UP-GRADATION OF 37MM ANTI AIRCRAFT GUN

The original 37mm twin barrel AD gun has been upgraded in order to meet the present combat threats. The upgraded gun with its new firing system gives a unique combination of modern technology resulting in a very reliable weapon system. Capable to track high speed targets coupled with auto ranging. The gun can be operated in three modes, i.e. joystick, handheld fire control and laser aiming sight.

- Sunlight viewable alpha numeric displays
- Provision of interfacing with multiple guns (optional)
- Off Gun tracking of target for stability
- Computer aided leveling
- Smart electronics for gun control
- Power electronics for motors
- Limit switch for safety arc range
- Emergency stop
- Motors for azimuthal & elevation movements
- Horizontal and vertical shaft encoder
- Fire safety switch





MILITARY BATTERIES

We design, develop and manufacture customized batteries and power sources for military use. The batteries are rigorously tested and produced by ISO 9001:2000 certified facilities, maintaining the most stringent international quality control standards. We produce more than 30 different types of batteries.



Nickle Cadmium Cells/ Batteries

Nickel Cadmium Batteries have a rugged construction and proven reliability. Characteristics like high power capabilities, a wide operating temperature range, long life cycle and resistance to maltreatment makes them suitable for many applications.

Lithium Thionyl Chloride Batteries

Lithium Thionyl batteries have highest cell voltage and energy densities. The cells have been fabricated in variety of sizes, designs and configurations to meet particular requirements.



Zinc Silver Oxide Batteries

These batteries have numerous applications particularly where high energy density batteries are used such as power sources for tactical missiles, torpedoes, GPS and various military communication and electronic equipment with excellent performance in range of 10 CO to + 50 CO.



Uses:

These batteries are used in various types of fixed wing and rotary aircrafts.

- Naval vessels
- Missiles
- Communication equipment
- Torpedoes, etc





**NAVAL
SYSTEMS**



HARBAB WEAPON SYSTEM

Harbah is a Navy Ship Launched Subsonic Cruise Missile system able to target Enemy Ships and Land based targets within an accuracy of $\geq 10\text{m}$ radius. It employs cutting edge navigation technologies such as Inertial Navigation System (INS) with GPS/GLONASS making it exceptionally accurate weapon system to precisely engage the desired targets. It is capable of engaging land based installations as well as both small and large ships. Harbah has a modular design, allowing a wide variety of warhead, guidance, and range capabilities. Harbah is all weather capable and flies at lower altitude which makes it impossible for countermeasures to come into play, making it one of the deadliest systems

Salient Features

- Medium Range
- Highly Precise Navigation
- All weather Operation
- High Hit Probability
- Smart Size and Weight
- High Survivability
- Easier Ground Handling

Guidance

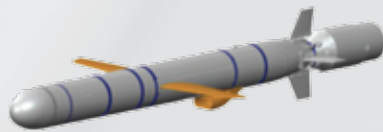
- Inertial Navigation System
- DSMAC Camera
- Radar Altimeter
- Imaging Infrared Seeker
- Radar Seeker

Parameters

Range
Speed
Gross Weight
Diameter
Length
Fuel
Seekers
Single shot hit Probability
After Sales Service
Survivability Features

Types of Payload / Warheads

- Fragmentation Warhead
- Anti-ship Warhead



Technical specifications

≥ 280 Km
0.6 – 0.8 (Mach)
1350 Kg
0.5 m
6.8 m
Liquid Aviation Fuel JP-8
Radar & IIR
>90%
Yes(Life Support Program)
Multiple way points,
Maneuverability, Speed





EXPANDABLE MOBILE ASW TRAINING TARGET (EMATT)

The Expendable Mobile ASW Training Target (EMATT) is used as a target for Anti-Submarine Warfare training in sea to ASW teams. It is a self-propelled underwater vehicle which can be programmed to execute certain manoeuvres according to the selected run geometry. It can be deployed from certain surface and/or aerial platforms. It can be used with active and passive sonars of PN surface ships including PN helicopters equipped with dipping sonars.

Salient Features

- Longer Shelf life
- Manual Deployment
- Sea water activated Battery
- Light weight
- Hydrodynamic stability

Main Specifications

Length	30-40 inches
Diameter	5 inches (approx.)
Weight	10-12 kg (approx.)
Buoyancy	Approximately 1.6 pounds (negative)
Speed	4-8 KNs
Endurance	5-6 hrs.
Operating Limits (Depth)	60 feet to < 600 ft.
Dive/Climb Rate for Depth Changes	2.5 ft/sec
Turn Rate for Course Headings	3.5 deg/sec





SONOBUOY ACOUSTIC PROCESSING SYSTEM (SAPS)

The Sonobuoy Acoustic Processing System (SAPS) is a combination of hardware and software that enable users to receive, process, record and analyze underwater acoustic signals transmitted by Sonobuoy(s) over radio frequency (RF) link.

Salient Features

- Wideband concurrently processed at different frequency resolutions.
- Selectable Center Frequency
- Multiple divider
- Spectral Analysis
- Demon analysis

Main Specifications

VHF Band	136.000 MHz to 173.500 MHz
Compatible Sonobuoys	LOFAR, DIFAR <ul style="list-style-type: none"> • Narrowband
Analysis Tools	<ul style="list-style-type: none"> • Broadband • Demon
Total Sonobuoys Managed	Up to 32
Localization Tools	Energy Plots
Classification	Harmonic Dividers
Operating Modes	<ul style="list-style-type: none"> • Initialization and Self-Test • Normal operation • Replay mode





SLIM LINE TOWED ARRAY (SLTA)

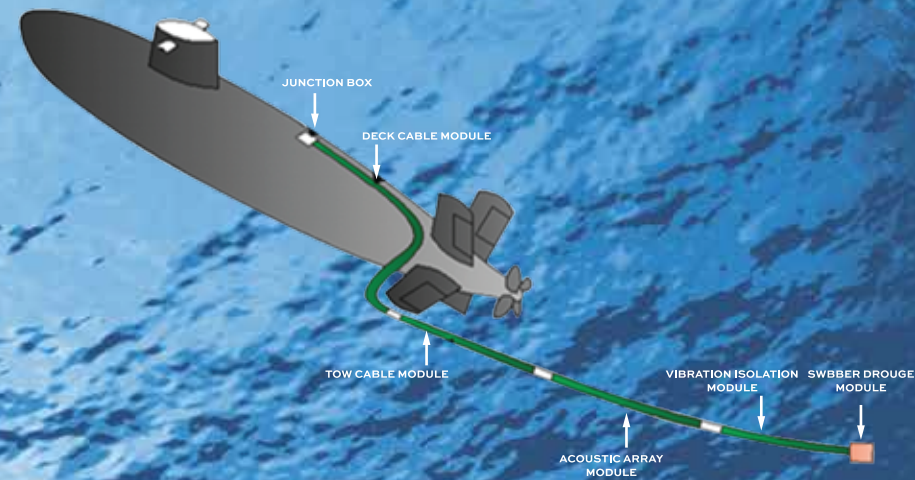
Anti-Submarine Warfare is an important capability for surface ships. Generally, Surface ships use Hull Mounted Sonar for ASW mission and detection of submarines. However, Hull mounted Sonar performance is limited due to its frequency range and environmental conditions. The shortcomings are overcome by use of low frequency Towed Array Sonar that provides long detection ranges and capability to vary depth to counter environmental conditions.

Salient Features

- Long Range detection
- Smaller Diameter
- Light weight
- Neutrally Buoyant
- Maintainable

Main Specifications

Number of Acoustic Channels	78
Frequency Band	Up to 1.5 KHz
Operating Speed	~Up to 17 Kts
Operating Depth	~Up to 300m
Number of Depth Sensors	02





SEA SURGE ANTI SUBMARINE

Sea Surge air launched anti submarine weapon can be deployed at shallow depths from either a fixed wing aircraft or a helicopter. This weapon is ideally suited for coastal defence operations.

Technical Specifications

Total Length	142 cm
Dia	28 cm
Weight of full prepared unit	150 kg
HE	82 kg
Firing depth	21 meter

System Configuration

- Main body carrying HE
- Fuze
- Tail unit
- Suspension and releasing mechanism





ESM SYSTEM RIBAT

Electronic warfare is of prime significance in modern warfare, both for tactical and strategic purposes. Electronic Support Measures (ESM) system is the most important EW component required for a variety of ground, surface, underwater and airborne applications especially in maritime scenario. RIBAT ESM system performs real-time interception, sorting, analysis and identification of Radar signals in dense and complex EM environment. The RIBAT ESM system covers 0.5-18 GHz of frequency band.

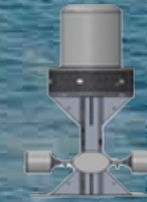
Salient Features

- Robust & Reliable System
- Compact Architecture
- Modular Design
- Fast Processing

Main Specifications

Operating Frequency	0.5 -18 GHz
Spatial Coverage	360° Azimuth 60° Elevation
Frequency Accuracy	≤ 5 MHz RMS
Sensitivity	-65 dBm
Dynamic Range	70 dB
MTBF	1500 Hrs
Library Capacity	1000 radars or 4000 modes
Power Supply	110/220 V. Single Phase, 50/60 Hz
Radar Blanking	05

ANTENNA UNIT (TOP OF THE MAST)



RADAR BLANKING UNIT



RECEIVER UNIT



PROCESSING AND DISPLAY UNIT





ACTION SPEED TACTICAL TRAINER (ASTT)

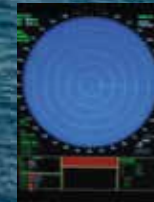
ASTT is a real time simulator that provides tactical training to naval officers & men in surface, subsurface and air operations in the most realistic sea environment. It is based on the most modern High-Level Architecture (HLA) developed by the US DoD and approved by Department of Modeling and Simulation Office (DMSO) and IEEE standards. The simulator imparts comprehensive training to operators in standalone mode as well as in an operationally integrated fleet environment. ASTT replicates the principal components of the Naval Fleet.

It includes all tactical facilities like:

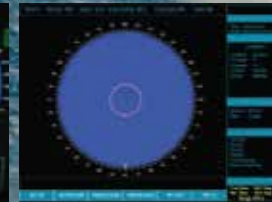
- Tactical maneuvers
- Fleet operations
- Planning and management
- C3I command center
- Scenario generation
- Exercise monitoring
- Trainees evaluation
 1. Provides true kinematics of vehicles.
 2. Provides real time modeling of weapons and sensors.
 3. 12 Cubicles are available with the simulator. Each of them can be configured as:
 - a. Surface ship
 - b. Submarine
 - c. Aircraft
 - d. Helicopter
 - e. MCMV
 - f. Hovercraft

The system also encompasses 6 instructor controls at the Controllers position. Which are used for:

- Exercise & scenario generation
- Library generation/edit
- Visualization of cubicles actions
- Environmental setting and control
- Exercise control
- Communication control
- Exercise replay facility
- Audio replay facility
- Performance evaluation
- Coast line generation



RADAR CONSOLE



SONAR CONSOLE



COMM CONSOLE



C3I CONSOLE



EW CONSOLE



VISUAL CONSOLE



ACTIVE & PASSIVE SONOBUOY

Modern submarines are getting quieter and more efficient, requiring an agile response from maritime forces in terms of ASW operations. The use of Sonobuoys for underwater target detection and classification had become an integral part of this response. Sonobuoy is used for underwater target detection & classification. Sonobuoys can be deployed quickly and over a wide area while providing varied data that can be used to develop an accurate picture of the undersea acoustic environment.

Salient Features

- Longer Shelf life
- Manual Deployment
- Sea water activated Battery
- Light weight

Main Specifications

Channel Selectivity	35 Channels selectable in VHF Band 158MHZ-173.125MHZ
VHF Transmitter power	Up to 1 watt
Operating depth	Preset three different depths selectable(30m/120m/300m) (Shallow/ Medium/ Deep Depth)
Tolerable Sea State	Less than 4





AUDIO SIMULATOR (AUDSIM)

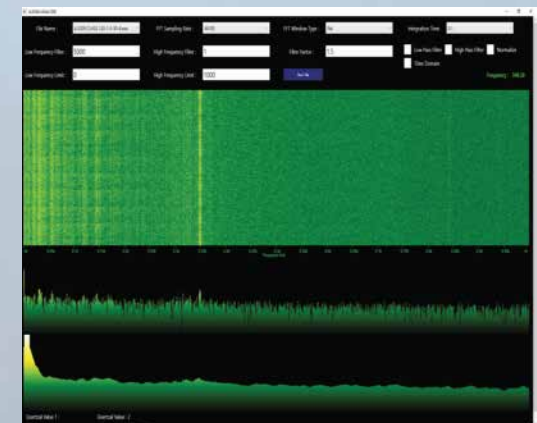
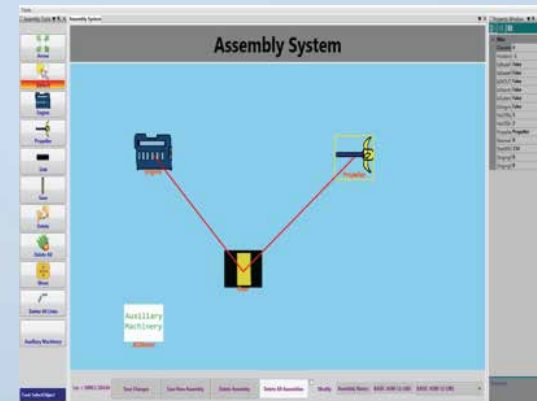
AUDSIM provides recognition and classification of sound signatures via analysis and evaluation tools such as DEMON, LOFAR and SPECTRO etc. The system works in a tactical environment with DOPPLER EFFECT irrespective of SONAR type.

Functions

- All type of biological and environmental noise has also been simulated.
- AUDSIM provides complete aural analysis that includes Dynamic Imbalance, Impulse Imbalance, Hull Resonance and Cavitation.
- The novelty of AUDSIM is assembly designing module which assists the instructor to design main and auxiliary machinery along with associated numeric and acoustic data.
- Another novel feature of AUDSIM is AUDSIM Analyzer. This module can be utilized to classify the unclassified data prior inculcating in a tactical scenario along with identified parameters.

Specifications

- Instructor Application
- AUDSIM Analyzer
- Assembly Designer
- Student Application with analysis tools.
- Record/Replay and post exercise evaluation report
- Sound System with Amplifier and Audio Communication system
- 01 instructor console and 20 student workstations along with 01 LED (55") for debrief.





AUTOMATIC DEPLOYABLE AND RETRIEVAL SYSTEM (ADRS)

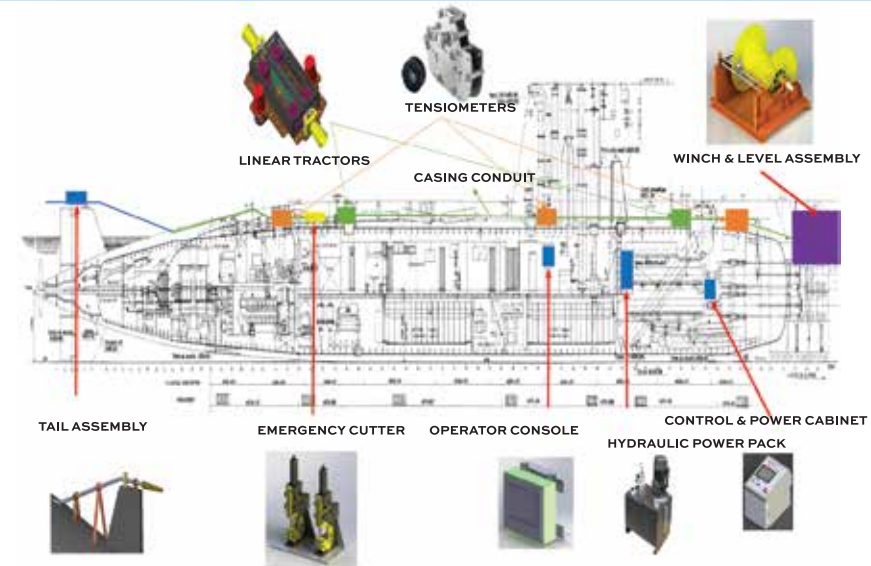
Automated Deployment and Retrieval System (ADRS) for towed arrays is vital to improve covertness and enhance operational capabilities of the submarine in varied scenarios. The overall deployment and retrieval time is greatly reduced along with reduced human resources required for the activity. Since TA is the only long-range sonar, its wartime availability shall also be made available using ADRS which is not currently possible due to manual deployment and retrieval.

Salient Features

- Reduced Deployment & Retrieval time
- Automatic operation
- Enhanced operational capabilities

Main Specifications

Overall Power Requirement	7.5 kW/ 10 HP
Hydraulic Pressure	250 bar
Hydraulic Reservoir Capacity	100 liters
Array Deployment / Retrieval Speed	20m/min (approx.)
Deployment/retrieval time	20-30min
Winch Drum Speed	5 rpm





GENERIC SONAR TRAINER (GST)

Generic Sonar Trainer (GST) has been developed to train SONAR operators for the underwater acoustics, tactics and techniques. It has features such as surveillance, detection, localization and classification etc. GST trains operators on various specific and generic sonar functions such as surveillance, detection, localization and classification of targets.

Functions

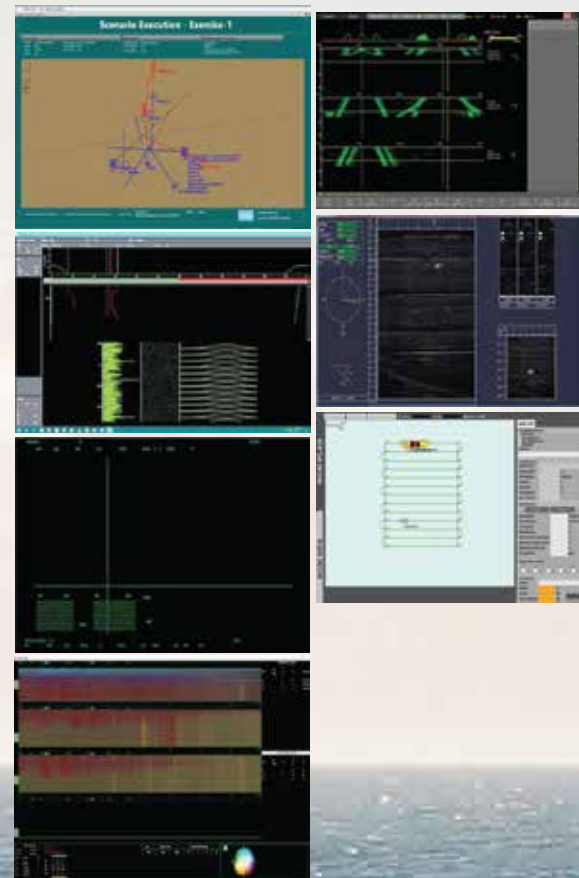
GST provides training in two modes:

- Anti Surface Warfare (ASW)
 - Customized platform designing with main and auxiliary machinery alongwith their specifications.
 - Customized weapon designing (Missiles and Torpedos), tactical planning, firing and detections at SONARS etc
 - Customized bathymetry (SVP, RPA and POD) visualization and relevant effects.
- Mine Hunting Warfare (MHW)
 - Customized mine laying, planning, detection and designation of different type of mines.

Specifications

- Instructor Application for ASW
- Assembly Designer
- Bathymetry (SVP, Ray Path, POD)
- Instructor Application for Mine Hunting
- Specific SONARs
 - ASO - 94
 - VDS - 2069
 - USQ - 78B
 - DUBM – 21D – Detector & Classifier
 - TOWED ARRAY of Agosta 90B Submarine
- Generic SONARs
 - Hull Mounted Sonar (HMS) Generic
 - Generic VDS
 - Towed Array

- Generic Sonobuoy
- Generic Mine Hunter – Detector & Classifier
 - Simulation of contacts, environmental & propagation conditions
 - Simulation of the SONAR characteristics
 - Record/Replay of the exercises
 - Sound System with Amplifier and Audio Communication system
 - O1 instructor console and O8 student workstations along with O1 LED (55”) for debrief





NAVAL COMBAT MANAGEMENT SYSTEM

GIDS has developed a Naval Combat Management System (NCMS) which takes in all relevant internal and external information, from onboard sensors, systems and tactical communication link (s), and enables ship command to detect, analyze and act against threats to the ships itself and the friendly forces around. NCMS is able to provide requisite operational capabilities to the command team for undertaking all peace & war missions. NCMS provides a comprehensive and up-to-date tactical picture to the command team and assists the command in four essential domain of naval warfare; Anti-Air warfare (AAW), Anti-Surface Warfare (ASuW), Anti-Subsurface Warfare (ASW) and Electronic Warfare (EW).

Key Features

Tactical Navigation	Min, Max, Avoidance, CCM, Formation CCM, Stationing, Situation Prediction
Search & Rescue	Incident Reporting & Management, Rescue Planning, Search Patterns (e.g. Expanding square search, sector search, parallel lines search etc), Man Over Board
Anti-Surface Warfare	Safeguard Areas, Threat Identification, prioritization, promotion/ demotion, Threat List, Auto/ Manual weapon designation, Fire Authorization, Mission Planning, SSM/ Guns
Anti-Air Warfare	Safeguard Areas, Threat Identification, prioritization, promotion/ demotion, Threat List, Auto/Manual weapon designation, Fire Authorization, CIWS/ SAM/ Gun/ Chaff
Anti-Sub Surface Warfare	Torpedo Danger Zone, Threat Identification, prioritization, promotion/ demotion, Threat List, Auto/ Manual weapon designation, Fire Authorization, Torpedo/ Depth Charge
Electronic Warfare	Display of Bearing Lines, Missile Alarms and Warnings, Threat Identification, prioritization, promotion/ demotion, Threat List, Auto/ Manual weapon designation, Fire Authorization, ECM, Chaff
Auxiliary and Support	Record and Replay, User and Role Management, Training and Simulation, System Monitoring and Management, Emission Control (EMCON), Alarm Warning and Information Management



Dual Vertical Screen (MFCC)



Data Processing Cabinet (DPC)



Tactical Picture Compilation in NCMS



SONAR TRANSDUCER & SYSTEMS

Design, development/manufacturing and refurbishment of underwater transducers, hydrophones and sensors for different applications is a rare technology. The developed products feature in a wide range of underwater sonar applications, ranging from echo sounders, towed arrays, Hull mounted sonars, sonobuoys, and mine-hunting sonars has been developed and delivered to PN.

Salient Features

- Spherical Transducers (LF,MF & HF)
- Echosounder
- Tonpilz/Piston
- Cylindrical Hydrophone
- Flexural Disc

Main Specifications

Resonant Frequencies ranges	1 kHz to 500 kHz
Acoustic sensitivity	up to -201 dBV re 1V/ μ Pa
Depth ranges	100 m to 1400 m
Bearing Resolution (Theoretical)	$\sim 1.50 \pm 0.10$ deg
Range Resolution (Theoretical)	~ 6.2 cm
Source Level	217 (1 μ Pa, 1m)





BRIDGE PILOTAGE SIMULATOR (BPS)

Bridge Pilotage Simulator (BPS) is a generic navigation simulator which simulates the bridge of Destroyer type of ship. The simulator provides 3D virtual environment of different harbors including important navigation landmarks. It provides configuration of different environment effects like day & night, rain, fog, sea states, etc. The simulator provides training of different navigational exercises such as Entering/Leaving harbor, RAS, Mooring, Tug handling, rope passing, MOB etc. The simulator is also capable of incorporating new models of harbors, different type of ships, submarines, etc.

Main Specifications

- Simulation of complete bridge room along with Customized Consoles including (Quarter Master, Captain, OOW, Pelorus) as per onboard ship
- The simulator displays one large synchronized scene of around 270 degree replicating actual Bridge of the ship
- ECDIS, Echo Sounder, GPS Simulation
- Radar Simulator

Modules

- Instructor Application
- 3D Visual Application
- Radar Simulator
- 3D Sound Simulator
- Record/Replay and post exercise evaluation report
- Physical Consoles
- Bridge Layout



BRIDGE SIMULATOR AREA



3D VISUAL



3D HARBOUR VIEW



SHIP STERN VIEW

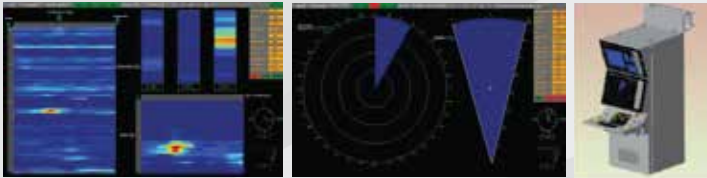




MINE HUNTING SONAR

Features

- Latest in Active / Passive Detection and Classification of both ground and moored mines
- Comprises Detector and Classifier Sonar Systems
- Long range LF Detection up to 1200 m
- HF Classification up to 320 m
- Enhanced Bearing and Range resolutions



Bearing vs. Range Graph

Plan Position Indicator

Console

Detector Sonar – Technical Specifications

Parameter	Value
Number of Sensors in RX Array	32
Frequency Range	up to 100 KHz
Detection Coverage	300, 600, and 900
Selectable Display Range Scales	400 m / 800 m / 1200 m
Transmitter – Source Level	217 dB (ref 1 μ Pa)
MTBF	up to 500 Hrs.

Classifier Sonar – Technical Specifications

Parameter	Value
Number of Sensors in RX Array	100
Frequency Range	up to 400 KHz
Detection Coverage	100 in fix sector
Selectable Display Range Scales	200 m / 320 m
Transmitter – Source Level	222 dB (ref 1 μ Pa)
MTBF	up to 500 Hrs.

- Designed with an Open System architecture and with a powerful COTS Signal Processing capability
- Operator Console based on State-of-the-art technology and HMI with proven industrial standard software to display sonar data
- Modular Approach for Ease of installation on Naval Platforms
- Product delivered to Pakistan Navy in 2018
- Computer Aids to Operator (CAD)
- Interface with External Systems e.g. Echo sounder, Gyro, Doppler Log
- Onboard Calibration
- Compliance with MIL grade Standards
- Flexible Design; can be tailored to the Customer requirements
- Complete Technical documentation, Trainings and Product support



TOWED ARRAY SONAR DRY END

Dry ends of Towed Array sonar cover the whole chain from Front End Conditioning, Analogue to Digital Conversion, Sonar Processing and presentation of the results on new Multi-Function Consoles. The primary purpose of TA Dry End is to provide an accurate rendering of the surface and undersea environment by processing data from the Towed Array Sonar and displaying the information extracted through high quality human machine interfaces on a rugged Multi-Function Computer Console. The displays are geared towards optimally fulfilling the surveillance, tactical and safety requirements of the sonar operators.

Specification

Sensor Type	Un-cooled
Sensor Size	384 x 288,17 μm
Spectral Response	8 -14 μm
Objective Lens	50mm, Manual Focus
Focusing Range	5m – Infinity
Field of View	7.4° x 5.6° (1X)
Display	Color AMOLED Display (800x600)
Electronic Zoom	1X, 2X, 4X
Polarity	WH/BH/Sepia/Fire/ Iron/Rainbow
Battery Type	1 x Li-ion (Rechargeable) battery
Battery Life	>5 hours
Mechanical Interface	MIL- STD 1913, STANAG 2324
Operation Temp.	-35oC to +55oC
Storage Temp.	-40oC to +70oC
Encapsulation	IP67
Vibration & Shock	MIL-STD-810G
Weight	<0.7 Kg (without battery)

Salient Features

- Long-range detection
- Broad and narrow band detection
- Transient Noise Detection



Main Specification

Broadband processing frequency	8Hz-1280Hz
Narrowband processing frequency	10Hz-640Hz
Audio Analysis	LOFAR, Vernier and DEMON
Tracking	Auto, Manual & Prediction



AVIATION MAINTENANCE MANAGEMENT SUITE

Aviation Maintenance Management Suite (AMMS) is the first in-country 100% indigenous, web-centric, technologically advanced, fully customizable, Maintenance Repair & Overhaul (MRO) or Maintenance & Engineering (M&E) Solution that can be customized for any Aerospace & Defence (A&D) Organization to meet the diversified needs of complete fleet (one solution for all types of aircrafts).

AMMS enables & integrates all the major departments/ functions of Maintenance organization through comprehensive modules/Components including:

- Admin & Security
- Human Resource Management
- Human Resource Training
- Configuration Management
- Document Management
- Inventory Management
- Work Shop Management

Salient Features

- Manage & Maintain complete configuration of Aircrafts from system / sub-system to component level
- Provide spontaneous visibility & status of Line/Shop Replaceable Units (LRUs & SRUs)
- Give complete repair/ maintenance history of aircraft/ equipment for fault diagnosis and rectification analysis
- Ensures automated tracking of life for aircraft & equipment in Hours, Landing and Days
- Track and monitor all type of flight check, schedule maintenances (A-Check, B-check etc.) & Depot Maintenance
- Provide complete visibility and status of work requisition / work orders undergoing at work shops
- Maintain & Verify requisite qualification & technical status to ensure safety & compliance

- Online fast and easy searching and accessibility of maintenance manuals & technical publication
- Fully integrate with demands of stores/ tools and spares with complete visibility of inventory items/components
- Powered with highly intuitive & analytical dashboards for holistic view of each Key Performance Indicator (KPI)

Main Specifications

- Processes architected and structured to comply aviation standards for maximum safety & airworthiness
- Enterprise Collaboration & applicable Integration to geared-up MRO Operations & activities
- Use cutting-edge web-responsive technologies for machine independence
- Instant/ Summarized reporting of KPI with drill-down tools
- Flexible Data Searching with export capabilities
- Offline/ Mobile Computing (with PDAs / Tablets)
- Intuitive, Informative & Analytical UI/ UX
- Workflows (customizable) with e-signatures
- Enabled with Barcodes, encrypted passwords
- Data-level access control & security



WAR GAMING SIMULATOR (WGS)

War Gaming Simulator (WGS) simulates military operations involving two or more opposing forces using rules, data & procedures designed to depict an actual or assumed real life situation. WGS provides an efficient and automated means to learn futuristic strategic planning and decision making skills. WGS provides user friendly and computer assisted war games to allow the course members to exercise Naval Operational Planning Process and enhance decision making abilities. WGS supports computer assisted analysis for evaluation of trainees' actions in an almost real time environment.



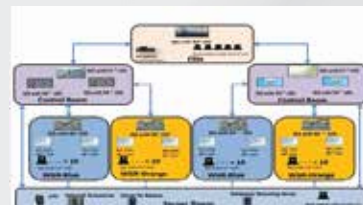
WGS MODULES



WGS WAR GAME
SCENARIO GENERATION



ENTITY LIBRARY
MODULE



WGS SYSTEM LAYOUT

WGS Modules:

- Privileged Access Management Module
- Entity Library
- Terrain Modification Utility (TMU)
- Exercise Library
- Map Utility
- Command Hierarchy Tool (CHT)
- Map filters
- Information Management Tool (IMT)
- Integrated Message Browser (IMB)
- Electronic Documentation Module (EDM)
- Controller's Module
- Trainee's Response Planning Module
- Record replay exercise
- Players orders
- Controllers orders
- 3d Visual Planning
- Post Game Performance Analysis
- Periodic Reports



SERVICES

Measurement & Testing Services

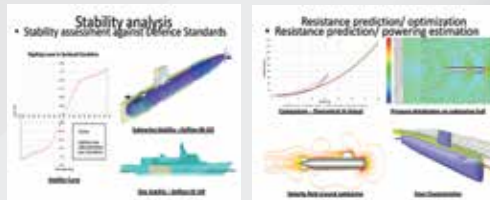
We design and install Electromagnetic Shielding for military, industry, medical facilities, hospitals and R&D laboratories. We offer a wide range of Electromagnetic Compatibility (EMC) services e.g. EMC testing of ships, submarines, other tactical platforms and electronic systems.



Designing of Small to Medium Size Surface Vessel

We have the capability to undertake the design of small to medium size surface vessel including missile boats, small merchant ships and coastal crafts etc. We have design labs that are equipped with latest ship design software like paramarine that enable following analysis to be undertaken:

- Stability analysis
- Powering calculations
- Sea keeping analysis
- Manoeuvring analysis
- Detailed structural design
- Radar Cross Section analysis
- Vulnerability analysis etc.

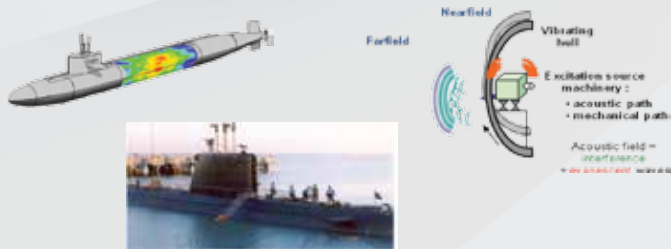




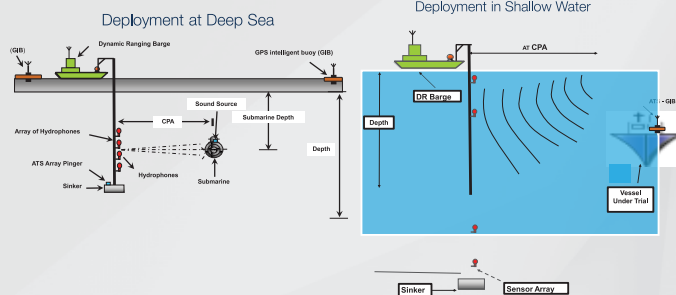
ACOUSTIC RANGING OF NAVAL VESSELS

In today's naval warfare, knowledge of one's own acoustic signatures is the difference between the prey and the predator. Signature management facility provides own noise level in full range of audible frequency spectrum, by utilizing static and dynamic measurements of naval vessels i.e. ships, Mine Counter Measure Vessels (MCMVs) and submarines.

Acoustic Signature Management is a very specialized field which not only requires operational skills but also has a very strong proficient development and analytical aptitude. We can provide the said service to friendly navies in the region. It consists of Static Ranging known as Near Field Holography (NAH) and dynamic ranging of moving vessels in open sea.



Dynamic Ranging





NAVAL VESSEL OPS ROOM SIMULATOR

Tactical training of Operations Room crew onboard naval ships is a paramount requirement of modern naval warfare. For this purpose sending of naval units at sea for longer durations is an expensive proposition. On the other hand the Ops Room Simulator provides continuous training to ships crew as convenient while remaining ashore. The system can provide integrated picture of different types of weapons and sensors and create battle scenario as per customer's requirements.

Capabilities and Main Features

- Provides tactical training for OPS room team
- Includes state of the art replica consoles of weapons and sensors as desired by the customer
- Generic library structure
- Simulation of Fire Control System, sensors, weapons etc.
- Record/ replay feature
- Modular & configurable architecture to meet customized needs
- Through life support is ensured





**INTEGRATED
SYSTEMS**



INTEGRATED COMMAND & CONTROL SYSTEM

Command, Control, Communications, Computer & intelligence (C4I) is a concept whereby all the defence entities of a country share, jointly process, and fuse data to establish real time Common Operational Picture (COP). The COP consists of Recognized Air Picture (RAP), Recognized Maritime Picture (RMP), and Recognized Ground Picture (RGP). COP, along with associated operational data, provides the supreme commander with a clear status of country's war fighting potential for the ease of decision-making during fog of war. C4I system forms a self-healing self-forming intelligent network that permits upward, downward, and lateral flow of information to bring all tiers of command at the same level of situational awareness. GIDS Integrated Command & Control System includes all the critical components for ground, air, and naval forces, including:

1. Common Operational Picture (2D and 3D)
 - Detection
 - Tracking
 - Identification
2. Asset Management & Tracking System
3. Intelligence Management System
4. Meteorological Management System
5. Mission Planning System
6. Threat Evaluation & Weapons Assignment System (TEWA)
7. War-gaming, Simulation, and Training System
8. Voice Switching System
9. Role Based Access Control System
10. Digital Audio & Video Recording System
11. Data Security & Encryption System





RABTA C4I & Air Defence Automation System

- Interfering the presence of valid targets form a series of plots and tracks received from different radars.
- Calculating true trajectories of the target in presense of uncertainties imposed by the sensor as well as aircraft dynamics.
- Recognizing and rejecting false targets.
- Successfully tracking and predicting the optimal estimates of the target in the presence of clutter and false alarms.
- Display target tracking information.
- Forming correct association between tracks and observation from radars in different environments.
- Successfully tracking the target during extreme condition of fast maneuver, formations, miss detection, cross-over etc.

ACMI System Air Combat Maneuvering Instrumentation System

The ACMI system is designed to be range-less and can be operated without any restriction in any area. The system records the "Time Space Position Information" (TSPI) of all the aircrafts involved in the training exercises along with their essential parameters onto removable data storage.

- An effective training tool for combat pilots.
- Capture of weapon deployment events.
- Exchange of data between the participating aircraft using realtime data link.
- Notification to pilots of weapon event result such as hit and miss for missiles for real time kill removal functionality.
- Real time warning to the pilots such as collision kill/miss etc.
- Recording of time synchronized relevant information for post mission debriefing replay like .
- Chaff & Flare Dispenser, RWR, EW etc.
- Post Launch Missile fly out and bombing accuracy calculations.
- The system is installed on Mirage / F-7P / F-16 aircraft.





PAKFIRE ARTILLERY FIRE CONTROL SYSTEM

PAKFIRE is a modular, reliable, secure, user friendly and fully integrated Artillery Fire Control System that automates all operational functions of artillery and ensures fast and accurate fire on targets. It provides an automated solution for Preparation, Coordination, Dissemination, Execution and Modification of Fire Support Plan, Fire Plan and Gun Programs. It has a scalable system architecture that is suitable for present combat scenarios and can be deployed at all combat echelons. PAKFIRE interfaces with all types of external systems, like radars, meteorological systems, UAVs and Command and Control through wired/wireless media.

Major Modules

Artillery Fire Direction Module receives target information from Forward Observers, Counter Bombardment and Fire Support Organizations. The data of met system and non standard conditions is then added to calculate fast and accurate firing data which is then transmitted to guns and digital message units using wired or wireless media.

Fire Support Planning Module is designed to integrate fire support with the maneuver plan. It assists in the preparation, coordination, dissemination, execution and modification of Fire Support Plan (FSP). All types of GIS functionalities like map navigation, drawing of tactical and military symbols, preparation of operational overlays etc have been incorporated.

Counter Bombardment Module integrates external sensors like Radars, UAVs etc with PAKFIRE for speedy transfer of information. It assists commanders and staff in employment of Locating Resources by providing Software Aids/Tools. It shows various charts, plots, HB List and CB Task Table generated automatically by the system.

Supporting Functions Module enables commanders in allocation, modification and management of resources like ammunition, weapons, vehicles and manpower.

Operational Features

- Facilities Observer in identification/acquisition of targets and passage of fire orders
- Handles all artillery procedures and functions
- Computers accurate ballistic data for all types of ammunition
- Incorporates scanned, vector imagery and 3D terrain maps
- Available for battery, regiment, divisional and up to operational level configuration
- Advanced level of networking features to ensure continuous connectivity
- Ruggedized hardware to work in harsh environmental conditions based on Military specifications





PAKSIM ARTILLERY FORWARD OBSERVER SIMULATOR

Artillery Forward Observer Simulator (AFOS) is a computer based system whose purpose is to provide training for the forward observer of the artillery.

The system provides realistic environment for the training of observer in a class room/simulation lab. Budget reductions and limitations of live fire opportunities have adversely affected the proficiency of the forward observer. For these types of reasons, an alternative method for training the forward observer must be found to provide almost realistic environments in order to accomplish the fire missions. One solution is to develop and use a computer simulation system in order to enhance training and operations.

Training of Forward Artillery Observer is a necessary and continuous process and its aim is to enhance observer's skills and capabilities. It is necessary to have a system which provides training that would enhance the capabilities of the observer to react promptly to various situations in war.

Small range practices are not enough to improve the quality of observers because the observations recorded and various corrections passed are not realistic. It is essential to have a system (Artillery Forward Observer Simulator), which would enhance the quality of training of forward observers without engaging ammunition and other expenditure.



AFOS system consists of the following main components

- Image Generation Station
- Instructor Station
- Ballistic Data Calculator



SATELLITE DATA APPLICATIONS AND SERVICES

Products

Satellite Imagery

Broad Specifications

Resolution: 0.5 m Pan, 2m XS
 Resolution: 0.98 m Pan, 2.89m XS
 Resolution: 1.5 m Pan, 6m XS
 Resolution: 2.5/5 m Pan, 10m XS
 (Archived Imagery)
 Resolution: 10 m Pan, 20m XS
 (Archived Imagery)

Specialized Products

Digital Elevation Model (DEM)
 Digital Terrain Model (DTM)
 Digital Surface Model (DSM)
 Resolution (1m, 4m, 8m, 30m)



Agriculture

Disaster Management

Forestry

Water Resource Management

Infrastructure Planning





**NBC
DEFENCE**



NBC DEFENCE & IPE

Nuclear Biological & Chemical Defence Suit

The NBC defence suit provides physical protection against CBW Agents for 24 hours. It provides protection against direct contact with and contamination by radioactive, biological and chemical substances. It is generally designed to be worn over extended periods to allow the wearer to fight while under threat or under actual NBC attack.



NBC GLOVES



NBC OVER BOOTS



NBC WATER BOTTLE



CWA DETECTION KIT



NBC HAVER SACK



DECONTAMINATION KIT



RADIAC CALCULATOR



NBC AIR FILTER



DETECTOR PAPER





HEADS

High Efficiency Advanced Decontamination System

- Used for decontamination / detoxification of vehicles, gears, buildings, equipment, terrain and personnel against CBW Agents
- The equipment consist of high pressure pump and heating system and is capable to spray hot / cold water, steam and decontamination solution over the contaminated area
- Easy transportation & moveable



Water Purification Plants

Water Purification Systems are used to purify all types of contaminated water from various sources. We have developed BRACKISH as well as SEA WATER purification systems having different capacities which produce water quality as per WHO Standards. Brackish water purification systems include WPP – D650 (capacity – 650 liter/hr, Raw water input – TDS upto 3500 mg/liter) & WPP – D2500 (capacity – 2500 liter/hr, Raw water input – TDS upto 3500 mg/liter) and NAVY vessels model include Dual Stage Reverse Osmosis Plant (Stage 1 & 2 capacity – 800 liter/hr, Raw water input – TDS upto 40,000 mg/liter, Stage 1 Product water Quality – less than 1000 mg/liter & Stage 2 Water Quality less than 2 mg/liter)

- Easy maintenance & fully automatic
- Latest & state-of-the-art Ultra Violet system for removal of harmful bacteria and viruses



- Integrated dispensing system automatically adds Chlorine to prevent re-growth of bacteria in water
- Setting up and operation of the system in 10 min by just one person
- System can be easily transported on various platforms like rail, ship, trailer aircraft and helicopter
- Back-washing of reverse osmosis through CIP system
- Diesel generator provides the system with electricity



**SECURITY &
RIOT PROTECTION**



SECURITY & RIOT PROTECTION EQUIPMENT



Light Weight Combat Helmet

GIDS Light Weight Combat Helmet (LWCH) while protecting the user from bullets & fragments also provides the wearing comfort due to balanced weight distribution, which does not impede the performance of the soldier.

The construction of the inner suspension system ensures that a gap is always present between the head & the shell, which minimizes the effect of blunt trauma experienced by the soldier. It includes an adjustable headband and a comfortable chinstrap assembly.

The Helmet is relatively light weight and provides maximum comfort, mobility and protection in its class.

Parameters

Weight (grams)

Material

Protection Level

Colour

Size

Design

Suspension Attachment

Magnetic Effect

Compatibility

Technical specifications

Small: 1,450 / Medium: 1,500 / Large 1,550

Aramid Bound in a Thermoset Matrix

NIJ Level II Std 0106.01 (9mm, FMJ) V50 (17 gr FSP; 500 m/sec)

Any Shade as Per User Requirement

Small, Medium & Large

PASGT

Bolted

None

Compatible with all Communication & Vision Devices

Metallic Mine Detector

A highly sensitive metal detector for effective detection of anti-personnel and anti-tank mines.





SECURITY & RIOT PROTECTION EQUIPMENT

Stun Grenade

A device to produce high intensity illumination and loud bang which causes temporary disorientation and incapacitation of persons. It is non lethal and does not contain explosive material. No fragments are produced after initiation. Available in singal bang and six bang versions.

Singal Bang

Illumination intensity	1.3-1.5 Mcp
Sound intensity	170-180 dbs (approx)
Delay time	1.5-2 Second
Total weight	230 g (approx)
Diameter	51.50mm
Lenght	165 mm



Six Bang

Illumination intensity	Up to 1.5 Mcp
Sound intensity	170-180 dbs (approx)
Delay time	1.5-2 Second
Total weight	530 g (approx)
Diameter	40 mm
Lenght	118 mm
Function time	3 - 4 Sec



Tear Gas Shell

Contains CS composition and is used for riot control by the law enforcing agencies, using 38mm Tear Gas Gun. The parameters and its characteristics conform to international standards. Aluminum cased payload enclosed in plastic casting.

Calibre	37/38 mm	Shelf Life	4 years
Range (long)	137 m (150yards)	Length	140 mm
Range (small)	68 m (75 yards)	Weight	150 - 160 g
Discharge Time	35 Sec. (Plus)		



CS Grenade

A non lethal hand throw grenade used for riot control. Produces white fumes of CS cause severe irritation of respiratory track, burning pain in nose and burning sensation in eyes etc.



Smoke Grenade

Used to release a very dense cloud of smoke to fill the surrounding area to military unit such as infantry tanks air crafts and ships etc. Used for anti terrorist operations





SECURITY & RIOT PROTECTION EQUIPMENT

Body Scanners

Hand held metal detectors for security and law enforcing agencies.

- Gives an audio signal, red LED visual alarm and vibration
- Available with rechargeable & consumable battery, and auto tuning
- Contains low battery alarm
- Reverse battery protection



Walk Through Scanning Gate

Walk Through Gate is used for detection of metal contents at security locations. The system works on Induction Balancing (IB) technique. Whenever a metallic object comes within the vicinity of WTS an error signal is produced, which is digitally processed.

- No. of zones: 06
- Four LED alarm light bar
- LCD screen readable in sunlight
- Remote Controlled
- Electric Current AC 21 5-230V
- Power less than 35 W
- Work environment -20 C to 55C





BULLET PROOF JACKET (BPJ)

GIDS Bullet Proof Jackets (BPJs) are suitable for both military and non-military applications. Bullet Proof Jackets can be used as standalone as well as the protection level can be enhanced to higher levels by using Ballistic plate. State of the art technologies are applied to create new products that combine a higher protection level with less weight and design and manufacture the product according to the customer's needs, in a variety of sizes and shapes.

Parameters

Max Weight (grams)

Small 4,000 (Excl. HAPs) +
3,400 (2x HAPs)

Medium 4,500 (Excl. HAPs) +
4,600 (2x HAPs)

Large 5,250 (Excl. HAPs) +
6,000 (2x HAPs)

Material

Soft Insert – UHMWPE

HAPs – UHMWPE

Protection Level

NIJ Lvl III (HAP Stand Alone)

6 x rnds of 7.62 x 25 mm
Tokarev (TT Pistol) from 5 mtr

6 x rnds of 7.62 x 51 SMG G3
Rifle from 15 mtrs

Back Face Trauma

Trauma Less than 44 mm

Sizes

Small, Medium & Large

Pattern / Shade

As per User Requirement





EXPLOSIVE & DRUG DETECTOR

Ion Mobility Spectrometry based Explosive and Drug detector (IMS EDD) is a portable and rapid response security equipment to detect the presence of certain explosive and drug materials by responding selectively to their traces, IMS EDD is useful for searching trace amount of explosive and drugs struck to surface. This makes IMS EDD for an extensive variety of applications.

- Military patrols
- Police patrol
- Crowded security
- Parking lots
- Aircraft, luggage and Cargo
- VIP meeting points & Locations
- Stadiums
- Border crossing



Capability

Detects a wide range of explosives like Black Powder, AN, TNT, Tetryl, PETN, Gun Power, NG, RDX, Semtex, Composition B, C4 etc.

Detects a wide range of Drugs like Cocaine Heroin, Morphine, Amphetamines, THC Dehydrogenation Ephedrine Methamphetamine etc.





VEHICLE BASED IED JAMMER

DETJAM-6500

DETJAM-6500 is a reconfigurable and modular Wide Band Jammer for convoys protection (prevent detonation of IEDs) from all the commercial RF devices used as IEDs.

Specifications

Frequency Range : 20 MHz- 6 Ghz

Threat Devices : GSM, DCS UMTS, LTE, Satellite Phone, Wi-Fi, Wi-Max, ISM, GNSS, VHF, UHF

Jamming Technique : Reactive, Sweep, Spot-Sweep & Multi-Spot

Jamming Range : >70 ~ 100m [@ RSSI < -35dBm]

>40 ~ 70m [@ RSSI < -25dBm & > -35dBm]

Communication Window: 1 x VHF [User Selectable]

Display : Touch Screen

Input Power : 24 VDC

Op Temperature Range : -50 C ~ 50 C (Tolerance + 50 C)

Design Features

- Reconfigurable architecture with intelligent and hybrid technology
- Auto adaptive jamming
- Smart jamming
- Smart jamming economizing on power consumption
- Output power 28W to 150 W in each band
- Over and under voltage/ current protection
- Compliance to health and safety standards
- Reconfigurable to meet future emerging threats





BARDA

AUTOMATIC FIRE EXTINGUISHER BALL

BARDA is a ball shaped fire extinguisher. When a fire occurs and no one is present; BARDA will self-activate upon contact with flame within 3-10 seconds and effectively disperse the extinguishing chemicals resulting in extinguishing the fire. Additionally, when it comes in contact with fire, it will give a loud noise as a fire alarm. Because of these features, it can be installed in many fire prone areas such as; above electrical circuit breaker or in a kitchen etc. No special training or skill is required to operate BARDA and no need to face the danger of the fire. No inspection or maintenance is required for the product's life span of 05 years.

Performance Characteristics

Material Weight:	1.2±0.2Kg
Total Weight:	1.3±0.2Kg
Shape:	Ball Type
Diameter:	15cm
Warning Sound:	120dB (Impulse Noise)
Instruction:	Fixed position by automatic fire sensor and /or throw in fire area
Ignition:	Automatically explodes within 3-5 second after contact with fire.
Effective extinguish area:	2-3 Cubic meter
Lifespan:	5 years

Features

- Fully Automatic and Rapid Responsive fire protection system
- Rolls like a ball, explodes in a bang to create attention not destruction and puts out fire like an efficient fire extinguishing tool
- Unlike a typical fire extinguisher; it will activate by itself when in need, and doesn't need a supervision in case of any fire emergency
- Very effective when put near flammable objects (circuit breakers, gas tanks etc.) to avoid emergencies



Export Control Policy

Sensitive Items, commodities, products having dual use in nature or other than its military (conventional use) are subject to approval of national authority's clearance under its export policy and Pakistan's Export Control Act, 2004 on Goods, Technologies Materials and Equipment related to Nuclear Biological Weapons and their delivery system”