Global Industrial & Defence Solutions (GIDS); an ISO 9001:2008 Certified Company feels pride being a premier defence company of Pakistan. The core objective of GIDS is to research, develop and market defence capabilities locally as well as internationally.

GIDS represents a group of companies involved in research, development, delivery and support of leading edge industrial and defence systems in the field of air, land and sea.

Our companies and their subsidiaries provide support and service solutions for current and future defence, security, and information technology systems. They design, develop and manufacture a wide range of electronic systems and subsystems for both military and commercial applications. They also design, develop, produce, and provide service support for armoured combat vehicles, artillery systems and intelligent munitions.

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.

Laboratories of our companies are staffed with highly specialized researchers. Our organization is designed to deliver, capability and overall financial performance to meet customers' needs.
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AIR LAUNCHED SYSTEMS & AIR DEFENCE
**SHAHPAR UAV SYSTEM**

Shahpur 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

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configuration</td>
<td>Canard pusher</td>
</tr>
<tr>
<td>Air Vehicle Length</td>
<td>4.2 m</td>
</tr>
<tr>
<td>Wing Span</td>
<td>6.6 m (22')</td>
</tr>
<tr>
<td>Gross T/O Weight</td>
<td>480 kg</td>
</tr>
<tr>
<td>Payload Weight</td>
<td>50 kg</td>
</tr>
<tr>
<td>Endurance</td>
<td>&gt; 7 hrs</td>
</tr>
<tr>
<td>Max Operating Altitude</td>
<td>5000 m (17000 ft) Approx.</td>
</tr>
<tr>
<td>Cruise Speed</td>
<td>160 km / hr</td>
</tr>
<tr>
<td>Maximum Power of Engine</td>
<td>100hp</td>
</tr>
<tr>
<td>Data Link Range (realtime)</td>
<td>250 km</td>
</tr>
<tr>
<td>Guidance / Tracking</td>
<td>Autonomous, GPS Based (manual control channel available)</td>
</tr>
<tr>
<td>Power Plant</td>
<td>Rotax 912 ULS (6 - Cylinder, 4 stroke piston)</td>
</tr>
<tr>
<td>Take-off / Launch</td>
<td>Automatic, Wheel take-off</td>
</tr>
<tr>
<td>Landing / Recovery</td>
<td>Automatic Landing, manual pilot and parachute option available</td>
</tr>
</tbody>
</table>

### 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 81OF)
- Geo referencing and geo pointing for terrestrial targets
- MISB compliant video format
UQAB UAV SYSTEM

Uqab is a tactical UAV System which can be effectively used for battle damage assessment, aerial reconnaissance, artillery fire correction, joint forces operations, search and rescue missions, coastal area surveillance, route monitoring, internal security / mob control and flood relief operations etc. Presently the system is being used by Pakistani Security Forces.

<table>
<thead>
<tr>
<th>Performance Characteristics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>150 km</td>
</tr>
<tr>
<td>Endurance</td>
<td>4 hrs</td>
</tr>
<tr>
<td>Height Ceiling</td>
<td>3,000 m</td>
</tr>
<tr>
<td>Speed</td>
<td>120 – 150 km/hr</td>
</tr>
<tr>
<td>Launch/Recovery</td>
<td>Wheeled</td>
</tr>
<tr>
<td>Flight Mode</td>
<td>Autopilot / RPV 1000 way points, Re-programmable during flight</td>
</tr>
<tr>
<td>Tracking / Navigation</td>
<td>GPS Based</td>
</tr>
<tr>
<td>Telemetry Data</td>
<td>Real time digital video Position and health of UAV Geo-referencing</td>
</tr>
<tr>
<td>Payload Weight/Type</td>
<td>Gyro-stabilized gimbal with color day camera, thermal imager with target tracking and locking capabilities</td>
</tr>
<tr>
<td>Power Plant</td>
<td>50 Hp (approx)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dimensions &amp; Weight</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Wing Span</td>
<td>5.6 m</td>
</tr>
<tr>
<td>Length</td>
<td>4.0 m</td>
</tr>
<tr>
<td>Height</td>
<td>1.2 m</td>
</tr>
<tr>
<td>Max Takesoff Weight</td>
<td>200 kg (approx)</td>
</tr>
</tbody>
</table>

Main Features

- User friendly mission planning and execution
- Mission de-briefing & simulation
- In-flight mission re-programming
- Flexible waypoints entry & editing during flight (direct from map & keypad)
- Mission parameter & flight data logger for post flight analysis & simulation
- Real time video and telemetry data
- Moving map software
- Geo-referencing
- Easy payload (camera) controls
- Separate consoles for mission commander, UAV pilot & payload operator
- Easy to read displays and gauges
- Standby control links (redundancy)
- Back-up power supply

Ground Control Station (GCS) for Uqab UAV

Ground Control Station is a truck mounted air-conditioned, insulated container which is equipped with standard, ruggedized consoles.
**SCOUT MINI UAV SYSTEM**

Scout is a mini UAV System which is designed for portability. It is modular, portable, light weight and easy to deploy. It is electric powered, capable of completely autonomous flight and carries an electro-optical payload for day time surveillance / reconnaissance.

---

**Performance Characteristics**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>15km</td>
</tr>
<tr>
<td>Endurance</td>
<td>&gt;45 mins (approx)</td>
</tr>
<tr>
<td>Height Ceiling</td>
<td>500 m</td>
</tr>
<tr>
<td>Launch</td>
<td>Hand / Catapult-launched</td>
</tr>
<tr>
<td>Recovery</td>
<td>Skid landing / Net Recovery</td>
</tr>
<tr>
<td>Flight Mode</td>
<td>Autonomous / RPV</td>
</tr>
<tr>
<td>Tracking / Navigation</td>
<td>GPS Based</td>
</tr>
<tr>
<td>Payload</td>
<td>3 x switchable Low-Lux Cameras with different Zoom levels</td>
</tr>
<tr>
<td>Power Plant</td>
<td>Electric Motor</td>
</tr>
<tr>
<td>Weight</td>
<td>4 kg</td>
</tr>
</tbody>
</table>

---

**Main Features**

- Mission Planning
- Mission Execution in Autonomous / RPV mode
- Pre-flight checks through hardware and software
- Flight and data link monitoring
- Real time GPS based Tracking of UAV
- Health of UAV through telemetry sensors
- Provision of re-programming the flight plan during a mission
- Fail-safe option through autopilot
- Orbit modes
- Real time video

---

**Ground Control Station (GCS) for SCOUT (Hand Launched) UAV System**

Ground Control Station is a portable, brief-case size which is equipped with video, telemetry and command / autopilot control equipment.
HUMA TACTICAL UAV SYSTEM

HUMA is a zero launch, remotely controlled or self-piloted Unmanned Aerial Vehicle (UAV), which can carry cameras, sensors, navigational communications equipment or other payloads. HUMA helps commanders with near-real-time imagery intelligence at various ranges. The system is rocket booster launched and parachute recovery, it is known for its state of the art performance characteristics as real time reconnaissance, rapid mobility, modular system design, low radar signature and field maintenance.

<table>
<thead>
<tr>
<th>Performance Characteristics</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>100 km</td>
</tr>
<tr>
<td>Endurance</td>
<td>4 hrs</td>
</tr>
<tr>
<td>Cruise Altitude</td>
<td>(3280-9842 ft) AMSL</td>
</tr>
<tr>
<td>Maximum Speed</td>
<td>180 km/hr</td>
</tr>
<tr>
<td>Launch</td>
<td>Rocket Booster Assisted</td>
</tr>
<tr>
<td>Operational Radius</td>
<td>80 km</td>
</tr>
<tr>
<td>Recovery</td>
<td>Parachute Landing</td>
</tr>
<tr>
<td>Power Plant</td>
<td>22 BHP Two Cylinder Two Stroke Engine</td>
</tr>
<tr>
<td>Navigation &amp; Control</td>
<td>GPS based auto piloting system with return home mode in case of GPS loss.</td>
</tr>
<tr>
<td>Payload Capacity</td>
<td>20 kg (44 lb)</td>
</tr>
</tbody>
</table>

Main Features

- Low operational cost
- Launched by rocket booster
- Ease of mobility
- Reliable performance
SCOUT VTOL UAV SYSTEM

Scout UAV system is a mini UAV system with Vertical Takeoff and Landing (VTOL) systems having the hovering capability. 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. It is mainly used for the surveillance and reconnaissance in multiple terrain environments including across the hill monitoring situation. Low deployment time, easy carriage and mobility makes them the choice for local area commanders. Main application includes perimeter surveillance, route monitoring, search & rescue, battle damage assessment and event monitoring etc. In order to achieve maximum time over target hovering capability is considered necessary.

The 4 x Brushless Electric Motors used in Scout-VTOL Mini UAVs offer high reliability and low maintenance. They have very low acoustic and heat signatures. It uses Lithium Polymer batteries for power which cater for high current surges required to run an electric engine.

### Performance Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter</td>
<td>2 m</td>
</tr>
<tr>
<td>Weight</td>
<td>8 kg</td>
</tr>
<tr>
<td>Range</td>
<td>5 km (LoS)</td>
</tr>
<tr>
<td>Operating Radius</td>
<td>3 km (LoS)</td>
</tr>
<tr>
<td>Endurance</td>
<td>&gt; 40 minutes</td>
</tr>
<tr>
<td>Ceiling</td>
<td>500 m</td>
</tr>
<tr>
<td>Power Plant</td>
<td>4 x Brushless Electric Motor</td>
</tr>
<tr>
<td>Power Source</td>
<td>Li Polymer</td>
</tr>
<tr>
<td>Flight Modes</td>
<td>Autonomous / Semi Autonomous / Manual</td>
</tr>
<tr>
<td>Navigation</td>
<td>GPS based</td>
</tr>
<tr>
<td>Payload</td>
<td>EO Sensor with 10 X Zoom, IR (un-cooled) sensor</td>
</tr>
<tr>
<td>GCS</td>
<td>Portable, Weighing less than 5 kg, RealTime Video with GPS overlay, Real Time UAV position tracking on moving map, Video recording, snapshots and mission play back</td>
</tr>
</tbody>
</table>

### Flight Performance

<table>
<thead>
<tr>
<th>Performance</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hovering Accuracy</td>
<td>Vertical 0.5 m / s; Horizontal 1.5 m</td>
</tr>
<tr>
<td>Max Wind Resistance</td>
<td>&lt; 8 m / s</td>
</tr>
<tr>
<td>Max Yaw Angular Velocity</td>
<td>150 deg / sec</td>
</tr>
<tr>
<td>Max Tilt Angle</td>
<td>350</td>
</tr>
<tr>
<td>Ascent / Descent</td>
<td>± 6 m / s</td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>Characteristics Specifications</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Range (km)</td>
<td>100</td>
</tr>
<tr>
<td>Launch Speed (Mach)</td>
<td>0.6 - 0.8</td>
</tr>
<tr>
<td>Launch Altitude (m)</td>
<td>≤ 9000</td>
</tr>
<tr>
<td>Weight with 250Kg GP Bomb (kg)</td>
<td>&lt; 300</td>
</tr>
<tr>
<td>Interface</td>
<td>RS 422 / MIL-Std-1760</td>
</tr>
<tr>
<td>Accuracy (with GPS)</td>
<td>&lt; 10 m CEP</td>
</tr>
<tr>
<td>Flight Time</td>
<td>~ 5 min</td>
</tr>
</tbody>
</table>

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.
ZUMR-1(EP)
DAY AND NIGHT SURVEILLANCE

Missions
- Day and Night surveillance of site
  (Offshore platforms, industrial and sensitive sites)
- Border surveillance
- Homeland security
- Search and Rescue (for sea vehicles)
- Tracking (persons or Land)
- Tactical support
- Aerial imagery

Technical Characteristics
- 4 axis system having 2 axis active gyro - Stabilization
- Azimuth 360° continuous
- Elevation 10° to -10°
- 30 kg
- Ø380 mm (15")

Power Requirements
- Voltage 24-32 VDC
- Consumption 400 W (600 W max)

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

Sensors Configuration
Enhanced Day Imager (continuous zoom)
- Resolution 540TVL
- Field of View:
  - Wide 35.5°
  - Narrow 0.9°
- Zoom 40X (Optical)
Thermal Imager
- Resolution 640 X 512 FPA
- Field of View:
  - Wide 24°
  - Medium-Wide 5°
  - Narrow 1.2°
  - Super-Narrow 0.6° (E-ZOOM)
Laser Range Finder
- Range 20M-20KM
- Accuracy ±5M
- Measuring Rate 10 Ranges / Min

Options
- System coupling:
  - GPS (Global Positioning System)
  - IMU (Inertial Measurement Unit)
- Geo-Printing and Geo-Locations

Platforms
- UAWS
- Aircrafts
- Helicopters
- Maritime
- Ground Based Vehicles

Main Features
- High performance Multispectral Imaging
- 24/7 Mission Capability with Enhanced Imagers
- Low weight and small size
- Highly stabilized system
- 3 LRUs (Line Replaceable Units)
LISA-4000 belongs to the family of Strap Down Inertial Reference and Navigation System. It provides necessary Navigation functions for mission success. LISA-4000 performs two distinct basic functions:

- The Flight Reference function provides Heading and Attitude for Display / autopilot and anti-aliasing filtered body angular rate and linear acceleration data for autopilot inner loop stability augmentation.
- Navigation is performed by coupling the LISA 4000 with a Doppler Radar and Air Data Computers or with GPS. As a navigator, LISA-4000 outputs high speed inertial velocity data required for accurate weapon release.

**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 up to 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 MILStd-810E, MIL-Std-461D/E
- MILStd-704
GP SERIES BOMBS

General Purpose Steel Bombs
- Effective against all kinds of ground targets
- Low drag design with high length-to-diameter ratio
- Forged from seamless steel tube
- Filled with Compo ‘B’ explosive
- Can be carried on NATO / WARSAW standard suspension systems

Pre-Fragmented Bombs
- New concept in optimizing the effectiveness of conventional bombs
- Outer casing manufactured from composite fiber
- Contains spherical steel balls which shoot out in all directions when the blast occurs
- 5 to 6 times more effective than GP Series Steel Bombs
- Can be carried on NATO/WARSAW Standard suspension systems

Incendiary Pre-Fragmented Bombs
A combination of steel balls and especially developed incendiary metal alloy is used to effectively create incendiary effect

CTU Conical Tail Unit
- Consists of an elongated cone assembled with four fins
- Stabilizes the flight and creates low drag configuration of the bomb
- Can be fitted with GP Series Steel and Pre-Fragmented Bombs

RTU Retarded Tail Unit
- Consists of a shock absorbing tube and four extendable drag fins
- Especially designed to provide adequate safe distance between bomb and delivery aircraft during low level attack
- Creates low drag configuration for the bomb when in closed position and a high drag configuration when in open position
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
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**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Length</td>
<td>142 cm</td>
</tr>
<tr>
<td>Dia</td>
<td>28 cm</td>
</tr>
<tr>
<td>Weight of fully prepared unit</td>
<td>150 kg</td>
</tr>
<tr>
<td>HE</td>
<td>82 kg</td>
</tr>
<tr>
<td>Firing depth</td>
<td>21 meter</td>
</tr>
</tbody>
</table>

**System Configuration**

- Main body carrying HE
- Fuset
- Tail unit
- Suspension and releasing mechanism
Infrared Flares

Aircraft counter measure for decaying heat seeking missiles. These IR Flares are compatible with both NATO & Warsaw standard aircraft.

<table>
<thead>
<tr>
<th>Aircraft Dispensers</th>
<th>CMF 1</th>
<th>CMF 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATO ALE 29 A, ALE 39, ALE 47</td>
<td>0.5 A pulse for 50 ms</td>
<td>0.7 A pulse for 35 ms</td>
</tr>
<tr>
<td>Firing Requirement</td>
<td>&gt; 4 Sec</td>
<td>&gt; 4 Sec</td>
</tr>
<tr>
<td>Burning Time</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 Missiles 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.
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
Anza MK-II missile weapon system is a Shoulder Launched, Man-Portable Short Range Air Defense System effective against low altitude airborne targets. Under visual conditions the weapon can intercept and attack fighters, fighter-bombers, strike aircrafts and armed helicopters omni-directionally.

The fire and forget Anza MK-II employs a Passive Infrared Seeker to home-in on its airborne target and needs no guidance from the operators to maintain lock on the target. This allows the operators to take cover or immediately get ready for engaging other targets.

Guidance Principle

Anza MK-II missile features proportional navigation and end-phase lead bias techniques which are the prevailing guidance techniques of portable missiles. Proportional navigation enables the missile to an end-phase collision course approximately like a straight line towards the tail flame behind the aircraft body and not toward the aircraft body. The end-phase leading bias of the control system diverts the missile’s flying direction toward the front of the target’s infrared source to hit the body, hence enhancing the lethal/kill probability of the missile.

Flying Speed

Propulsion System of Anza MK-II adopts a separable structure that drops the launch motor and retains a dual thrust flight-motor (booster + sustainer) in order to reduce the unnecessary weight during flight. The flight-motor composes of high-density composite propellant enabling high-flying speed up to 600 m/sec.

Firing Control

Anza MK-II launching mechanism adopts strict firing control regime and can operate in manual as well as in automatic mode distinguished by firing unit.

- High hit probability
- Fire and forget
- High maneuverability
- All-direction attack
- Wide attacking area
- Accurate guidance

Technical Specifications

<table>
<thead>
<tr>
<th>Target types</th>
<th>Helicopter, propeller aircraft, fighters, bombers and jet aircrafts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target velocity</td>
<td>≤ 300 m/s</td>
</tr>
<tr>
<td>Maximum maneuverability of target</td>
<td>6 g</td>
</tr>
<tr>
<td>Maximum lethal height</td>
<td>4000 m</td>
</tr>
<tr>
<td>Minimum lethal height</td>
<td>30 m</td>
</tr>
<tr>
<td>Maximum lethal slant range</td>
<td>5000 m</td>
</tr>
<tr>
<td>Minimum lethal slant range</td>
<td>500 m</td>
</tr>
<tr>
<td>Cruise velocity of missile</td>
<td>600 m/s</td>
</tr>
</tbody>
</table>
BAKTAR SHIKAN
ANTI-TANK GUIDED MISSILE WEAPON SYSTEM

Bakhtar Shikan is an anti-tank missile weapon system which pursues the principle of optical aiming, IR tracking, remotely controlled and wire transmitted guidance signals. The system can quickly be dis-assembled into the following four sub-units: encased missile, tripod, goniometer and control box each weighing not more than 25kg 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 form a potent Bakhtar Shikan family of missiles is in service for more than two decades and is a battle tested weapon held with different armies worldwide.

Salient Features
- Day & night firing
- Anti-ERA capability
- Long range
- Quick reaction time
- High hit probability
- Greater penetration
- Rapid rate of fire
- Anti-jamming capability
- Easy operation & maintenance

<table>
<thead>
<tr>
<th>Technical Specifications</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Propulsion</td>
<td>Solid</td>
</tr>
<tr>
<td>Range</td>
<td>3,000 m</td>
</tr>
<tr>
<td>Hit Probability</td>
<td>&gt;90 %</td>
</tr>
<tr>
<td>Penetration</td>
<td>750 mm Behind ERA</td>
</tr>
<tr>
<td>Speed</td>
<td>220 m/s</td>
</tr>
<tr>
<td>Calibre</td>
<td>120 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>11.7 kg</td>
</tr>
<tr>
<td>Length</td>
<td>1135 mm</td>
</tr>
<tr>
<td>Rate of Fire</td>
<td>2-3 missiles per min</td>
</tr>
<tr>
<td>Crew</td>
<td>3 Persons</td>
</tr>
</tbody>
</table>
Nigehebaan surveillance system is used for day and night forward observation, target acquisition and border monitoring. It has the capability to determine the range of required targets.

- Reliable, continuous day / night surveillance
- Multi sensor head for target’s image, range and position
- Motorized pan / tilt for precise remote control
- Comprehensive interface for reliable data communication
- Full function remote control

Night Observation Device (NOD)

NOD is a portable, long range multi-sensor system for target acquisition, border patrol and perimeter security. The NOD system comprises of digital magnetic compass, GPS, pan and tilt unit.

- Area surveillance
- Target acquisition
- Search and rescue
- Forward observation
- Perimeter security
- Border patrol
TI SIGHT FOR SMALL ARMS (TISA-3)

TISA-3 is a long range compact thermal imager which can be mounted on any type of weapon. It is very efficient for operations in complete darkness, smoke or adverse weather conditions such as rain fog.

### Technical Data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor Type</td>
<td>Un-Cooled Micro-bolometer</td>
</tr>
<tr>
<td>Sensor Size</td>
<td>640x480, 17um</td>
</tr>
<tr>
<td>Spectral Response</td>
<td>8-14 μm</td>
</tr>
<tr>
<td>Electronic Zoom</td>
<td>1X, 2X, 4X</td>
</tr>
<tr>
<td>Field of View</td>
<td>8.3° x 6.2° (1x)</td>
</tr>
<tr>
<td>Focus Type</td>
<td>Manual Focus</td>
</tr>
<tr>
<td>Focusing Range</td>
<td>5m - Infinity</td>
</tr>
<tr>
<td>Polarity</td>
<td>White/Black/Fire/Sepia/iron</td>
</tr>
<tr>
<td>Video Output</td>
<td>PAL</td>
</tr>
<tr>
<td>Viewfinder Display</td>
<td>OLED Display (600x600)</td>
</tr>
<tr>
<td>Battery Type</td>
<td>2 x 3.7V LiIon</td>
</tr>
<tr>
<td>Battery Life</td>
<td>&gt; 8 hrs</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-30°C to 60°C</td>
</tr>
<tr>
<td>Weight (w/o battery)</td>
<td>1.4 kg</td>
</tr>
<tr>
<td>Conformance</td>
<td>MIL-STD-810G</td>
</tr>
</tbody>
</table>

### Applications

- Area Surveillance
- Perimeter Security
- Border Patrol
- Target Acquisition
- Handheld or Gun mounted

### Observations Ranges

- 2200m
- 4500m
THERMAL IMAGER FOR MEDIUM RANGE ARM (TISA-3M)

TISA-3M is a medium-range thermal imager for small arms comprised of 64X480 microbolometer FPA Detector. It has integrated OLED display with diopter adjustments and video output for LCD display.

### Technical Data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor Type</td>
<td>Un-Cooled Micro-bolometer</td>
</tr>
<tr>
<td>Sensor Size</td>
<td>640 x 480, 17um</td>
</tr>
<tr>
<td>Spectral Response</td>
<td>8-14 µm</td>
</tr>
<tr>
<td>Electronic Zoom</td>
<td>1x, 2x, 4x</td>
</tr>
<tr>
<td>Field of View</td>
<td>10.5° x 8° (1x)</td>
</tr>
<tr>
<td>Focus Type</td>
<td>Fixed (Athermalized)</td>
</tr>
<tr>
<td>Focusing Range</td>
<td>5m - Infinity</td>
</tr>
<tr>
<td>Polarity</td>
<td>White/Black/Fire/Sepia/Iron</td>
</tr>
<tr>
<td>Video Output</td>
<td>PAL</td>
</tr>
<tr>
<td>Viewfinder Display</td>
<td>OLED Display (800x600)</td>
</tr>
<tr>
<td>Battery Type</td>
<td>4 x 3.7V Li ion</td>
</tr>
<tr>
<td>Battery Life</td>
<td>4 hrs</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-30°C to 60°C</td>
</tr>
<tr>
<td>Weight (w/o battery)</td>
<td>0.9 kg</td>
</tr>
<tr>
<td>Conformance</td>
<td>MIL-STD-810G</td>
</tr>
</tbody>
</table>

### Applications

- Area Surveillance
- Perimeter Security
- Forward Observation
- Boarder Patrol
- Target Acquisition
- Handheld or Gun mounted.

### Observations Ranges

- **1000m**
- **2500m**

---

THERMAL IMAGER FOR MEDIUM RANGE ARM (TISA-3S)

TISA-3S is a short-range thermal imager for small arms comprised of 384X288 microbolometer FPA Detector. It has integrated OLED display with diopter adjustments and video output for LCD display.

### Technical Data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor Type</td>
<td>UN-Cooled Micro-bolometer</td>
</tr>
<tr>
<td>Sensor Size</td>
<td>384 x 288, 17um</td>
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<tr>
<td>Spectral Response</td>
<td>8-16 µm</td>
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<tr>
<td>Electronic Zoom</td>
<td>2x</td>
</tr>
<tr>
<td>Field of View</td>
<td>28° x 21° (w/o zoom)</td>
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<tr>
<td>Focus Type</td>
<td>Fixed</td>
</tr>
<tr>
<td>Focusing Range</td>
<td>3m - Infinity</td>
</tr>
<tr>
<td>Polarity</td>
<td>White/Black/Hot</td>
</tr>
<tr>
<td>Video Output</td>
<td>PAL</td>
</tr>
<tr>
<td>Viewfinder Display</td>
<td>OLED Display (600x600)</td>
</tr>
<tr>
<td>Battery Type</td>
<td>4 x 3.7V Li ion</td>
</tr>
<tr>
<td>Battery Life</td>
<td>&gt; 4 hrs</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-30°C to 60°C</td>
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<tr>
<td>Weight (w/o battery)</td>
<td>0.6 kg</td>
</tr>
<tr>
<td>Conformance</td>
<td>MIL-STD-810G</td>
</tr>
</tbody>
</table>

### Applications

- Area Surveillance
- Perimeter Security
- Forward Observation
- Boarder Patrol
- Target Acquisition
- Handheld or Gun mounted.

### Observations Ranges

- **300m**
- **900m**
LASER SYSTEMS

Laser Range Finder (AR-4)

The AR-4 Laser Range Finder is a compact reliable instrument for measurement of target distance and correction of gun fire. The system range is up to 10 Km with an accuracy of ± 5m. It is operated hand-held but can be quickly clamped to a goniometer for artillery use.

- Compact design
- High performance
- Fully integrated stand alone design principle
- Extensive on board BIT facilities
- Environmental performance to MIL-STD-810F

Laser Range Finder (LRH 786Q)

LRH 786Q is a light weight, rugged, compact size, simple to operate and versatile for both static and moving targets on land, air and sea. Besides, it can simultaneously range multiple targets i.e. can range and store four targets in its internal memory in one ranging operation. These ranges can be displayed one by one when desired.

- Range up to 4 targets with a possibility of 5th target detection
- Range targets from 150 meters to 20000 meters
- Accuracy ± 5 meter
- Gate ranging 500 to 5000 meters

LDR Laser Designator & Ranger

LDR-4 is a lightweight high performance laser based system which acquires target coordinates by measuring RANGE, ELEVATION ANGLE and AZIMUTH ANGLE to the target with respect to LDR 4. System designates a target for laser-guided weapon homing on to the laser spot. It is also compatible with NATO and WARSAW laser-guided weapons.

- Multi configuration
- Light weight
- Compact
- Rugged
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.

- Wavelength response 0.6 ~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-2) 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
- Azimuth 11 Mil (360 deg) Elevation 1 Mil
- Weight: 4.2 kg
MOBILE FIELD KITCHEN (MFK)

It is built on two wheeled trailer, strong enough to sustain cross country tow-ability by a 2.5 ton vehicle. It can cook multiple food items etc for 150 persons. It is equipped with multi fuel burner with proper exhaust system and corrosion free utensils. It can function in all weather and terrain conditions. MFK can be used for Army, Police, and Marines.

Main Features
- Multi-fuel burner with proper exhaust system
- Accessories & utensils are non injurious to human health
- Functions in all weather & terrain conditions
- Rust and corrosion free
- Adopts external power source, when required
- Accessories & utensils are firmly secured for no noise or rattling effect

Vehicle Mounted Kitchen (VMK)

GIDS has indigenously designed and developed a Vehicle Mounted Kitchen for use in the field area to facilitate quick and hygienic cooking for troops. The kitchen has been successfully inducted in Pakistan Army and is mounted on a 4 x 4 vehicle with good cross country mobility. It is a complete and compact unit which has been equipped with the modern equipment to fulfill all basic cooking requirements in the field.

Main Features
- Quick and hygienic cooking
- Storage of ration, water and requisite fuel
- Integral electric power supply
- Hot and cold water
- Carries three days ration for 150 persons.
- Cooks meals for 150 persons in approximately two hours.
- Stores 1000 liters of water in overhead water tank.
- Uses both internal (14KVA Generator Set) and external electric power source.
- Only 15 minutes required to setup the kitchen.
- Easy relocation as per the operation requirements.
- Hygienic food can be laid on the service counter for consumption on self service basis.
- Appropriate quantity of utensils, crockery and cutlery available.
- It has got an appropriate arrangement for washing of utensils.
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.

**Nickel 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
- Communication equipment
- Missiles
- Torpedoes, etc
SLTA
SLIM LINE TOADED ARRAY SONAR FOR NAVAL APPLICATION

Detection of targets by the naval ships and submarines has always been very difficult and challenging due to the peculiar sea and associated environmental conditions. However, the radiated noise from own platform makes it difficult or at times even impossible to detect weak signals from silent or remote targets. The successful design and development of the SLTA has significantly enhanced the underwater detection capability of the naval platforms.

Future Applications
- SLTA for Submarines & Ships in passive mode
- Coastal Defence system
- SLTA for surface Ship Applications consist of
  - Active Towed Array Sonar
  - Stand Alone Passive Array
  - Divers, detection/ Offshore Harbour Defence Systems
  - Geophysical Exploration Applications
  - Seismic surveys etc

RIBAT ESM System
Electronic Support Measures (ESM) system is the most important aspect of Electronic Warfare (EW), required for a variety of ground, surface and airborne applications, especially in maritime scenario. It is imperative for every surface naval platform to be equipped with ESM system for early detection and parameters measurement of friendly & hostile emitters.

- 100 percent intercept probability
- Wide operating frequency range
- High sensitivity & dynamic range
- Instantaneous frequency measurement
- High frequency accuracy & resolution
- 360 degree spatial coverage
- Fast reaction time
- Threat identification
- Mission library
- Scan & pulse measurement analysis
- High resolution display
- Audio/visual threat alarm

Main Features
- Equally adaptable for surface ships or submarines
- Enhanced detection and classification due to longer array having wide acoustic aperture, reduced flow noise and efficient processing
- Smaller diameter for easier handling onboard to facilitate its deployment and retrieval during all weather and covert operations
Bridge Pilotage Simulator (BPS) is developed for training of bridge-crew in navigation and other operational tasks. The simulator displays one large synchronised scene replicating the view from the bridge of a surface ship and provides life-like training in real time scenario to naval personnel on navigation, watch keeping and other specific bridge and sea operations.

ASST Action Speed Tactical

ASST is a real time Simulator that provides tactical training to Naval Officers and men in surface, subsurface and air operations. Based on state of the art development techniques the Simulator ensures generation and execution of multidimensional game scenarios in the most realistic sea environments.

Capabilities and Main Features

ASST replicates the principal components of the Naval Fleet. It includes all tactical facilities like:

- Tactical Maneuvers
- Complete Fleet operations
- Planning and management of war scenario
- C3I Command Centre
- Scenario generation
- Exercise monitoring
- Trainees evaluation

Capabilities and Main Features

- State of the art Navigation Simulator
- Can replicates Bridge of any naval or merchant vessel
- Controlled with ships replica consoles
- Wide angle view as desired by the customer
- Picture display of all types of radars
- Provision of 3D Sounds
- Navigational Exercises with complete bridge team
- Implementation of Physics Engine for real time platform motions
- Environmental Effects
NAVAL POLICE BOAT

Policing of inshore waters against any illegal activity demands for reliable & potent harbour defence capable to neutralize any saboteur / illegal act in harbour. The boat can carry a crew of 4-5 personnel for a maximum of 8 hours at a speed of 35 knots.

Roles of the Boat

- Law enforcement
- Prevention or repression of illegal activities
- Rescue operation in inshore waters
- Fast interception and boarding of suspect craft in inshore waters
- Protection against sabotage

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
SIMPAS & SIMDAS

SIMPAS
Propulsion Simulator for Submarine

Propulsion Simulator is real time simulator of propulsion control room for offshore training of crew members of AGOSTA 90B submarine. It will simulate the Propulsion Control Panel, Main AC Switchboard Panel, Main Motor Local Control and Cruising Motor Local Control.

- Efficient and risk free training
- Electronic logbook of entire training session for performance evaluation
- Realism of training through simulation of sounds
- Instructor console to manage and monitor training sessions
- Emergency generation by the instructor at any moment during exercise
- Real time monitoring and control of more than 800 digital and analog IOs through high-tech data acquisition system
- Simulates emergency situations such as fire, flooding and equipment failure etc.

SIMDAS
Naval Vessel Operations Room Simulator

Diving Simulator is real time simulator of control room of Agosta 90B submarine for training of crew members. It will simulate operations of diving safety panel, steering station, air circuits and hydraulics along with other assemblies of the control room.

- Efficient and risk free training
- Reproduction of trim movements up to ±45° with variable speeds from 9 arc minute / sec to 9 ° / sec with accuracy of 40 arc minutes
- Video recording and playback
- Electronic logbook of entire training session
- Realism of training through simulation of sounds
- Instructor console to manage and monitor training sessions
- Emergency generation by the instructor at any moment
- Real time monitoring and control of more than 900 digital and analog IOs through high-tech data acquisition system
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
- Maneuvering 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.
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
C4 & 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 presence 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 real-time data link.
- Notification to pilots of weapon event result such as hit and miss for missiles for real time kill/miss 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-16 / F-16 aircraft.
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 the 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. 

**Support 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 (AFOS) is a desktop application that provides training for the forward artillery observer in a near-real environment in a classroom/simulation lab using indoor realistic scenarios. PAKSIM also incorporates a ballistic calculator to cater for various artillery shots according to their respective calibre. This system also has the capability to place 3D models according to their actual scale with respect to terrain and utilizing complete physics like mass, gravity and dimensions of that particular model.

Operational Features

- Provides comprehensive training for Observation Post
- Allows simulations applications of multiple environmental effects
- Displays fall of a shot as in actual
- Contains adequate landmarks/reference points for target indication
- Produces numerous blast effects of artillery shells
- Sound simulation is realistic
- Provides various types of targets
- Guides fire planning
- Can train trainers as well
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.
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 – D1550 (capacity – 1550 liter/hr, Raw water input – TDS upto 3500 mg/liter) and NAVY vessels model include Dual Stage Reverse Osmosis Plant (Stage 1 & 2 capacity – 3000 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

Ballistic Helmet

GIDS’s Ballistic Helmet protects the user from bullets, fragments and provides wearing comfort due to balanced weight distribution which does not impede the performance of the user. The construction of inner suspension system ensures that a gap is always present between the head and shell which minimizes the effect of blunt trauma experienced by the user. It includes an adjustable headband and a comfortable chinstrap assembly. The helmet is relatively lightweight and provides maximum comfort, mobility & protection in its class.

Models of Ballistic Helmet

- BH A140 1.36 Kg
- BH A150 1.50 Kg
- SBH 400 1.60 Kg (Magnum Resistant)

Metallic Mine Detector

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

Explosive Detector

Hand Held and Long Handle Detector used for detection of explosive materials. Operates on principle of ion Mobility spectrometry technique. Detects vapes coming out of explosives and produces signals in the form of light by LED and sound by buzzer. Rechargeable low voltage alarm battery.
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.

<table>
<thead>
<tr>
<th>Single Bang</th>
<th>Six Bang</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illumination intensity</td>
<td>Up to 1.5 Mcp</td>
</tr>
<tr>
<td>Sound intensity</td>
<td>170-180 db (approx)</td>
</tr>
<tr>
<td>Delay time</td>
<td>1.5-2 Second</td>
</tr>
<tr>
<td>Total weight</td>
<td>230 g (approx)</td>
</tr>
<tr>
<td>Diameter</td>
<td>51.50 mm</td>
</tr>
<tr>
<td>Length</td>
<td>165 mm</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Calibre</th>
<th>Range (Big)</th>
<th>Range (small)</th>
<th>Discharge Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>37/38 mm</td>
<td>137 m (150 yards)</td>
<td>68 m (75 yards)</td>
<td>35 Sec. (Plus)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Shelf Life</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4 years</td>
<td>100-160 g</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>140 mm</td>
</tr>
</tbody>
</table>

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

Walk Through Scanning
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 215-230V
- Power less than 35 W
- Work environment -20°C to 55°C
BULLET PROOF JACKET

Ballistic Jacket

GIDS indigenousy developed Ballistic Jackets are suitable for both military as well as non-military applications. GIDS jackets can be used as a stand alone or with Ballistic plates to further enhance protection levels. State-of-the-art technology is utilized to create a product that combines higher protection level with reduced weight. Our product can also be customized to meet customer's specific needs.

Ballistic Plate

GIDS Ballistic Plates are integration of hard ceramic hexagons, with high molecular weight polyethylene or aramid backing, with optimized composite construction to produce rugged multi-hi armor, reaching protection levels NIJ III plus at the lowest cost. They are available for both stand-alone and non-stand-alone use. Ballistic plates can be used various Ballistic Jackets due to their very high compatibility. State-of-the-art technologies are applied to create new products that combine a high protection level with less weight and design and manufacturing the product according to the customer’s needs in a variety of sizes and shapes.

Technical Specifications

<table>
<thead>
<tr>
<th>Material</th>
<th>Soft insert</th>
<th>UHMWPE</th>
<th>HAP</th>
<th>UHMWPE + Ceramic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protection level</td>
<td>PK Level 1</td>
<td>6x rds of 7.62 x 25 mm Takorov (TT Pistol) from 5m</td>
<td>3x rds of 7.62 x 39 mm SMG Chinese (AK-47) from 15m</td>
<td>3x rds of 5.66 x 45 mm INSAS (M-16) from 15m</td>
</tr>
<tr>
<td>Back Face Trauma</td>
<td>Less than 44 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sizes</td>
<td>Small, Medium &amp; Large</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pattern / Shade</td>
<td>As Per User Requirement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>As Per Pakistan Army General Staff Requirement (GSR)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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.”