
ASISGUARD
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ASISGUARD

About Us

ASISGUARD has high-end engineering capabilities through which the company has developed national and domestic critical solutions, some of which are the first in our country, with Electro-Optical Sight and Border Security Systems, Military Vehicle Electronics Systems, Rotary Wing Armed/Unarmed Drone Systems, Screen System solutions. All systems of ASISGUARD™ such as original hardware design, embedded software design, system engineering are performed by experts in their respective fields and delivered to the end user.

ASISGUARD, with the expertise to design and revise projects and solutions according to customer demands, and to keep the technologies and products it has developed up-to-date; the company has developed a cutting-edge specialization to design image stabilization, moving object tracking, object recognition and classification algorithms by using artificial intelligence and big data technologies.

ASISGUARD, Offering many domestic and national products in the field of defense to Turkiye, NATO and allied countries; constantly considers the needs and satisfaction of internal and external stakeholders, aims to develop its technological and engineering competence and to direct the technologies of the future.

Mission

To contribute to the strengthening of the Turkish Defense Industry with innovative technology and military solutions, to share the developed products and systems with allied countries.

Vision

To become a leading global brand by creating local and global solutions with high value-added critical technologies.

Our untiring soldiers and law-enforcement forces who put their lifes at risk without a second thought have the utmost importance for us. Therefore, we take on the mantle of guardian angel for our army and law enforcement agencies via our domestically and nationally developed technology.

Sınırların Ötesinde Teknoloji
Technology Beyond Borders

A subsidiary of HAVELSAN

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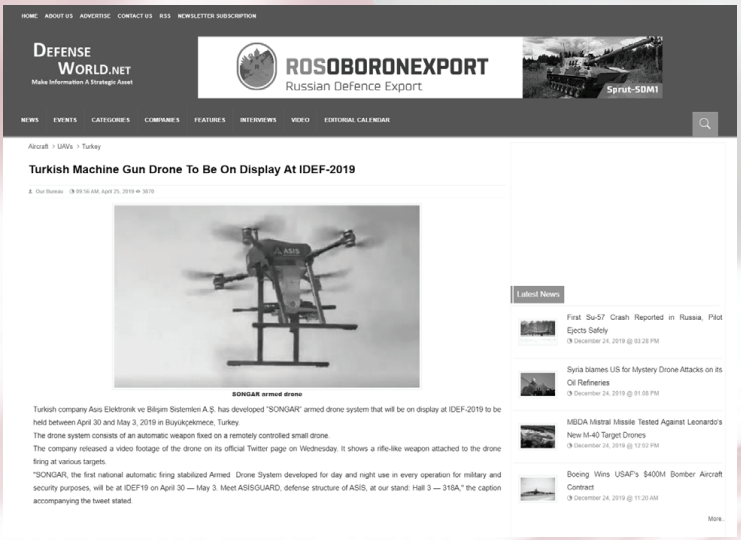

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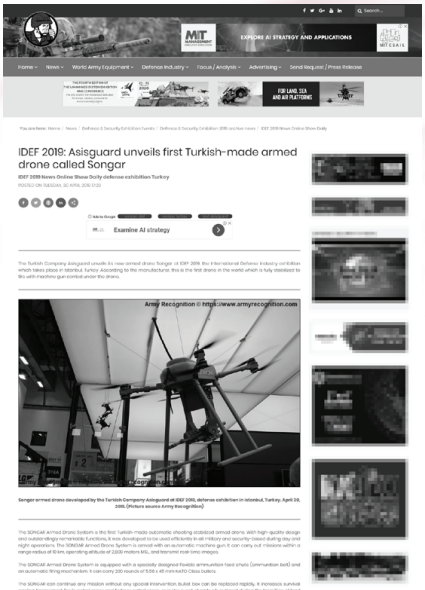

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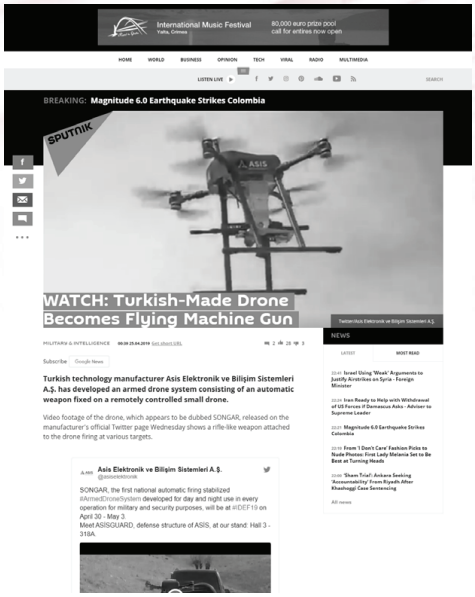

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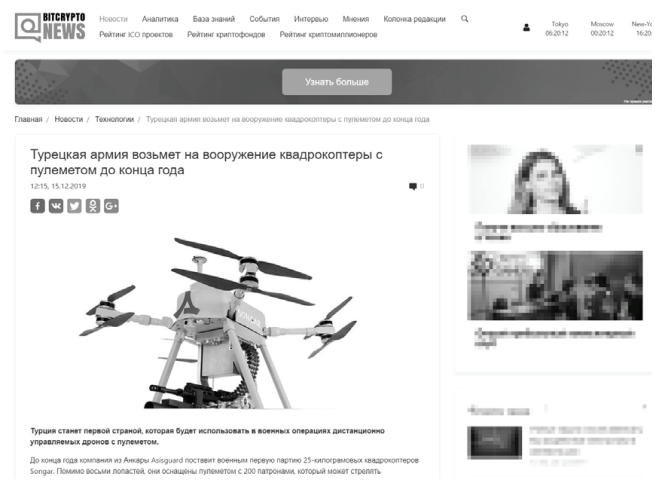

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TEKNOLOJİ, SAVUNMA SANAYİSİ
Türk savunma sanayisi "bir taşla 14 kuş" vurdu
Türk savunma sanayisinde bir KOBİ'nin liderlik ettiği entegre güvenlik çözümü, 14 şirkete ihracat fırsatı oluşturdu.
Göksel Yıldırım | 13.01.2024 - Güncelleme : 13.01.2024
Fotoğraf: Erçin Ertürk/AA
Ankara
Elektro optik görüş ve sınır güvenliği sistemleri, askeri araç elektroniği çözümleri ve döner kanatlı insansız sistemler üreten Asisguard'ın Nijerya'da uygulayacağı Yol Güvenliği Projesi ile savunma sanayisi için birçok ilke imza atıldı.
Proje kapsamında Asisguard'ın yanı sıra HAVELSAN, STM, Nurol Makina, Gürbağ Savunma, MILMAST, Radio Teknoloji Hizmetleri, Promec, Mirsan, Makelsan, UNIDEF, Sarsılmaz, Güçbir, Barok Savunma'nın dron, zırhlı kara aracı, silah
Türk zırhlısı YÖRÜK 4X4, Nijerya'da kullanılacak!
Asisguard ile Nijerya arasında imzalanan sözleşme kapsamında Nijerya'da yol güvenliği sağlanacak. Projede zırhlı kara aracı olarak Nurol Makina'nın Yörük 4X4 aracı kullanılacak.
7.62 mm silah entegreli SONGAR ilk test atışını başarıyla tamamladı
12:27 - 11.12.2023
Sarsılmaz ve Asisguard iş birliği ile geliştirilen SONGAR 7.62 mm silahlı mühimmat versiyonunun ilk test atışı başarıyla tamamlandı.
Yerli silahlı dron SONGAR'a 7.62x39 mm kalibreye sahip yerli piyade tüfeği SAR 15T entegre edildi.
www.defensehere.com
Songar 7.62, Developed with Sarsılmaz Silah Sanayi, Completed Its First Tests
9 January 2024
Press
TEKNOLOJİ, SAVUNMA SANAYİSİ
Yeni kamikaze dron SAGAN tehditleri avlayacak
Türk savunma sanayisi bünyesinde insansız hava araçları sınıfından geliştirilen çözümlere FPV dron SAGAN eklendi.
Göksel Yıldırım | 05.06.2024 - Güncelleme : 05.06.2024
Ankara
Güncel ihtiyaçlar ve ortaya çıkan yeni tehditler savunma sanayisinde yeni çözüm arayışlarını da beraberinde getiriyor. Sağladığı faydalar yanında önemli bir tehdide de dönüşen dronlar, güvenlik güçleri ve bu alanda teknoloji geliştiren savunma sanayisi profesyonellerinin en önemli gündem maddeleri arasında yer alıyor.
Gündem
Deniz kirliliğine neden olan Antalya Büyükşehir Belediyesine 464 bin 585 lira para cezası
Şehit yakınları ve gazilerin TCDD'den bilet alım işlemleri kolaylaştırıldı
İzmir Menderes'teki orman yangınına müdahale sürüyor
MİT, dron saldırılarında yer alan PKK'lı teröristi Irak'ın kuzeyinde etkisiz hale getirdi
Merdivenlerden düşen gazeteci Reha Muhtar hastaneye kaldırıldı

BORDER SECURITY SOLUTIONS

BORDER SECURITY SYSTEMS

The main purpose of Border Security Systems is to protect the land, air and marine border areas of countries, deter threats along these borders and secure the legal entry and exit points of people and commercial goods. In this context, ASISGUARD develops state-of-the-art domestic and national turnkey solutions for reconnaissance and surveillance of border lines, identification of threat factors, creation of situational awareness, prevention of illegal incidents, immediate intervention and neutralization of terrorist elements that threaten national sovereignty with manned and unmanned systems, development of fast and effective measures against possible negativities by evaluating the images and all kinds of data obtained, establishment of safe crossing areas and safe trade routes between neighbor countries, and collection of evidence for the solution of illegal incidents.

RECONNAISSANCE, SURVEILLANCE AND DETECTION SYSTEMS

LONG RANGE MULTI-SENSOR MOVING THERMAL CAMERAS

ASISGUARD develops Long Range Multi-Sensor Moving Thermal Cameras that can see up to 25 km away with electro-optical sensor technology to detect, identify and track people, vehicles and all kinds of threats according to the geographical conditions of the region. These high-tech cameras produce efficient and effective solutions for the protection of borders, critical infrastructures, roads and cities by providing long and wide range visibility.

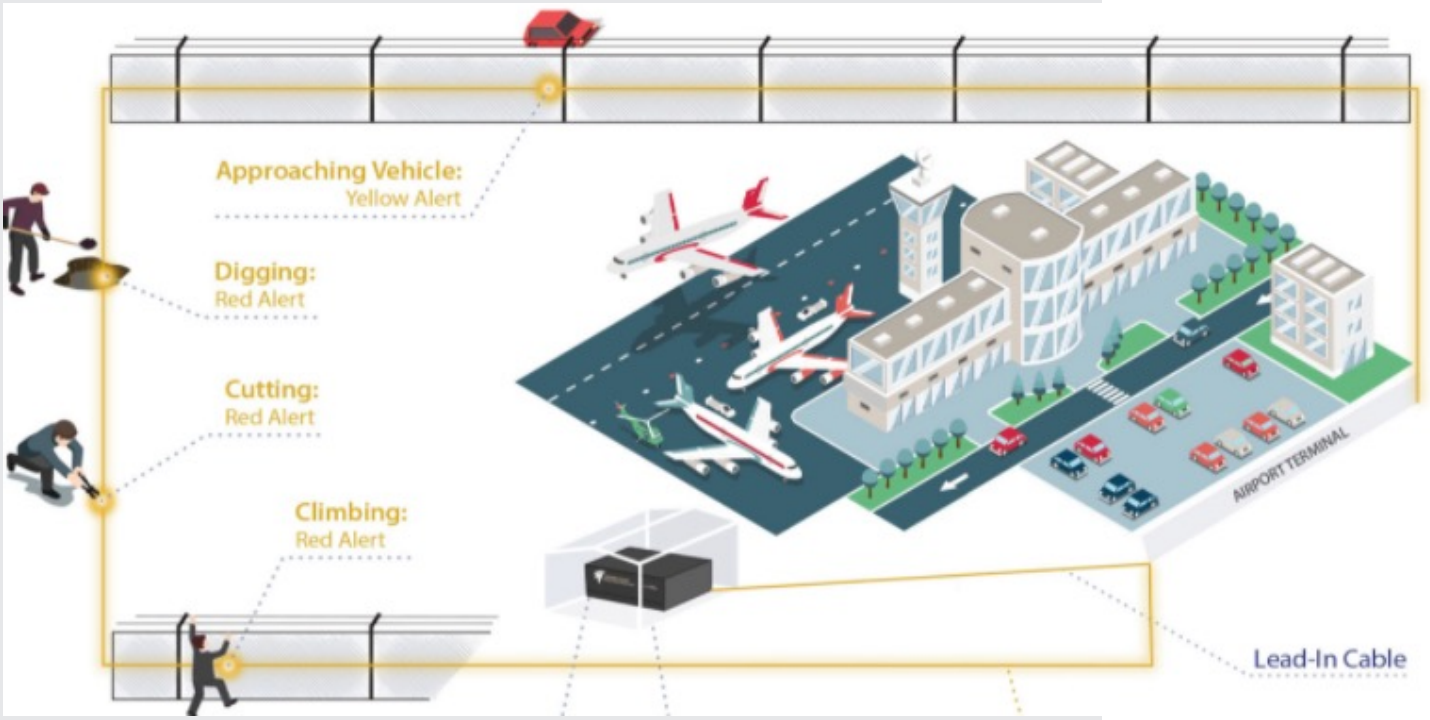
- Long range threat detection and identification
- Working in all harsh environmental conditions day and night
- Identifying coordinates of threats and targets with mapping software
- Determining route and tour using pan-tilt and zoom capabilities
- Measuring the distance of the threat distance with Laser Range Finder
- Video analytics and image exploitation features with artificial intelligence algorithms

RECONNAISSANCE, SURVEILLANCE AND DETECTION SYSTEMS

PERIMETER SURVEILLANCE RADAR

ASIGUARD uses cutting edge radar systems in border security, critical infrastructure security, road security and city security in order to detect all kinds of conventional and asymmetric threats, to create situational awareness and to perform surveillance and reconnaissance in a much large areas.

- Human, Vehicle and Animal Classification
- Easily Portable and Quickly Installable System
- Low Power Consumption
- High data rate and high positioning accuracy
- Ability to work in harsh environmental conditions
- Detection of threats autonomously in a defined area



RECONNAISSANCE, SURVEILLANCE AND DETECTION SYSTEMS

FIBER OPTIC BASED DISTRIBUTED ACOUSTING SENSING SYTEMS

Distributed Acoustic Sensing (DAS) is a technology that enables continuous, real-time measurements along the entire length of a fiber optic cable. These systems allow acoustic signals to be detected over large distances and in harsh environments. Distributed fiber optic sensing cables can make security systems more sensitive, discrete, and cover longer distances.

- High precision detection
- Multi-terrain
- Works without electricity
- Protected against electromagnetic interference
- High sensitivity
- High immunity
- High flexibility

COMMAND AND CONTROL SYSTEMS

COMMAND AND CONTROL CENTERS

ASISGUARD designs and builds special Command and Control Centres according to environmental conditions, geographical characteristics and the type and diversity of terrorism and crime incidents within the scope of border security, road security, urban security and critical infrastructures security solutions.

- Video Walls and Monitoring Systems
- Data management and advanced video analytics.
- Detection, analyzation, and identification of threats with Artificial Intelligence driven software
- Decision making with using advanced statistics and mathemetical methods
- Big-data management and deep learning techniques to make risk management of threats and early detection of threats
- Video Analytics methods and procedures exploring hours of video surveillance data from thousands of cameras to find a particular incident or threat

INFRASTURUCTURE AND CONSTRUCTION

- Installation of energy and data infrastructure according to site and field requirements
- Command and control center infrastructure design and installation
- Design, installation and construction of surveillance towers and poles
- Excavation, piping, trenching and anchoring
- Network infrastructure installation with RadioLink, Fiber Optic and Ethernet
- Grounding , lightening protection of watching tower and poles
- Indoor and outdoor structural cabling
- Installation of end user data and energy groups

ARMOURED VEHICLE MODERNISATION

ARMOURED VEHICLE MODERNISATION

Armoured vehicles are crucial assets in both combat and defense operations for military and security forces. In this regard, Asisguard specializes in developing advanced vehicle electronics and upgrading military vehicles to meet the operational demands of armed units in diverse environments, from rural to urban areas under challenging conditions.

Through modernization, Asisguard integrates communication and coordination systems into these vehicles, facilitating continuous and reliable connectivity with other units and command and control centers in combat scenarios, thereby enhancing operational efficiency.

Asisguard designs and manufactures electro-optical systems such as Perimeter Surveillance Systems, Situational Awareness Systems, Driver Vision Systems, and Mast-Mounted Moving Cameras tailored to the needs of armoured vehicles. These systems effectively detect both close and distant threats, supporting essential reconnaissance and surveillance tasks in a mobile context. Utilizing advanced Artificial Intelligence algorithms, the systems can accurately identify and categorize threats, providing vehicle personnel with user-configurable alerts and warnings.

Furthermore, Asisguard equips vehicles with various functionalities for warfare applications, including vehicle computer systems, display units, control computers, internal communication systems, and siren announcement systems.

MODERNISATION SOLUTIONS

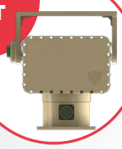
LDSU/ CLDSU

WEAPON TOWER

MAST

SK LDSU

PAN TILT



HF RADIO

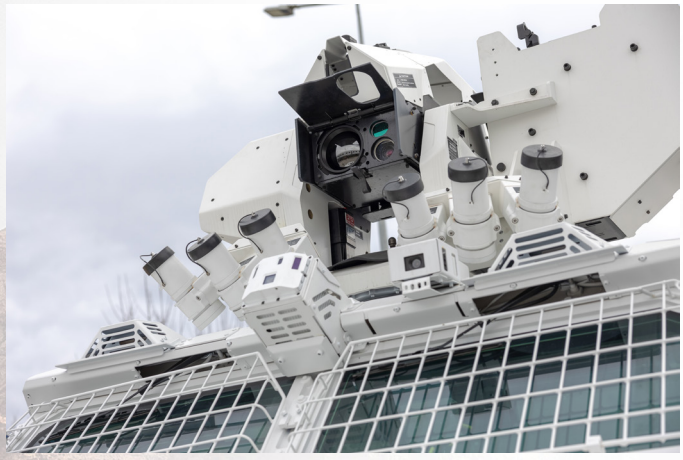
VMS

DSU

MPTZ

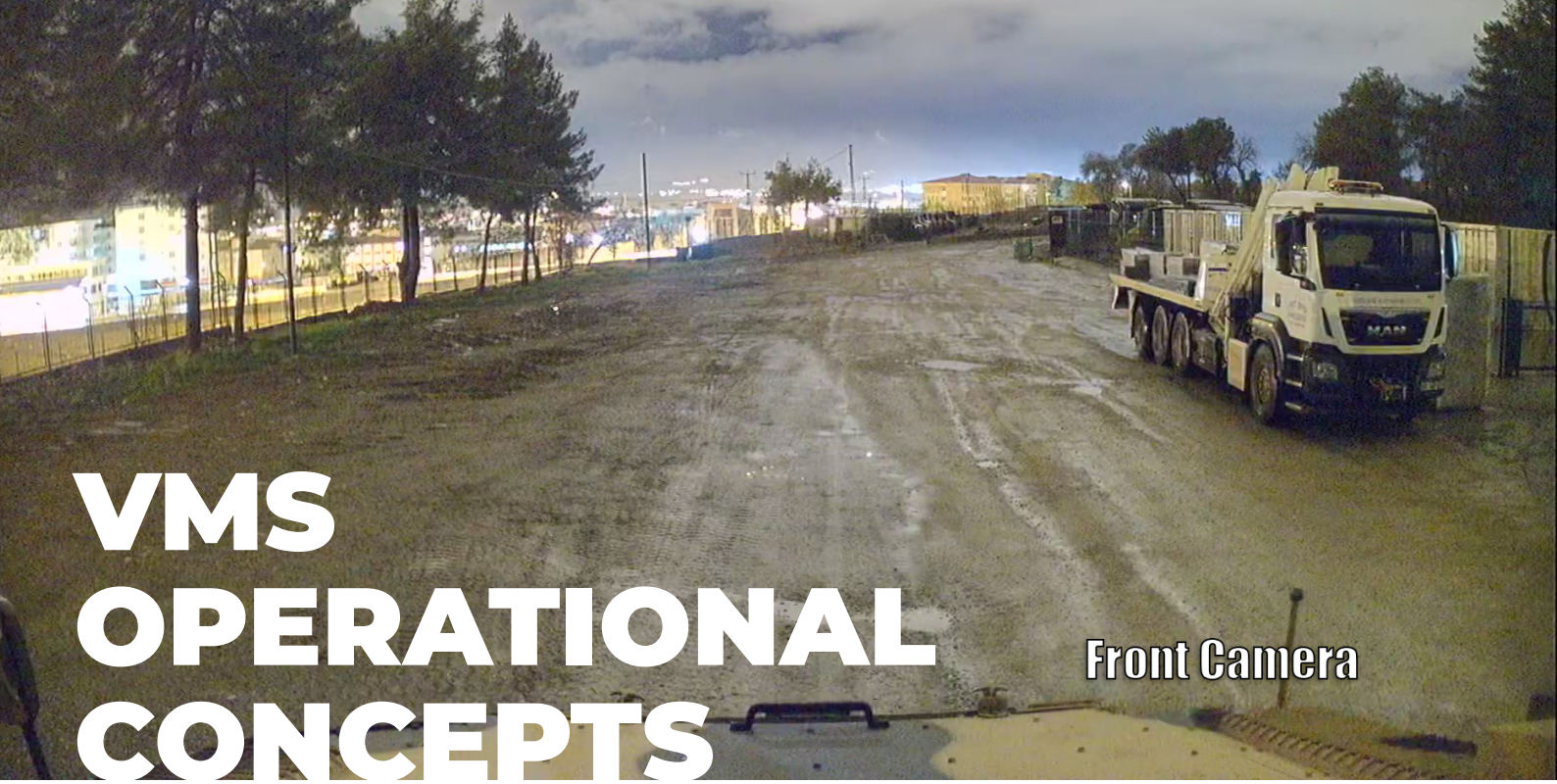
ICS

UHF RADIO




SADAK™
MILITARY VEHICLE SOLUTIONS
SADAK™
VMS | VIDEO MANAGEMENT SYSTEM
SADAK™
DIS | DRIVER INFORMATION SYSTEM
SADAK™
ICS | INTERNAL COMMUNICATION SYSTEM
SADAK™
SCU | SMART CONTROL UNIT
SADAK™
SAS | SIREN ANNOUNCEMENT SYSTEM
SADAK™
AIC | ARTIFICIAL INTELLIGENCE COMPUTER


BARKAN
tekatron



VMS OPERATIONAL CONCEPTS

SURVEILLANCE

Environmental Awareness

The VMS facilitates continuous monitoring of the armoured vehicle's environment as it traverses its route, with ongoing recording of video data. Given the challenges in controlling these armoured vehicles and their limited field of view, the integrated cameras allow personnel to capture images from various angles at any time on the vehicle's monitors. This capability enhances environmental awareness and contributes to safe transportation.

Ease of Use

The VMS enables the armoured vehicle to easily execute maneuvers such as parking and unparking by detecting its surroundings while stationary.

Night Vision

The night vision cameras within the VMS enhance environmental awareness and visibility under all nocturnal conditions, improving performance compared to previous systems.

DETECTION

Motion Detection

The VMS identifies threats in the vicinity of the vehicle through its motion detection capability and alerts the personnel within the armoured vehicle. The system includes software that distinguishes between significant objects and minor ones, thereby minimizing unnecessary alerts.

Warning System

The armoured vehicle's warning system delivers a prominent alert on the screens when enemy presence is detected by the sensors, thereby safeguarding the personnel's safety by preventing potential risks.

Scenario: Night Operation in Rugged Terrain

Scenario Description

To ensure the secure transit of a military unit from point A to point B through terrain susceptible to enemy ambushes, the unit will deploy armoured vehicles equipped with a Video Management System (VMS) along the designated route.

Preparation and Planning

Pre-Operation:

Detailed terrain maps and satellite imagery must be provided to identify and assess potential enemy concealment and ambush points, and to delineate patrol routes. Additionally, mission-specific equipment should be loaded onto the vehicles.

Operation Commencement:

Upon initiating the operation, the armoured vehicle will proceed along the assigned route. Vehicle headlights must remain off throughout the mission to prevent detection.
The VMS will assist the personnel in identifying external threats via vehicle monitors, enabling them to implement countermeasures.
Motion detector data will be monitored by the personnel to detect potential enemy presence, with the sensors providing alerts to ensure readiness upon detection of hostile elements.

Surveillance and Detection

The VMS delivers real-time imagery to the vehicle's monitors, enabling personnel to observe enemy movements. Motion sensors detect an adversary and transmit a signal to the interior of the vehicle. Night vision cameras relay the image to the monitors inside, and the location of the enemy is pinpointed through alerts on the monitor.

Personnel promptly evaluate the situation to track the patrol's movements and devise the most effective strategy.
Opting to avoid direct engagement, the vehicle should maneuver to a concealed position using night vision cameras to avoid detection, thereby evading danger and ensuring mission completion.

After Action Review

Upon safely returning to base, the surveillance data collected by the VMS 360-degree vision system is analyzed to gather insights on enemy movements and potential vulnerabilities. This data can be reviewed by commanders for strategic planning.

Such information is essential for preparing future operations and refining the overall mission strategy.

Conclusion

The operation highlights the VMS's effectiveness in enhancing maneuverability and stealth, thereby countering enemy ambushes and improving operational security.

SADAK™

VMS | VIDEO MANAGEMENT SYSTEM

VIDEO MANAGEMENT SYSTEM

The Sadak Video Management System is a multifunctional device specifically engineered for military armoured land vehicles. It can be integrated into the vehicle to provide comprehensive environmental monitoring. As a domestic and national solution, it enhances user visibility by amalgamating images from cameras positioned at the front, rear, and interior of the vehicle with those from 360-degree view cameras.

GENERAL FEATURES

Accesories

Cable Installation

Apparatus Designed According to the Platform to be Used

TECHNICAL FEATURES

IR Illuminated Camera

Resolution: 1920 x 1080, CMOS

View Angle: 120° Horizontal(Optional,±5%)

Image Output Format: Analogue Video (Optional AHD)

360 Degree Camera

Resolution: 1920 x 1080, CMOS

View Angle: 360° (with 4 cameras)

Image Output Format: Analogue Video (Optional AHD)

Monitor

Screen Size: 10.1”

Resolution: 1920 x 1080 Communication

Interface: CANBus

VNIR Camera

Resolution: 1920 x 1080, CMOS

View Angle: 90° x 59° (H x V) (±10%)

Minimum Illumination: 0.1 mLux.

Image Output Format: AHD

Data Recording Unit

Video Recording: H264/H265 Compressed Video

Capacity: 1 TB SSD

Communication Interface: CANBus

Interface

Power Interface: 20-33VDC

Video Outputs: CVBS (Optional AHD)

Communication Interface: CANBus

Optional Digital Zoom: x2, x4

System Features

External Power: 20-33VDC

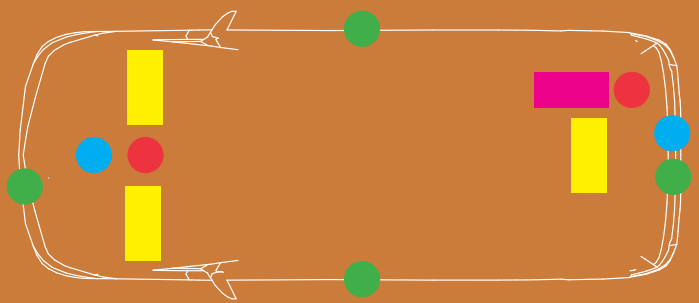
Operating Temperature: -32°C, +55°C

Storage Temperature: -40°C to +60°C

Protection Level: IP67

Environmental Conditions Standard: Compliant with MIL-STD-810

Voltage Protection: MIL-STD-1275E



SADAK ICS OPERATIONAL CONCEPTS

Commander Unit Features

The system provides various authorization capabilities, including radio permissions for the commander or all users, and the ability to immediately mute specific radios or all radios. This functionality allows the commander to manage participation in radio communications and control their usage. The ICS commander unit is an optimal solution for adaptable and secure radio communication.

General Features

The ICS is a radio system that facilitates communication via microphone headsets with reduced external noise, is compatible with analog radios, and supports external radio and speaker connections. It offers both air and bone conduction headset options and can support up to 12 users.

Radio Communication Capabilities

- Listening and speaking on the primary radio
- Listening on both the primary and secondary radios, while speaking on the primary radio
- Listening and speaking on the secondary radio
- Conducting simultaneous calls with all users (full-duplex)
- Concurrent intercom and radio listening

Scenario: Sharp Radio

Scenario Description

To guarantee effective communication for the military unit amidst the demanding conditions of combat and ensure their safe return to the company, a military unit is operating in rugged, expansive terrain using armoured vehicles outfitted with the ICS radio system. Due to the noisy environment in which the operation occurs, internal communication within the armoured vehicle is facilitated through the ICS system.

To maintain the efficient execution of the mission, the commander communicates with designated personnel on a dedicated line provided by the ICS.

The goal is to complete the operation safely and without communication issues.

Preparation and Planning

Detailed terrain maps and satellite imagery of the operational area are obtained. Personnel assigned to the mission receive training on the ICS system. The suitability of ICS devices for the mission is verified. Essential equipment is loaded onto the armoured vehicles.

Operation Commencement

Armoured vehicles commence movement along the designated route. Within the vehicle, the vehicle supervisor/commander oversees all radio communications and manages the operation using the ICS commander unit. Each soldier is equipped with an ICS headset with a microphone, which provides clear communication due to its noise-cancellation feature. The commander issues instructions via radio, establishes targets, and monitors the progress of the operation. Soldiers provide feedback to the commander and to one another, reporting field developments. The ICS system enhances the operation's efficiency and safety by facilitating coordinated actions among soldiers. Instant communication allows soldiers to respond swiftly to threats and ensure mutual protection.

Conclusion

The ICS radio system substantially improves the unit's operational success. It enhances security by offering clear, rapid communication, a secure communication channel, and immediate response capabilities, while mitigating external noise.

SADAK™

ICS | INTERNAL COMMUNICATION SYSTEM

SADAK™ INTERNAL COMMUNICATION SYSTEM

The SADAK™ ICS is an electronic communication system adhering to military standards, designed to facilitate voice communication among personnel within military land vehicles under operational conditions and to enable communication with external operational units within specified authorization limits. This system includes a commander unit, user units, a speaker unit, and in-vehicle headsets.

The SADAK™ ICS provides low-noise communication, allowing simultaneous listening to internal speech and radio broadcasts. Users without headsets can still hear both radio and internal communications through the external speaker unit. Additionally, it permits all users connected to the internal communication system to transmit and receive radio communications.

Engineered for the demanding environment of military land vehicles, SADAK™ ICS is resilient to harsh weather conditions, water, dust, and external impacts. It delivers high-quality internal communication within the vehicle and external communication through two separate radios connected to the system. The SADAK™ ICS offers tailored solutions with various authorization options for the commander unit, including permissions for listening and speaking on the first radio, listening and speaking on the second radio, and listening to both radios while speaking on the first. The Turkish Armed Forces currently utilize the SADAK™ ICS in their vehicles.

SADAK DIS OPERATIONAL CONCEPTS

Scenario: Critical Info

Scenario Description

To ensure the safe and efficient delivery of logistical supplies across challenging terrain without delays.

Scenario:

A military unit is tasked with delivering heavily loaded supplies to a designated location to meet logistical needs. The route is characterized by rough terrain. Consequently, the transfer must be conducted without interruptions using armoured vehicles equipped with the DIS to ensure the safe and effective completion of the mission. Personnel assigned to this mission have received training on operating the DIS, and the suitability of the DIS devices for the mission is verified.

During the DIS equipment checks, the driver of the armoured vehicle notices on the 3.8-inch information screen that the Engine Oil Temperature is significantly above the normal level. The driver reports this issue to the commander.

The alert indicating that the engine oil temperature is excessively high implies that the vehicle will be incapacitated and unable to complete the mission. As a result, the mission is cancelled.

Conclusion

The integration of the DIS system into the armoured vehicle allows for real-time monitoring on the screen of critical vehicle parameters (such as oil levels, temperature, speed, etc.) to ensure they meet required standards before the vehicle is deployed. Additionally, the driver can review these metrics during operation or as needed, thereby safeguarding both the vehicle and its personnel.

Easy Access

The system provides straightforward and prompt access to data due to its user-friendly interface. The intuitive monitor design enables personnel to easily retrieve information during operations.

Readable Vehicle Data

- Vehicle Speed Data
- Engine Speed Data
- Engine Coolant Temperature Data
- Engine Oil Temperature Data
- Engine Operating Time Data
- Personnel Seat Belt Status Data
- Mine Lock Status Data
- Explosion Suppression System Status Data

SADAK™

DIS | DRIVER INFORMATION SYSTEM

SADAK™ DRIVER INFORMATION SYSTEM

The system delivers comprehensive vehicle engine data including vehicle speed, engine speed, coolant temperature, oil temperature, and operational time along with information on personnel seat belt status, mine lock status, and explosion suppression system status, all accessible through a single screen. The driver can view status updates from the CAN data line as well as information, warning, and error messages from connected peripherals on the 3.8-inch information screen.

Currently, Turkish Armed Forces vehicles are equipped with SADAK™ DIS product.

The Driver Information System (DIS) provides the driver with immediate updates on the vehicle's operating conditions and the status of all occupants. The DIS screen consolidates diverse information into a single display, enabling continuous monitoring of the vehicle's operational state.

Data such as speed, fuel level, oil temperature, oil level, engine coolant temperature, seat belt status, various warnings and alerts, vehicle communication status, mine lock status, and door open/closed status are conveyed to the driver via the DIS screen. The SADAK™ DIS screen also features warning lights and indicators for speed, seat belt status, mine lock alerts, and door status to ensure safe operation and prolonged vehicle use. The SADAK™ DIS system comprises one IO module, one electrical installation, and one 3.8-inch driver information system display.

- Simple installation and seamless integration.
- The display unit features customizable button functions to meet user specifications.
- This system is actively used within the inventory of the Turkish Armed Forces.
- The addition of an I/O module, if necessary, allows for the reading of additional messages, offering the capability to display more data than competing systems.
- ASİSGUARD can rapidly address customer needs due to its domestically developed and national software.
- Should the vehicle have a different screen based on the customer's requirements, software updates can be applied to those screens.

SADAK™

SAS | SIREN ANNOUNCEMENT SYSTEM

SADAK™ SIREN ANNOUNCEMENT SYSTEM

SADAK™ Siren Announcement System (SAS) is developed in accordance with military standards for land and sea platforms which allows the personnel to listen to the outside environment and make announcements from inside the vehicle.

SADAK™ SAS transmits the sounds received from the external environment to the internal loudspeaker unit through the microphones installed on the vehicle. Captured sounds pass through digital signal processing and noise filtration algorithms, ensuring that the received sounds are parasitic free and heard by the personnel in the vehicle clearly.

Siren/Warning type can be selected and amplitude of the external sound can be adjusted from the vehicle control panel. SADAK™ SAS consists two parts of outer horn units, an inner handheld microphone, a control unit, an amplifier & power unit, an outer microphone, an inner loudspeaker unit and a cabling set. It enables to listen the environment with external microphone and internal speaker units. Other units of the system ensure to amplify sound signals and transferring to the external environment.

- **External Audio Surveillance Features**
  - Power ON/OFF Switch
  - Power Led Indicator
  - Sensitive Volume Adjustment
  - In Vehicle Loudspeaker Mute Mode
  - Optional Second Outer
  - Microphone

Announcement and Siren Features

- 7 Preset Siren Choice, Optional increase up to 12 Siren Choice
- Standard Siren Number 2x100W, Optional Siren Number 4x100W
- Announcement Priority
- Sensitive Volume Adjustment
- Power ON/OFF Switch
- Power Led Indicator
- Siren Button
- Horn Button
- Panic Button

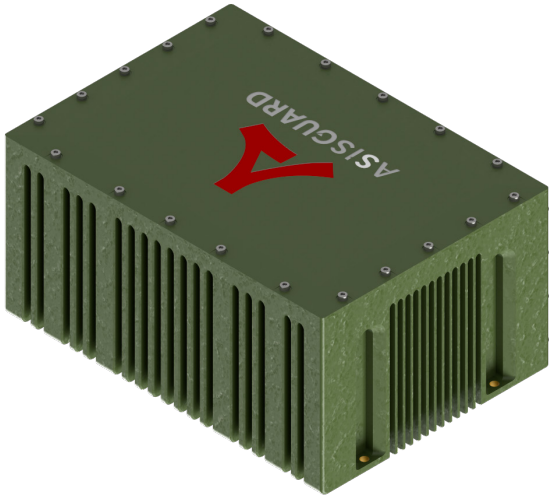
SADAK™

AIC | ARTIFICIAL INTELLIGENCE COMPUTER

ARTIFICIAL INTELLIGENCE COMPUTER

Artificial Intelligence Computer (AIC), featuring an 8-core processor and 30 TOPS of artificial intelligence performance, is designed to manage and control military and civilian applications through advanced AI-based solutions. It excels in handling and interpreting large, complex data sets, self-correcting, and effectively analyzing intricate processes at speeds surpassing human capabilities.

Equipped with a temperature and humidity sensor, the AIC system continuously monitors environmental conditions to ensure optimal operation under variable conditions. It supports multiple communication interfaces including RS232/422/485, CANBUS, Gbit Ethernet, USB2.0, and I2C BUS. Storage options include 32GB 256-bit LPDDR4x RAM, 8GB eMMC 5.1, EEPROM, NVMe SSD M.2, and MicroSD card support up to 128 GB.



AREAS OF USE

- Manned/unmanned land and sea vehicles
- Military and civil systems

GENERAL FEATURES

Accessories

Carry Case

TECHNICAL FEATURES

General Features

30 TOPS AI Performance

8-Core Processor

32GB 256-bit LPDDR4x RAM

8GB eMMC 5.1

2 pcs. EEPROM

NVMe SSD, M.2

MircoSD Input

Elapsed Time Counter (ETC)

Digital Temp.-Humidity Sensor

Reverse Voltage Protected

Other Interfaces

4 pcs GPIO

HDMI

Microphone

Headphones

7 SDI Video Interfaces Configurable as Input and Output

Communication Interfaces

2 software selectable RS232/422/485

2 pcs CANBUS

5 pcs Gbit Ethernet

2 pcs USB2.0

I2C BUS

System Features

Op. Temperature: -40°C, +55°C

Storage Temperature: -40°C, +80°C

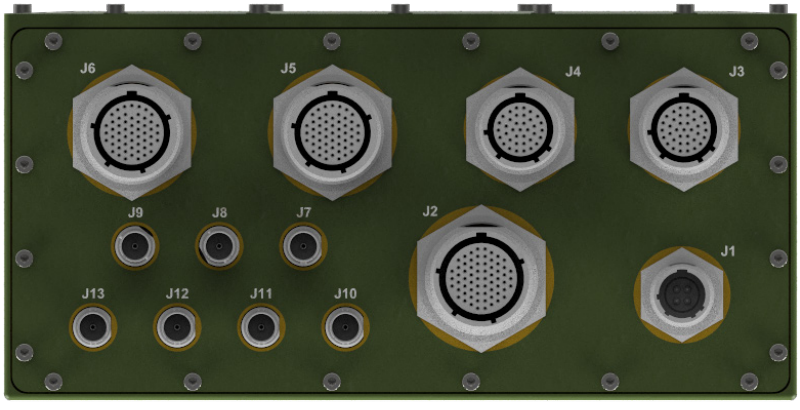
Protection Level: IP67

Environmental Conditions Standard: Compliant with MIL-STD-810

Voltage Protection: Compliant with MIL-STD-1275

Operating Voltage: 18-36VDC

Insulation Voltage: >1kV



SADAK™

SCU | SMART CONTROL UNIT

SMART CONTROL UNIT

The Asisguard Smart Control Unit (SCU) facilitates both local and remote management of military and civilian systems. It incorporates a temperature and humidity sensor to continuously monitor environmental conditions, ensuring the system's reliable operation in varying conditions. The SCU supports communication via RS232/422/485, CANBUS, Gbit Ethernet, USB2.0, and 4G LTE interfaces. It includes 1 GB 800MHz DDR3L RAM, 8 GB eMMC 5.0 storage, and supports MicroSD cards up to 128 GB.

AREAS OF USE

- Manned/unmanned land and sea vehicles
- Military and civil systems

GENERAL FEATURES

Accessories

Carry Case

General Features

Operating Temperature: -32°C, +55°C

Storage Temperature: -40°C, +55°C

Protection Level: IP67

Environmental Conditions Standard: Compliant with MIL-STD-810

Voltage Protection: Compliant with MIL-STD-1275

Operating Voltage: 18-36VDC

Communication Interfaces

2 Pcs. Gbit Ethernet

3 Pcs. USB2.0

WiFi 802.11 b/g/n

System Features

1Gbit 800Mhz DDR3L RAM

8 GB eMMC 5.0

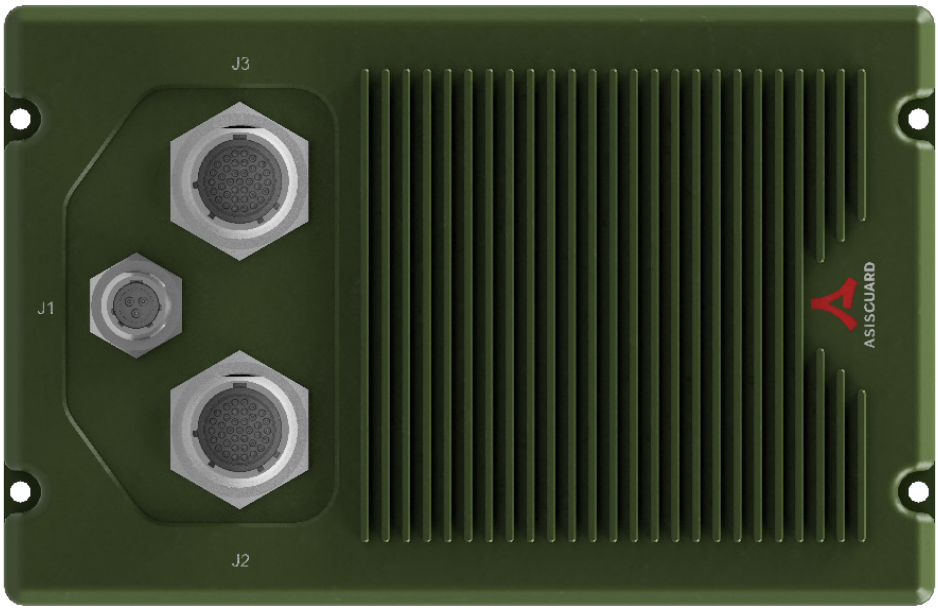
MicroSD Card Support up to 128GB

Digital Temperature-Humidity Sensor

Real Time Clock Integrator

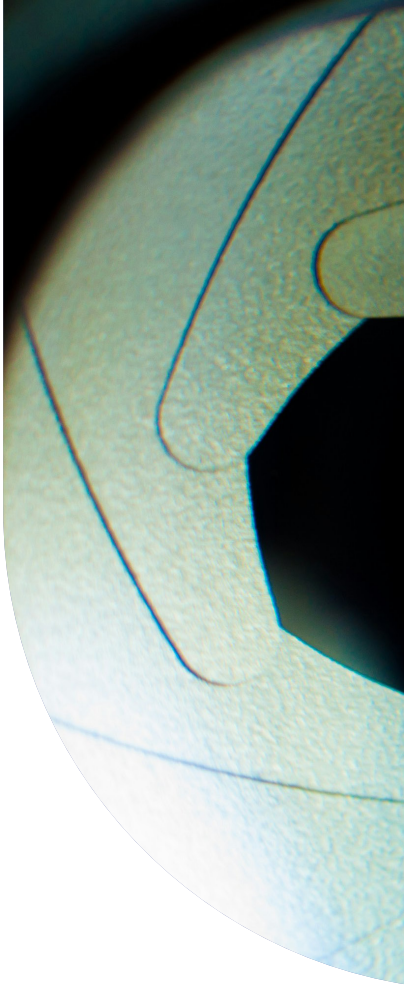
Elapsed Time Counter (ETC)

Protected Against Reverse Voltage

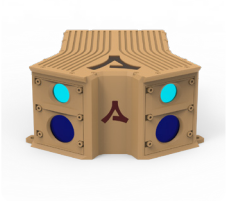


AGGÖZ

ELECTRO-OPTICAL SIGHT SYSTEMS



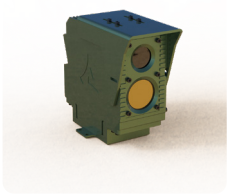
SAVS | SITUATIONAL AWARNESS VISION SYSTEMS



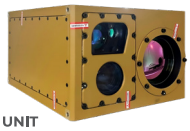
DSU | DRIVER SIGHT UNIT

LDSU | LONG DISTANCE SIGHT UNIT

DVU | DRIVER VISION UNIT



CLDSU | COOLED LONG DISTANCE SIGHT UNIT



TED | THERMAL BINOCULARS

AGGÖZ

TWS-8 | THERMAL WEAPON SIGHT

AGGÖZ

VTS | VISUAL TARGETING SYSTEM

AGGÖZ

TWS-50 | THERMAL WEAPON SIGHT

AGGÖZ

GIMBAL 275

AGGÖZ

UMV/NCU | UNMANNED MARINE VESSEL / NAVIGATION CAMERA UNIT

AGGÖZ

GIMBAL 275 HELI

AGGÖZ OPERATIONAL CONCEPTS

Strategic Surveillance

Ongoing monitoring and assessment of critical regions are essential. Ensure persistent strategic oversight of primary areas to track adversarial actions and implement preemptive defense strategies.

Coordinated Attacks

Enhances the coordination and efficacy of military operations by accurately identifying and tracking targets. This system offers persistent surveillance capability during daylight, allowing for the early identification of potential threats and supporting synchronized offensive actions.

Operational Flexibility

It adjusts to diverse operational settings and situations through adaptable technology integration and configuration. Enhances operational adaptability by interfacing with command and control systems for real-time information exchange and target coordination.

Reconnaissance

Perform comprehensive reconnaissance missions to collect intelligence on adversary activities and support informed decision-making. Delivers essential insights for strategic command decisions, thereby enhancing the effectiveness of operational planning and execution.

Target Identification

Ensures precise and prompt identification of adversary components to enable accurate targeting and operational decision-making. Offers enhanced clarity and resolution in low-light or obscured visibility conditions, ensuring dependable target identification even under adverse weather circumstances.

Scenario: Ground Defence Operation

Time: Night

Location: Border area, rough terrain

Unit Commander: Land Forces Commander

Reconnaissance Officer: Intelligence and Reconnaissance Officer

Technical Expert: Operator of long-range vision systems

Scenario Description

The Unit Commander, stationed at a military installation in the border region, evaluates the status of the troops on night patrol upon receiving an intelligence report. The report indicates that enemy forces across the border might be mobilizing.

Reconnaissance Mission

The Unit Commander designates the Reconnaissance Officer to oversee a reconnaissance team, which is equipped with the Long Range Vision System, to confirm enemy activity.

Target Identification

The reconnaissance team navigates challenging terrain employing the Long Range Vision System to detect heat signatures of enemy positions. The Technical Specialist analyzes and documents enemy positions through thermal imagery acquired from the system.

Surveillance and Monitoring

The reconnaissance team maintains ongoing observation and surveillance of identified enemy positions with the Long Range Vision System to track enemy force movements during daylight, thereby enhancing operational visibility.

Decision

The unit commander evaluates the intelligence on enemy movements and makes operational decisions. He directs the preparation of air support and, if required, coordinates the deployment of artillery units.

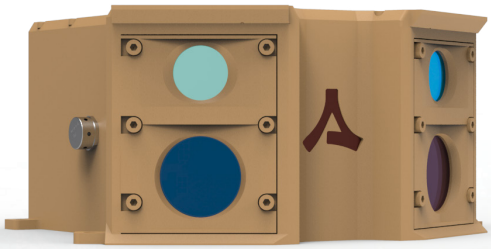
Conclusion

Under the Troop Commander's leadership, the ground forces effectively track and detect enemy movements using the capabilities of Long Range Vision Systems, thereby securing the border. This situation illustrates the role of technology in military operations and its adaptability to contemporary battlefield environments. It highlights how Long Range Vision Systems contribute significantly to land defense operations, enhancing situational awareness and operational efficiency in military settings.

AGGÖZ

SAVS | SITUATIONAL AWARNESS VISION SYSTEMS

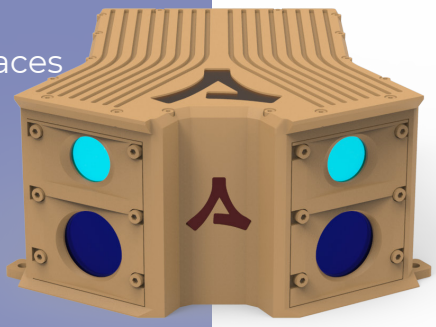
The AGGÖZ Environmental Vision System (SAVS) is engineered for land vehicles to deliver comprehensive 360-degree situational awareness for the crew in all weather conditions, both day and night. Based on user requirements, digital images captured from various configurations of thermal, day vision, and near-infrared (NIR) cameras are transmitted to the user interface via the system's image processing unit. Additionally, an alternative solution includes a laser-illuminated day vision camera or NIR camera.

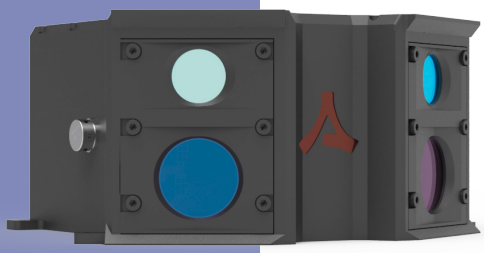


According to user requirements and mission conditions, the system offers the option of 360-degree imaging through the use of single, dual, or triple camera modules surrounding the vehicle. The system integrates images from these camera modules to deliver comprehensive peripheral vision and enhance security.

GENERAL FEATURES

- System can be configured with any combination of thermal camera, Day camera, NIR camera and laser illuminator according to customers requirements
- Combined images from different combinations of single, double and triple camera blocks
- Standard 60-degree – Customized images with optional different FOVs
- Video transfer capability via analog and Ethernet interfaces
- Simultaneously multiple video transfer
- Adaptable with modular systems
- Fusion view with Day TV camera and thermal camera
- Artificial intelligence applications
    - o Object classification and recognition
    - o Moving object tracking
- Video recording and playback capability
- Real time image processing capability
- Multiple images transfer capability to the monitor
- Panoramic image generation capability
- Video compression capability
- Integration capability with other imaging systems of the vehicle platform





AGGÖZ SAVS has capabilities to increase awareness, support driver sight, detect threats and warn the driver with the help of innovative artificialintelligence and image processing capabilities.

AGGÖZ

LDSU | LONG DISTANCE SIGHT UNIT

AGGÖZ LONG DISTANCE SIGHT UNIT

AGGÖZ Long Distance Sight Unit (LDSU) is designed to meet tactical field requirements in all weather conditions as well as day and night operational capability.

This system, thanks to the optical design with continuous zoom and high sensitivity to temperature difference, provides solutions aimed at identification and real-time tracking capability to military surveillance concept of operations.

AGGOZ LDSU, which incorporates Uncooled IR camera operating at Infrared Band and Full HD day camera, provides a complete system by integrating additional features such as object detection and classification, moving target tracking and symbology.

The system is designed to withstand harsh environmental conditions and can be controlled by operator or user computer.

AREA OF USE

- Border surveillance
- Long range surveillance
- Reconnaissance

GENERAL FEATURES

Accessories

Optical Cleaning Kit

Carry Case

TECHNICAL SPECIFICATIONS

Thermal Camera

Type: Uncooled LWIR

Resolution (H x W): 640 x 512

Pixel Pitch: 17 µm

Detector Wavelength: 8 – 14 µm

NETD: < 35 mK (@F#=1.0)

Focus Length: 30 mm-150 mm

Horizontal Field of View (Wide/Narrow): 20.6° × 16.5° /4.1° (±10%)

Focus: Automatic

Color Daylight Camera

Resolution: 1920 x 1080

Focus Length(mm): 5.5-180 (±%10) Continuous Zoom

Field of view (Wide / Narrow): 60.5°(±%10) / 2.3° (±%10)

Focus: Automatic / Manuel

Laser Range Finder

Wavelength: 1.5 µm

Measurement Sensitivity: ±0.5 m

Range (m): 3 – 12000 m

Interface

Power Interface: 20-33 VDC

Video Output: Ethernet, HD-SDI

Communication Interface: RS422, Ethernet

System Specifications

Operation Temperature: -32 C°, +55 C°

Storage Temperature: -40 C°, +60 C°

Enviromental Conditions: MIL-STD-810 Compatible

Voltage Protection: MIL-STD-1275E Compatible

Ingress protection: IP67

CLDSU | COOLED LONG DISTANCE SIGHT UNIT

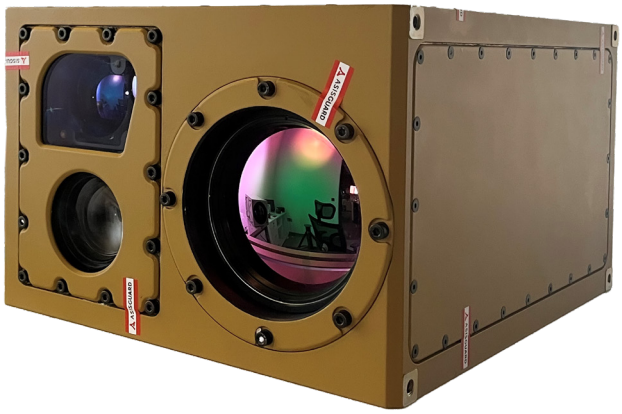
COOLED LONG DISTANCE SIGHT UNIT

AGGÖZ Cooled Long Distance Sight Unit (CLDSU) is designed to meet tactical field requirements in all weather conditions as well as day and night operational capability.

This system, thanks to the optical design with continuous zoom and high sensitivity to temperature difference, provides solutions aimed at identification and real-time tracking capability to military surveillance concept of operations.

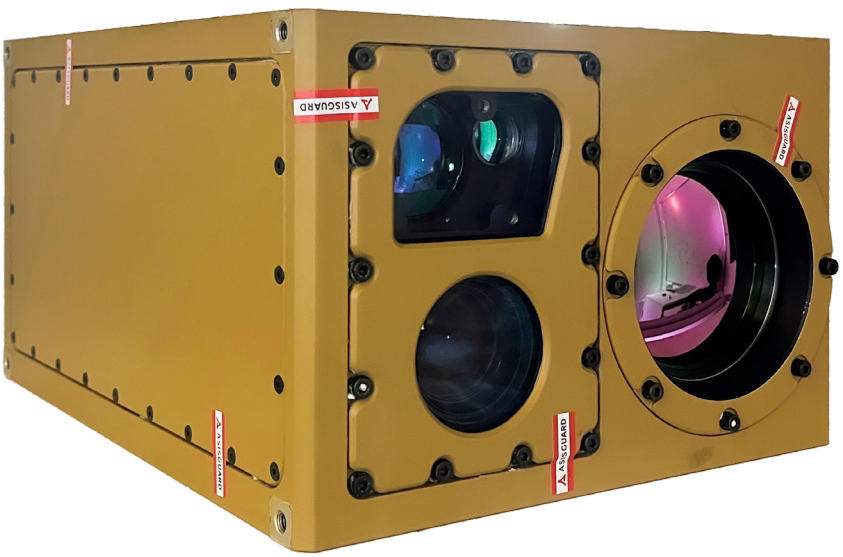
AGGOZ CLDSU, which incorporates Cooled IR camera operating at Infrared Band and Full HD day camera, provides a complete system by integrating additional features such as object detection and classification, moving target tracking and symbology.

The system is designed to withstand harsh environmental conditions and can be controlled by operator or user computer.



AREAS OF USE

- Border surveillance
- Long range surveillance
- Military and civilian vehicles
- Reconnaissance



GENERAL FEATURES

Accessories

Optical Cleaning Kit

Carry Case

TECHNICAL SPECIFICATIONS

Thermal Camera

Type: Cooled MWIR

Resolution (H x W): 640 x 512

Pixel Pitch: 15 µm

Detector Wavelength: 3-5 µm

NETD/Sensitivity: ≤25 mK

System Specifications

Operation Temperature: -32°C, +55°C

Storage Temperature: -40°C, +60°C

Enviromental Conditions:
MIL-STD-810H Compatible

Voltage Protection: MIL-STD-1275E Compatible

Laser Range Finder

Wavelength: 1.5 µm

Measurement Sensitivity: ±0.5m

Range (m): 3-32000m

Color Daylight Camera

Resolution: 1920 x 1080

Focus Length: 5.5-180 (±%10)
Continuous Zoom

Zoom Speed: ≤5 sec

Focus: Automatic / Manuel

Field of view (Wide/Narrow):
60.5°(±%10)/ 2.3° (±%10)

Interface

Power Interface: 20-33VDC

Video Output: Ethernet, HD-SDI

Communication Interface: RS422, Ethernet

DAY TIME TV IMAGE

THERMAL CAMERA IMAGE AT NIGHT

AGGÖZ

DSU | DRIVER SIGHT UNIT

DRIVER SIGHT UNITS

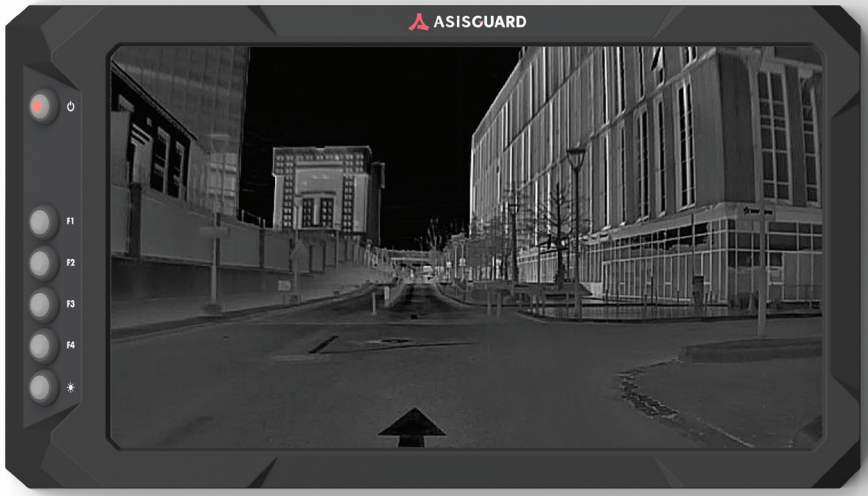
AGGÖZ Driver Sight Units (DSU) is designed for military vehicle platforms and provides safe driving support to the driver by detecting close obstacles in day and night conditions and increasing environmental awareness.

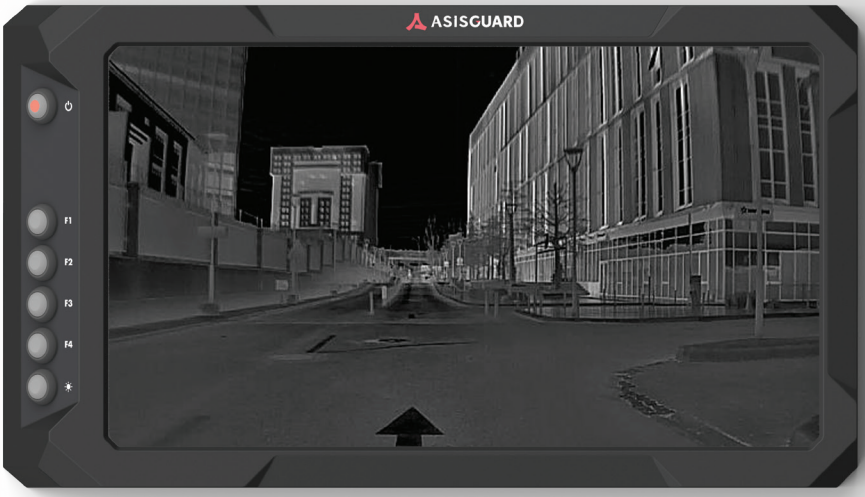
AGGÖZ DSU, which provides the driver front and rear sight capability in all weather conditions, transfers live camera stream to the driver's screen via digital interfaces with high performance Thermal or Thermal + Day Tv options.

AGGÖZ DSU provides a modular design with high resolution camera components and different lens configurations. Therefore, different design solutions can be offered according to the purpose of use.

AREAS OF USE

- Night imaging
- Military and civilian vehicles
- Security
- Reconnaissance





GENERAL FEATURES

Accessories

Optical Cleaning Kit

Carry Case

TECHNICAL SPECIFICATIONS

Thermal Camera

Type: Uncooled LWIR

Resolution: 640 x 512

Pixel Pitch: 17 µm

Detector Wavelength: 8-12 µm

NETD/Sensitivity: ≤35 mK (@F# = 1.0)

Focus: Athermalized Fixed Focus

Viewing Angle (Optional): 90° x 76° (H x V) (±10%)

Interface

Power Interface: 5-12 VDC

Video Output: CVBS

Communication Interface: RS232/RS485

System Specifications

Operating Temperature: 32°C, +55°C

Storage Temperature: -40°C, +60°C

Protection Level: IP67

Environmental Conditions Standard: MIL-STD-810 Compatible

AGGÖZ

DVU | DRIVER VISION UNIT

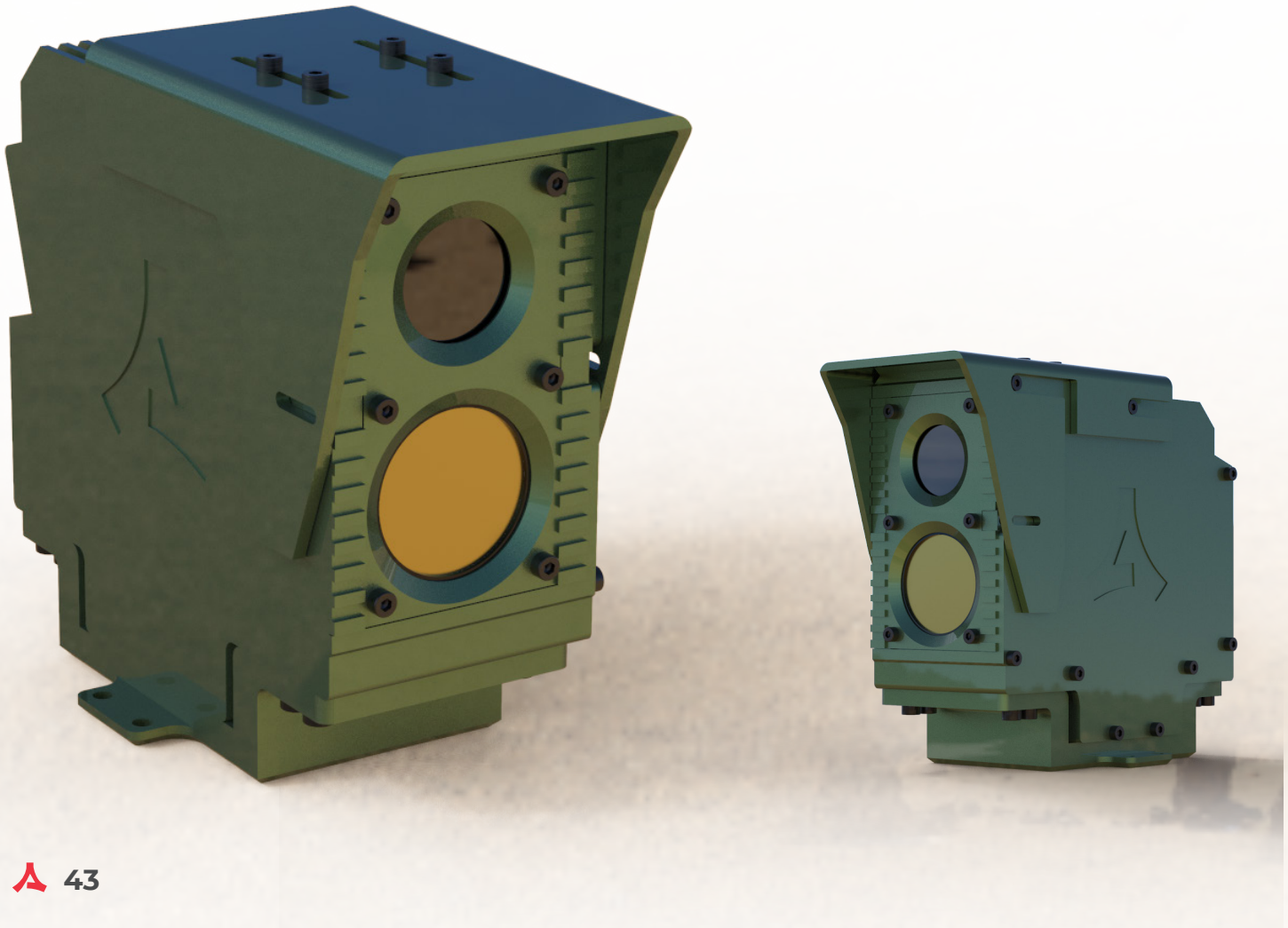
DRIVER VISION UNIT

The Driver Vision Unit offers enhanced and efficient visibility for both military and civilian vehicles through its combination of a day camera and thermal camera unit. It comes with accessories, including an optical cleaning kit for maintaining the thermal window, various mounting fixtures for angled surfaces, and a carrying case.

The thermal camera unit operates in the uncooled LWIR (8-12 µm) wavelength, while the daytime camera unit provides a resolution of 1920x1080. A 10.1-inch monitor with a resolution of 1024 x 600, supporting 4 channels, AHD, and CVBS inputs, is utilized to display the images to the user.

AREAS OF USE

- Military and civilian vehicles



GENERAL FEATURES

Accessories

Optical Cleaning Kit

Mounting Brackets for Angled Surfaces

Carry Case

Display Function

Screen Size: 10.1”

Resolution: 1024 x 600

Video Input Count: 4

Video Signal: AHD, CVBS

TECHNICAL SPECIFICATIONS

Thermal Camera

Type: Uncooled LWIR

Resolution (H x V): 640 x 512

Pixel Range: 17 µm

Detector Wavelength: 8-12 µm

NETD: ≤35mK (@F# = 1.0)

View Angle (Optional):90° x 76° (H x V) (±10%)

Focusing: Fixed Focus

Coloured Daytime Camera

Resolution: 1920 x 1080

Focusing: Fixed Focus

View Angle (Optional) 90° x 59° (H x V) (±10%)

Interface

Monitor Power Interface: 20-33VDC

Camera Video Output: AHD, CVBS

System Features

Operating Temperature: -32°C, +55°C

Storage Temperature: -40°C, +60°C

Protection Level: IP67 (Except Monitor)

Environmental Conditions Standard: Compliant with MIL-STD-810

Voltage Protection: MIL-STD-1275E

AGGÖZ

TED | THERMAL BINOCULARS

THERMAL BINOCULARS

AGGÖZ TED Binoculars, which provide high quality vision from a distance in all weather conditions, day andnight with its cooled type thermal detector, is designed to be an indispensable part of field operations with its high-sensitive location finding feature, light and compact design, and long usage time provided on a single charge.

- Medium wave infrared sensor
- Thermal continuous zoom capability
- Day continuous zoom capability
- Laser range finder
- Global navigation satellite (GNSS)

GENERAL FEATURES

Areas of Use

Border Surveillance

Long Distance Surveillance

Coast Guard

Reconnaissance

Security

Environmental Conditions

Operating Temperature: -30°C to +55°C

Storage Temperature: -40°C to +60°C

Environmental Conditions Standard: MIL-STD-810 G

SYSTEM FEATURES

Type: Cooled

Resolution: 640 x 512

Focus: Electrical Focus/Auto Focus

Display: Binocular OLED, 1280 x 1024, Adjustable Diopter

Polarity: Black Hot/White Hot

Storage: Internal 32 GB

Working Time: ≥5 Hours (At Normal Temperature)

Protection Level: IP67

Weight (Including Battery): ≤3.9 Kg

TWS-8 | THERMAL WEAPON SIGHT

THERMAL WEAPON SIGHT

AGGOZ TWS-8 Thermal Weapon Sight, which has a clip-on feature, is light, resistant to harsh environmental conditions, can be easily attached to and removed from the weapon, can record photos and videos, can work for 5 hours or more with a single battery, has a high-resolution display screen, and has high shock resistance. It is designed to provide high-accuracy shooting capability to snipers at night.

With its Clip-on feature, AGGÖZ TSD provides thermal vision to day sights in night conditions.

Thermal Sight

Superior Performance

Lightweight And Compact Design

AGGÖZ TSD offers uninterrupted operation with rechargeable lithium-ion batteries.

GENERAL FEATURES

- Lightweight and compact design
- Clip-on feature
- Superior performance in harsh environmental conditions
- Video and photo recording feature
- 9 different palette options

Areas of Use

- Long Range Surveillance
- Reconnaissance
- Security Units

Environmental Conditions

- Operating Temperature: -40°C to +60°C
- Storage Temperature : -45°C to +65°C
- Environmental Standard: MIL-STD-810H

TECHNICAL SPECIFICATIONS

- 2 pieces 18650 Li-Ion Battery
- Working Time: <5 hours (with 2500mAh Battery)
  <8 hours (with 3500mAh Battery)
- Operating Temperature: -40°C ~+60°C
- Storage Temperature : -45°C ~+65°C
- Weight: ≤710 g (excluding batteries)
- Dimensions: 251x70x91mm
- Protection Class: IP67
- Target Detection Distance: <2400 m feature

Thermal Imaging Performance

- Sensor Type: Uncooled Microbolometer
- Spectral Band: 8-12 µm
- Pixel Pitch : 12 µm
- Resolution : 640 x 480 px
- NETD: ≤ 25 mK
- Objective Lens: 50 mm F1.0
- Field of View (Horizontal x Vertical)
  8.8°x6.6° (±10%)
- Frame Rate: 50 Hz

TWS-50 | THERMAL WEAPON SIGHT

THERMAL WEAPON SIGHT

The Thermal Weapon Scope (TWS) is engineered for deployment on infantry and sniper rifles. Its compact, monocular design, combined with advanced sniper features such as a laser rangefinder and an uncooled thermal camera, enables effective use in nocturnal conditions.

AREAS OF USE

- Weapon mounted scope
- Security
- Discovery

GENERAL FEATURES

Accessories

Lens and Ocular Protection Covers

Optical Cleaning Kit

Carry Case

TECHNICAL SPECIFICATIONS

Thermal Camera

Type: Uncooled LWIR

Resolution (H x V): 640 × 512

Pixel Range: 12 µm

Detector Wavelength: 8-12µm

NETD: <35mk (@25°C, F#=1.0)

Focus Distance: 50 mm

View Angle (Optional): 8.80° x 7.03° (±10%)

Focusing: Manual

Zoom: Manual

Digital Zoom: x2, x4, x8

Laser Range Finder

Wavelength: 905 nm

Measure Precision: ±2m

Measurement Range (m): 10m – 600m

Interface

Power Interface: 2 x 18650 Li-ion

Video Output: CVBS, 1024 x 768
Monocular OLED

System Features

External Power: 5VDC/2A

Operating Temperature: -32°C, +55°C

Storage Temperature: -40°C, +60°C

Protection Level: IP67

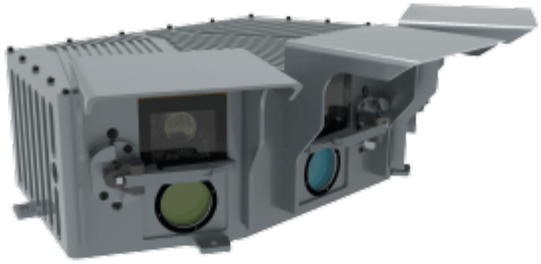
Environmental Conditions Standard:
Compliant with MIL-STD-810

Operating Time: >8 hours

UMV/NCU | UNMANNED MARINE VESSEL / NAVIGATION CAMERA UNIT

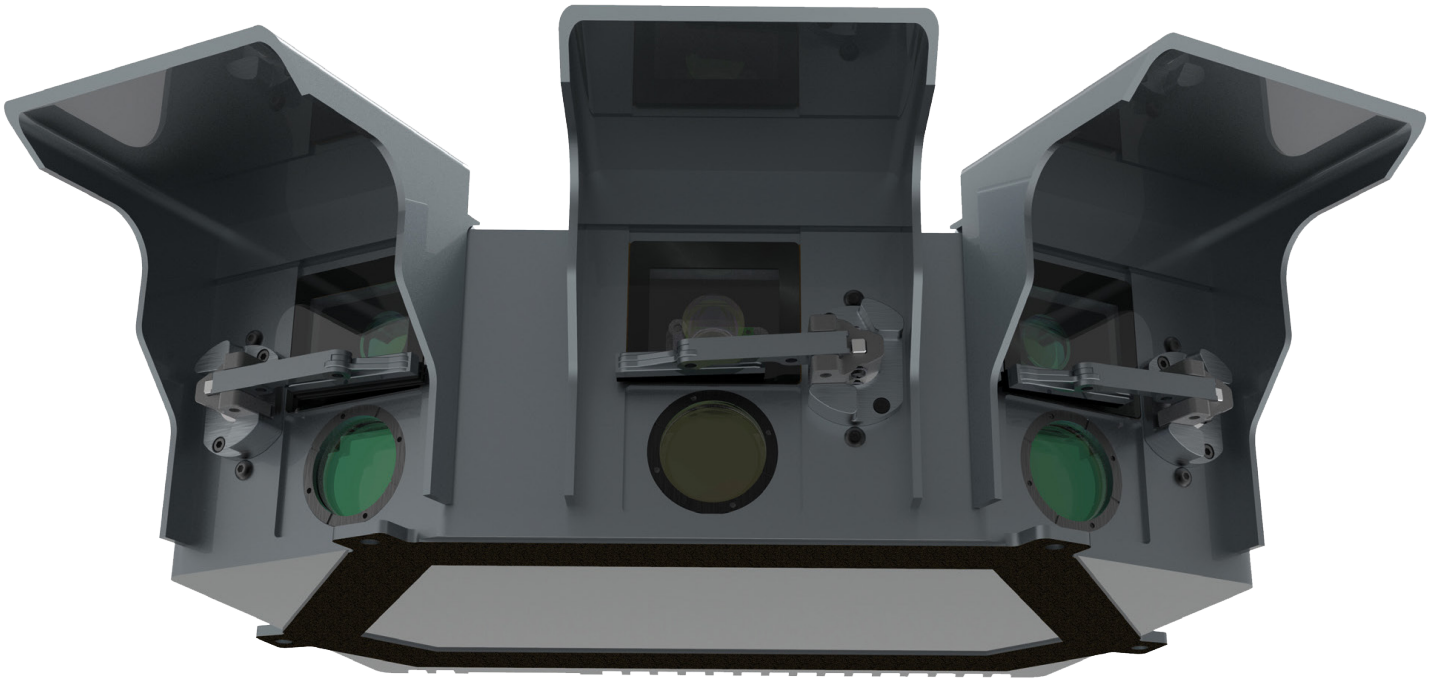
UNMANNED MARINE VESSEL / NAVIGATION CAMERA UNIT

The Unmanned Maritime Vehicle and Navigation Camera Unit addresses the most demanding defense and security scenarios. It is a domestically developed Environmental Surveillance System designed for military marine vehicles. The system comprises three primary components: a 360° Imaging System, the UMV/NCU Image Processing Unit, and Virtual Vision Goggles Integration. It facilitates early detection of close-range asymmetric threats in irregular warfare situations, allowing for prompt countermeasures by remote operators or autonomous systems.



AREAS OF USE

- Environmental surveillance
- Security
- Reconnaissance
- Armed Forces and Security Units



GENERAL FEATURES

Accessories

Optical Cleaning Kit

Carry Case

TECHNICAL SPECIFICATIONS

Thermal Camera

Type: Non-cooled

Resolution (H x V): 640 x 512

Pixel Range: 17 µm

Detector Wavelength: LWIR (8-14 µm)

NETD: <50mK

Camera-1 View Angle (H): 60° ±10%

Camera-2 View Angle (H): 40° ±10%

Camera-3 View Angle (H): 60° ±10%

Focusing: Fixed Focus

Digital Zoom: x2

Coloured Daytime Camera

Resolution: 1920 x 1080

Camera-1 View Angle (H): 60° +10%

Camera-2 View Angle (H): 40° +10%

Camera-3 View Angle (H): 60° +10%

Focusing: Fixed Focus

Digital Zoom: x2

Interface

Power Interface: 20-32 VDC

Video Output: Ethernet

Communication Interface:Ethernet

System Features

Operating Temperature: -15°C, +55°C

Storage Temperature: -40°C to +70°C

Protection Level: IP67

Environmental Conditions Standard: Compliant with MIL-STD-810

Voltage Protection: Compliant MIL-STD-1275E

Frame Rate: 25 (+2) fps

AGGÖZ

VTS | VISUAL TARGETING SYSTEM

VISUAL TARGETING SYSTEM

The Visual Targeting System (VTS) is an electro-optical apparatus incorporating Laser Rangefinder and Thermal Camera units. It is intended for target identification and distance measurement of detected targets during border surveillance, long-range observation, coast guard operations, and reconnaissance, applicable in both daytime and nighttime conditions.

AREAS OF USE

- Border surveillance
- Long distance surveillance
- Reconnaissance

GENERAL FEATURES

Accessories

Lens and Ocular Protection Covers

Optical Cleaning Kit

Carry Case

TECHNICAL SPECIFICATIONS

Thermal Camera

Type: Uncooled LWIR

Resolution (H x V): 640 × 512

Pixel Range: 17 µm

Detector Wavelength: 8-14 µm

NETD: <35 mk (@F#=1.0)

Focus Distance: 30-150 mm

View Angle (Wide/Narrow):20.6° (±%10) / 4.1° (±%10)

Focusing: Automatic

Laser Range Finder

Wavelength: 1.5µm

Measure Accuracy: 0,1-1m

Measurement Range (m): 3 – 12000m

Interface

Power Interface: 20-33VDC

Video Output: Ethernet, 1920x1080 Binocular OLED

Communication Interface: RS422

System Features

Operating Temperature: -32°C, +55°C

Storage Temperature: -40°C, +60°C

Protection Level: IP67

Environmental Conditions Standard: Compliant with MIL-STD-810

Voltage Protection: Compliant with MIL-STD-1275E

GIMBAL 275

AGG-M-275-PRF

The gimbal system, installed on either a stationary or mobile platform, allows the operator or computer to aim the mounted payload at the intended target. It is engineered for the detection, identification, and tracking of targets and threats in both daylight and nighttime conditions through image enhancement technology.

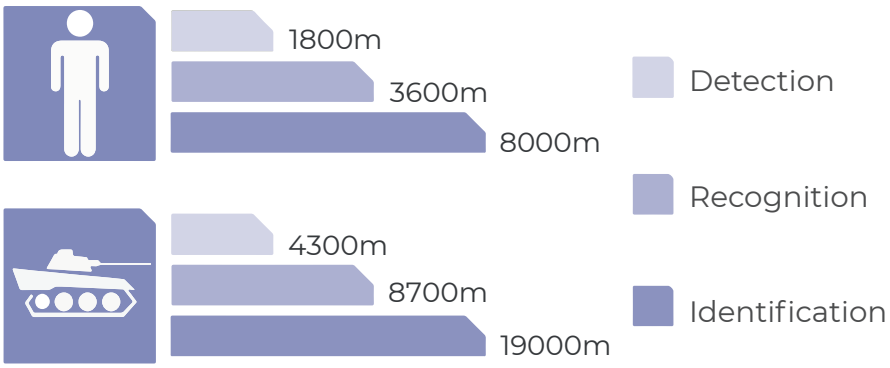
The gimbal unit comprises the following components:

- A cooled thermal camera (MWIR) for enhanced night vision and performance in adverse weather conditions (such as fog and smoke).
- A high-resolution daytime camera for use during daylight conditions.
- A laser rangefinder to provide the user with coordinate and distance information of the identified target.

It is a stabilized system that offers two-axis movement in Pitch (horizontal) and Yaw (vertical) directions, and can adjust up/down and left/right based on the connection interface to meet specified requirements .

AREAS OF USE

- Manned/unmanned aerial vehicles
- Unmanned ground vehicles
- Armed/unarmed systems
- Target tracking
- Long distance surveillance



General Features

2 Axis Movement (Yaw, Pitch)
3 Axis Stabilisation

Yaw: 360° continuous

Pitch: -90°; +20°

Stabilisation Performance: < 90 uRad(rms)

Target Tracking: Yes (Single Target)

Command Interface Type: Ethernet

Operating Temp.: -20°C / +55°C

Video Output: Ethernet

Power Output: 18-32 VDC

Weight: <3.5 Kg

Carry Case

Daytime Camera Features

Detector Type: CMOS

Detector Format: 1920 x 1080

Optik Zoom: 30x

Viewing Angle Continuous Magnification;
Wide Fov (Horizontal): 27°(±%10)
Narrow Fov (Horizontal): 1.9°(±%10)

Thermal Camera Features

Detector Type: Cooled, (3-5 µm) MWIR

Detector Format: 640 x 512

Pixel Range: 15 µm

Viewing Angle Continuous Magnification;
Wide Fov (Horizontal): 61.2°(±%10)
Narrow Fov (Horizontal): 2.2°(±%10)

Optical Zoom: 13x

Electronic Zoom: 4x

Laser Illuminator

Output Power: Min. 30 mW

Wavelength: 800-860 nm

Lazer Range Finder

Wavelength: 1.5 µm

Type: Class III, Eye Safe

Sensitivity: <± 1m

Measuring Distance: 5000m (Nato Target)
10000m (Beam Filling Target)

GIMBAL 275 HELI

AGG-M-275-RF-HELI

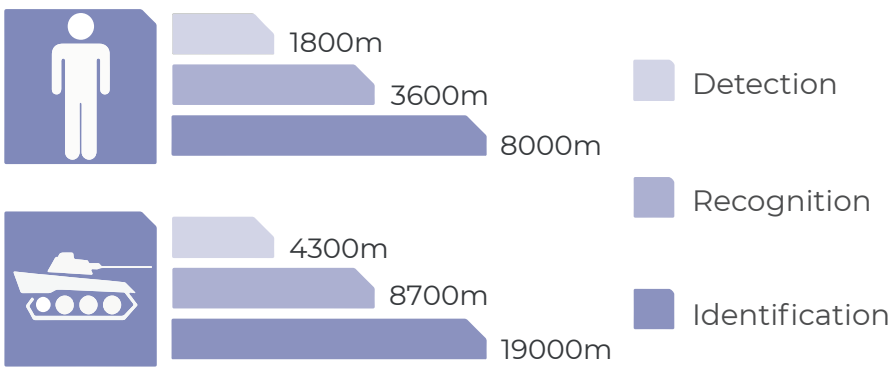
The gimbal system, affixed to either a stationary or mobile platform, enables the operator or computer to aim the payload at specified targets. It is engineered to detect, identify, and track targets and threats in both daylight and nocturnal conditions, utilizing image enhancement technology.

The gimbal unit comprises the following components:

- A cooled thermal camera (MWIR) for enhanced night vision and operation in adverse weather conditions (such as fog and smoke).
- A high-resolution daytime camera for use in daylight conditions.
- A laser rangefinder to convey the coordinate and distance information of the identified target to the user.
- A damping component designed to mitigate vibrations.

It is a stabilized system that facilitates movement along two axes: Pitch (horizontal) and Yaw (vertical). It is capable of adjusting both vertically (up/down) and horizontally (left/right) in accordance with the connection interface and specified requirements.

- **AREAS OF USE**
- Manned/unmanned aerial vehicles
- Unmanned ground vehicles
- Armed/unarmed systems
- Target tracking
- Long distance surveillance



General Features

2 Axis Movement (Yaw, Pitch)
3 Axis Stabilisation

Yaw: 360° continuous

Pitch: -90°; +20°

Stabilisation Performance: < 90 uRad(rms)

Target Tracking: Yes (Single Target)

Command Interface Type: Ethernet

Operating Temp.: -20°C / +55°C

Video Output: Ethernet

Power Output: 18-32 VDC

Weight: <7 Kg

Carry Case

Robust and Durable Design Suitable for Helicopter Environmental Conditions

Daytime Camera Features

Detector Type: CMOS

Detector Format: 1920 x 1080

Optical Zoom: 30x

Viewing Angle Continuous Magnification;
Wide Fov (Horizontal): 61.2°(±%10)
Narrow Fov (Horizontal): 2.2°(±%10)

Thermal Camera Features

Detector Type: Cooled, (3-5 µm) MWIR

Detector Format: 640 x 512

Pixel Range: 15 µm

Viewing Angle Continuous Magnification;
Wide Fov (Horizontal): 27°(±%10)
Narrow Fov (Horizontal): 1.9°(±%10)

Optical Zoom: 15x

Electronic Zoom: 4x

Laser Range Finder

Wavelength: 1.5 µm

Tip: Class III, Eye Safe

Sensitivity: <± 1m

Measuring Distance: 5000m (Nato Target)
10000m (Beam Filling Target)

SONGAR™

DRONE SYSTEMS

SONGAR™ 5.56 X 45 MM Assault Rifle

SONGAR™ 2 X 40 MM Grenade Launcher

SONGAR™ 6 X 40 MM Drum Type Grenade Launcher

SONGAR™ 3 X 81 MM Mortar Gripper

SONGAR™ 8 X Tear / Smoke Grenade Launcher

SONGAR OPERATIONAL CONCEPTS

ATTACK

Coordinated Attacks

SONGAR can be used to coordinate attacks with other military assets, such as ground troops or other drones, to create a more comprehensive ambush strategy. This coordination can increase the likelihood of a successful outcome.

Force Multiplication

SONGAR can act as force multipliers by providing additional firepower and support to ground troops. This can enhance the overall effectiveness of an ambush, especially in asymmetric warfare scenarios.

Suprise and Stealth

SONGAR can be deployed stealthily, allowing forces to launch a surprise attack without revealing their location or presence. This element of surprise is crucial in an ambush, enabling a higher chance of success.

DEFENSE

Diversion and Distraction

SONGAR can create diversions or distractions to draw enemy attention away from the movement of friendly forces. This can help minimize the risk of detection.

Surveillance and Intelligence

Before launching an ambush, SONGAR can be used for reconnaissance and surveillance, providing real-time intelligence on enemy movements, positions, and activities. This information is crucial for planning a successful ambush.

Flexibility and Rapid Response

SONGAR offers flexibility in terms of deployment and can be rapidly redeployed to different locations as needed. This ability to adapt quickly is beneficial in ambush scenarios, where timing and mobility are critical.

Scenario: Neutralizing a High-Value Target in a Remote Location

Objective:

A military unit has identified a high-ranking enemy leader who frequently travels through a remote mountainous region to inspect operations and meet with field commanders. The objective is to ambush the leader's convoy without causing excessive collateral damage or risking troops on the ground.

Preparation and Planning

Intelligence Gathering:

SONGAR deployed to monitor the enemy leader's movements and identify his routine travel routes. Surveillance data indicates a narrow mountain pass where the convoy is most vulnerable.

Strategic Positioning:

SONGAR determine the optimal location for the ambush. They choose a point along the mountain pass where the terrain provides natural cover and limited escape routes for the enemy convoy.

Coordination with Ground Forces:

While the focus is on SONGAR, a small team of special forces operators is positioned at a safe distance to provide support if needed and to confirm the success of the ambush.

Execution

Triggering the Ambush:

On the operation time , SONGAR launched and positioned over the mountain pass. SONGAR operators wait for the target convoy to enter the designated kill zone.

Initial Strike:

When the convoy reaches the ambush point, SONGAR launch a coordinated attack. The drones target the lead and rear vehicles to block the convoy's escape routes.

Follow-Up Attacks:

Once the convoy is immobilized, SONGAR focus on key assets within the convoy, such as armed escorts or communication vehicles, to prevent retaliation or calls for reinforcements.

Diversions and Suppression:

To maintain control of the situation, additional SONGAR drops smoke bombs and engage any hostile forces attempting to counterattack or escape.

Extraction and Aftermath

Safety and Rapid Extraction:

With the convoy neutralized, the ground team verifies the status of the high-value target and retrieves any important intelligence. SONGAR provide overhead security to ensure a safe extraction.

Post-Operation Surveillance:

After the ambush, SONGAR continue to monitor the area for enemy reinforcements or other developments. This ongoing surveillance helps assess the impact of the operation and provides valuable intelligence for future missions.

Outcome

The ambush achieves its objective by eliminating the high-value target and disrupting enemy operations with minimal risk to friendly forces. SONGAR allows for a precision attack, reducing the need for large troop deployments and lowering the risk of casualties.

SONGAR™

SONGAR™

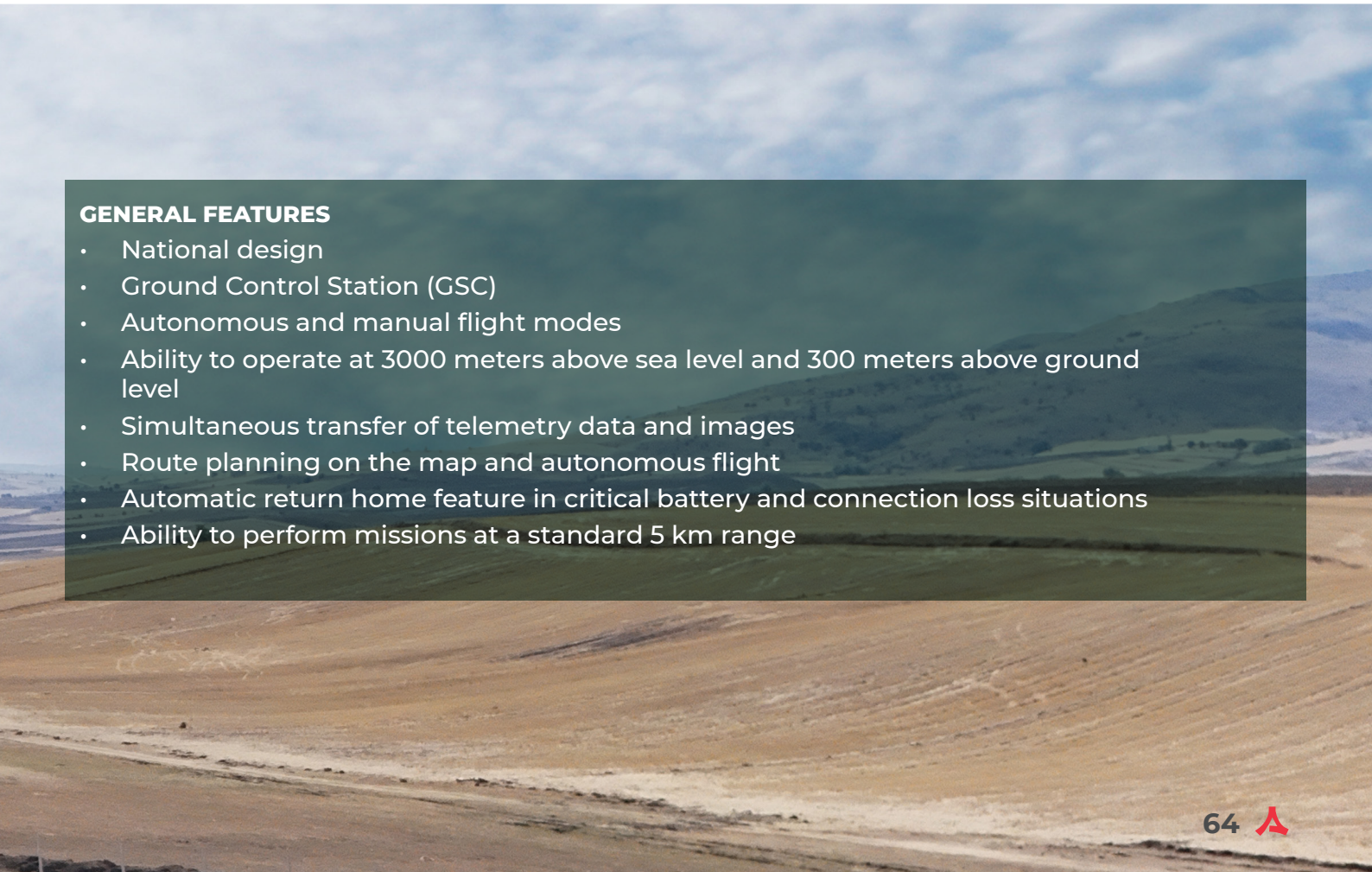
is a remotely-operated armed drone system, the **first** of its kind developed **indigenously** for the **Turkish Armed Forces'** inventory.

Designed for effective deployment across a wide range of military and security operations, SONGAR is capable of both day and night missions. It can operate within a 5 km radius and up to an altitude of 3000 meters mean sea level (MSL).

SONGAR is built with ergonomic and user-friendly features to minimize operator workload during critical tasks, such as executing return-to-home procedures in the event of a lost link, re-tasking mid-flight, and switching between autonomous and manual flight modes.

The SONGAR Ground Control Station is optimized for effective drone operation, featuring a compact, portable design suitable for tactical field use. During operations, real-time camera feed, flight telemetry, and mission mapping are displayed simultaneously and can be recorded effortlessly. The Ground Control Station enables mission-critical functions, including starting and stopping recordings and reviewing previously captured data.

Currently fielded by the Turkish Armed Forces, SONGAR is operated by highly skilled military personnel.



GENERAL FEATURES

- National design
- Ground Control Station (GSC)
- Autonomous and manual flight modes
- Ability to operate at 3000 meters above sea level and 300 meters above ground level
- Simultaneous transfer of telemetry data and images
- Route planning on the map and autonomous flight
- Automatic return home feature in critical battery and connection loss situations
- Ability to perform missions at a standard 5 km range

SONGAR™

5.56 X 45 MM ASSAULT RIFLE

BEYOND THE BORDER

The SONGAR drone technology is **Turkey's first armed drone system** designed for assault purposes.

SONGAR is actively deployed within the inventories of the **Turkish Armed Forces** and the **General Directorate of Security.** The SONGAR armed drone technology is also operational in the inventory of several allied and partner nations.

FEATURES

- National Design
- Barrel rotation between +5 degrees and -45 degrees on elevation axis
- Close air support capability for critical military installations
- Ability to perform 35 minutes of duty without payload
- Rapid response to known threats
- Multi-layered firing safety measures until operator's authorization is received
- Gimbaled Automatic Firing System (GOAS)
- Compatibility with in-service 5.56 caliber 45 mm NATO standard firearms

SONCAR™

SONGAR™

2 x 40 MM GRENADE LAUNCHER

FEATURES

- National Design
- Close air support capability for critical military installations
- Rapid response to known threats
- Firing up to 2 grenades
- 400-450 meters of effective range
- Launcher rotation between +5 degrees and -90 degrees on elevation axis
- Ability to perform 35 minutes of duty without payload
- Multi-layered firing safety measures until operator's authorization is received

SONGAR™

SONGAR™

6 x 40 MM DRUM TYPE GRENADE LAUNCHER

FEATURES

- National Design
- Close air support capability for critical military installations
- Rapid response to known threats
- Firing up to 6 grenades
- 400-450 meters of effective range
- Launcher rotation between +5 degrees and -90 degrees on elevation axis
- Ability to perform 35 minutes of duty without payload
- Multi-layered firing safety measures until operator's authorization is received

SONGAR™

SONGAR™

3 x 81 MM MORTAR LAUNCHER

FEATURES

- National Design
- Operational Capability Against Mobile Targets
- Internal Security and Close Air Support
- Effective Destruction Radius
- Triple Mortar Hold-and-Release Mechanism
- Multi-layered firing safety measures until operator's authorization is received
- Ability to perform 35 minutes of duty without payload

SONGAR™

SONGAR™

8 X TEAR / SMOKE GRENADE LAUNCHER

FEATURES

Sliding map and mission planning in autonomous flight

Capable of conducting operations within a 5-kilometer range

Firing up to 8 grenades

Executes direct impact on target through controlled free-fall deployment

Multi-layered firing safety measures until operator's authorization is received

Ability to perform 35 minutes of duty without payload

SONGAR TM

DOGAY™

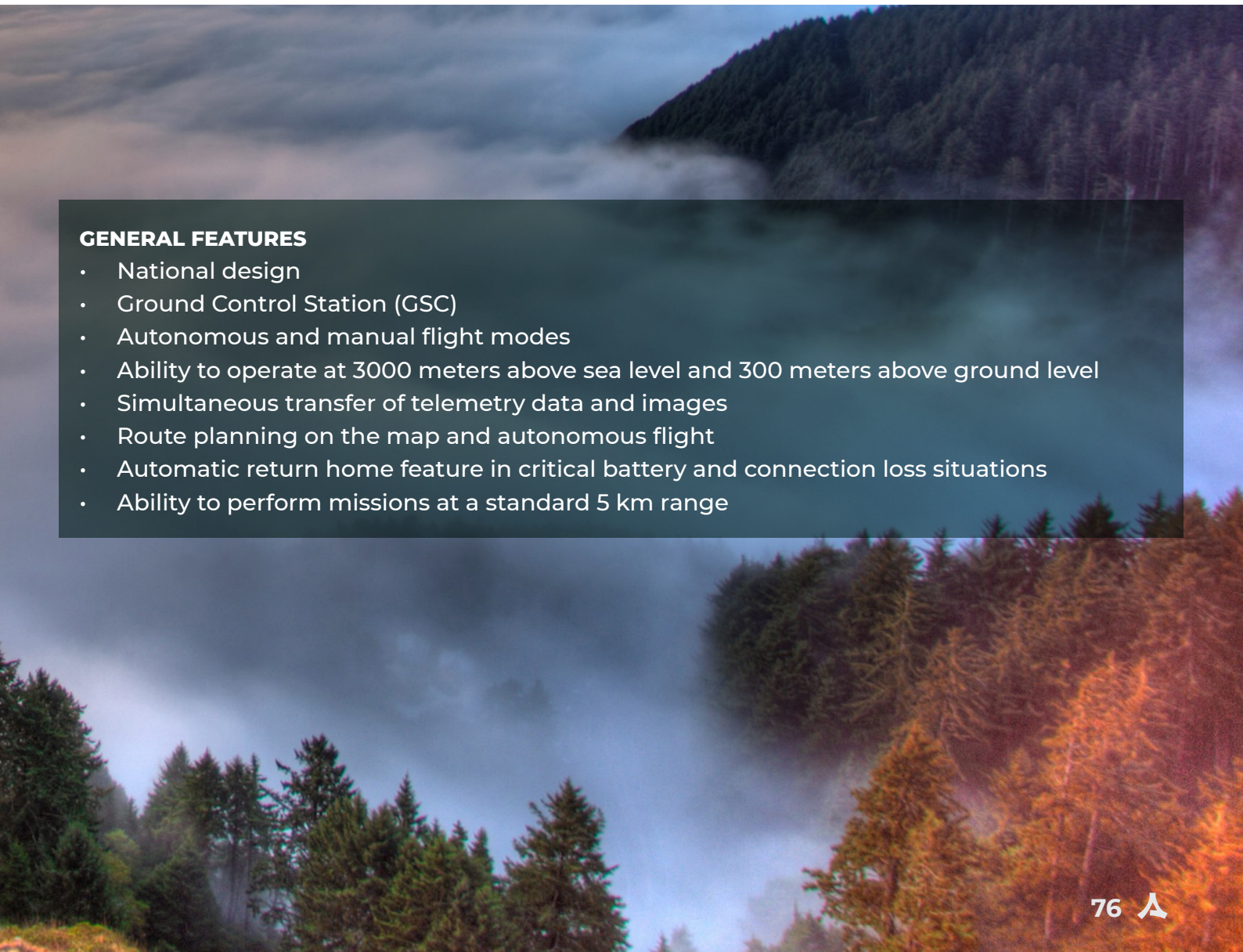
THE FIRST LIGHT OF FUTURE VICTORIES

DOGAY™

Dogay is an innovative drone developed by ASİSGUARD for day and night ISR (Intelligence, Surveillance, and Reconnaissance) operations. Thanks to its high maneuverability, it provides effective operational capabilities even in challenging weather conditions, ensuring real-time imagery and information flow.

Flightwithout payload duration of up to 70 minutes, it becomes a reliable intelligence asset that enhances your operational decision-making. The advance gimbal system, featuring day and thermal cameras, provides precise target identification, ensuring timely and informed decisions in dynamic operational environments.

Dogay is the architect of your future victories by providing the first light that forms the basis of every operation. It is an ideal choice for military professionals seeking a powerful and effective solution.



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- Ground Control Station (GSC)
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- Ability to operate at 3000 meters above sea level and 300 meters above ground level
- Simultaneous transfer of telemetry data and images
- Route planning on the map and autonomous flight
- Automatic return home feature in critical battery and connection loss situations
- Ability to perform missions at a standard 5 km range

DOGAY™

SURVEILLANCE DRONE

FEATURES

- National design
- Day and night surveillance capability
- Continuous data transfer
- Anti-vibration mechanical stabilization system
- Target tracking algorithm
- Capability to conduct missions for 70 minutes without payload
- Anti-jamming

DOOGAY™

DOGAY™

81 MM SINGLE MORTAR LAUNCHER

FEATURES

- National design
- Internal security and close air support
- Effective destruction radius
- Single mortar grab and release mechanism
- Mechanical and software ignition precautions
- Capability to conduct missions for 70 minutes without payload
- Day tv / thermal gymbal

DOOGAY™

SAGAN OPERATIONAL CONCEPTS

Precision Strikes

SAGAN can be used for precision-guided attacks on enemy infrastructure, vehicles, equipment, or personnel. These drones allow for highly targeted strikes, reducing the risk to human pilots and minimizing collateral damage compared to larger weapons.

Suppression of Enemy Defenses

SAGAN designed for one-way missions can be used to overwhelm or disrupt enemy air defense systems, radar installations, or communication networks. The goal is to create confusion and reduce the effectiveness of enemy defenses.

Decoy Operations

SAGAN can be used as decoys to divert enemy attention or simulate an attack, thereby enabling other military operations to proceed with reduced risk of detection or interference.

Extended Flight
TimeUpgraded batteries for prolonged mission duration

Enhanced Firepower
High-explosive/dual-purpose shaped charges for anti-vehicle and anti-materiel use

Blast/fragmentation munitions for anti-personnel operations

Improved Agility
Enhanced speed and maneuverability for superior tactical performance

Optimized Management
Redundant flight navigation with inertial navigation system for reliable control

Advanced Targeting
HD and low-light cameras for precise target acquisition and reconnaissance

Extended Range Control
Primary antenna for robust communication, navigation, and flight control

Specialized Missions

In scenarios where traditional weapons or personnel deployment is not feasible, SAGAN can be used to accomplish specific objectives, such as sabotaging a critical target or delivering a small explosive payload to a remote location.

Intelligence, Surveillance, and Reconnaissance (ISR) Support

SAGAN can support larger ISR operations by gathering critical information before completing their mission. The data gathered can be used to inform strategic decisions and military planning.

SAGAN

FPV KAMIKAZE DRONE

GENERAL FEATURES

National Design Fire Control System

6"-10" frame options available

Capability to conduct missions for 25 minutes without payload

Flight speed of 120 km/h

Over 10 minutes of flight time with a 1500 g payload

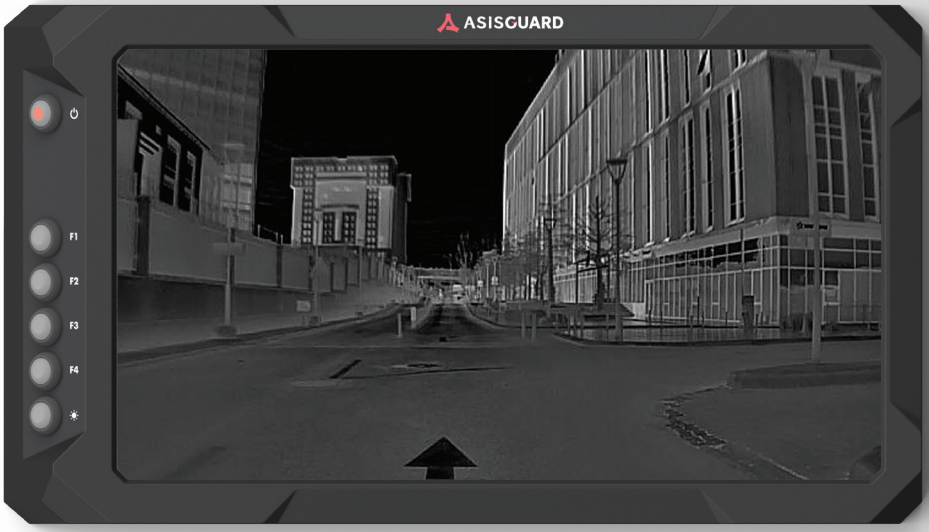
Digital/Analog data transmission

SAGAN delivers reliable performance in challenging conditions due to its high durability and speed. With **silent flight** and a **low radar signature**, it can penetrate defenses and execute missions with stealth.

DISPLAY FAMILY

FPGA / CPU BASED MONITORS

The AYN display family encompasses display systems designed for a variety of applications across both military and civilian platforms. A critical component of these display systems is the monitor, which facilitates the user's interpretation of data. ASİSGUARD prioritizes the development of products that align with the specific needs of military operations while ensuring durability against severe environmental conditions. The monitors produced by ASİSGUARD provide versatile solutions for both military and industrial sectors, offering a range of screen sizes and cost-effective options.



GENERAL FEATURES

- Low latency in video transmission and communication
- Customisable hardware
- Customisable hardware
- High image quality and high resolution
- High speed processor
- Navigation option
- Customisable operating system and application support

You are in Control without Delay

Monitors in the AYN family of displays allow users to watch and control low-latency video in real time.

Superior Image Quality

Leveraging its robust hardware and software capabilities, the system generates clear, vibrant, and realistic color images. Its high resolution, sharpness, and brightness ensure the consistent delivery of high-quality images, irrespective of varying light conditions.

All Your Content in One Place

It offers an integrated structure with CAN, Ethernet, UART and USB protocol supports as well as customisable analogue and digital inputs/outputs.

Design Adaptable to the Area of Use

Featuring minimal bezels and a contemporary design, the monitors within the AYN display family impart a refined aesthetic to your platform and elevate the overall viewing experience.

AG-D-GCS 2251

YKİ | CONTROL/CONSOLE FAMILY

Ground Control Station

AG-D-GCS-2251 YKİ (GROUND CONTROL STATION)

AG-D-GCS-2251 Ground Control Station (GCS) facilitates the operation of unmanned vehicles, enabling the configuration of semi-autonomous and autonomous driving missions, as well as conducting reconnaissance and imaging tasks. This system is designed for effective use by security personnel and armed forces.

AREAS OF USE

- Control of unmanned vehicles
- Control of payloads on unmanned vehicles
- Reconnaissance and imaging system

GENERAL FEATURES

Accessories

Carry Case

Charging Adapter

Car Charger Adapter

2 System Battery

General Features

2 pcs 1920 x 1080 px Touch Screen

15 Toggle Switches, 32 Push Buttons, 1 5-Way Selection Button

3 Axis Joystick with 2 Buttons and 3 Pro-portional Outputs

1 Emergency Stop Button

Replaceable Lithium- Ion Battery

Logitech K310 Keyboard

Physical Features

120 x 60 x 30 cm (Closed box)/120 x 60 x 80 cm (Open box)

Computer System

Intel 9th Gen 8 Core 3.5 GHZ Processor

32 GB DDR4 Ram

1 TB SSD SATA 3.0 Data Storage Disc

Communication System

Intel 9th Gen 8 Core 3.5 GHZ Processor

32 GB DDR4 Ram

1 TB SSD SATA 3.0 Data Storage Disc

Computer System

3.5 mm Jack Headphone and Microphone Connection

2 X USB2.0/2 X USB3.0/4 X Gbps Ethernet

8 x SMA Connector (LTE/GPS/WIFI)

SIM Card Interface

Operator Recognition Camera

Charging Socket Interface

Accesories

Operating Temperature: -20°C, +50°C

Storage Temperature: -40°C to +60°C

Environmental Conditions: MIL-STD-810G Compliant

Voltage Protection: MIL-STD-1275E Compliant

Protection Level: IP65 (Bag Closed)

AG-H-GCS- 1050

YKİ

Ground Control Station

CONTROL/CONSOLE FAMILY

AG-H-GCS-1050 YKİ (GROUND CONTROL STATION)

AG-H-GCS-1050 Ground Control Station (GCS) allows for the management of unmanned vehicles, including the oversight of semi-autonomous and autonomous driving functions. It also facilitates reconnaissance and imaging operations, making it suitable for deployment in security and military settings.

AREAS OF USE

- Control of unmanned vehicles
- Semi-autonomous and autonomous control
- Reconnaissance and imaging system

GENERAL FEATURES

Accessories

- Carry Case
- Charging Adapter
- Car Charger Adapter
- External Charger
- System Documents
- 2 System Battery

General Features

- 1280 x 800px 10.1” General Features
- 5 pcs Toggle Switch, 18 pcs Push Button
- 2 pcs Proportional Output Finger Joystick
- 1 pc Emergency Stop Button Replaceable Lithium- Ion Battery
- Replaceable Lithium- Ion Battery

Physical Features

- 52.6 x 32.8 x 13.5 cm

Communication System

- Communication via 4G/LTE
- Communication via WIFI
- Ability to communicate via Tactical Link connected to 1000Base-T ethernet port

Computer System

- 4-Core ARM Cortex-A76 MPCore Processor
- 16 GB LPDDR 4X RAM
- 128 GB SSD SATA3.0 Data Storage Disc

Interface

- 3.5 mm Jack Headphone and Microphone Connection
- 2 X USB3.0/1 X Gbps Ethernet
- 3 X SMA Connector (LTE/GNSS/WIFI)
- SIM Card Interface
- D38999 Military Connector with 19V Power Output
- POE Military Interface Connector
- Operator Recognition Camera
- Charging Socket Interface

System Features

- Operating Temperature: -20°C, +50°C
- Storage Temperature: -40°C to +60°CEn-vironmental Conditions: MIL-STD-810G Compliant
- Voltage Protection: MIL-STD-1275E Compliant
- Voltage Protection: MIL-STD-1275E Compliant
- Protection Level: IP65 (Bag Closed)

AG-H-GCS- 1051

YKİ

Ground Control Station

CONTROL/CONSOLE FAMILY

AG-H-GCS-1051 YKİ (GROUND CONTROL STATION)

AG-H-GCS-1051 Ground Control Station (GCS) enables the operation of unmanned vehicles, including the management of semi-autonomous and autonomous driving capabilities, and supports reconnaissance and imaging tasks. It is designed for use in security and military applications.

AREA OF USE

- Control of unmanned vehicles
- Semi-autonomous and autonomous control
- Reconnaissance and imaging system

GENERAL FEATURES

Accessories
Sunshade
Neck Strap
Carrying Strap
Carrying Box
External Adapter

General Features
Domestic / Original Design
Aluminium Mechanical Body
Hand Portable
Safety Precautionary Shooting
System Dimensions: 450*250*10mm
Weight < 4.5kg
Replaceable Li-Ion Battery
Customised datalink integration
Operating Time > 2 hours

Computer System
1920 x 1200 Resolution Display
10.1'' Display
1000 Nit Display Brightness
10 Finger Capacitive Touch Screen
Windows 11 Operating System
Intel Core i5-10310U Processor
512 GB SSD
16 GB RAM
8 Functional Button
3 Functional Joystick
2 Functional Round Button
External USB Port
External ETH Port
Military Standard Connector
Operating Voltage: 24V

Meteorological Conditions
Operating Temperature: -10°C ~50°C
Storage Temperature: -10°C ~50°C

MPTZ | CONTROL / CONSOLE FAMILY

MAST PANTILT ZOOM (MPTZ) CONTROL PANEL

MAST PANTILT ZOOM MPTZ Control Panel facilitates the management of long-distance vision systems on land vehicles, enabling control over semi-autonomous and autonomous driving functions, as well as supporting reconnaissance and imaging operations. It is applicable in both security and military contexts.

AREA OF USE

- Military and Civilian Land Vehicles
- Military and Civilian Sea Vehicles

Technical Features

Weight: 6 Kg. (Excluding Connection Brackets)

Case: Aluminum, White

Internal Hardware

RK3588 based SOM, 8-core 64-bit processor,4 x Cortex-A76(2.4GHz), 4 x Cortex-A55(1.8GHz)and separate NEON co-processors

8 GB LPDDR4 RAM

32GB Emmc (expandable up to 256GB)

M.2 2280 slot for NVMe SSDs

2x2.5GLAN Ethernet (RTL8125BG)

MIL-STD-1275 compliant power distribution unit

External Hardware

16 buttons

3 axis 2 button joystick (left side)

3 axis joystick (right side)

3 toggle switch with protection covers

1 emergency button

Power Supply: 18-32 VDC

Current: Steady State <3 A, Peak Current <5 A,@24VDC

Size: 448 mm x 369,78 mm x 322 mm

ASISGUARD

Detailed Information

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