

The background is a light teal color with a subtle pattern of vertical lines and binary code (0s and 1s) scattered throughout. At the bottom, there is a large, abstract geometric shape composed of many overlapping triangles in various shades of teal and blue, creating a low-poly effect.

# uidea

**DEFENCE**



## LAND PLATFORMS

- ▶ Video Recording Systems (DVRs, NVRs)
  - ▶ Displays
  - ▶ Video Transfer Systems
- ▶ Command and Control Systems
- ▶ Interior Vehicle Consoles (Dashboards)
- ▶ Interior/Exterior Vehicle Lighting Systems
  - ▶ Power Distribution Units
- ▶ Platform-Specific Electronic Products (Custom Solutions)

## WIRELESS TECHNOLOGIES

- ▶ Product RFID Tags and Tracking Systems
- ▶ Vibration, Shock, Temperature Measurement and Logging Systems
- ▶ Data Recording and Telemetry Systems

## AMMUNITION

- ▶ Artillery Rocket and Missile Electronics
  - Mutli-Option /Proximity / Time Fuzes
  - ▶ Wired / Wireless Fuze Setting Units
- ▶ Wireless Communication and Control Electronics
- ▶ Ammunition Specific Products (Custom Design)

## WEAPON SYSTEMS

- ▶ Command and Control Systems
  - ▶ Sensor Networks
- ▶ Data Logging and Telemetry Systems





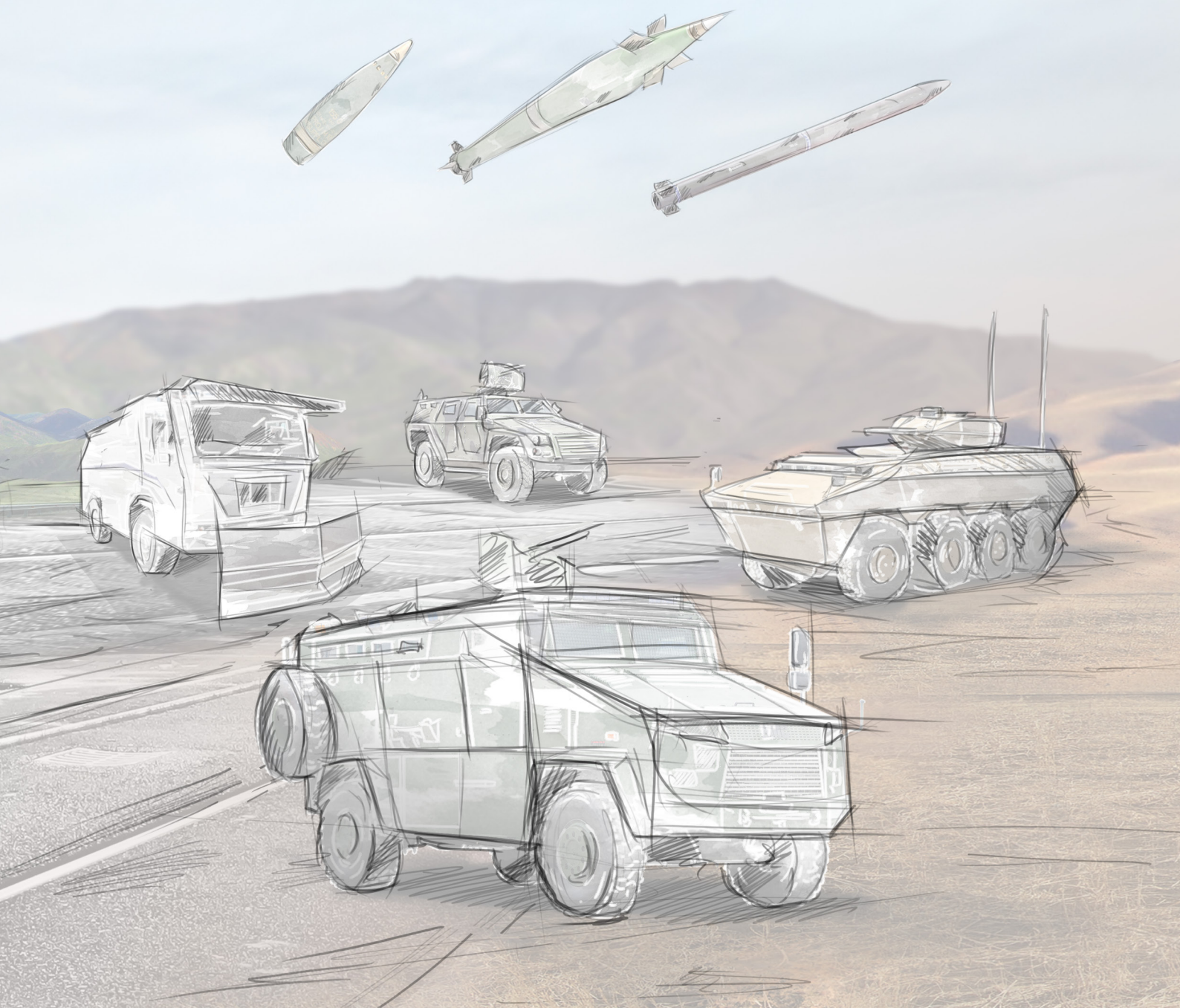
## Company Overview

UDEA is a private company headquartered in Ankara and established in 1999 to design and manufacture electronic hardware for a worldwide customer portfolio. UDEA's mission is to produce high-tech and quality products and services. UDEA offers analog-digital electronics design and RF technological know-how at every stage from system design and platform design to installation especially for defense industry needs. UDEA's qualification certificates includes ISO 16949 and ISO 9001.

### UDEA is capable of offering services in the following titles.

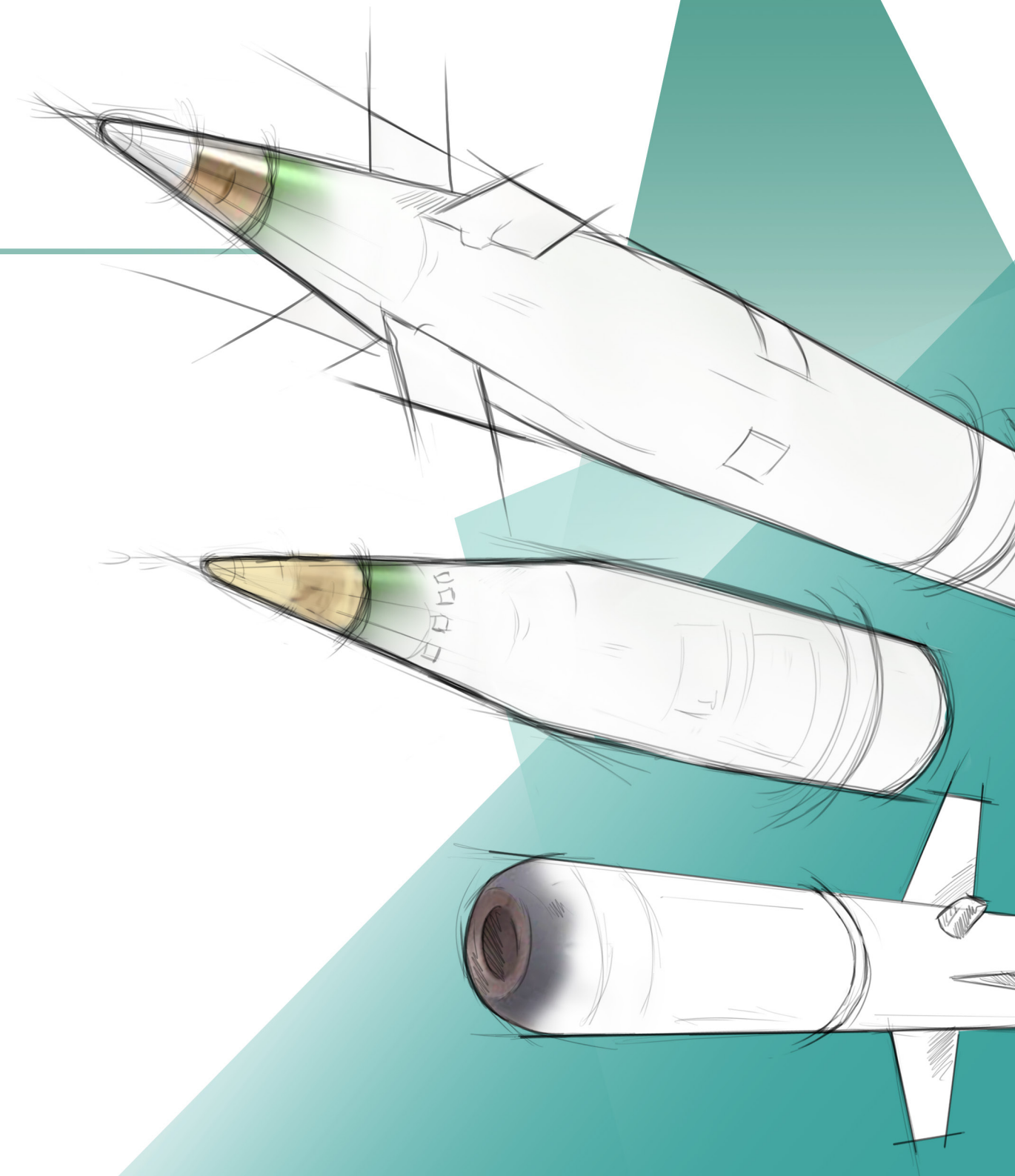
- ▶ Concept creation / Technical support
- ▶ Project Plan Preparation
- ▶ Hardware / Software / Mechanical Design and Development
- ▶ Production
- ▶ Test / Approval Studies

The long-term costs of major projects are largely accrued through research and development, operational and maintenance costs. UDEA has a proven track record for advising consumer and military systems manufacturers on best practices related to hardware development. UDEA strive to deliver high quality and cost-effectiveness in every aspect of our products and consulting services.



# FUZE PRODUCTS

UDEA designs and develops fuze electronics for artillery munitions and guided missiles. Proximity fuze, time fuze and multi-option fuze are main products of the product family. These products conform military standards and can be configured according to customer needs.

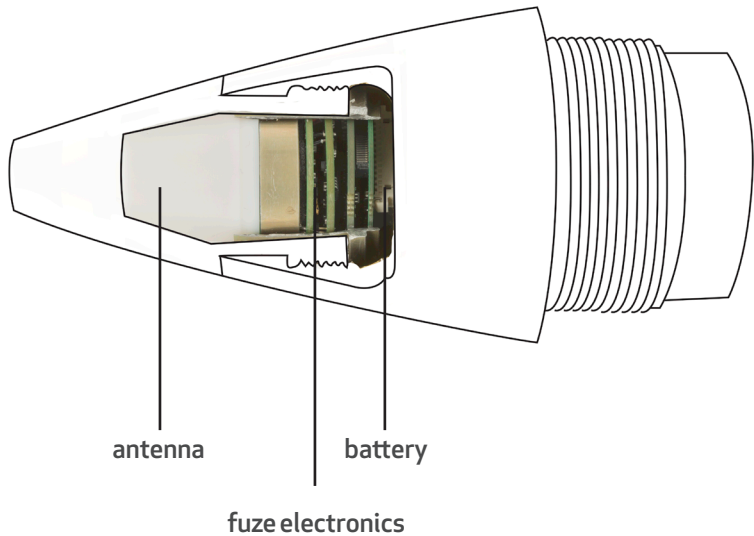




# MULTI OPTION FUZE

UDEA has deep knowledge about fuze electronics. RF design, electronic design and software development can be done according to system requirements. There are several design solutions for different munition types.

As shown below, UDEA is capable of providing a broad solution spectrum for antennas, fuze electronics, battery sections to different types of fuzes.



## TIME FUZE

Time Fuze electronics generates detonation signal after a set of period time which is set before firing. This product is mainly developed for munitions like 105mm, 122mm and 155mm artillery projectiles.

**This type of fuze provides;**

- ▶ Dimensions and geometry conforms Stanag 2916
- ▶ Inductively settable according to AOP 22 and Stanag 4369
- ▶ Safety and Sustainability of Service conforms Stanag 4157 and Stanag 4187
- ▶ Microprocessor based electronics
- ▶ 15 years battery service life



Multi-Option fuze provides different modes which can be settable via integrated missile control line or external connection (with wire or wireless interface).

**This type of fuze provides;**

- ▶ High resolution proximity sensing with FMCW radar technology
- ▶ Height of Burst setting
- ▶ Blocking time setting
- ▶ Burst of Time setting (Time Fuze Mode)
- ▶ Jamming Signal Sensing
- ▶ Speed Calculation Algorithm
- ▶ RS485 / RS422 Telemetry interface for test mode



**Frequency Modulated Continuous Wave (FMCW) radar technology has several advantages as listed below**

- ▶ Higher distance measurement with high resolution
- ▶ Rapid measurement updating
- ▶ Impervious to atmospheric conditions
- ▶ Velocity measurement of the ammunition
- ▶ Better electrical and radiation safety
- ▶ Speed Calculation Algorithm
- ▶ High penetration through non-metallic parts (can be used with different radome materials)

## FUZE SETTING UNIT

UDEA also have solutions for fuze setting units. In addition to inductive setting equipment, UDEA has handheld or launcher integrated setting units.

**Inductive setting units characteristics**

- ▶ Handheld
- ▶ Battery Operated
- ▶ Supports Read Back

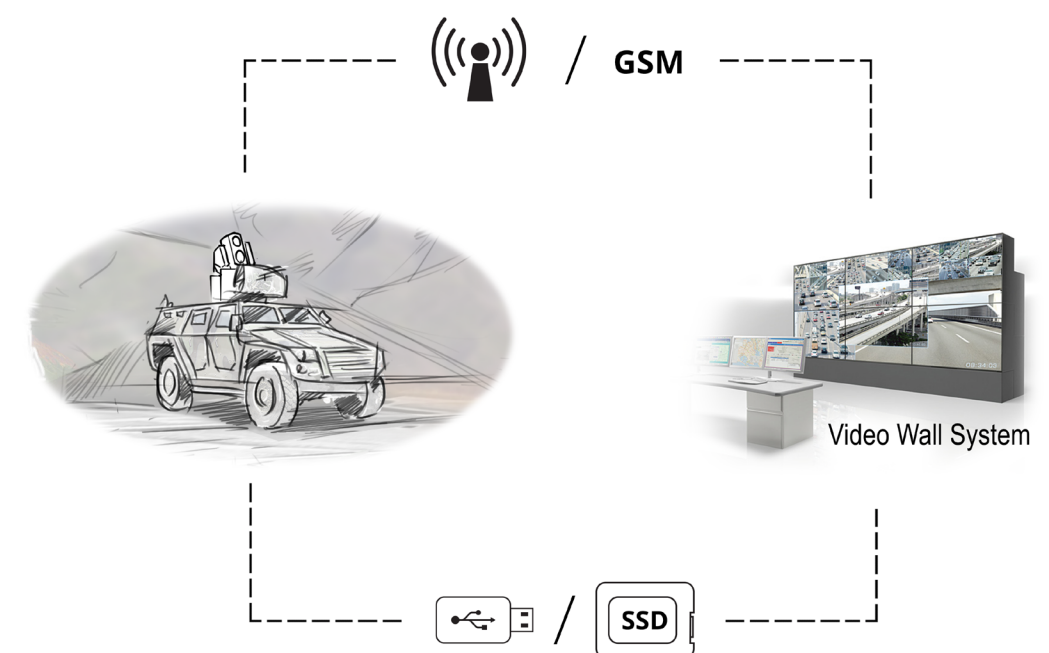
**Launcher integrated setting units characteristics**

- ▶ Adaptable to system requirements
- ▶ Serial interface for launcher control computer



# VIDEO RECORDING & SURVEILLANCE PRODUCTS

UDEA has a wide range of solutions for surveillance and video recording needs on military vehicles. UDEA has a base Hybrid system which can be adapted to any project, independent from requested camera and monitor types and numbers. The system features up to 8 cameras which can be IP, Analog or Thermal with a flexible and convertible software which supports video streaming and remote system control via 4G and Wi-Fi. As a leading company in video surveillance products, UDEA is also able to do customized designs (mechanical or electronics) of all systems in accordance with customer requirements.





# MOBILE VIDEO RECORDING and SURVEILLANCE SYSTEM

In the main Hybrid system, the cameras on the vehicle can be displayed on Driver's, Commander's and Operator's Monitor simultaneously. The System consists of up to 8 cameras, up to 4 displays with touchscreen, a keyboard, a ruggedized main recording and control unit and a harness set. Users can easily control the system by the help of a keyboard or touchscreen. Camera and monitor quantities are depended on the project needs.



### Features

- ▶ 8 Analog Camera or 4 Analog + 4 IP Camera Input
- ▶ 9-36 VDC Voltage Input (Can be used on both 12V or 24V Vehicles)
- ▶ Mil-Std-1275 Transient Voltage Protection
- ▶ Mil-Std-461 Compatible (Shock and Vibration)
- ▶ Mil-Spec Connectors
- ▶ 4G Video Transfer Option
- ▶ Car Battery Low, Backup Battery Low Alarms
- ▶ Optional Electrical Mast Control

## DISPLAYS

Over the years UDEA has designed and manufactured various types of displays with different configurations for military vehicles. Vast amount of systems of UDEA are being used in Turkey and Middle East countries. UDEA's standalone display units are used for observation and control purposes of the commander, weapon platform operator, driver, and the other crews within the military vehicles.



### Compatibility

Mil-STD-1275, Mil-STD-810F Shock and Vibration

### Available Connection Types

Analog Video, VGA, HDMI

### Available Monitor Sizes

5", 7", 8", 9.7", 10.1", 10.4", 12", 13.3", 15", 17"

# GENERAL PURPOSE VIDEO RECORDING SYSTEMS with 4G VIDEO TRANSFER

UDEA also designed various other products with different configurations such as 4 channel NVR, 4 channel DVR, 4 Channel Hybrid NVR with 4G video transfer options. In addition, 360° bird view systems, rear view systems are also a part of UDEA's Video Surveillance Systems Family. To satisfy the market pricing, technical and dimensional requirements, UDEA has a variety of solutions in Video Surveillance Application.



### Features

- ▶ 4 Channel Video and Audio Recording (8 channel optional)
- ▶ 9-36 VDC Voltage Input
- ▶ Low Power Consumption
- ▶ 3G, 4G, GPS and Wi-Fi Option
- ▶ Hard disk drawer with direct USB3.0 connection
- ▶ Ignition, Reverse Gear Inputs



## CAMERAS

UDEA provides several types of cameras with different resolution and night vision options. IR leds and laser units are used for night view illumination which can be adjusted in a range of 10 meters to 1 kilometers.



### Features

- ▶ Full HD IP PTZ with Laser
- ▶ Full HD Mini IP PTZ
- ▶ Analog PTZ
- ▶ Wide angle rear view cameras
- ▶ Ultra wide angle side view cameras



# ODM PRODUCTS

UDEA is proud of being electronics equipment supplier to lots of companies in Turkey and Middle East Countries. With the experienced professionals, UDEA is able to design and manufacture different types of customized products which require hardware, software and mechanical design capabilities.





## DASHBOARD

UDEA has designed several dashboard units according to the customer needs, for easy control and diagnostic purposes on military vehicles. Engine start/stop operations, exterior/interior lighting control, condition check of the equipment and diagnostic control can be done with the help of dashboard systems. Moreover, data logging is another function of these systems. Previous situations of the sensors, inputs and outputs are logged up to one year, and can be transferred into a flash memory to be analyzed on a PC program for diagnostic purposes.



### Features

- ▶ User friendly control by touchscreen
- ▶ Designed according to human factors
- ▶ Engine Start / Stop Button
- ▶ Darkening Input
- ▶ Dimmable Screen and Warning LEDs
- ▶ Heater, illumination etc. Controls
- ▶ Analog or Thermal camera Inputs
- ▶ Diagnostic

## LED LIGHTING PRODUCTS

UDEA is also manufacturer of an extensive range of LED lighting products. There are EU and NASO certified headlights and tail lights solutions for automotive industry. Addition to automotive certified lighting, UDEA designs and develops military standard lighting products.



**Different types of LED lights can be designed according to needs. Some examples are below:**

- ▶ Headlights / Tail Lights / Signal Lights
- ▶ Interior Lights
- ▶ Auxiliary Lights
- ▶ Auxiliary IR Lamps for night vision
- ▶ Military Front/Rear Composite LED Lights

## VEHICLE EQUIPMENTS

UDEA has comprehensive experience in the design of electrical and electronic systems for military vehicles. Most of the products below are initially designed according to customer demands.

### Power Distribution & Filter Units

Isolated Mil-STD-1275 compatible products are designed in a range of 12W to 200W for supplying power for sensitive electronic equipments of a vehicle. Semiconductor based power switching units are used, which replaces the relay boards within the vehicles.



### Seat Belt Warning System

This system is integrated with the seat and seat belt sensors to warn the driver and commander if there is any occupancy and unfixed belt. Designed especially for custom design military vehicles.



### Video Line Isolator

Designed for filtering the image noises in the displays which is caused by ground noise in the vehicle.



### Other Products

- ▶ Can Bus Logger
- ▶ Warning Indicators
- ▶ Simple Switch Boxes
- ▶ Video Splitters
- ▶ Video Multiplexers
- ▶ Video Converters



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