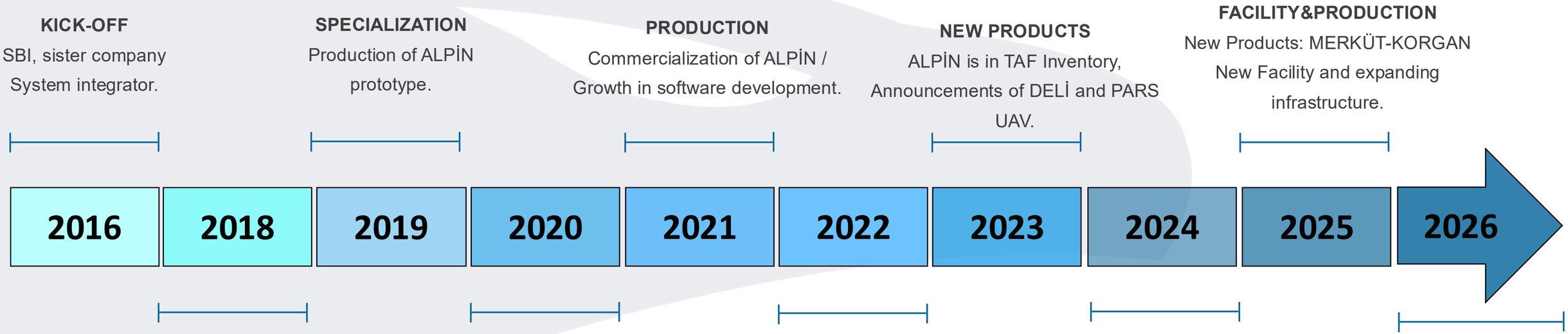
TITRA

Story of TİTRA



KICK-OFF
SBI, sister company
System integrator.

SPECIALIZATION
Production of ALPİN
prototype.

PRODUCTION
Commercialization of ALPİN /
Growth in software development.

NEW PRODUCTS
ALPİN is in TAF Inventory,
Announcements of DELİ and PARS
UAV.

FACILITY&PRODUCTION
New Products: MERKÜT-KORGAN
New Facility and expanding
infrastructure.

R&D
First R&D projects on
unmanned systems and
swarms.

REORGANIZATION
Spin-off from sister
company to focus on
Defense Industry.

PROJECTS
First contract in
defense sector.

INVESTMENTS
PATEK
CARACAL

New products /
Expanding
production to
abroad.

Pasifik Holding

55 Company

2500+ Employees

5 Sector

4 **Companies listed on BIST**

PATEK : 12,6 Billion
PASEU : 19,9 Billion
PSGYO : 8 Billion
ORÇAY : 740 Million

It shows the market value as of January 3, 2025.

39 Years of Experience

350.000 m²
Residential and Commercial/ Office

3.5 MİLYON TONS
Railway Transportation (2019-2024)

180 TONS
Daily Fresh Tea Processing

Turkey's First and Only International Railway Logistics Company.

%60
Green Energy
175 MW Installed Capacity.

40.000 TONS
Pellet Production Capacity

ALPİN
Turkey's First and Only Unmanned Helicopter.

5.000 Residence
350 Offices Have Been Delivered

First Block Train
First Block Export Train to China.

Pasifik Holding

REAL ESTATE-CONSTRUCTION

- Pasifik Real Estate Investment Trust (REIT)
- Pasifik Construction
- Advancing / Progressing

INTERNATIONAL LOGISTIC

- Pasifik Eurasia
- Pasifik Eurasia Railway Train Operations
- PSF Panama
- Pasifik ISR Logistics
- Pasifik Global Logistics
- Ms Pacific Terminal Management
- Pasifik Eurasia Terminal Services

TECHNOLOGY

TiTRA

SAVX
TEKNOLOJİ VE HAVACILIK A.Ş.

Mainty

icredible
Technologies

ditrave

DESTEL CONNECT

DESTEL

ENERGY AND MINING

- Pasifik Renewable Energy
- Aden Pellet
- Pasifik Mining

FOOD INDUSTRY

- Orçay
- Keifi

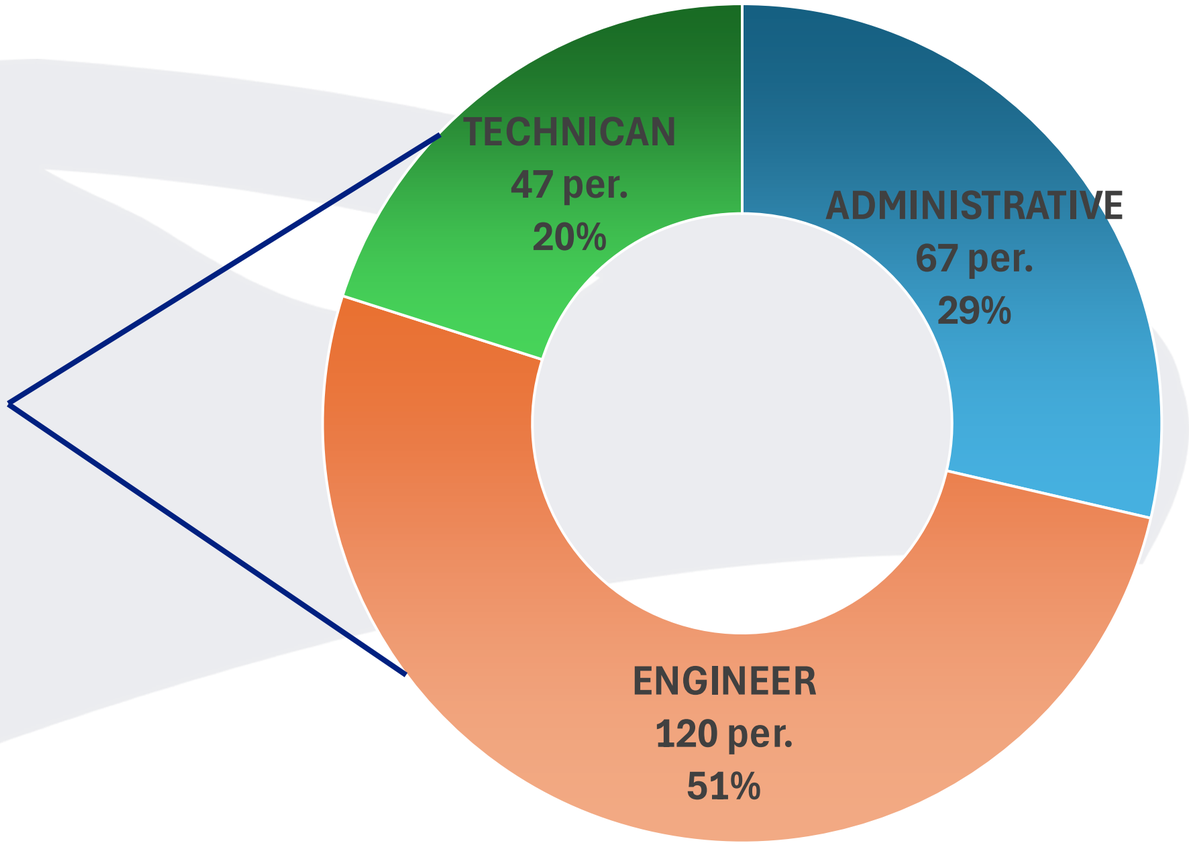
TITRA

Inspired by our past, we are working to build a brand-new future.

Personnel Situation

ENGINEER/TECHNICIAN

167 of 250 employees



- **An expert team driving defense technologies with high engineering capabilities and strategic vision.**

Facilities

KAHRAMANKAZAN

TİTRA Production Facility

KAYSERİ

TİTRA Kayseri R&D Facility

KALECİK

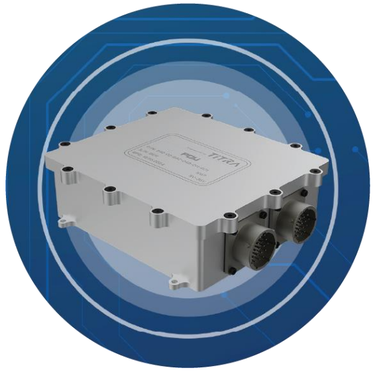
TİTRA Flight Test Center

Avionic Systems

AUTOPILOT
AUTOMATIC FLIGHT CONTROL UNIT

MCU
MISSION CONTROL UNIT

TLU
TELEMETRY UNIT



PDU
POWER DISTRIBUTION UNIT

FCU
FUSE CONTROL UNIT

GNSS
GLOBAL NAVIGATION SATELLİTE SYSTEM

IFC
INTERFACE CONTROL UNIT

ALPİN 2

UNMANNED HELICOPTER SYSTEM

A reliable solution for military and civilian missions with its high payload capacity, long endurance, and versatile duty capabilities.

PAYLOAD CAPACITY
200 KG

CONTROL RADIUS
200 KM

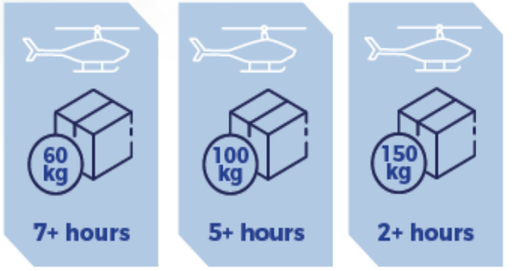
ENDURANCE
9+ HOURS

SERVICE CEILING
21.000 FT
(6.400 M)

TECHNICAL SPECIFICATIONS

Max Takeoff Weight	550 kg
Max Speed	203 km/h
Cruise Speed	107 km/h
Fuel Type Gasoline	175 lt

ENDURANCE BASED ON PAYLOAD



With a payload capacity of 200 kg, ALPİN 2 offers **6 to 10 times** lower logistics costs compared to general-purpose helicopters.

PARACHUTE SYSTEM

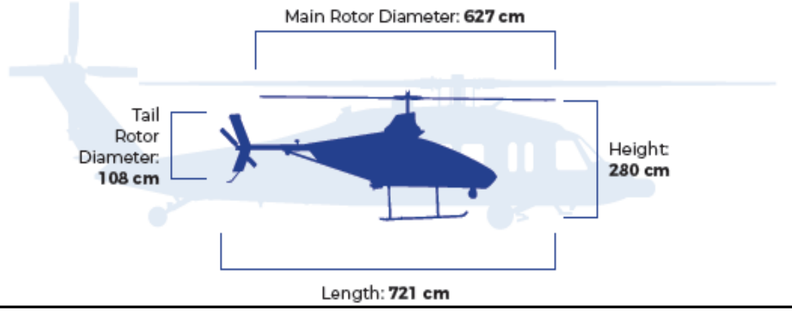
PROPULSION SYSTEMS (140HP)

AVIONICS SYSTEMS

- Data Link / Video Link
- GNSS-Antijam CRPA System
- Identification Friend or Foe (IFF)
- SATCOM (Satellite Communications System)
- VHF Air Band Communication
- Radar Altimeter
- Flight Data Recorder

WIND RESISTANCE

High-endurance Mission Execution Capability



ALPİN

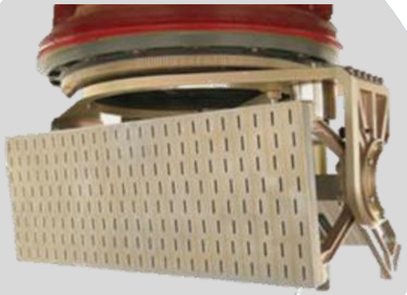
- Forest Fire Monitoring (2021).
- Military Logistics – Turkish Land Force (Dec 2022 & Aug 2023).
- A contract for 4 ALPIN-2 units has been signed, with deliveries scheduled by December 2025.
- Naval Integration (May 2024),

  Under the GİHA (Shipborne Unmanned Aerial Vehicle) project, a protocol with Airbus, integration DeckFinder to ALPİN.
- Enhancement with Roketsan Missile Systems (2024).

  Integration of missile systems to ALPİN.

Cargo Hook/Winch

Cargo Box



ISR SAR/GMTI

EO/IR Sensor

Electronic Warfare

Integration Options

AIS

Missile

LIDAR/Mapping

Areas of Use

	Border Patrol	Marine Patrol	Forest Monitor	Field Monitor	Comm.	Combat	Search & Rescue	Logistics	Urgent Medical	Intel	Spraying Seed	Traffic Control
Air Forces	•	•			•		•	•		•		
Land Forces	•				•	•	•	•	•	•		
Naval Forces		•			•	•	•	•	•	•		
Gendarmerie	•		•	•	•	•	•	•	•	•		•
Coast Guard		•			•		•	•	•	•		•
Police	•	•		•	•	•		•		•		•
Special Forces	•	•	•	•	•	•	•	•	•	•		
Forest Ministry			•					•			•	
Health Ministry							•	•	•			
Cargo								•				
Agriculture								•			•	
S&R				•			•	•	•			
OffShore				•	•			•	•			

Why ALPİN?

- 200 kg payload capacity
- Up to 9 hours endurance
- 6–10× lower cost compared to a general-purpose (utility) helicopter
- Modular design with multiple integration options (winch, sensor pods, radar, weapons, etc.)
- Fully autonomous flight: hovering, return-to-home, waypoint/route following
- LOS and BLOS operational capability (line-of-sight and beyond-line-of-sight)
- GNSS-independent, semi-autonomous flight capability (operable in GNSS-denied environments)
- In service with the Turkish Armed Forces (TSK); combat-proven

UNMANNED COMBAT HELICOPTER

Superior performance with multi-role mission capability, modular munition integration, and a compact design in both military and civilian scenarios.

FULLY AUTONOMOUS
TAKE-OFF / LANDING / NAVIGATION

FPV USAGE

ENDURANCE
UP TO 120 MINUTES

PAYLOAD CAPACITY
8 KG

CONTROL RADIUS
20 KM

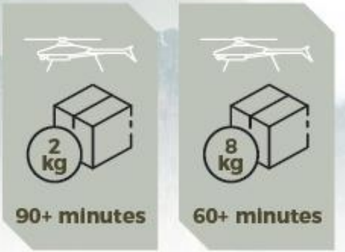
FLIGHT RANGE
UP TO 60 KM

SERVICE CEILING
13.200 FT (4.000 M)

TECHNICAL SPECIFICATIONS

Flight Capability (Vertical Take-Off and Landing)	VTOL
Cruise Speed	36 km/h
Max Take-Off Weight	21 kg
Time to Mission Readiness	2 minutes

FLIGHT TIME BASED ON PAYLOAD (AVERAGE)



WIND RESISTANCE

MISSION PAYLOAD AND MODULES

DUMRUL is equipped with multi-munition and sensor carriage capability for diverse mission requirements.

MORTAR
81/60mm

- **Impact Diameter** 50 m
- **Explosive** Comp B
- **Fuze** MKE MOD 128 UAV Fuze
- 2 of 81 mm or

GRENADE LAUNCHER
40x46 mm/40x51 mm

- **Drum Capacity** 6 Rounds of Ammunition
- **Effective Range** 400 - 800 m
- Manuel or Semi-Automatic Firing

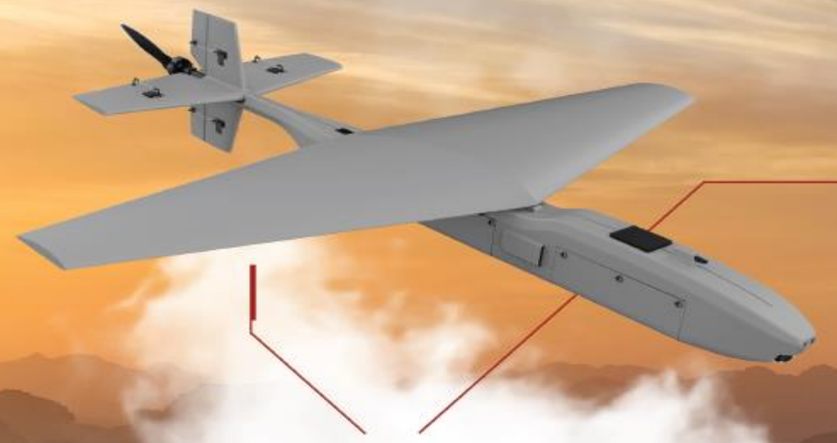
METE
Mission Concept

- Laser Guided Mini Missile (Two METEs)
- Target Designation (Ground/Air-Based)
- 1500 m Range 1 m Accuracy 4 m Effective Range

Why DUMRUL?

- Compact design — easy transport and pre-flight preparation
- Fully autonomous flight with FPV support
- Vision-aided flight modes; operable in GNSS-denied environments
- Jamming-resistant / resilient to electronic interference
- Operational flexibility — quiet/low-acoustic signature, modular
- Multi-mission capability (ISR, armed operations)
- Rapid and effective response to dynamic targets
- In service with the Turkish Armed Forces (TSK); combat-proven

DELI-2



TACTICAL KAMIKAZE SYSTEMS

A fixed-wing loitering munition developed for long-range precision strike missions. It offers an effective solution in enemy territory with silent approach, low radar signature, autonomous/semi-autonomous mission capabilities, and integrated electro-optical imaging and targeting systems.

RANGE
50 KM

FLIGHT TIME
45 MIN

WARHEAD
3.8 KG

EFFECTIVENESS RADIUS
30 M

SERVICE CEILING
3.500 M (AMSL)

DELI-2EO

- Precise Navigation in GPS-Jammed Environments via GNSS-Independent Visual Odometry and Inertial Navigation System (VO/INS)
- Enhanced Imaging Capability with Advanced Gimbal System
- Automatic Target Tracking and Precision Visual Target Dive
- Real-Time Video Transmission

TECHNICAL SPECIFICATIONS

Cruise Speed	80 km/h
Maximum Speed	162 km/h
Control Range	20 km
Altitude	150 m+ (AGL)
Maximum Take-Off Weight	15 kg
CEP - Accuracy Radius	5 - 10 m
User - Defined Impact Angle	-5,-90

OTHER FEATURES

- Impact and Distance Sensor Plug
- Autonomous and Semi-Autonomous Mission Capability
- Catapult Launch Capability
- 4-Stage Fuze Safety
- Mission Tracking and FPV Capability via Pilot Camera
- Mobile Ground Control System
- Separate Storage of Warhead and Platform

DELİ MİNİ

LIGHT CLASS KAMIKAZE UAV

DELİ Mini is a low-cost loitering munition system developed for tactical and secondary missions, featuring a compact structure, easy portability, and rapid deployment capability.

EFFECTIVE RANGE
35 KM

FLIGHT TIME
30 MIN

WARHEAD
2 KG

EFFECTIVENESS RADIUS
15 M

SERVICE CEILING
2000+ M (AMSL)

WIND RESISTANCE

OTHER FEATURES

- High Mobility with Backpack-Style Carrying Case
- Operable and Deployable by a Single Operator
- Hand-Launch or Catapult Launch Capability
- Rapid Mission Planning via User-Friendly Interface
- In-Flight Mission Abort and Safe Self-Destruct Option
- Low-Cost Multi-Use Concept
- Swarm Mission Capability
- Mobile Ground Control Station

TECHINICAL FEATURES

Maximum Speed	144 km/h
Control Range	20 km
Altitude	200 m+ (AGL)
Maximum Take-Off Weight	7.5 kg
CEP - Accuracy Radius	10 m
User-Defined Impact Angle	-5, -90

POTENTIAL MISSION PROFILES

- TACTICAL SUPERIORITY IN AMBUSH AND SABOTAGE OPERATIONS
- NEUTRALIZATION OF ASYMMETRIC THREAT ELEMENTS
- URBAN WARFARE OPERATIONS
- SWARM-BASED INTERDICTION AND/OR NEUTRALIZATION OF MULTIPLE MOVING TARGETS
- NEUTRALIZATION OF TARGETS ON THE BATTLEFIELD
  E.G., TACTICAL WHEELED VEHICLE, LIGHT ARMORED VEHICLE, EXPOSED ENEMY PERSONNEL, ETC.

Why DELİ?

- Autonomous / semi-autonomous operational capability with EO (electro-optical) assistance — GPS-independent operation
- Quiet, high-effectiveness strike enabled by a fixed-wing configuration
- Swarming capability to engage multiple targets simultaneously
- Warhead/munition already available in current inventory
- Separate storage of warhead and airframe/platform (munitions kept apart from the vehicle)
- Four-stage arming/safety mechanism with abort/mission capability when required

MERKÜT

FPV KAMIKAZE UAV SYSTEM

MERKÜT is a force multiplier loitering munition UAV solution, developed specifically to counter asymmetric threats in modern warfare. Featuring FPV capabilities, next-generation high-precision, reliable, and effective munitions, MERKÜT operates effectively in all operational environments, day and night. It ensures uninterrupted operational superiority even under electronic warfare conditions.

FLIGHT RANGE
10 KM

FLIGHT TIME
20 MINUTES WITH WARHEAD / **30 MINUTES** WITHOUT WARHEAD

WARHEAD
600 G
1,000 FRAGMENTS - 4 MM

EFFECTIVE RADIUS
20 M

PROXIMITY SENSOR
0.5 M – 10 M
(ADJUSTABLE)

MAXIMUM FLIGHT ALTITUDE
15000 FT
4500M MSL

OPERATIONAL MISSION ALTITUDE
3000 FT
900M AGL

WIND RESISTANCE

TECHNICAL SPECIFICATIONS

Maximum Take-off Weight	4.0 kg
Imaging System	Electro-Optic
Cruise Speed	110 km/h
Maximum Speed	150 km/h
Altitude Safety	20 m (Adjustable)
Warhead Type	Directed Anti-Personnel
Fuze System	5-Stage Electromagnetic Safety Mechanism
Environmental Durability	Operational Capability Under Precipitation

OTHER FEATURES

- Operator-Guided Control Thanks To FPV Interface
- Real-Time Engagement with Target Tracking Camera
- High Maneuverability for Effective Engagement of Moving Targets
- Modular Plug-and-Play Solution for Rapid Field Deployment
- Low Acoustic Signature and Stealth Advantage via Silent Flight Profile
- Manually Triggered by Operator or Automatically Activated via Proximity Sensor-Enabled Fuse

Why MERKÜT?

- FPV flight capability
- Jam-resistant architecture
- 5 level electronic and mechanical safety system
- Day/night vision, thermal imaging, and tethered options
- Rapid and effective response against dynamic targets
- Allows the operator to conduct missions without exposing themselves to risk
- Proximity sensor (50 cm–10 m) to enable adjustment of detonation timing and desired on-target effect
- In service with the TAF; combat-proven

PARS VTOL

VTOL UAV SYSTEM

PARS is a fixed-wing VTOL UAV system developed for short- to medium-range reconnaissance and surveillance missions. With its low weight, silent flight profile, and advanced optical systems, it provides tactical-level situational awareness in the operational field.

ENDURANCE
4 HOURS

COMMUNICATION RANGE
60 KM

PAYLOAD CAPACITY
2 KG

ALTITUDE
5000 FT / 1500 M (AGL)

SERVICE CEILING
15000 FT / 4500 M (AMSL)

TECHNICAL SPECIFICATIONS

Maximum Take-Off Weight	25 kg
Cruise Speed	65 km/h
Maximum Speed	85 km/h

WIND RESISTANCE

POTENTIAL MISSION PROFILES

- TRACKING OF FIXED AND DYNAMIC TARGETS
- PRE-MISSION INTELLIGENCE, SURVEILLANCE, AND RECONNAISSANCE (ISR)
- AREA RECONNAISSANCE AND PATROL FLIGHTS
- TARGET COORDINATE IDENTIFICATION

SYSTEM FEATURES

- Vertical Take-Off / Landing
- Autonomous Take-Off, Landing and Navigation
- Modular Body Structure
- Advanced EO/IR Camera Integration
- Real-Time Video Transmission
- Mission Planning Supported by GPS and INS
- Mission Abort and Return-to-Base (RTB) Function

FIELD APPLICATIONS

- Tactical-Level Reconnaissance and Surveillance with Low Acoustic and Visual Signature
- Day and Night Operation
- **Potential Civil Uses**
  - Surveillance and Detection in Natural Disasters
  - Input Provision for Decision Support Systems
  - Inspection of Energy Lines and Pipelines
  - Mapping
- Support to Outpost/ Base Area and Critical Infrastructure Security
- Border Surveillance

AUTONOMOUS GROUND SUPPORT AND MONITORING UNIT

KORGAN 2 is a ground support system developed to enhance the operational effectiveness of unmanned aerial vehicles. It can be integrated into both fixed and mobile platforms, offering capabilities such as autonomous mission management, video transmission, target tracking, and environmental data collection in the field.

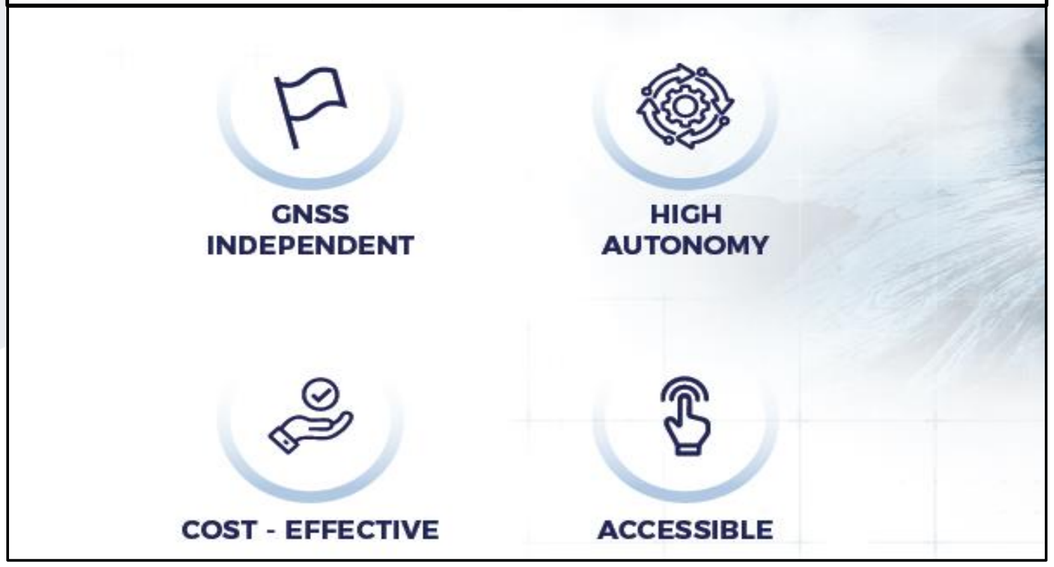
AT UAV LANDING/ TAKEOFF AREAS **REAL-TIME WEATHER MONITORING AND TRANSMISSION**

BROADBAND VIDEO TRANSMISSION NODE

FIXED SURVEILLANCE CAPABILITY THROUGH DEPLOYMENT IN THE TARGET AREA

USE AS A **MOBILE GROUND CONTROL UNIT** IN EMERGENCY SITUATIONS

LONG-DURATION MISSION SUPPORT WITH EXTERNAL POWERSOURCES



INDEPENDENT VISUAL NAVIGATION SYSTEM

TİTRA Visual Navigation System is an integrated solution that provides highly accurate position, velocity, and orientation information required for autonomous navigation of aerial vehicles in areas where GNSS receivers are partially or completely unavailable due to interference and spoofing.

Thanks to its architecture compatible with the swarm UAV concept, the system enables synchronized mission execution on multiple platforms and enhances operational integrity in the mission area.

Thank you

TİTRA

www.titra.com.tr/en