

PRENEU Co., Ltd. designs its UAV systems to support NDAA-aligned procurement requirements by applying secure supply-chain practices and avoiding restricted components from prohibited entities.



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Drone Solutions Guide by Mission

This brochure presents PRENEU's UAV solutions by mission type, helping customers quickly identify the most suitable platform for defense, public safety, industrial, and overseas applications. Built on modular airframe design, integrated avionics, and autonomous flight technologies, PRENEU's product lineup supports a wide range of operational environments.



**Military
Operations**



**Reconnaissance &
Surveillance**



**Logistics
Delivery**



**Aerial
Survey**



**Disaster
Response**



Localization

COMPANY

PRENEU is a comprehensive manufacturer of unmanned aerial vehicles and a platform service provider.

By converging intelligent cognitive-learning autonomous flight system technology, integrated avionics system technology, and diverse drone design and manufacturing technologies, PRENEU provides UAV manufacturing and platform services.

Company Name	PRENE Co., Ltd.
CEO	Lee Jong Kyung
Founded	June 2, 2017
Employees	127 (as of 2026)
Address	325 Sandan-ro, Danwon-gu, Ansan-si, Gyeonggi-do, South Korea
Website	www.preneu.com
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Brand

DRONEIT

A portmanteau of DRONE + IT, embodying the commitment to build a better world through the convergence of drones and diverse IT technologies.

DEVELOPMENT

A record of challenges that turned the impossible into the possible — PRENEU is growth continues today.

2017~2020

- '17.06 Established as a corporation
- '18.02 Corporate R&D Institute Certification
- '18.04 Launched VTOL-based MILVUS
- '18.05 Venture company Certification
- '18.09 Released Ground Control System (GCS)
- '18.10 RUEPEL, a small-engine helicopter
- '19.02 PANDION, a long-endurance multicopter
- '19.11 1st development of Companion Computer (CC)
- '20.09 ISO 9001 Quality Management Certification
- '20.11 Technology Innovation SME (INNOCUBE) / Pre-A Investment (KRW 1 billion)
- '20.12 Relocated Factory and Office to Ansan

2021~2023

- '21.04 "Excellent (T-3)" in Technology Evaluation
- '21.08 Launched Electric Helicopter "RUEPEL-E"
- '21.10 ISO 14001 Environmental Management Certification
- '22.06 Series-A Investment (KRW 3 billion)
- '22.08 Business Innovation SME (MAINBIZ)
- '22.12 Family-Friendly Company
- '23.09 2023 Top Job Creation Company by the Ministry of Employment and Labor
- '23.10 ISO 45001 Occupational Health and Safety Management Certification
- '23.12 Technology Evaluation Grade T1-2

2024~Present

- '24.03 Series-B Investment (KRW 15 billion)
- '24.05 IPO Lead Underwriter and chosen for / KDDIT Pre-ICON Program (Pre-IPO government)
- '24.09 2023 Top Job Creation Company (two consecutive years)
- '24.11 Good Design Award – Silver Prize (ARK S3)
- '25.03 Germany's IF Design Award (ARK S3)
- '25.06 Series-C Investment (KRW 15 billion)
- '25.10 DAPA / Helicopter Military Suitability Determined
- '25.10 Establishment and investment of joint production corporation in Kazakhstan
- '26.01 AS2100-D Acquires International Aerospace Quality Management System Certification
- '26.02 Selection of Gyeonggi Defense Venture Company
- '26.03 Ministry of Land, Infrastructure and Transport's VTX project implementation company
- '26.05 Selection of K-water cooperative start-ups
- '26.05 Participation in Joint Live-Fire Exercise
- '26.06 Selected for 2026 Korean Air Aerospace Open Innovation Program

STRENGTH

Through optimized modular design and an integrated avionics system, PRENEU delivers high scalability and stable operation, while AI-based system integration enables a comprehensive drone solution.

01 Optimized Modular Design

Supplies a diverse range of drone airframes with flexible expandability of mission equipment.

02 Localized Integrated Avionics System

Application of a modular integrated avionics system improves the domestic-production rate of core components and ensures a stable supply chain.

03 AI-Based Autonomous Operation

Implements automatic control and autonomous/swarm flight, providing AI-based target tracking and a variety of mission services.

04 Intuitive Operating Interface

Ensures effective drone control and integrated operability through an intuitive operating interface.

DEVELOPMENT

Relentless R&D —
challenging the pinnacle of drone technology.

Patents

37

Design

13

Trademarks

20

Certifications

16



Certificate of
Corporate
R&D Center



Confirmation of
venture business



GS (Good Software)
Certification
- Grade 1



Certificate of
Direct Production



ISO 9001



ISO 14001



ISO 45001



AS 9100

REFERENCE

**400+ drone deliveries and
200+ completed project references.**

Defense Market



방위사업청

2022~2025

A multi-purpose reconnaissance drone

POONGSAN

2022~2024

Development of a small attack drone for
Munition Delivery



2019~2026

Air Force Perimeter Security Drone
(Phase 1~3)



2023~2026

Small Multi-function Modular Drone Project



방위사업청

2021~2022

Rapid Demonstration Acquisition Project



2022

Small Spraying Drone Manufacturing
Project



2021

Shipborne Helicopter Drone project



2023~2024

Navy Perimeter Security Drone
Manufacturing



2023

Drone manufacturing for Combat
engineering support



2020

ROK Army Education Command
Reconnaissance Drone Manufacturing

Public & Civilian Markets



2023~2027

Maritime Fixed-Wing Fish-Detection Drone



2023~2028

Philippine Navy Unmanned
Helicopter Project



2022~2024

Helicopter Drone for 3,000-Ton
Coast Guard Ship



2023~2024

Cave Exploration Autonomous Drone



2024

Development of Wildfire Monitoring Drone



2022

Spatial Analysis and Autonomous
Navigation Drone



2022

Small Multi-purpose Drone for a
Smart City Project



2024~2025

Drone Demonstration Project
for Local City/County

Overseas Markets



2024

Ethiopia, Mozambique-Mapping
Drone Project



2024~2025

Kazakhstan Joint Venture for
Drone Manufacturing

D-ACAS — Autonomous Flight & AI Operation System



D-ARK

Integrated Avionics & Automatic Module Recognition

Integrated design of multiple avionics systems based on a main board; manufacturing of the integrated avionics module (D-ARK); automatic drone-type recognition and linking technology.



D-CALI

Automatic Calibrator

Drone sensor data fusion and automatic sensor calibration technology; configures an integrated avionics system in conjunction with D-ARK.



D-SOM

AI System On Module

Operates LLM-based AI algorithms; equipped with an AP+ASIC chip and an NPU processor.



D-AORTE

AI-Based Target Coordinate Extraction

YOLOv8 target detection and Deep SORT tracking; AI-based GPS generation, flight-risk detection, and target coordinate extraction.



MILVUS Series

VTOL Fixed-Wing

MT400

MT240

MC80



RUEPEL Series

Small Helicopter

REM

REF



PANDION Series

Multicopter

PQ330

PQ650

PQ450

PQ1200

PQ500

PH1300



Ground System

Ground System

D-GCS P7

D-GCS P10

D-GDT

(Ground Communication
Relay System)



Components

Core Parts

D-FC, D-DL,

D-DS (KCMVP),

D-GPS, D-ARK



SW Platform

Service Platform

D-HUB, D-UTM,

D-AI, D-LINK Services

Military Education

MILITARY EDUCATION

Military Training UAV Platform

A specialized airframe optimized for military education and training purposes.

- 100% domestic production
- Mass production capable
- High-performance antenna module
- DRL (daytime running lights) applied
- Modular battery
- Rapid airframe inspection
- High-resolution camera module



PANDION Q500

Military Training UAV Platform Multicopter



Specification

Airframe Type Military education drone

MTOW Under 2.5 kg

Flight Time 20 min or more

Operating Temperature -20~43°C

AGL(m) 150 m or more

Wind Resistance 10 m/s

Communication Using RF 2.4 / 5.5~5.8 GHz

Size 418 × 392 × 275 mm

EO Camera Modul

100% Domestic, Enhanced Security and Operational Stability

100% Domestic Sourcing of Core Components: FC, DL, ESC, Motor, and Prop.
Certified Data Security & Stable Maintenance via a Secure Supply Chain

Equipped with High-Performance Antenna Modules

Stable Communication Range of over 3km
Stable Long-Range Connectivity for Long-Range Reconnaissance & Strike Training

Daytime Running Light (DRL) System for Enhanced Visibility

High-Brightness Front LED for Instant Power-On Verification

Battery & Camera Modular for Efficient Mission Execution

Supports Sliding-Connection Battery & High-Resolution Camera Modules
Tool-free, Rapid Swapping for Flexible Mission-Specific Operations

Reference

- Proposal for the 2026 Military Commercial Training Drone Procurement Project



MILITARY OPERATION

Tactical Defense & Precision Response

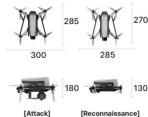
A product family optimized for loitering munition drones, munition dropping, target-coordinate extraction, and wide-area reconnaissance in combat environments.

- Automatic AI target tracking
- Munition-dropping module
- Grenade self-destruct operation
- Data encryption(KCMVP)
- EO/IR day & night surveillance
- Long-range operational radius
- CEP within 5 m precision strike



PANDION Q330

Micro Loitering Munition Drone [Multicopter](#)



Specification

Airframe Type **Payload-delivery drone**

MTOW **Under 2 kg**

Flight Time **Over 15 min(Grenade Mounted)**

Operating Temperature **-20~43°C**

AGL(m) **Over AGL 50 m**

Wind Resistance **10 m/s**

Communication **Using RF 2.4 / 5.5~5.8 GHz**

Size **270 × 270 × 220 mm**

[EO Camera Module](#) [Activation Module](#) [HUD Glass/Infrared](#)

*Performance based on optimal test conditions; actual results may vary with the operating environment

Overwhelming Portability & Operational Efficiency

Soldier Can Carry and Operate Up to 3 Drones
Guaranteed Compatibility with Existing Grenade Systems

Operational Capability that Defies Limits

Extended 3km Mission Range & 15-Minute Flight Time Guaranteed
Rapid Target Approach with High-Speed Flight of Up to 100km/h

Fall-Safe Design that Designed to reduce operational risk

Operable with Explosives Mounted Without Removing the Safety Pin

Equipped with a Dedicated Secure Communication Module

Executes Missions Without Data Leakage via Integrated Comms/Security Modules

Modular System Architecture

Fully Customizable & Expandable Frame and Canopy
Quick-Swap Battery System

Reference

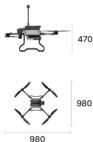
• 36th Infantry Division Operational Trial

Operational Scenario: Target Strike Demonstration (Enemy Facilities)



PANDION Q1200

Mortar Ammunition-Dropping
Attack Drone **Multicopter**



Specification

Airframe Type Small Mortar Ammunition-Dropping Attack Drone

MTOW 18 kg

Flight Time 30 min(No Payload)

Max Payload 3 kg(±0.5)

AGL(m) Over AGL 150 m

Range Over 5 km

Weight 8.5 kg(Without Battery, Payload)

Size 980 × 980 × 470 mm

EO Camera Module

Wind Speed &
Direction Sensor

Ammunition
loading module

Ultimate Portability & Operational Efficiency

Real-time data correction driven by a high-performance wind sensor delivers ultra-precise strike capabilities within a 5m CEP, even at an altitude of 150m

Operational Efficiency

Equipped with a 3-round payload capacity, enabling concentrated strikes and flexible response options against targets

Proven Performance

A highly reliable combat solution developed through a commercialization project led by the ICDCM (Institute for Civil-Military Cooperation Promotion), co-developed with Pongnan Corporation

Reference

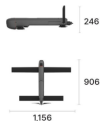
- '22-'24 Small Munition-Dropping Attack Drone Development Project



*Performance based on optimal test conditions; actual results may vary with the operating environment

MILVUS C80

Small multi-function modular drone **VTOL Fixed Wing**



Specification

Airframe Type Compact Multi-Mission Modular UAV

MTOW Under 2.5 kg

Flight Time Over 15 min

Cruise Speed Over 42 m/s

AGL(m) Over AGL 150 m

Launch Method Canister / Inflator Launcher

Size 1,158 × 906 × 246 mm

Max Payload Under 0.5 kg

EO/IR Camera

Direct Attack Munition

Multi-Mission Platform

Adapts a multi-purpose architecture designed for reconnaissance and strike missions via customizable mission payloads

Portable System

Featuring a collapsible tube-launched design for effortless transport, compact storage, and rapid field deployment

Scalability

Designed to support Multiple Rocket Launcher (MRL) operations in alignment with an expandable deployment concept

Reference

- '23-'26 KAI Compact Multi-Functional Modular Air Vehicle (CMMAV) Project

- Independently developed based on small modular multi-purpose Unmanned Aircraft System (UAS) technology



*Performance based on optimal test conditions; actual results may vary with the operating environment

RUEPEL EM

Multipurpose Reconnaissance Drone **Helicopter**



Specification

Airframe Type

Small Reconnaissance & Surveillance RUAV

MTOW

Under 25 kg

Flight Time

45 min

Max Payload

Under 5 kg

IP

IP43

Range

8 km

Weight

11.6 kg(Drone Only)

Size

2,189 × 681 × 612 mm(Propeller Excluded Size)
2,759 × 2,200 × 612 mm(Propeller Included Size)

EO Camera

Searchlight

Drop Box

Multipurpose mission equipment

High Level of Core-Component Localization

Enhancing security and establishing a rapid maintenance, repair, and overhaul (MRO) system through the indigenization of core components

Proven Performance

Minimizes operational downtime by enabling rapid equipment replacement and expansion adapted to mission requirements.

Reduces maintenance costs through component-level replacement

Allows seamless upgrades to the latest specifications by replacing specific modules without requiring a full airframe replacement

JTAC Optimized

Accelerates on-site response times through seamless switching between diverse mission equipment, including reconnaissance, surveying, spraying, and payload dropping

Reference

- '22-'25 Rapid R&D Project & Operational Test Deployment

Developed under DARPA Rapid R&D Project and delivered to the ROK Army and Air Force for operational deployment

Achieved military suitability certification through successful reconnaissance and modular mission capability evaluations



*Performance based on optimal test conditions; actual results may vary with the operating environment



Security & Surveillance

SECURITY & SURVEILLANCE

Surveillance • Perimeter Security • Short-Range Reconnaissance

A drone solution optimized for perimeter-security missions at military bases, coastal areas, and borders, as well as automated short-range patrol

- Continuous day/night surveillance
- Automated patrol route(Mission Patrol)
- Real-time video transmission
- Warning message broadcast
- Maritime-shipboard takeoff & landing
- IP43 water/dust resistance
- Data encryption
- AI automatic object detection



MILVUS T400

Long-Endurance Maritime &
Wide-Area Surveillance UAV VTOL Fixed Wing



Specification

Airframe Type	Maritime reconnaissance/ surveillance & survey drone
MTOW	25 kg
Flight Time	Over 180 min
Max Payload	1.5 kg
Battery	Li-Po 12S 57,000 mAh
Range	Over 50 km
Weight	14.45 kg(Drone Only)

Size	4,148 × 1,919 × 846 mm(Propeller Excluded Size)
	4,148 × 2,135 × 846 mm(Propeller Included Size)

EO Camera

EO/IR/UV Camera

EO/IR Camera

*Performance based on optimal test conditions; actual results may vary with the operating environment

Long-Endurance Battery

Aerodynamically optimized design supports an extended mission flight time of over 180 minutes, providing a significantly expanded operational radius

Maritime Operations

VTOL capability enables versatile takeoff and landing on mobile platforms, from maritime vessels to ground vehicles, maximizing operational flexibility

Smart Integration

Enables real-time field monitoring and control through the seamless integration of communications and precision camera technologies

Mission-Adaptive Variable Airframe Weight System

Rapid Mission Mode: Precision reconnaissance, high-resolution mapping, emergency disaster monitoring, and first response (Optimizes field deployment speed at under 25 kg)

High-Endurance Long-Range Mode: Wide-area maritime fish finding, long-term coastal surveillance, and wide-area security operations (Extended operation at 30.5 kg)

Reference

- Dongwon Industries Fish-Finding Drone Project : Integrated with AI-powered fish detection technology
- Mozambique Search & Disaster Response Project (Search & Disaster Response Mission)



PANDION Q450

Small Drone with Components
Integrated Module System [Multicopter](#)



Specification

Airframe Type **Reconnaissance drone**

MTOW **2 kg**

Flight Time **Over 25 min**

Max Payload **0.4 kg**

AGL(m) **Over AGL 150 m**

Range **2 km**

Weight **1.1 kg(Without Battery)**

Size **402 × 334 × 155 mm**

Integrated avionics system(D-ARK)

EO/IR Camera

*Performance based on optimal test conditions; actual results may vary with the operating environment

Global Recognition

Winner of the prestigious iF DESIGN AWARD, recognized for its innovative design and exceptional functionality

Integrated Avionics System

The D-ARK module integrates core battlefield components to seamlessly handle specification modifications and system upgrades

Field replacement of the module pack delivers convenient hardware upgrades and technical support

Providing User-Centric Solutions

Flexibly reconfigures airframe specifications to seamlessly meet evolving mission requirements

Delivers fully customized, operator-focused solutions tailored to specific mission needs

Reference

- '22 Lotte E&C Autonomous Driving Drone & Spatial Analysis Project
- '22 Uju-gun Smart City Development Project



PANDION Q650

Search-Surveillance & Close-Range
Reconnaissance Drones [Multicopter](#)



Specification

Airframe Type **Close-Range Reconnaissance Drones**

MTOW **7 kg**

Flight Time **Over 45 min**

Max Payload **1.3 kg**

AGL(m) **Over AGL 150 m**

Range **3 km**

Weight **2.6 kg(Drone Only)**

Size **515 × 515 × 300 mm**

EO/IR Camera

Digital Zoom
Gimbal Camera

Speaker / LIDAR

*Performance based on optimal test conditions; actual results may vary with the operating environment

Customizable Payload

Supports various mission profiles by allowing users to freely attach and detach required equipment, such as speakers, searchlights, and LIDAR

Ensuring Reliable Operations

Featuring an IP43-rated waterproof and dustproof design, ensuring rugged durability capable of withstanding harsh terrains and adverse environmental variations

Operational Efficiency

Delivers high-precision search and surveillance capabilities sustained for approximately 40 minutes on a single takeoff

Reference

- '23-'24 Naval Base Perimeter Security Drone Manufacturing Project
- '26 Participation in Joint Live-Fire Exercise Demonstration Exercise



RUEPEL EF

All-in-One Drone for Specialized
Mission Equipment **Helicopter**



Specification

Airframe Type Executing Reconnaissance,
Search, and Rescue Operations

MTOW 24 kg

Flight Time Over 75 min

Max Payload 5.5 kg

IP IP43

Range 20 km

Weight 11.4 kg(Drone Only)

Size 1,879 × 590 × 706 mm

EO Camera

EO/IR, LRF Camera

Buoyancy Device

*Performance based on optimal test conditions; actual results may vary with the operating environment

Extreme Environmental Adaptability

support surveillance, reconnaissance, search, and rescue missions in harsh environments, including maritime and mountainous terrains

Vessel-Integrated Solution

Establishes an optimized shipboard coastal surveillance system for accelerated initial operations
Interlocks naval vessels and Coast Guard forces for immediate response to critical maritime crises

Exceptional Operational Stability

The unibody design ensures high-precision executions of specialized missions, even in high-wind environments

Reference

- '21 Korea Coast Guard Shipboard Helicopter Program Execution
- '23-'28 HD Hyundai Heavy Industries Philippine Navy VTOL UAV Project



Safety & Infrastructure

Search & Rescue• Disaster Monitoring• Survey/Facility Inspection

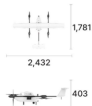
A rapid-response and high-precision aerial survey and digital infrastructure solution for natural disasters, mountain accidents, and maritime incidents

- Missing-person search(EO/IR)
- Access to mountainous and island areas
- Mapping camera
- Digital infrastructure mapping
- Regular mapping of wildfire/flood areas
- Transmission tower, facility inspection
- D-AI data-analysis integration
- Smart-city integration



MILVUS T240

Compact Surveying Airframe VTOL Fixed Wing



Specification

Airframe Type	Survey, mapping, and disaster-monitoring drone
MTOW	12 kg
Flight Time	Over 100 min
Max Payload	1.5 kg
Battery	Li-Po 12S 22,000 mAh
Range	3 km
Weight	6.5 kg(Drone Only)
Size	2,432 × 1,781 × 403 mm

Mapping Camera

LIDAR Package

PPK

*Performance based on optimal test conditions; actual results may vary with the operating environment

Operational Capability Free of Spatial Constraints

Reusable operations in narrow environments with no runway required

Up-down camera tilt enhances flight endurance and enables comprehensive rear-aspect reconnaissance

Compact Design

Engineered for tool-free, rapid assembly and disassembly to maximize transport convenience

Versatile Capabilities

High-precision aerial surveying, surveillance, and reconnaissance with a compact platform

Turnkey solutions for smart city aerial mapping, forestry protection, and wildlife monitoring

Reference

- '24 Mozambique Missing Person Search & Disaster Response Project
- Africa Drone Mapping Project for Flood Prevention



Logistics Delivery

LOGISTICS DELIVERY

Drone Delivery • Agricultural pest control • Smart-City Services

A commercial drone solution for urban logistics, agricultural pest control, and communication-relay services

- Drop-box payload
- Agricultural pest control
- Automatic flight-path generation
- Communication-relay drone
- Multi-aircraft operation
- Tethered drone



PANDION H1300

Versatile Drone for Specialized
Mission Equipment [Multicopter](#)



Specification

Airframe Type **Logistics delivery and
pest-control drone**

MTOW **25 kg**

Flight Time **Over 45 min**

Max Payload **5 kg**

AGL(m) **Over AGL 150 m**

Range **3 km**

Weight **12 kg(Drone Only)**

Size **1,350 × 1,215 × 620 mm**

Digital Zoom Gimbal Camera

Searchlight

Drop box

Speaker

LiDAR

*Performance based on optimal test conditions; actual results may vary with the operating environment

Heavy-Lift Mission Equipment Capacity

Supports large-scale payload integration, enabling the installation of advanced dispersal systems, logistics delivery modules, and other specialized mission equipment

Tethered Power Supply System

Continuous power supply enables long-endurance surveillance and persistent standby missions

Optimized for Industrial Sites

Stable flight in challenging environments to support search, surveillance, and logistics delivery
Extends connectivity to isolated mountainous areas and communication-compromised regions

Reference

- '19-'26 ROK Air Force Base Perimeter Security Project (Phases 1-3)
- '22 Compact Agricultural Spraying Drone Manufacturing Project
- '24-'25 Drone Demonstration Project (Seoul, Gumi, Ulsan, Uju-gun)





Integrated Mission Operations Software Platform

Provides an all-in-one suite encompassing mission control, data processing, real-time field control, and scalable communication systems



Value of Integrated Management



Safe flight management



Improved operational efficiency



Data-driven decision-making



Scalability and flexibility

Core-Component Localization

Localization of Core Components

By building a self-sufficient production system independent of imported components, Preneu guarantees stable supply and optimal, customized solutions under any circumstances

1. Flight Control System

D-FC (Drone-Specialized Flight Controller)

D-FCC Carrier Board (FC+Companion Computer in one)

2. Communication & Security

D-DL (High-Performance Data Link)

D-DS (Drone-Specialized Encryption Module)

D-GPS (Drone-Specialized GNSS Module)

3. Propulsion & Power

ESC&Motor

Main Board & Battery

4. Camera

FPV EO/IR (Multi-Sensor Camera)

2~3Axis EO/IR (Gimbal Multi-Sensor Camera)

D-GDT (Ground Communication Relay System)

5. Ground Control

D-GCS P7 (Portable Ground Control System)

D-GCS P10 (Portable Ground Control System)

Flight Control System



D-FC

Drone-Specialized High-Performance Flight Controller

MCU	STM32H743IK - Cortex-M7 (32-bit)
Firmware	PX4, Ardupilot
IMU(redundant)	2 × ICM-42688-P + 1 × BM088
Size	38.8 × 31.8 × 17.9 mm

Multicopter-VTOL-Helicopter



D-FCC Carrier Board

FC + Companion Computer in one

FC Support	Pixhawk Standard Cube-compatible interface
CC Support	Jetson Orin NX / Nano
I/O	Ethernet x3, USB-C, HDMI
Size	135 × 70 × 31 mm

AI workloads-video AI-payload control

Communication & Security



D-DL • High-Performance Data Link

Professional Data Link Based on IEEE 802.11 Standards

Frequency	2.4 / 5.8 GHz
Max Speed	300 Mbps
LOS Range	3~5 km
Security	WPA-AES / TKIP-802.1X
Bandwidth	20 / 40 MHz channel / TPC
Encryption	Integrated with D-DS (KCMVP) module

Air Unit + Ground Unit



D-DS

Drone-Specialized Encryption Module (KCMVP)

Certification	KCMVP domestic encryption module
Architecture	Dedicated board (MCU-isolated)
Integration	D-DL, D-FC
Key Management	Supports security-agency key injection
Form factor	Standalone and integrated communication option
Applications	Defense-government-infrastructure

Standalone communication option



D-GPS • Drone-Specialized GNSS Module

F9P(RTK) / M10Q(lightweight)

Receiver	ZED-F9P / SAA-M10Q
Satellite Systems	GPS-Galileo-Glonass-BDS
RTK	F9P supported(multi-band)
Power	5 V
Operating Temperature	-40 ~ +85°C
Interface	UARTCAN / UART

Centimeter-level precise positioning

Propulsion & Power System



ESC • Propulsion Control

In-house firmware

Continuous/Max Current	55 A / 80 A
Operating voltage	7.2-22.2 V
RC Protocol	DShot150-1200
Processor	60 MHz Cortex-M4 × 4
Size / Weight	45 × 45 × 7.3 mm / 20 g

RCPWM-KRM Support



Motor • BL4420

KV 580 • Mid-size multistators

KV / Configuration	580 / 18 slots, 24 poles
Max continuous	12 A (30 Sec)
Weight	70 g
Motor dimensions	Ø 44 mm × 22 mm
Shaft diameter	Ø 4 mm × 2.6 mm × 2

Mid-size multistator airframes



Battery • Power distribution

12,500 mAh • 185 Wh

Nominal Voltage	14.8 V
Operation Voltage	11.2 ~ 16.8 V
Max. Discharge current	62.5 A (5.0 C)
Max. Charge current	12.5 A (1.0 C)
Operation Temperature Range	Charge: 0°C ~ 40°C Discharge: -10°C ~ 50°C

Shipment Capacity SOC 35±5 %



Main Board • Power distribution

Centralized Power Distribution Hub

Battery input	XT60 (4 S ~ 6 S)
Motor outputs	XT30 × 4 EA
Auxiliary outputs	5 V • 12 V
Working voltage	4 S ~ 6 S
Size	81 × 50 mm

Digital FC power sensing

Camera & Imaging System



FPV EO/IR • Fixed Multi-Sensor

EO 2.1 MP • QVGA Thermal

EO / RGB FOV	2.1 MP / H-FOV 60~140°
Thermal	QVGA 320×240 / 50 mK
Frame Rate	30 / 60 Hz
Weight / Size	67.4 g / 33 × 49 × 41 mm
Input Power	12 V
Spectral Range	LWR 8 µm ~ 12 µm

IP54-Industrial grade



2~3-Axis EO/IR Gimbal Camera

3-axis stabilization • 3 km detection

EO Detection / Recognition	3 km / 1.5 km
IR Detection / Resolution	0.8 km (640×480)
Image Stabilization	3-axis roll stabilization
Weight	Under 250 g
Size	43(Ø) × H102
Input Power	DC 12 V

EO 38°×28° / IR 35°×28°



D-GDT

Ground Communication Relay System

Range	Up to 20 km
Antenna	Densi-directional 360° / Directional 180°
Tripod height	Adjustable up to 2.5 m
External connection	1 × RJ-45 Ethernet
Operating time	More than 5 hours
Size (with antenna)	246 × 234 × 1,645 mm

Field operations,
mobile command posts

Portable Ground Control System (GCS)



D-GCS P7 • Portable Controller

7 inch Android 15 • 1.8 kg

Display	7 inch IPS / HD 1,280 × 800
CPU / RAM / SSD	Qualcomm QC5430 CPU / 4 GB / 64 GB
Network	D-DL(802.11 be) / 5.8 GHz
Battery	113 V 3,390 mAh

Over 6 hours Run-Time



D-GCS P10 • High-Performance Controller

10 inch Windows 11 • 2.5 kg

Display	10.1 inch / FHD 1,920 × 1,200
CPU / RAM / SSD	Intel i3 14 core / 16 GB / 256 GB
Network	Intel i226-V 2.5GbE • Wi-Fi 5.8 GHz
Battery	14.4 V 4,900 mAh

Over 5 hours Run-Time