

Product Technical Specification



Features

- Compatible with the Microhard broadband COFDM radio modules:
 1. pMDDL2350
 2. pMDDL2450
 3. pMDDL2550
 4. pMDDL2460
 5. pDDL1800
 6. pDDL900
- Wide 9–36 V DC power input with onboard regulation
- Dual-diversity receiver for superior link stability and range
- Dual Ethernet ports (LAN/WAN) for IP video and telemetry streaming
- Transparent RS-232 / 3.3 V TTL serial interface for telemetry and control
- Compact 60 × 66 mm PCB, lightweight and efficient
- Industrial-grade lightweight aluminium enclosure for rugged airborne use
- LED indicators for Power, Link, Tx/Rx, LAN, and RSSI
- Dual SMA antenna ports for diversity operation

Applications:

- AI Edge Computing and Vision Analytics
- Multi-Camera Networked Vision Systems
- Robotics and Autonomous Platforms
- Industrial & Machine Vision Systems
- Defense and Security Imaging
- UAV / ROV Payloads
- Smart Surveillance and Remote Monitoring
- Embedded Vision Research & Prototyping

Product description:

The Aerolink radio is an advanced, industrial-grade wireless communication module engineered for high-performance real-time video and telemetry transmission across aerial, ground, and industrial domains. Designed on a proven COFDM RF architecture, it delivers robust long-range connectivity and superior link stability even in electromagnetically noisy environments—making it ideally suited for UAVs, UGVs, and autonomous robotic systems.

Operating in the 2.3GHz band, Aerolink employs adaptive modulation schemes including QPSK and 16-QAM, dynamically optimizing throughput and reliability under varying channel conditions. With data rates up to 20 Mbps, it supports HD video streaming, low-latency control links, and transparent telemetry data exchange between airborne payloads and ground control systems.

A dual-diversity antenna architecture minimizes signal fading during manoeuvring or partial obstruction, maintaining uninterrupted communication for stable mission performance. Standard Ethernet and UART interfaces ensure seamless integration with IP cameras, flight controllers, and companion computers across multiple platforms.

The system accepts a wide 7.5–36 V DC input and features advanced onboard power conditioning, ensuring compatibility with UAV and ground vehicle power buses. Its compact 60 × 66 mm footprint and lightweight construction make it ideal for payload-constrained applications, while the industrial-grade aluminium enclosure provides mechanical protection and efficient thermal dissipation.

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info@oppila.in; www.oppila.in

Equipped with AES-128 hardware encryption, Aerolink secures both video and control data, ensuring mission-critical confidentiality. Designed for –40 °C to +85 °C operation, it is fully rated for harsh industrial, airborne, and tactical environments.

Optimized for rapid deployment, the Oppila Aerolink pairs seamlessly with Oppila’s ground receiver modules, forming a complete end-to-end wireless video and telemetry ecosystem—reliable, secure, and mission ready.

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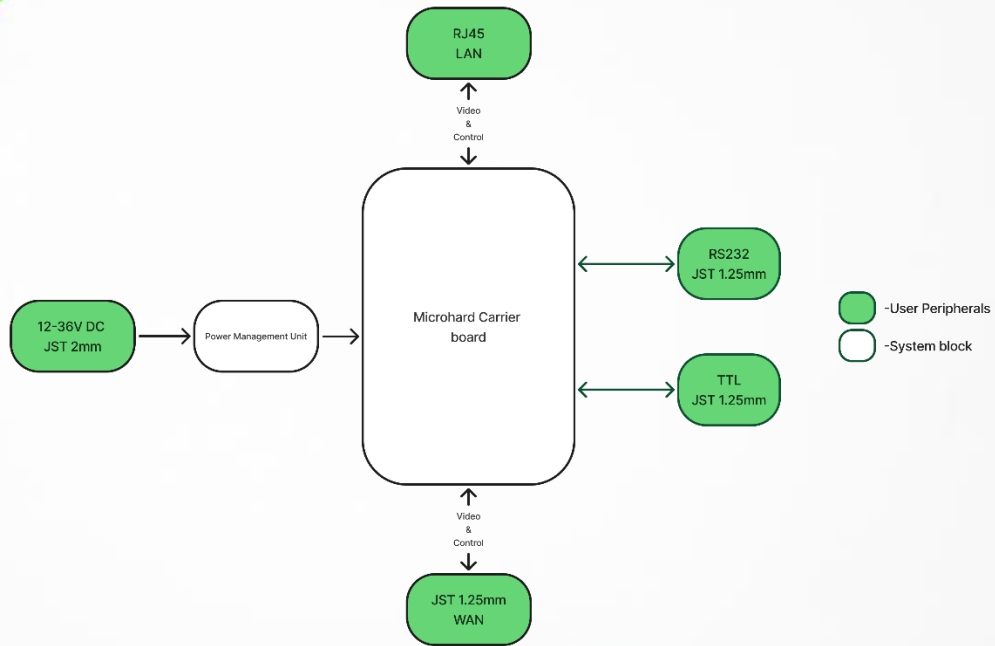
Parameter	Description
Radio Module	Microhard COFDM Data Links <ol style="list-style-type: none">1. pMDDL23502. pMDDL24503. pMDDL25504. pMDDL24605. pDDL18006. pDDL900
Frequency Range	900 MHz – 2550 MHz
Modulation	COFDM, QPSK / 16QAM / 64QAM (adaptive)
Data Throughput	Up to 25 Mbps (typical)
Ethernet Interfaces	1 × LAN (RJ-45), 1 × WAN (JST GH 9-pin connector)
Serial Interface	RS-232 / 3.3 V TTL (selectable)
Power Input	12 – 36 V DC wide-range input
Auxiliary Power Output	12 V @ 2 A (configurable 6–20 V)
Antenna Ports	Dual SMA (Main Tx/Rx + Diversity Rx)
Status Indicators	Power, Link, Tx/Rx, LAN, RSSI (bar indicator)
Configuration	Web GUI and Serial CLI interface
Operating Temperature	–40 °C to +85 °C
Dimensions (L × W)	60 × 66 mm (board only)
Weight	31 g (without enclosure)
Enclosure	Lightweight CNC-machined Aluminium case
Compliance	RoHS, CE (pre-compliance)

Kit Contents

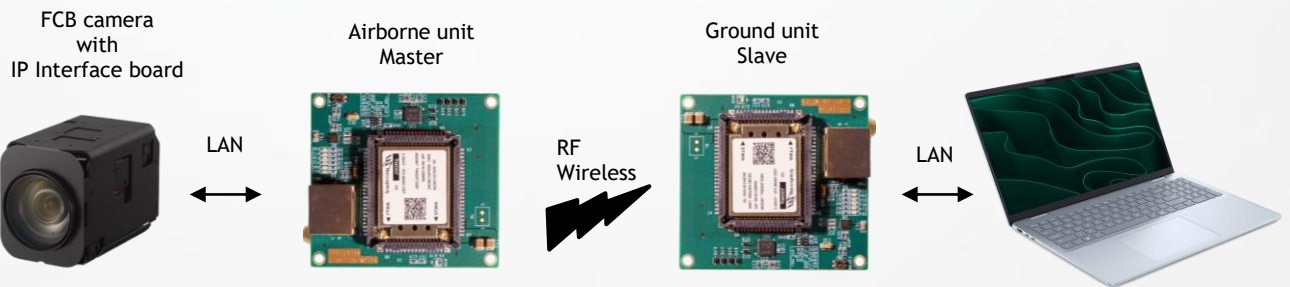
Item	Description
Interface Board	AeroLink Long Range Wireless Video & Telemetry Module
Power Cable	2-pin DC input cable
Ethernet Cable	JST GH to RJ-45 interface (optional)
Serial Cable	RS-232 / TTL serial interface set
Antenna Set	Dual SMA antennas (optional)
Mounting Kit	Screws and spacers for enclosure mounting
Documentation	Product datasheet and setup guide (digital copy)

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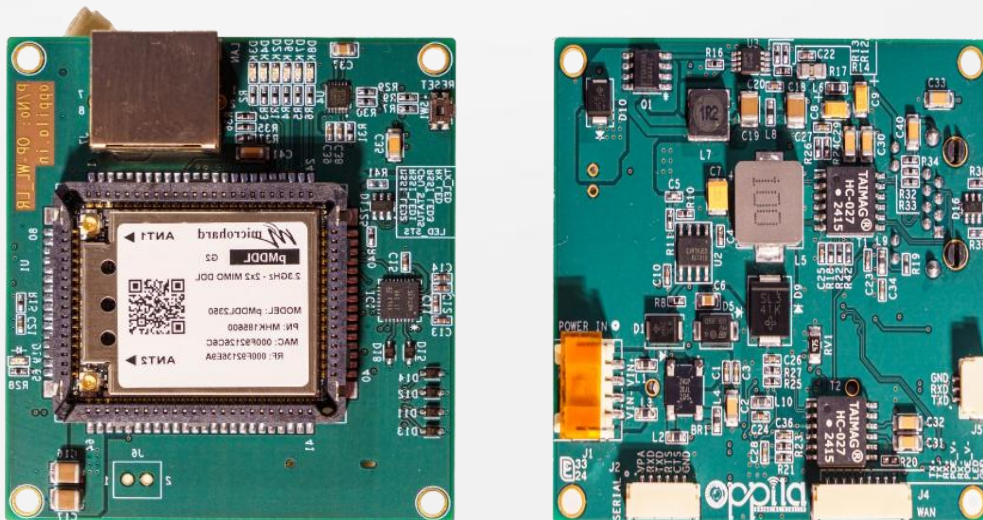
Board Block diagram



System Block diagram



Product Images



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