



L-band Tactical Radios

Platforms

Fighters, Military Aircrafts
MALE UAV, Large Drones
Rotary & Fixed-Wing Platforms
Control Stations, Ground Vehicles
Vessels, Maritime Radios
Launchers, Balloons
Stratospheric Platforms
High-Altitude Stations (HAPS)

Applications

Tactical ISR Data Links
Command and Control (C2)
Intra-Flight Data Links
Swarm and Mesh Networks
Telemetry & Video Streaming

P1350 are airborne-qualified IP data links operating in the L-band (1150-1550 MHz) that provide a compact, robust, and affordable solution for tactical communications in electronic warfare (EW) environments.

Combined with COFDM or DSSS waveforms, the Transmission Security option enables Frequency Hopping Spread Spectrum (FHSS), adding low probability of interception (LPI) and detection (LPD) capabilities.

P1350 radios implement unique frequency offset compensation algorithms that keep communication performance at hypersonic speeds.

TDMA multiplexing allows point-to-point, point-to-multipoint, and mesh networks (MANET) with configurable time slots and dynamic routing. Any network topology can be deployed without the need for external infrastructure.

Multiple devices can be connected simultaneously to the Ethernet and serial interfaces, centralising data links for C2, telemetry, audio, and video in a single device.

Superior Performance

- Up to 100 Mbps of network capacity.
- Up to 30W of RF output power.
- Configurable RF within the 1150-1550 MHz broadband.
- Hypersonic Mobility up to Mach 5 (>6000 km/h).

Waveforms

- COFDM with selectable channel bandwidth for optimum multipath and fading robustness.
- Direct Sequence Spread Spectrum (DSSS) with configurable spreading codes for LPI/LPD capabilities.
- FHSS with up to 512 frequencies for both COFDM and DSSS waveforms.

Mesh Networking

- Robust MANET with configurable nodes.
- Mesh, Star, and Mixed network topologies.
- Internally synchronised, GPS not needed.
- Dynamic Packet Routing between nodes beyond LoS.
- IP Filtering, Wireless Bridge, IP Multicast.

Transmission Security

- Frequency Hopping Spread Spectrum (FHSS).
- AES-256 Encryption.
- Zeroization of TRANSEC parameters.

Avionics-grade Qualification

- Qualified for airborne environmental conditions.
- Extremely rugged IP67-rated design.
- Nickel-plated aluminium enclosure.
- Any point on the surface is valid for Electrical Bonding.
- Built-in self-tests (BIST).
- Over-temperature monitoring and protection.
- Robust power supply with EMI filtering, overcurrent, and reverse voltage protections.
- Military-grade components for enhanced MTBF.

Data Interfaces

- A single unit for Commanding & Control (C2), telemetry, audio, and video streaming.
- Simultaneous connection of multiple devices via Ethernet and serial data interfaces.
- +5 VDC output to supply external devices.

Configuration and Diagnostics

- Link Commander: cutting-edge application for data link and mission control.
- Open protocol for local and remote configuration.
- Network and signal status monitoring.
- Real-time constellation.
- Multiple video players and Geo-positioning map.
- Spectrum Analyzer, Scanning Mode.

Specifications

Signal	P1350-CO	P1350-DS
Frequency Band	1150-1550 MHz	
Waveform	COFDM	DSSS
Spreading Factor	-	1, 7, 15, 31, 63
Modulations	QPSK, 16QAM	DBPSK, DQPSK
Channel Bandwidth	5,10,15,30 MHz	50 MHz
Data Rate	3 to 100 Mbps	0.2 to 80 Mbps
Max. RF Output Power	10 W	30 W
Multiple Access	TDMA	
Networking	Scalable Mesh, MANET	
Transmission Security ^{-SE}		
Frequency Hopping ^{Option}	Up to 50 hops/s	Up to 90 hops/s
Data Encryption ^{Option}	AES-256	
Interfaces		
RF Single Antenna Port	1x SMA 50Ω	
Ethernet ^{Data & Control}	10/100/1000BASE-T <i>Series 800 Mighty Mouse</i>	
J1 Power Supply Connector	+24 to +30 VDC <i>MIL-DTL D38999</i>	
J2 Auxiliary Connector	RS232 / RS422 ^{Data} , +5 VDC Out <i>MIL-DTL D38999</i>	
Status Indicator	Stainless Steel Red LED	
Current Consumption @28VDC (typ.)	2.5A @10W RF Out	4.0A @30W RF Out
Mechanical		
Dimensions	180x142x80 mm	
Weight	2.3 kg	
Material	Aluminium 6082, Nickel Plating	
Environmental & Operational Conditions		
Operating Case Temperature	-40°C...+75°C	
Storage Temperature	-55°C...+85°C	
Waterproofness	IP67	
Temperature, Humidity, Vibration, Shock, ESD	MIL-STD-810 RTCA DO-160	
EMC	MIL-STD-461	
MTBCF	17,000 hours, 50°C AUC	
Environmental Protection	RoHS, REACH	
Export Classification	Standard ^{-ST}	EAR99 No License
	Security ^{-SE}	5A001.b.3
		5A001.b.3, 5A002.a.2

Ordering Information

