



MANET Radios for Critical Platforms

Platforms

UAV, RPAS, Drones
Rotary & Fixed-Wing Platforms
Control Stations
Vehicles, Rovers, Handheld Units
Ground Communications
Launchers, Balloons
Stratospheric Platforms

Applications

Tactical ISR Data Links
Telemetry & Video Streaming
Commanding & Control (C2)
Intra-Flight Data Links
Wireless Mesh Networks

P6000 are defence-grade IP data links that provide a light, compact, robust, and affordable solution for airborne and ground communications. A higher power version delivering up to 8W is available for long-range missions.

P6000 radios implement innovative synchronisation algorithms specifically designed to keep communication performance under high dynamics. This results in the unique broadband solution in the market that shows no signal degradation after take-off.

FDMA and TDMA multiplexing allow point-to-point, point-to-multipoint, and mesh networks (MANET) with configurable time slots, data relay, and dynamic routing capabilities. Based on a proprietary channel access scheme, any network topology can be implemented 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 120 Mbps at UHF, L, S, and C-bands.
- FDMA and TDMA operational modes.
- Up to 8W output power for long-range data links.
- Hypersonic Mobility up to Mach 5 (>6000 Km/h).
- Encrypted Communications.

Mesh Networking

- Robust MANET with configurable nodes (master or slave, with relay and mesh capabilities).
- Internally synchronised, GPS not needed.
- Dynamic Packet Routing between nodes without LoS.
- IP Filtering, Wireless Bridge, IP Multicast.

Defence-grade Qualification

- Extremely rugged IP67-rated design.
- Built-in self-tests (BIST), temperature monitoring.
- Qualified for airborne environmental conditions.
- Optimised dimensions and weight for thermal management and electromagnetic compatibility.
- Robust power supply including EMI filtering, overcurrent, and reverse voltage protections.

One Hub for all your Links

- A single transceiver for Commanding & Control (C2), telemetry, audio, and video streaming.
- Simultaneous connection of multiple devices via Ethernet and serial data interfaces.
- Plug-and-play with most autopilots, radio controls, gimbals, and IP cameras.
- +5 VDC output to supply external devices.

Flexible Configuration

- Open IP protocol for local and remote configuration and status monitoring.
- Cutting-edge application for data link and mission control, including:
 - Setup of transceiver parameters
 - Network and signal status monitoring
 - Real-time constellation
 - Multiple video players and Geo-positioning map

Options & Support

- Included
 - Link Commander: Configuration & Control Application
 - Circular Connector Cable Assembly
 - Guaranteed Integration and Post-sales Support
- Options
 - Frequency Hopping Spread Spectrum (FHSS)
 - Ground and Airborne Antennas
 - On-site Integration Support and Training

Specifications

Signal	P6000	P6000+
Frequency Bands	225 MHz to 6 GHz	
Waveform	Proprietary COFDM <i>Configurable Modulation & Coding Rate</i>	
Data Rate	Up to 120 Mbps	
Max. RF Output Power	2 W <small>UHF, L, S</small>	5 W <small>UHF, L, S</small> 8 W <small>C-band</small>
Multiple Access	FDMA, TDMA	
Networking	Scalable Mesh, MANET	
Interfaces		
RF Connectors	2x SMA 50Ω	
Ethernet <small>Data & Control</small>	1000BASE-T, RJ-45 connector	
Circular Connector	MIL-DTL D38999	
Serial Interfaces <small>Data</small>	RS232, RS422/485, UART, SBUS	
Input Power Supply	+24 to +30 VDC	
Current Consumption <small>@28VDC</small>	≤ 0.7A	≤ 1.8A <small>@5W RF Out</small>
Mechanical		
Dimensions	118x107x48 mm	118x166x59 mm
Weight	0.7 Kg	1.3 Kg
Material	Aluminium 6082, Nickel Plating	
Environmental & Operational Conditions		
Operating 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	
Environmental Protection	RoHS, REACH	
Export Classification	NLR, ITAR-free	

Ordering Information

Part Numbering P6000 + CO - S3 - B 15 - R2 - N

Model			
-	P6000 up to 2W		
+	P6000+ up to 8W		
RF Band, MHz		Bandwidth <small>Data Rate</small>	
U0	225-400	01	1 MHz 0.7 to 2.6 Mbps
U1	300-500	05	5 MHz 3.8 to 13 Mbps
U2	800-1000	10	10 MHz 7.5 to 26 Mbps
L1	1150-1350	15	15 MHz 11 to 40 Mbps
L2	1350-1550	30	30 MHz 23 to 120 Mbps
S1	2000-2200		
S2	2200-2400		
S3	2400-2600	Serial Interfaces	
C0	4400-5000	R2	2x RS232
C1	4400-4600	R4	1x RS422/485
C2	4700-4900	B2	2x SBUS
C3	5050-5250	RB	1x RS232, 1x SBUS
C6	5700-5900	RU	1x RS232, 1x UART
		Encryption	
		N	No
		E	AES-128

Contact us for non-listed RF band or serial interface