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goTenna PRO - X2m

Data Sheet

The Pro-X2m is intended to ease integration of the goTenna mesh networking capabilities across a wide variety of systems, making it ideal for adaptable communications solutions in demanding environments. Made in USA.



KEY BENEFITS

The goTenna Pro-X2m offers seamless integration of goTenna's AspenGrove™ mesh networking into various third-party platforms. This modular, cartridge-based solution is designed specifically for integration partners and platform original equipment manufacturers (OEMs), allowing easy embedding into unmanned aircraft systems (UAS), maritime, vehicle, or fixed platforms to enhance communication range, relay capabilities, and overall resilience.

Together with the Pro-X2 and EdgeRelay product families, the Pro-X2m enables the rapid and flexible deployment of reliable, mesh-based, off-grid communication for critical applications spanning air, ground, and maritime environments.

Long Range
Tested Up To:

- 15 miles (24km) - 55 miles (88.5km) line-of-sight depending on elevation and terrain.
- Over 100 miles (160km) using an aerial relay.

Low Profile
Proven to be difficult to detect. Utilizes short burst transmission, frequency hopping, and advanced Mesh Network protocols.

Secure
Secure broadcast, private, and group messaging using AES 256-bit encryption.

Rapidly Deployable Team Networking
Setup a 100% off-grid network setup for teams in minutes in conjunction with Pro-X2 series portable radios to enable seamless communications with integrated systems and personnel.

Vehicle Node / Relay

Marine Node / Relay

Medium UAS Node / Relay

Helicopter Node / Relay

Tower Node / Relay

Aircraft Node / Relay

Rack / Sled Systems

Extensible Software Integration
goTenna offers a multi-platform Radio SDK (R-SDK) which enables OEMs and software developers the ability to integrate key functionality within their own applications.

Platform-Powered for Extended Operations
Unlike modules reliant on internal batteries, the Pro-X2m uses the host platform's 9-32 VDC power. This allows its operational duration to match the host system's endurance, enabling integrators to achieve significantly longer, platform-managed mission times.



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SPECIFICATIONS

General	
Radio Dimensions HxWxD	5.32 × 1.90 × 1.21 in / 135.10 × 48.34 × 30.73 mm
Weight	6.43 oz / 182.5 g
FCC ID	2ABVK373373
IC ID	21842-373373
Emission Designators	7K33F1D, 7K31F1D, 11K9F1D
CE	IEC 62368-1 Certified
Mesh Networking Protocol	Aspen Grove™
Transceiver	
VHF Frequency	142 to 175 MHz*
UHF Frequency **	406 to 420 MHz (NTIA J/F-12), 420 to 450 MHz (NTIA J/F-12), 445 to 480 MHz (FCC Part 90)
Channel Bandwidth	12.5 kHz Channel, 7.28 kHz Occupied 25 kHz Channel, 11.8 kHz Occupied
Frequency Stability (-30°C, +60°C, +25°C Ref)	2.5ppm
Sensitivity (1% BER, 12.5 kHz)	-111 dBM
Sensitivity (1% BER, 25 kHz)	-107 dBm
Power Output Settings	0.5W, 1.0W, 2.0W, 5.0W (27dBm, 30dBm, 33dBm, 37dBm)
Modulation	4GFSK
Environmental	
Maximum Internal Operating Temperature	140° F (60° C)
Minimum Internal Operating Temperature	-4° F (-20° C)
Storage Temperature	-22 to 140° F (-30 to 60°C)

Final operating and storage temperature ratings dependent on OEM integration.

Integrations Details	
Front Plane Interface	Micro-USB Data / SMA RF / SMA RF Bluetooth
Backplane Interface	Power Input: 9-32VDC on 2×2 Molex Power Connector (latching or push-on)
USB Port	Micro USB 2.0
Intrusion Characteristics (IP Rating)	IP20 (Final IPXX rating dependent on OEM integrations)
Mounting Features	Rail system / #6-32 Threaded Holes (5 faces)

Consult the X2m integrator guide for additional details and specifications.

* VHF is intended for fixed and mobile antenna mounting configurations. For other configurations, including portable, please contact goTenna.

** Requires minimum Pro-X2 firmware Version v3.2.10 and ATAK Plug-In version v2.3. Expanded band support outside of NTIA requires in-country regulatory approval.



prosales@gotenna.com