goTenna PRO-X2

Data Sheet

One of the world’s smallest, lightest, most cost-effective mesh networking devices with proven performance for tactical operations. Made in USA.

Key Benefits

Used as a standalone relay or paired with a mobile phone, the mobile mesh network delivers mission-critical situational awareness beyond the edge of traditional connectivity. The goTenna Pro X2 is interoperable with the goTenna Pro X.

**Long-range**
Tested up to:
- 15 miles line-of-sight with standard, body-mounted configuration.
- 55 miles line-of-sight with an elevated ground relay.
- 164.8 miles ridgeline-to-ridgeline.
- 130.5 miles air-to-ground using an aerial relay with a coverage of 14,412 square miles.
- 597 square miles - complete island coverage of Oahu, HI.

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

**ATAK Compatible**
Directly share location, messages, and more with the goTenna-ATAK plugin.

**Longer mission endurance**
9 hours per charge for standard missions.

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

**Ruggedized**
MIL-STD-810 compliant.

**Lightweight**
Significantly lighter than standard radio options at 3.5 oz (100g).

**Rapidly Deployable**
100% off-grid network setup for teams in minutes.

**Advanced Power Management**
Seamless operation in power-limited configurations for solar relays, device tethering, and more.

**Configurable Antennas**
Standard options include compact and performance antenna options, along with ability to integrate with vehicle-mount and directional antennas for extended range.

**Scalable**
More than 60 nodes demonstrated in a single network in routine operation.
## Specifications

### General
- **Radio Dimensions HxWxD**: 5.5 x 1.2 x 0.75 in / 13.46 x 2.75 x 1.78 cm
- **Weight**: 3.5 oz (100g)
- **FCC ID**: 2ABVK373372
- **IC ID**: 21842-373372
- **CE**: Certified

### Mesh Networking
- **Mesh Networking Protocol**: Aspen Grove™
- **Recommended Hop Count**: 6*

### Transceiver
- **VHF Frequency**: 142 to 175 MHz**
- **UHF Frequency**: 445 to 480 MHz
- **Channel Bandwidth**: 12.5 kHz, 25 kHz (User Selectable)
- **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
- **Operating Temperature**: -20 to 60°C
- **Storage Temperature**: 0 to 45°C
- **Ruggedization**: MIL-STD-810
- **Ingress Protection**: IP68 (10 meters for 30 minutes)
- **Intrinsic Safety**: Class I and II, Division 2 Class III, Divisions 1 and 2

### Power
- **Battery Life (Standby)**: Up to 30 hours
- **Battery Life (Nominal)**: Up to 9 hours***
- **Battery Capacity**: Li-Ion, 474mAh, 3.51Whr
- **Power Management**: Auto Power-On (Solar Mode) Charge Control (Tether Mode)

### Interfaces
- **Antenna Port**: SMA
- **Bluetooth**: BLE 5.0 & BLE 4.0+
- **USB Port**: Micro USB 2.0

### Mil Std 810G/H
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* User configurable to higher hop counts based on use case and mission.
** VHF is intended for fixed and mobile antenna mounting configurations. For other configurations, including portable, please contact goTenna.
*** Performance may vary based on node count, number of hops, power output, and transmission rate.