SATELLITE PUSH-TO-TALK RADIO
4G LTE ENABLED

EXPEDITION COMMUNICATIONS

Leverage a powerful combination of push-to-talk (PTT) radio capabilities over reliable satellite connectivity with the option for cellular failover. This system integrates a M2M terminal with an easy-to-use PTT radio to establish seamless radio connectivity over land and sea. This means that whether you have a field team patrolling rural areas or teams just offshore, you can be sure they have a means to communicate with their base operations leveraging satellite in areas where LMR and cellular might not work.

With two systems in place (one for the message sender and one for the receiver), messages can be sent and received without issue and because the system is satellite based, if terrestrial connections are down, this system will still work.

Relevant for Various Agencies & Use Cases

› **Police** - Patrol Communications
› **Fire** – Emergency Response
› **EMT** – Emergency Response
› **Forestry** – Land Surveillance
› **Construction** – Remote Teams
› **Insurance** – Disaster Response
› **Energy/Utilities** – Pipeline Monitoring

Technology

› IP-based networking
› L-Band Satellite Connectivity
› Message via the PTT handset, over ethernet, or Android App
› Ethernet and Wi-Fi enabled and real-time monitoring with no delays
› Two-way send/receive connectivity
› Low-latency for instant message transfer and real-time monitoring with no delays
› High reliability—even in harsh weather conditions
› Low service costs with bandwidth
› Embedded commercial GPS and GLONASS
› Netted Voice
› Message recording of audio files for playback
› Ability to set up different talk groups

M2M Terminal

PTT Handset

MOUNTING OPTIONS

PTT Handset Specifications

- › CPU: MT6737M Quad core processor 64bit
- › RAM+RO: 1GB+8GB
- › OS: Android 7.0
- › Screen Size: 4.5 inches, 480x320mm
- › Language: Multi languages

- › FDD-LTE:Band1/2/4/5/7/12/13/17/28a/28b WCDMA: Band 1/2/4/5 GSM/GPRS/EDGE: Band2/5
- › Antenna
  - 1- WCDMA/GSM with external antenna
  - 2 - GPS antenna with external antenna
  - 3 - BT/WIFI antenna is built-in FPC antenna

- › Wifi: IEEE802.11 b/g/n
- › Bluetooth: Bluetooth 3.0HS
- › GPS: GPS/AGPS
- › USB: USB 2.0
- › SIM: TypeStandard sim card
- › Dimension: 170x80x85mm
- › Weight: 380g

- › Working Voltage: DC 10-24V
- › Working Temperature: -30C to +75C

M2M Terminal Specifications

Specifications

Antenna polarization	RHCP & LHCP, software configurable
Frequency band	
TX	1626.5 to 1675.0 MHz
RX	1518.0 to 1559.0 MHz
Transmission security	
Link encryption	AES-256
GNSS	GPS + GLONASS

External Interfaces

Power	10 to 32 VDC, via multi-pin connector Short circuit and surge protection
Wi-Fi	IEEE 802.11 B/G, 2.4 GHz
Ethernet	Via multi-pin connector
GNSS	L1 frequency

Mechanical

Size (L x W x H)	7" x 5" x 1.65"
Weight	2 lbs

Environmental

Temperature	
Operational	-40° to +71° C
Transport	-40° to +85° C
Storage	-40° to +85° C
Solar Radiation	1120 W/m2 p per IEC-60068-2-5
Relative Humidity	Up to 100% condensing at 45° C, per IEC 60068-2-30
Ingress Protection	IP 66 dust and spray proof in all directions
Wind	Wind Wind speeds up to 200 km/hr
Air Pressure Transport	4500 m AMSL

Environmental (Continued)

Vibration **Operational**	Random vibration of 1.05 g rms in each of three mutually perpendicular axes
5 to 20 Hz Vibration	0.02 g2 /Hz
20 to 150 Hz Vibration	-3 dB/octave
Survival	Transportation vibe per IEC 60068-2-64
Frequency	5 to 200 Hz
ASD	1.0 m2/s3
Shock **Operational**	IEC 60068-2-64, 50 m/s2, 11 ms
Survival	Transportation shock per IEC 60068-2-29, A = 180 m/s2, t = 6 mS

Regulatory Approvals

CE	Per R&TTE Directive 1999/5/EC, Low Voltage Directive 2006/95/EC
FCC	Title 47 Section 15, Title 47 Section 25
RCM	AS/NZS CISPR 22:2009 Safety IEC/EN/AS/NZS 60950-1, IEC/EN/AS/NZS 60950-22
RoSH	Per European Union Council Directive 2011/65/EU
REACH	Per European Union Council Directive 1907/2006/EC
WEEE	Per European Union Council Directive 2012/19/EU

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