



Features and Benefits

- Easily connect Push-To-Talk radios to IP networks
- Simple to use interface and wizard based configuration
- Supports multiple radio devices and manufacturers
- Compatible with a range of PTT over Cellular apps and radio dispatch systems
- Can be mounted in 19 inch rack with optional Rack Kit
- Mission Critical Push-To-Talk (MCPTT) compatibility
- Enables crossbanding between VHF, UHF and other radio frequencies
- FIPS 140-2 Compliance Tested*

Vocality RoIP

The Vocality RoIP provides users with a simple to use and small form factor Radio over IP connectivity solution.

Fully compatible with a wide range of third party radio dispatch solutions and mobile apps, Vocality RoIP allows users to benefit from Push-To-Talk over Cellular apps while maximizing their existing PTT investment.

Connect up to four radio devices from different manufacturers regardless of radio brand, frequency or technology. Multiple agencies can connect their radios to Vocality RoIP to create a single unified radio solution locally and/or via the cellular network.

The Vocality RoIP can be expanded with the addition of RoIP Connect and Rack Kit to offer up to an 8-port Radio over IP solution.

Specifications

Mechanical	Description
Form Factor	Standalone enclosure
Cooling	Conduction by internal heat spreader to case
Operating Conditions (boxed)	-40°C to +80°C ambient 0-90% RH non condensing Note: if the optional power supply (Vocality RoIP/PSU) is used, this range will be reduced to 0 to 40°C
MTBF	>175,000 hours at 70°C
Dimensions	1" H x 4" W x 4" D 2.54 cm H x 10.16 cm W x 10.16 cm D
Indicators	4 tri-color audio channel status LEDs, 2 port status LEDs per Ethernet port, 1 tri-color status LED
Weight	0.6 lbs / 0.27 kgs

Electrical	Description
Supply Input Rating	5-35VDC @ 1.5A max
Power Consumption	5W (typ)
Optional Power Supply	100-240V AC @2A, 50-60Hz (Output 12V DC @6A max)

Connectors	Description
DC Power	3 way locking Power Connector
ETH1, ETH2 Ethernet Ports	2 x 8-way RJ45
Analogue Audio Ports	4 x 8-way RJ45
Quad Serial & Radio Auxiliary I/O	26-way high-density D-Type female
USB	1 x USB 2.0 Type A (support for RoIP Connect, LTE and Wi-Fi devices) Contact us for compatible list of USB devices

Functional	Description
Quad Serial Ports	V.24/RS232 serial
10/100/1000base-T Ethernet Ports	2
Presentation	Auto-MDIX
Format	IEEE 802.3i (10BASE-T), IEEE 802.3u (100BASE-TX), IEEE 802.3ab (1000BASE-T)
RoIP Protocol Support	Unicast RTP, Multicast RTP, SIP UA
Optional Software Modules	Secure, Multi-bearer and Dispatch optional modules available
RTP Packet Sampling Rates	Auto
Audio 4-Wire Ports	1 x standard (expandable up to 4 via software license or 8 with RoIP Connect)
Interfaces	4-wire activation with COR/PTT, adjustable gain and optional DC bias for direct microphone connection
Compression	G.723.1 (5.3/6.3Kbps MP-MLQ), G.729 Annex A (8Kbps CS-ACELP), G.711 (64Kbps PCM) μ -law or A-law, Opus and variable bit rate codec including HD voice
Impedance	Input: high/600ohms, Output: 600 ohms
Max Input Level	6.0V pk-pk
Max Output Level (1kHz)	7.1V pk-pk
Passbands Flatness	+/-1.0dB (300-3300Hz)
Maximum PTT Voltage	-24V to +60V relative to GND
Maximum PTT Current	+/-120mA
Activation	COR/PTT, Vox, Permanent
Coding Delay	Per algorithm
Gain	Input: -12 to +55dB programmable in 1dB steps Output: -57 to +6dB programmable in 1dB steps
Radio Auxiliary I/O	6 general purpose programmable I/O signals
Wi-Fi Support	Access Point and Client modes with WPA2. (Requires separately supplied dongle)
Supported MCPTT Systems	FirstNet PTT

When equipment is adequately protected from direct user contact, the equipment will reliably operate with an ambient temperature within the specified range. Vocality RoIP is a product under continuous development. Information correct at time of creation and is subject to change. Please be advised that Secure module licenses will be subject to UK dual-use export control restrictions.

*The Vocality RoIP Gateway from Cubic Corporation has successfully completed FIPS 140-2 compliance testing (performed by an independent, accredited testing laboratory) and is now undergoing final review by the Cryptographic Module Validation Program (CMVP).



Features and Benefits

- **Embedded 4G LTE easily connects PTT radios and LTE-enabled smart devices over cellular networks**
- **Extensive range of connectivity options: wired, 4G LTE and Wi-Fi**
- **Supports multiple radio devices and manufacturers**
- **Compatible with a range of PTT over Cellular apps and radio dispatch systems**
- **Approved for use on AT&T, FirstNet® and Verizon LTE networks**
- **Mission Critical Push-To-Talk (MCPTT) compatibility**
- **Enables crossbanding between VHF, UHF and other radio frequencies**
- **FIPS 140-2 Certified**

Vocality RoIP

The Vocality RoIP products provide users with a range of easy to use small form factor Radio over IP connectivity solutions.

Fully compatible with a wide range of third-party radio dispatch solutions and leading Push-To-Talk over Cellular apps, the Vocality RoIP allows users to maximize their existing Land Mobile Radio investment.

Connect up to four radio devices from different manufacturers regardless of radio brand, frequency or technology to a single RoIP device or up to eight devices with the RoIP Connect USB expansion module.

Multiple agencies can connect their radios to Vocality RoIP to create a single unified radio solution locally and/or via the cellular network.

The optional Rack Kit allows for up to three RoIP's or RoIP Connects to be mounted in a standard 19 inch rack and requires only 1U of rack height.



Specifications

Mechanical	Vocality RoIP	Vocality RoIP Connect
Form Factor	Standalone enclosure	Standalone enclosure (Requires USB connection to Vocality RoIP)
Operating Conditions (boxed)	-40°C to +80°C ambient 0-90% RH non condensing Note: if the optional power supply (Vocality RoIP/PSU) is used, this range will be reduced to 0 to 40°C	-40°C to +80°C ambient 0-90% RH non condensing
MTBF	>100,000 hours at 70°C	>128,000 hours at 70°C
Depth (in / cm)	4.0 / 10.16	4.0 / 10.16
Width (in / cm)	4.0 / 10.16	4.0 / 10.16
Height (in / cm)	1.0 / 2.54	1.0 / 2.54
Weight (lbs / kg)	0.6 / 0.27	0.4 / 0.18
Supported LTE Cellular Bands	B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B20, B28, B38, B40, B41, B66, B71	N/A
Supported MCPTT Systems	FirstNet PTT	FirstNet PTT

Electrical	Vocality RoIP	Vocality RoIP Connect
Optional Power Supply	100-240V AC @2A, 50-60Hz (Output 12V DC @6A max)	N/A
Supply Input Rating	5-35VDC @ 1.5A max	5VDC @0.3A (Powered via USB 2.0 from Vocality RoIP)
Power Consumption	5W (typ)	1.5W (max)

Connectors	Vocality RoIP	Vocality RoIP Connect
DC Power	3 way locking Power Connector	N/A
ETH1, ETH2 Ethernet Ports	2 x 8-way RJ45	N/A
USB	1 x USB 2.0 Type A (Support for RoIP Connect, LTE and Wi-Fi devices)	1 x USB 2.0 Micro B, 2 x USB 2.0 Type A
Analogue Audio Ports	4 x 8-way RJ45	4 x 8-way RJ45
Quad Serial & Radio Auxiliary I/O	26-way high-density D-Type female	26-way high-density D-Type female

Rackmount Kit



Mechanical	Description
Form Factor	1U 19 Inch Rack
Width (in / cm)	19.00 / 48.26
Height (in / cm)	1.75 / 4.45
Depth (in / cm)	12.87 / 32.69
Weight Unpopulated (lbs / kg)	2.2 / 1.0

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