



Vocolity RoIP

Radio over IP connectivity solution

The Vocolity 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, Vocolity RoIP allows users to benefit from Push-to-Talk over Cellular 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 Vocolity RoIP to create a single, unified radio solution locally and/or via the cellular network.

The optional Wi-Fi access point dongle allows devices such as laptops and tablets access to the cellular data network via the RoIP, sharing the available resources.

The Vocolity RoIP can be expanded with the addition of RoIP Connect and Rack Kit to offer up to a 12-port Radio over IP solution.

FEATURES & BENEFITS

- Embedded 4G LTE to easily connect PTT radios to cellular networks and smartphone PTT apps
- Extensive range of connectivity options: wired, 4G LTE and Wi-Fi
- Supports multiple radio devices and manufacturers



RoIP Gateway

Connect push to talk radios into IP infrastructure, for onward connection to VoIP phones, telephone PBX systems, radio dispatch servers and push to talk smartphone applications.



Integrated 4G LTE

Connect radios via 4G LTE networks for connectivity beyond normal radio range to anywhere in the world..



Multi-Bearer Support

Automatically switch between networks including cellular, Wi-Fi, fixed line and satellite based on user preference, helping to maintain connectivity and reduce service charges.



Radio Dispatch

A lightweight console application with a drag-and-drop user interface providing connectivity between multiple radio devices and ability to create radio talk groups.

DMX-2019-01

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	Height 43.18mm x Width 482.6mm x Depth 329mm
Indicators	4 tri-color audio channel status LEDs, 2 port status LEDs per Ethernet port, 1 tri-color status LED
Weight	1kg

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)
Power Over Ethernet	Device may be powered over Ethernet, 802.3af Class Device

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)
Compatible 4G LTE Dongles	US (AT&T) Sierra Aircard 313u, Aircard 340u and Huawei E3372 LTE USB Stick
Internal Expansion Slot	Mini-PCIe for LTE with external SMA connectors and SIM card slot
Supported Cellular Bands	B1/ B3/ B5/ B7/ B8/ B20/ B38/ B40/ B41

Functional	Description
Quad Serial Ports	V.24/RS232 serial
Serial Outline Features	Terminal Server, Serial over IP Server and Serial over IP Server/Client
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	Enhance, Secure, Multi-bearer and Dispatch optional modules available
RTP Packet Sampling Rates	Auto
Audio 4-wire Ports	1 x standard (expandable up to 4 or 12 with 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, 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)