



RMU25

P25 Radio Modem Unit

FEATURES

- ➔ Secure industrial control
- ➔ Data comms over P25 networks
- ➔ IP-connected SCADA master
- ➔ Sends and receives data
- ➔ Ethernet, serial RS232 and general purpose I/O ports
- ➔ Rugged aluminum case
- ➔ Robust AES & DES encryption
- ➔ VHF and UHF bands
- ➔ Integrated voice and data, with priority available to data
- ➔ FIPS 140-2 Level 1 compliance



SECURE INDUSTRIAL CONTROL FOR THE UTILITIES INDUSTRY.

Etherstack has released the first custom designed SCADA P25 data modem. Designed to work on both conventional and trunking P25 networks, the Radio Modem Unit (RMU) supports the DNP3 protocol for SCADA systems via serial and/or ethernet interfaces. The enclosure is a mechanically robust aluminum case that was designed to meet IP67 submersion in up to 3.2 feet of water. Eight digital I/O's are also provided.

When used in conjunction with an Etherstack-based P25 trunked radio network core, the unit can intelligently share traffic channels with voice traffic with a range of call priority options, allowing the most efficient use of radio network resources.

Robust AES 256 & DES encryption is available to meet critical infrastructure requirements.



The Radio Wave Building
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New York, NY 10001
917-661-4110

Want to learn more about the RMU?
Email us at solutions@etherstack.com.

Specifications

General

Frequency Range*	136-174 MHz	380-520 MHz
Channel Spacing	12.5 kHz / 25 kHz	12.5 kHz / 25 kHz
Channel Step Size	2.5 / 3.125 kHz minimum step size	2.5 / 3.125 kHz minimum step size
Maximum Frequency Separation	Full Bandsplit	Full Bandsplit
Modulation	C4FM / FM	C4FM / FM

RMU25-V VHF

RMU25-U UHF

Transmitter

Rated RF Output Power	100 mW to 10 W	100 mW to 4W
FM Hum and Noise	34dB (12.5 kHz) / 40dB (25 kHz)	34dB (12.5 kHz) / 40dB (25 kHz)
Conducted Spurious Emissions	<-20 dBm	<-20 dBm
Audio Distortion	< 3%	< 3%
Modulation Fidelity	RMS deviation error magnitude <2%	RMS deviation error magnitude <2%
Frequency Accuracy	+/- 2.0 ppm	+/- 2.0 ppm
Adjacent Channel Power	67 / 60 / 70 (12.5 digital / 12.5 / 25 kHz)	67 / 60 / 70 (12.5 digital / 12.5 / 25 kHz)

Receiver

Reference Sensitivity	-120 dBm	-120 dBm
Selectivity	60 / 60 / 75 / 80 dB (12.5 digital / 12.5 / 25 / 25 above 162 MHz)	60 / 60 / 70 dB (12.5 digital / 12.5 / 25 kHz)
Intermodulation Rejection	75 dB	75 dB
Conducted Spurious Emissions	-57 dBm	-57 dBm
FM Hum and Noise	34 dB (12.5 kHz) / 40 dB (25 kHz)	34 dB (12.5 kHz) / 40 dB (25 kHz)
Audio Output Distortion	< 5%	< 5%

Environmental

Dust & Water	IP67 (connector cover installed)	IP67 (connector cover installed)
Operating Temperature	-30°C to +60°C	-30°C to +60°C
Storage Temperature	-40°C to +85°C	-40°C to +85°C
Humidity Operation	MIL-STD 810E	MIL-STD 810E

Electrical

Nominal Power Supply Voltage	12V DC	12V DC
Extreme Power Supply Test Voltages	+/- 20%	+/- 20%
Maximum Current Drawn	5A	5A
Standards	TIA-102 TIA-102.CAAA TIA-102.CAAB	TIA-102 TIA-102.CAAA TIA-102.CAAB

*If your desired operating band is not listed, please contact Etherstack at 917-661-4110 or info.na@etherstack.com.

This device has not been approved by the Federal Communications Commission. This device is not, and may not be, offered for sale or lease, or sold or leased until the approval of the FCC has been obtained.

The specifications above are for typical performance and may change without notice.

Not all specifications as published are permitted by the FCC and where applicable, configuration will be in compliance with the regional authority

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