150 MHz

Alligator Communications

Model 2188

150 MHz Licensed MAS Radio

Features:

- Ethernet and RS-232 Interfaces Concurrently
- Telnet network management
- AES-256 Encryption with SHA256 key generation
- Robust 4GFSK modulation
- Automatic Frequency Calibration

Applications:

- SCADA Systems
- Utility Data Communications
- Oil & Gas Pipeline Monitoring
- Water Systems
- Distribution Automation

General Description

Alligator now offers the most secure and robust multiple address licensed radio in the industry. Featuring both Ethernet and RS-232 interfaces concurrently, it automatically encapsulates and encrypts any SCADA protocol on to a secure 4GFSK modulation format that is sent over a standard 6.25 or 12.5 kHz channel. Frequency synthesis permits selection of any channel pair in the 150-174 MHz bands to ±1 ppm stability.

Single unit with three modes of operation: Master, Polling Master, or Remote. One unit backs up all three modes. Automatic frequency control keeps all remote radios phase locked to the master frequency. Several modes of network management including Telnet and web browser permit tight monitoring and control, totally transparent to primary data traffic. This makes Alligator the clear choice for MAS radio systems due to its superior flexibility and system transparency operations.

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Model 2188 Radio

Technical Specifications

TRANSMITTER

RF Output Power	1, 2, or 3W (max.)
Impedance	50 Ohms
Frequency Range	150-174 MHz
Frequency Step Size	1 Hz
Frequency Stability	±1 ppm
Modulation	4GFSK
Maximum Frequency Deviation	2400 Hz**
Attack Time	<1 msec
Release Time	<0.5 msec
Bandwidth	6.25 or 12.5 kHz**

RECEIVER

Input Sensitivity	-117 dBm at 10^{-6} BER
Impedance	50 Ohms
Frequency Range	150-174* MHz
Frequency Step Size	1 Hz
Frequency Accuracy	±1 ppm
Selectivity	-100 dB
Desensitization	-60 dB
Intermodulation	-75 dB (EIA)
Spurious Image Rejection	-80 dB
Bandwidth	6.25 or 12.5 kHz**

GENERAL

Frequency	150-174* MHz
Input Voltage	12-24 Vdc
Current Consumption (at 13.8 Vdc)	
Receive Mode	<80 mA
Transmit (5W)	< 1.2 A
Data Rate	
6.25 kHz channel	4800 bps
12.5 kHx channel	9600 bps
Connectors	
Antenna	Type N female
Power	2 Pin Captive Rectangular
Data (RS232)	DB9F
Data (10/100 Ethernet)	RJ45
FCC Certification	FCC ID JIL2188
Environment	
Temperature	-30^0C to $+60^0$C
Humidity	95% at 40^0C
Dimensions	6.75” x 1.5” x 5.75”
Weight	2 pounds

*Other frequency bands available on special order
**Other bandwidths available on special order by changing symbol rate and frequency deviation

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