

# 700 MHz

## Alligator Communications Model 2788 Series

### 700 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
- Railroad

#### 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 12.5, 25, 50 or 100 kHz frequency channel. Frequency synthesis permits selection of any channel pair in the 757-758/787-788 MHz bands to  $\pm 1$  ppm accuracy.

Single unit with four modes of operation: Master, Repeater, Polling Master, and Remote. One unit backs up all four. 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.



**Alligator**  
Communications, Inc.

# 2788 Series Remote Radio

## Technical Specifications

### TRANSMITTER

RF Output Power	2W***
Impedance	50 Ohms
Frequency Range	757-758/787-788* MHz*
Frequency Step Size	1 Hz
Frequency Stability	±1 ppm
Modulation	4GFSK
Symbol Rate	4800 Hz**
Data Rate	19200 bps
Maximum Frequency Deviation	2400 Hz**
Attack Time	<1 msec
Release Time	<0.5 msec
Bandwidth	12.5, 25, 50 or 100 kHz**

### RECEIVER

Input Sensitivity	-117 dBm at 10 <sup>-6</sup> BER
Impedance	50 Ohms
Frequency Range	757-758/788-788* 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	12.5, 25, 50 or 100 kHz**

### GENERAL

Frequency	757-758/787-788* MHz
Input Voltage	10-24 Vdc
Current Consumption (at 13.8 Vdc)	
Receive Mode	<80 mA
Transmit	< 1.0 A
Data Rate	19200 bps
Connectors	
Antenna	Type N female
Power	2 Pin Captive Rectangular
Data (RS232)	DB9F
Data (10/100 Ethernet)	RJ45
FCC ID	
JIL2788A (757-758 MHz)	
JIL2788B (787-788 MHz)	
Environment	
Temperature	-30°C to +50°C
Humidity	95% at 40°C
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

\*\*\*Higher power levels available on special order.



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