The FireLine UHF Data Radio modem is a rugged 2-watt UHF data radio modem, designed to easily integrate into OEM products. Perfect to remote control SCADA, and telemetry applications, it contains a high-performance transceiver with a powerful integrated high-speed modem.

**Product Overview**

**High Speed and Efficiency**
The *FireLine* operates with over-the-air data rates of 1200, 2400, 4800, or 9600 bps on 12.5kHz radio channels and up to 19200bps on 25kHz channels. Faster rates for higher efficiency, or lower-speed for increased communication range.

**Fully Programmable**
Using industry-standard AT commands, the *FireLine* may be configured for simple “Transparent” operation, or for more sophisticated systems, may be configured with network IDs, digital-repeating (store-and-forward), and hardware flow control.

**Serial Interface**
A versatile RS-232 serial interface is utilized for both the user’s data and to configure the data radio modem. Ethernet, RS485 and RS422 options are available.

**Packets or Streaming**
The FireLine modem may be configured to send data in either a Packet Mode or Streaming Data Mode. Use Packets for reliability and error-free communications, and use streaming for high-speed low-latency transmissions.

**Real-time diagnostics and statistics**
Channel performance, RSSI, RF power, packet counters, errors, and radio configuration are easily accessed. An *Auto-Status* feature enables the FireLine to periodically report its status and DC voltage.

**Fully Integrated Design**
The advanced UHF transceiver is integrated with a powerful 32-bit microprocessor-based modem in one easy-to-implement package. The microprocessor simplifies the user interface, make the data radio modem truly transparent. Data In. Data Out. It also incorporates sophisticated DSP and FEC routines, allowing the modem to receive data that is buried in noise.

**Flexible Addressing and Error Correction**
The FireLine uses a 16 bit address with a 16 bit network mask, allowing for many devices to be co-located without receiving each other, as well as the creation of sophisticated network topologies. User-programmable automatic error correction is built in using an ARQ method.

**SkyLine Compatible**
The FireLine modem may be configured to communicate with older “SkyLine” radio modems. See the user manual for details concerning operation and limitations of this feature.

**For More Information**
For more information about this or any other Raveon product, call in the U.S.A. 1-760-931-8001.
General Specifications

Model: RV-M5-Ux-y2 (x=band, y=B.W.)
Size: 3.0D X 3.76W X 1.40H
Input Voltage: 8.5 – 16 VDC
Current draw:
Receiving data: <110mA
Transmitting data: <1.7A (1.3A typ.)
Frequency Stability:
Better than ±1.5ppm
Frequency Bands:
A 403-419MHz (for export)
B 419-435MHz (for export)
C 450-480MHz
Serial Port Baud Rates (programmable)
1200, 2400, 4800, 9600, 19200, 57600
Over-the-air baud rates (programmable)
-N 1200, 2400, 4800, 5142, 9600
-W 1200, 2400, 4800, 8000, 9600, 19200
Operating Mode
Simplex or Half-duplex
Full Spec Operating Temperature range
-30°C to +60°C
TX-RX and RX-TX turn-around time
<10mS
Wake-up time from off
<500mS
Front Panel LEDs
Power/Busy
Carrier Detect
Transmit
RF I/O Connector
BNC (Female)
Power Connector
Molex
Addressing
Individual address: 65,536

Transmitter Specifications

RF Power Output 2 watts
Maximum Duty Cycle 10% max. @ 2W
Frequency Deviation ±2.25kHz
Occupied bandwidth 11 kHz
TX Spurious outputs <-70dBc
Occupied Bandwidth Per FCC
FCC Emissions Designator 11K0F1D,

Receiver Specifications

RX sensitivity (.001% BER)
9600bps <-107dBm
2400bps <-114dBm
1200bps <-119dBm
RX selectivity -50dB
RX intermodulation rejection -65dB at 2400bps

Interface Specifications

Serial Interface Port
Connector Type DB-9
Voltage Levels RS-232 or CMOS std.
RS485 or RS422 optional
RX and TX data Transparent Async
Word length 7 or 8 bits
Format N, O, or E
Modem handshake signals RTS, CTS, CD

AT Commands

AT commands are available for the following functions:
Channel Number and frequency
Carrier Detect Operation
Modem Statistics
Unit Address
Destination address
Network Address Mask
Number of Retries
Baud Rate, parity, stop bits
Preamble-length
Power-savings modes
ARQ error correction on/off
Select Packet or Streaming mode
Store-and-forward Repeating on/off
Store-and-forward address range
Busy-channel lock-out
Hardware flow control operation
LEDs operation or disabled
Read Serial Number
Set maximum packet size
Auto Status report on/off and interval.