



# Model 20981 UHF Radio Modem

**allweatherinc**



- Frequency Range 450–470 MHz
- Programmable Output Power 1–3 W
- 2 Channels
- Channel Width 12.5 kHz

## OVERVIEW

The Model 20981 UHF Data Radio is an integrated modem and radio that provides digital data transmission at data rates of 9600 bps in a 12.5 kHz channel over a frequency range of 450–470 MHz. The user data interface is a serial port through a 15-pin D connector, and is configured for RS-232 signal levels. The Data Radio comes in a small, compact package that is easy to integrate into new systems or retrofit into existing systems.

## LED Indicators

Transmit and receive LEDs provide the operational status of the Data Radio.

## Antenna

The antenna interface to the Data Radio is through a standard 50  $\Omega$  female BNC connector. A variety of antennas can be used.

PERIPHERALS

## SPECIFICATIONS

Parameter	Specification
Frequency Range	450–470 MHz
Channel Width	12.5 kHz
Serial Output	RS-232
Data Rate	9600 bps
Modulation	4FSK
Channels	2
Operating Bandwidth	20 MHz
Synthesizer Step Size	5.0/6.25 kHz
Emissions Bandwidth	8.0 kHz
Frequency Stability	±1.0 ppm (-30°C to +60°C) ±1.5 ppm (-30°C to +75°C)
<b>Transmitter</b>	
RF Output Power	1–3 W
RF Load Impedance	50 Ω
PTT Attack Time	<10 ms
Spurious and Harmonics	<-25 dBm
Current Drain	1.1 A (max.) @ 1 W 1.6 A (max.) @ 2 W
<b>Receiver</b>	
Sensitivity	0.30 μV (max.) @ 10-3 BER
Adjacent Channel Selectivity	>60 dB
Spurious and Image Rejection	>70 dB
IMD Rejection	>67 dB
Squelch Attack Time	<15 ms
Receive Current Drain	<120 mA
<b>Environmental</b>	
Operating Temperature	-35°C to +60°C
Relative Humidity	0–95% noncondensing
<b>Power and Mechanical</b>	
Supply Voltage	11–16 VDC, up to 3 A in Transmit mode
RF Connector	BNC
Power/Data Connector	15-pin subminiature D-type
<b>Regulatory</b>	
Approvals	FCC Identifier AIERIT39-46006 Industry Canada Identifier 1084A-RIT394

## ORDERING INFORMATION

Part Number	Description
20981	UHF Data Radio
M488306-01	AWOS 3000 CDP Installation Kit
M488679-00	DCP Installation Kit
M489171-00	1 dB 50 W BNC Attenuator
M489125-00	Yagi Antenna
M489126-00	Omni Antenna
M491361	Antenna Cable 15 m (50 ft)

## DIMENSIONS & WEIGHT

Dimensions	91 mm L × 58 mm W × 25 mm H (3.6"L × 2.3"W × 1.0"H)
Weight	0.17 kg (6 oz)



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