

DAVIS Catalog Supplement

Radio Communication Options

To access data from remote weather stations—without running wires—add a radio communication package. Start with any of our weather stations, then add the appropriate WeatherLink data logger and software package. Next, select a recommended third-party radio or cell phone modem and add one of our Antenna/Installation Kits. Whatever your choice, our kits help make installation easy and trouble-free. For more details, ask for Application Note 4, *WeatherLink Radio Communications*.



Health EnviroMonitor installation with cellular phone modem and omni antenna.

Cellular Phone Modem

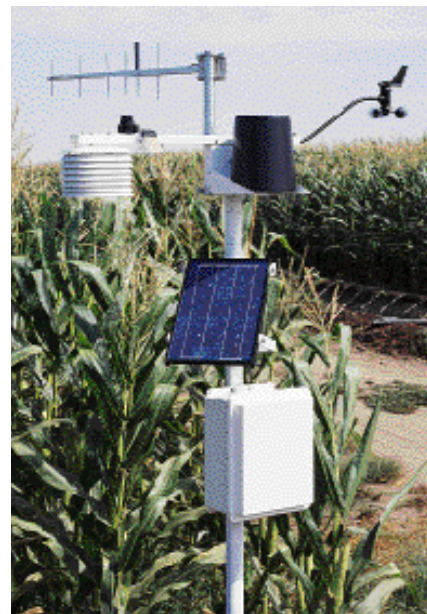
For rugged terrain or distant field sites, or when multiple users need access to the same field station, choose the cellular phone modem. The Model CTM2400 from Motorola is a specially designed modem with intelligent cellular interface functions built into a 3-watt cellular transceiver. Within the cellular service area, there is virtually unlimited range. No license is required. Our Antenna/Installation Kit includes the hardware necessary to connect the CTM2400 to a WeatherLink data logger at the field site. Modem capable of 1200 baud is required at the base site. To allow multiple users access to the same field station, purchase WeatherLink extra user licenses. Power: 11–16 VDC. Transmit: 1.65 A. Standby: 290 mA. Power adapter is included in the Antenna/Installation Kit.

UHF Radio Modems

The Model 9600 from RF Neulink is a sophisticated UHF radio modem with a high-speed communications processor and intelligent data communication protocol. It has a range of up to 25 miles (40 km). Operates in the 450 to 470 MHz band. FCC license is required. Our Antenna/Installation Kits provide the hardware necessary to connect the Model 9600 to a WeatherLink data logger at the field site or to a PC at the base site. A minimum of two radio modems and Antenna/Installation Kits are required for each installation. Power: 10–15 VDC. Transmit: 900 mA. Receive: 100 mA. Power adapter is included in the Antenna/Installation Kit.



Energy EnviroMonitor installation with UHF radio modem, Yagi antenna, and solar panel.



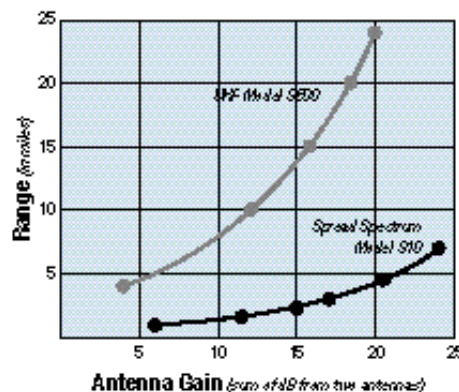
GroWeather installation with spread spectrum radio modem, Yagi antenna, and solar panel.

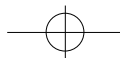
Spread Spectrum Radio Modems

The Model 910 from YDI is a high performance, error-free spread spectrum radio modem with built-in microcomputers and a buffer memory. It has a range of up to 7 miles (11 km) line of sight, and may be used as a repeater. Operates in the 902 to 928 MHz band. No FCC license is required. Our Antenna/Installation Kits include the hardware necessary to connect the Model 910 to a WeatherLink data logger at the field site or to a PC at the base site. A minimum of two radio modems and Antenna/Installation Kits are required for each installation. Power: 10–14 VDC. Transmit: 200 mA. Receive: 200 mA. Power adapter is included in the Antenna/Installation Kit.

Comparison of Radio Communication Options

Option	Range	FCC License Required	Typical Installation Cost	Ongoing Cost
Spread Spectrum	Up to 7 miles (11 km)	No	\$1540–1825	None
UHF Radio	Up to 25 miles (40 km)	Yes	\$1700–1785	FCC license fee
Cellular Phone	Unlimited within service area	No	\$750–960	Monthly charges from service provider





Order these from your local dealer or from the sources listed:

910-DAVIS Spread Spectrum Radio Modem from YDI \$585 (approx.)
910-10 12 dB Yagi Directional Antenna \$165 (approx.)
 Contact YDI at 103 Rowell Ct., Falls Church, VA 22046. Phone (703) 237 9090
 Fax (703) 237 9092. Or find them on the web at www.ydi.com.

9600 UHF Radio Modem from RF Neulink \$550 (approx.)
 Contact RF Neulink at 7610 Miramar Road, San Diego, CA 92126
 Phone (800) 233 1728 or (619) 549 6340. Fax (619) 549 6345
 Or find them on the web at www.rfneulink.com.

CTM2400 Cellular Phone Modem from Motorola \$550 (approx.)
 Available from MobileQuest at 340 Constance Dr., Suite 5, Warminster, PA 18974
 Phone (800) 882 1288 or (215) 734 7000.
 Fax (215) 734 8000. Or find them on the web at www.mobilequest.com.

Order these from your local dealer or directly from Davis:

For use with Model 910-DAVIS Spread Spectrum Radio Modem from YDI:
 7632-003 3 dB Omnidirectional Antenna/Installation Kit \$150
 7632-008 8.5 dB Yagi Directional Antenna/Installation Kit \$185
 7932-912 Installation Kit without Antenna for 12 dB Yagi \$70

For use with Model 9600 UHF Radio Modem from RF Neulink:
 7642-002 2 dB Omnidirectional Antenna/Installation Kit \$165
 7642-010 10 dB Yagi Directional Antenna/Installation Kit \$300

For use with Model CTM2400 Cellular Phone Modem from Motorola:
 7652-003 3 dB Omnidirectional Antenna/Installation Kit \$200



Timer for Solar Power

When a radio or cellular phone modem is operated on solar power, add the Timer. The Timer minimizes power drain by turning the radio on and off to transmit data at user-determined times.

7690 Timer \$65

Radio Surge Protectors

Provides protection for radio modem or cellular phone modem from lightning-induced power surges. For installation on coaxial cable between omnidirectional antenna and radio. Not required for Yagi directional antenna if mounted on grounded metal mast.

Radio Surge Protectors
 7681 for Cellular Phone Modem \$145
 7683 for Spread Spectrum or UHF Radio Modem \$145



Antenna Mast Mount Kit

Most installations do not require an Antenna Mast Mount Kit.

- Our Omni Antenna/Installation Kits include the hardware necessary to mount the antenna on our Sensor Mounting Arm or other flat surface. An Antenna Mast Mount Kit is required only if you want to mount the antenna on a mast, pipe, or post.
- Our Yagi Antenna/Installation Kits include the hardware necessary for most configurations. An Antenna Mast Mount Kit is required only if you are using a third-party antenna.

7995 Antenna Mast Mount Kit \$20

Yagi and omni antennas may be mixed and matched according to your needs.

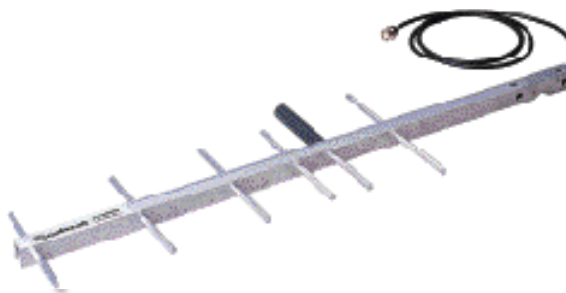
When multiple field stations report to a single base station, use a Yagi directional antenna at each field station and an omnidirectional antenna at the base station.

Approximate range for Spread Spectrum Radio with

- Two 3 dB omni antennas: 0.9 miles (1.5 km)
- Two 8.5 dB Yagi antennas: 3.2 miles (5.1 km)
- Two 12 dB Yagi antennas: 7 miles (11 km)

Approximate range for UHF Radio with

- Two 2 dB omni antennas: 4 miles (6.5 km)
- One 2 dB omni antenna and one 10 dB Yagi antenna: 10 miles (16 km)
- Two 10 dB Yagi antennas: 25 miles (40 km)



Yagi Antenna



Omnidirectional Antenna

Because regulations vary, these radio communication options may not be available outside the USA.

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