

Industrial 4G LTE Cellular Gateway

COMPONENT





Overview

The RV50 is an industrial 4G LTE cellular gateway that provides serial and Ethernet connectivity to numerous cellular networks. It is capable of LTE, CDMA/EV-DO, and GSM/GPRS/EDGE/WCDMA networking and is CE, RCM, GCF and RTTE certified.

Benefits and Features

- Easily provides Internet connectivity to Campbell Scientific dataloggers and peripherals anywhere there is cellular network coverage
- Very low power consumption when compared to other industrial cellular gateways

Internet Connectivity

The RV50 provides Internet connectivity to any of our dataloggers located within range of a compatible cellular network. Armed with Internet connectivity, a datalogger can remotely connect to Campbell Scientific software on your PC,

Device Intelligence

The RV50 is powered by the Sierra Wireless ALEOS® embedded operating system. This allows the RV50 to provide highly reliable connectivity and remote device management independent of

Advanced Power Management

Compared to many other industrial cellular gateways, the RV50 has a very low power consumption. The average current consumption at 12 Vdc is about 65 to 95 mA when idle, The networking and carrier used by the RV50 is determined by the active SIM card(s) inserted into the device. The RV50 automatically falls back to 3G or 2G when 4G coverage is not available.

- Compatible with all Campbell Scientific dataloggers
- > 4G LTE networking with automatic fallback to 3G and 2G
- > Works with many cellular network carriers

mobile device, and the cloud. The RV50 can also enable many dataloggers to communicate using other Internet protocols, such as Modbus, DNP3, Email, and web (HTTP).

the device it is connected to. Embedded are numerous services including IP serial server and client, local PPP host, dynamic DNS client, routing, VPN, and more.

depending on its configuration. Additionally, the RV50 can be turned on and off easily using a datalogger C, U, or SW12V port.

Establishing Cellular Service

Ask your cellular provider for an M2M (machine-to-machine) account sales expert for the purpose of setting up either a publicly

Configuring the RV50

The RV50 is configured using ACEManager, a web based configuration tool hosted by the gateway. ACEManager can be accessed using Internet Explorer or Firefox remotely over the

Specifications

- Network Technology: 4G with automatic fallback to 3G and 2G
- Cellular WAN: International Model
 - International Model (Sierra Wireless MC7304)
- Supported Frequency Bands: LTE: 2100(B1), 1800(B3), 2600(B7), 900(B8), 800(B20)
- WCDMA: 2100(B1), 1900(B2), 850(B5), 900(B8)
- GSM/GPRS/EDGE: Quad-band
- Industry Approvals: CE, RCM, GCF, R&TTE
- Software defined radio with automatic network operator switching
- Dual SIM Interfaces
- RF Connectors: three SMA jacks for primary cellular and optional diversity cellular and GPS

Compatibility

Ethernet: the RV50 ships with an Ethernet cable allowing direct connection between the Ethernet socket on the CR6 and other dataloggers fitted with Ethernet interfaces.

For serial connections:

• A null-modem serial cable (009876-001) is required to connect the RV50 serially to the RS-232 port of a datalogger such as the CR1000 or a peripheral such as the RF422 series radio.

• A CPI/RS-232 to DB9 male cable (009635) is required to connect the RV50 to the RS-232/CPI port on the CR6.

• A DB9 male to pigtail cable (010657) can be used to connect the RV50 to C- or U-ports configured for serial communication.

• An SC105 or SC932A can be used to connect the RV50 to a CS I/O port of a datalogger.

available static or dynamic IP account. You will need them to provide a mini-SIM card provisioned for your account.

cellular WAN or locally over Ethernet. A number of templates will be provided for download to make most configurations very simple once connected to ACEManager.

- Host Interfaces
 - 10/100/1000 Ethernet RJ45
 - RS-232 Serial DTE DB9 Female
- USB 2.0 Micro-B
- Operating Voltage: 7 to 36 Vdc
- > Typical Current Drain at 12 Vdc
- Enable / Ignition Sense Low: 1 mA
- Idle: 65 to 95 mA, depending on configuration
- Active: 250 to 300 mA, depending on configuration
- Operating Temperature Range: -30° to +70°C
- > Width: 11.9 cm (4.69 in)
- Height: 3.4 cm (1.34 in)
-) Depth: 9.4 cm (3.7 in)
- > Weight: 320 g (11.3 oz)

• A normal / straight through serial cable (008085) can be used to connect the RV50 to a DTE serial device such as a NL201 or RF500M.

Antenna:

For use in areas of good reception a single, standard low gain, wideband antenna can be used, Campbell Scientific offers suitable pole mount or enclosure mount antennae:

Part 009528	2G/3G/4G Antenna (Wall/Pole Mount)
	c /w 5 m Cable & SMA connector
Part 009960	2G/3G/4G Antenna (Enclosure Mount)
	750-2700 MHz
	c/w 400 mm Cable & SMA connector

Where reception is marginal, higher gain antenna can be used as can an additional diversity antenna. The antenna would then need to be matched to the waveband used by the preferred cellphone network. Please contact Campbell Scientific for more information on other antenna options.

Mounting the RV50

The mounting kit (#32252) is available to special order. The manufacturers DIN rail mount can also be supplied to special order. The RV50 can also be mounted on any flat surface providing there

is adequate space and suitable matching mounting holes. For fixed installations the MB3 Mounting bracket (009847) can be used to mount the modem in an enclosure, this uses a Velcro strap.

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