

o Welcome

o Overview

o <u>Components</u> o <u>Safety Notices</u> o Specifications

- o Installation
- o Configuration
- **o** Integration
- **o** Troubleshooting
- o Service
- o Contact Us

Welcome to the MP200 Radio Modem

The MP200 Series are a family of radio modems designed to use existing cellular infrastructure to send and receive data. These products support Class I (3 Watt) transmission to provide the widest possible coverage area.

MP200

2110026 Rev 2 0

December 1999

User Guide

A <u>GPS Option</u> is also available, adding a GPS receiver inside the package. This is available as an option pre-installed at the factory. Documentation related to GPS is covered in a <u>separate section</u>.

Your MP200 Series Components

All MP200 Series packages will include the following components:

- MP200 radio modem.
- Power Harness.
- Sierra Wireless Product CD-ROM with this Documentation including a <u>3 Year Warranty</u>.
- 6 Screws with Washers.
- Mounting Template.
- Quick Start Guide.

The MP205 and MP210 with voice capability will also include:

• Telephone Handset.

Additional accessories are available from Sierra Wireless. These include:

- Serial Connector Cables (an assortment of lengths are available).
- <u>Approved</u> Cellular Antennas.
- GPS antennas (Magnetic or Hard Mount options).

For details on these and other Sierra Wireless accessories <u>contact sales</u> or visit our web site.

Important Notice

Because of the nature of wireless communications, transmission and reception of data can never be guaranteed. Data may be delayed, corrupted (i.e., have errors) or be totally lost. Although significant delays or losses of data are rare when wireless devices such as a MP200 Series radio modem are used in a normal manner with a well-constructed network, they should not be used in situations where failure to transmit or receive data could result in damage of any kind to the user or any other party, including but not limited to personal injury, death, or loss of property. Sierra Wireless, Inc. accepts no responsibility for damages of any kind resulting from delays or errors in data transmitted or received using a MP200 Series radio modem, or for failure of the MP200 Series modem to transmit or receive such data.

o Welcome (top)

o <u>Overview</u> o Safety Notices

- o <u>Hazards</u> o Regulatory
- o Patents
- o Specifications

Safety and Hazards

Do not operate the MP200 Series modem in areas where blasting is in progress, where explosive atmospheres may be present, near medical equipment, near life support equipment, or any equipment which may be susceptible to any form of radio interference. In such areas, the modem **MUST BE TURNED OFF**. The radio modem can transmit signals that could interfere with this equipment.

Do not operate your MP200 Series modem in close proximity to any aircraft, whether the aircraft is on the ground or in flight. Near aircraft, the radio modem **MUST BE TURNED OFF**. When operating, the MP200 Series radio modem can transmit signals that could interfere with various onboard systems.

The driver or operator of any vehicle should not operate a wireless data device while in control of a vehicle. Doing so will detract from the driver or operator's control and operation of that vehicle. In some states and provinces, operating such communications devices while in control of a vehicle is an offence.



WARNING - The FCC has developed guidelines to reduce any possible hazard due to exposure of the human body to electromagnetic radiation (i.e. to radio waves). This device is approved for operation using a 3dB gain Cellular Mobile whip antenna with at least 0.5dB cable loss, as described in the filing. The antenna installation must provide a separation distance of 20cm (8") or more between the antenna and all persons to satisfy MPE compliance.



WARNING - For FCC compliance only antennas meeting the following attributes should be used:

- Rated gain of 3dBd
- Collinear (coil style) design with dimensions as shown in the illustration at right. The antenna may be encapsulated or open.
- Mount designed for a horizontal metal surface of vehicle using either magnetic or through-hole hard mounting.
- 165mm min 235mm max
- Cable loss of more than 0.5dB.

Regulatory Information

The equipment certifications appropriate to your device are marked on the device and the accompanying product specific information. Where appropriate, the use of the equipment is subject to the following conditions:



CAUTION - Unauthorized modifications or changes not expressly approved by Sierra Wireless, Inc. could void compliance with regulatory rules, and thereby your authority to use this equipment.



WARNING (EMI) - United States FCC Information - This equipment has been tested and found to comply with the limits pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in an appropriate installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help



WARNING (EMI) - Canada - This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus as set out in the interference causing equipment standard entitled "Digital Apparatus", ICES-003 of the Department of Communications.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe A prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques", NMB-003 édictée par le ministre des Communications.

Patents and Trademarks

Portions of this product are covered by some or all of the following US patents: 5515013, 5617106, 5629960, 5682602, 5748449, 5845216, 5845553, 5878234, 5890057, and other patents pending.

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o Welcome (top)

- o Overview
- o Safety Notices
- o Specifications
- o <u>radio modem</u> o <u>Environmental</u>

Technical Specifications

MP200 Series radio modem

Compliance:	FCC Parts 15 and 22
	Industry Canada RSS-128, ICES-003
Compatibility:	CDPD Release 1.1
	EIA/IS-19B, IS-91
	EIA/TIA-553
CSC Data Rates:	CSC data CCITT V.32bis 14400bps
	CSC fax TIA/EIA-578 Class I or II
Voltage:	Standard vehicle battery
	11 - 16 Vdc (13.8 Vdc nominal)
Current:	Power Reduction Mode: 25mA (typical)
	CDPD:
	Stand-by (Sleep): 110mA (350mA w/GPS)
	Enabled (Receive): 370mA (550mA w/GPS)
	Maximum Transmit: 1.7A (2.0A w/GPS)
	CSC (AMPS):
	Enabled (Receive): 350mA (600mA w/GPS)
	Maximum Transmit: 1.7A (2.0A w/GPS)
Transmitter Power:	Class I mobile
	Up to 4.5 Watts ERP from device
	(depending on <u>antenna/cabling</u>)
Host Interface:	DB-9 at RS-232 level
Antenna Interface:	50 ohm TNC RF connector
GPS Antenna Interface:	SMB RF connector

Environmental Specifications

Operating Temp:	-30 to +70° C (restricted duty cycle) -30 to +60° C (un-restriced duty cycle)
Storage Temp:	-40 to +80° C
Humidity:	5 - 95%, non-condensing
Vibration:	MIL-STD-810E,I-3.4.9.

Document Map

Back to Product List

Use the <u>document map</u> to jump to a subject of interest or <u>turn the pages</u> to read the full manual.

Page Top

Next Page

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