

MultiModem® GPRS

External Wireless Modem



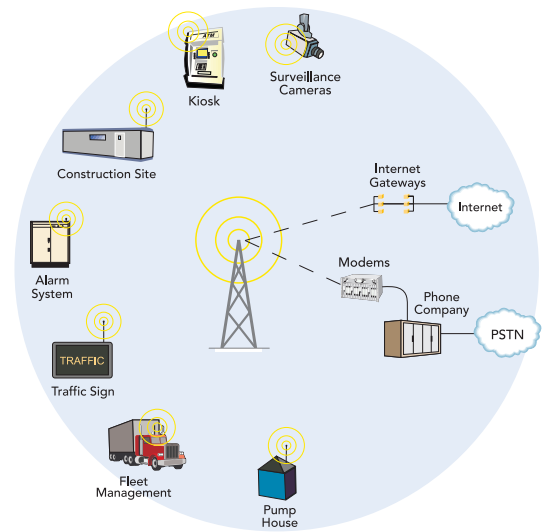
Benefits

- Rugged industrial chassis design
- Desktop or panel mounting
- Carrier approved
- RS-232, USB, Bluetooth® and Ethernet interfaces

The MultiModem® GPRS wireless modem offers standards-based multi-band GSM/GPRS Class 10 performance. This ready-to-deploy, standalone modem provides wireless data communication and integrates seamlessly with virtually any application. It is available with a broad range of interface options including RS-232, USB, Bluetooth® and Ethernet as well as GPS capabilities to cover all of your application needs. The MultiModem GPRS wireless modem is based on industry-standard open interfaces and can be desktop or panel mounted.

Features

- GPRS Class 10
- Dual-band 850/1900 or 900/1800 MHz GSM/GPRS
- Packet data up to 85.6K bps
- Embedded TCP/IP stack
- Circuit-switched data up to 14.4K bps transparent and non-transparent
- GSM Class 1 and Class 2 Group 3 Fax
- Short Message Services (SMS)
- RS-232, USB, Bluetooth and Ethernet interfaces
- SMA antenna connector and SIM socket
- Serial interface supports DTE speeds to 115.2K bps
- 12-channel GPS functionality
- AT command compatible
- MNP2 error correction, V.42bis compression
- Numerous LEDs provide operational status
- Desktop or panel mounting
- PTCRB certified
- Carrier approved
- Two-year warranty



Highlights

Applications. With packet data speeds up to 85.6K bps, the MultiModem GPRS wireless modem is targeted at applications which periodically need to send or receive data over a wireless network. It is ideal for:

- Automated machine-to-machine (M2M)
- Public Safety/Emergency Services
- Public Transit
- Remote Industrial, Medical, Environmental, Monitoring
- Remote diagnostics
- Security Systems
- Telemetry/Remote Metering
- Vehicle Tracking/Fleet Management/AVL

Reduces Development Time. The MultiModem GPRS wireless modem can make your existing and next generation device communication-ready without requiring any hardware changes to its design. It actually provides faster time-to-market because it relieves the burden and expense of obtaining PTCRB and RF approvals. This complete, ready-to-deploy wireless modem allows you to enhance your product while you focus on developing its core features.

Packet-switched Data. The MultiModem GPRS wireless modem supports GPRS Class 10 packet-switched cellular data. This enables mobile Internet functionality by allowing interworking between the existing Internet and the cellular network at speeds up to 85.6K bps. Any service that is used over the fixed Internet today – File Transfer Protocol (FTP), web browsing, chat, e-mail, telnet is available over the cellular network as well. It includes support for PBCCH, coding schemes: CS1 to CS4 and is compliant with SMG31bis.

Circuit-switched Data. The MultiModem GPRS wireless modem also supports GSM circuit-switched cellular data connections. Circuit-switched data connections support speeds up to 14.4K bps, Class 1 and Class 2 Group 3 fax, as well as MNP 2 error correction, V.42bis compression. CSD cellular wireless connections are ideal for applications that require a quick wireless replacement of an existing point-to-point analog dial-up connection. They integrate seamlessly with your current application requiring little infrastructure change.

Short Message Services. The MultiModem GPRS wireless modem offers SMS features such as text and PDU, point-to-point (MT/MO) and cell broadcast.

Internet-enabled. The MultiModem GPRS wireless modem includes an embedded TCP/IP protocol stack to bring Internet connectivity to any device without making changes to its hardware design. Using the Internet protocols and the wireless connection to an IP network, the modem sends and receives data over the Internet.

Voice Features. The MultiModem GPRS wireless modem provides telephony and Dual Tone Multi Frequency (DTMF) transmission functionality. It also allows for emergency calls as well as echo cancellation and noise reduction (option), and full rate, enhanced Full Rate and Half Rate (FR/EFR/HR).

Compatible Supplementary Services. The MultiModem GPRS wireless modem is compatible with supplementary services such as call forwarding, call barring, multiparty, call waiting and call hold, calling line identification, advice of charge, USSD, closed user group and explicit call transfer.

Management Features. The MultiModem GPRS wireless modem provides advanced management features including phone book management, fixed dialing number, real time clock and alarm management.

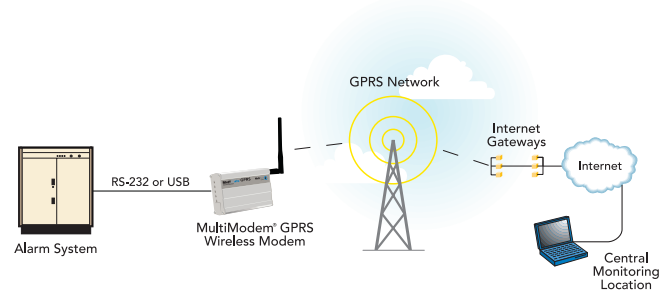
Industrial Chassis. The MultiModem GPRS wireless modem is packaged in a rugged, industrial chassis with an SMA antenna connector. It can be desktop or panel mounted and features numerous LEDs providing operational status.

Multiple Interface Options. The MultiModem GPRS wireless modem is designed around a broad range of interface options including RS-232, USB, Bluetooth, and Ethernet to provide you with seamless connectivity for your application. Each interface option offers unique features and benefits related to the technology it supports. It also supports GPS for vehicle tracking and fleet management applications.



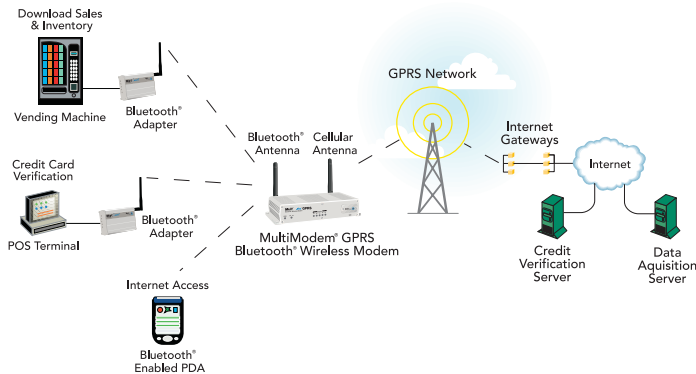
Serial Connectivity. The MultiModem GPRS wireless modem with a serial interface utilizes RS-232 or USB to connect to any serial device to provide access to the Internet. The RS-232 model supports DTE speeds of 115.2K bps and provides a DE-15 voice/data interface and permanent screw-type power connector. The USB model provides for the easiest modem installation. The USB interface features a 12M bps serial connection and utilizes an RJ-9 jack for voice connectivity. In addition, it is host-based USB powered which means no external power supply is required.

RS-232/USB Application



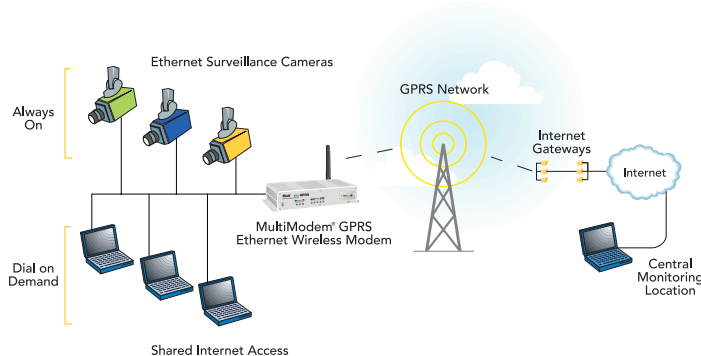
Bluetooth Connectivity. The MultiModem GPRS wireless modem with a Bluetooth interface provides any Bluetooth-enabled peripheral device such as a POS terminal, vending machine, or PDA with GPRS wireless access to the Internet. Providing secure, standards-based wireless data transfer up to 100 meters, the MultiModem GPRS wireless modem completely eliminates the need for serial cable connections. It is Class 1 Bluetooth V1.2 compliant and utilizes 56-bit encryption and 10 alphanumeric Personal Identification Number (PIN) authentication. In addition, it utilizes error correction schemes for guaranteed packet delivery.

Bluetooth® Application



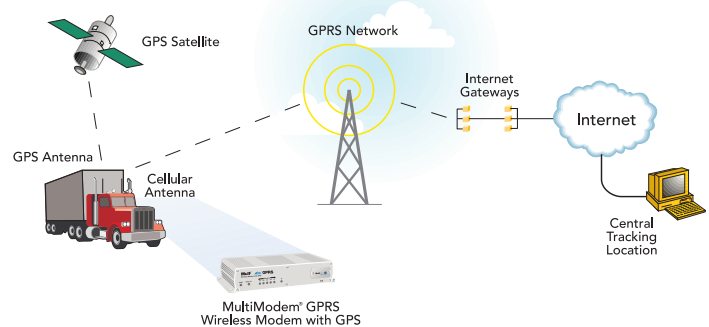
Ethernet Connectivity. The MultiModem GPRS wireless modem with an Ethernet interface provides shared Internet access with one IP address. The built-in routing capabilities provide DHCP services and firewall security utilizing Network Address Translation. The modem can be configured for one of three network connections: always-on, wake-up on ring, or dial-on demand. The always-on network connection automatically establishes a wireless data connection and allows for around the clock surveillance, monitoring or real-time data acquisition of any remote Ethernet device such as a Web camera. If the data link is dropped in the event of poor reception or a complete loss of service, it will automatically re-establish the data link. The wake-up on ring configuration allows the modem to “wake up” and initiate a connection when it detects an incoming ring. For security reasons, you can setup the modem to wake up based on the caller ID. This configuration is ideal for reducing the costs associated with the modem being online and available 24/7. When configured for dial-on demand, the wireless modem only accesses the Internet when data is present. This configuration is ideal for sharing Internet access among networked PCs.

Ethernet Application



GPS Connectivity. The MultiModem GPRS wireless modem with GPS incorporates an internal Trimble® Lassen® iQ GPS module providing 12-channel GPS functionality. It delivers complete position, velocity and time (PVT) solutions making it ideal for real-time vehicle tracking, navigation and fleet management applications. The GPS functionality supports the four most popular protocols: NMEA 0183, DGPS (RTCM), TSIP (Trimble Standard Interface Protocol), and TAIP (Trimble ASCII Interface Protocol) and provides dual sensitivity modes allowing it to automatically switch to higher sensitivity when satellite signals are weak. The MultiModem GPRS wireless modem with GPS utilizes an RS-232 interface. The GPS information is received on a secondary serial port and can be used for in-vehicle navigation. In addition, the data can be sent through the wireless modem to a central, real-time tracking server via SMS or GPRS. The MultiModem GPRS wireless modem provides the flexibility to allow third party GPS applications and Application Service Providers (ASPs) the ability to customize their software to work with the wireless modem hardware.

GPS Application



Industry-standard Modem Commands. The MultiModem GPRS wireless modem provides industry-standard AT-style commands for ease of integration into your existing software application.

Network and RF Approved. The MultiModem GPRS wireless modem is PTCRB certified. In addition, it has successfully completed worldwide compliance testing for global RF approval.

Comprehensive Service and Support. The Multi-Tech commitment to service means we provide a two-year product warranty and service that includes technical support, 24-hour web site and ftp support.

Specifications

Packet Data Features

GPRS Class 10, PBCCH support
Coding Schemes: CS1 to CS4
Embedded TCP/IP stack

Circuit Switched Data/Fax Features

Asynchronous, transparent & non-transparent up to
14.4K bps, MNP2 & V.42bis
Group 3 fax, Class 1 & Class 2

SMS Features

Text & PDU, Point-to-Point, cell broadcast

Internet Protocols Supported

ARP, Dial-in PPP, DNS Resolve, FTP client, ICMP, IP, IPCP,
LCP, POP 3 (receive mail), PPP, SMTP (send mail), TCP
socket, Telnet client, Telnet server, UDP socket, CHAP,
PAP

Antenna Connectors

RF Antenna: 50 ohm SMA (Female connector)
Bluetooth & GPS Antenna: 50 ohm SMA (Male
connector)

SIM Connector

Standard 3V SIM receptacle

Interface Connectors

RS-232 Model: DE-15
USB Model: USB Type B
Bluetooth Model: DB-9
Ethernet Model: RJ-45, 10BaseT/100BaseTX, 802.3
GPS Model: (2) DB-9

Power Connectors

RS-232, Bluetooth, Ethernet, & GPS Models: 2.5mm
miniature screw
USB Model: Bus Powered

Voice Connectors

RS-232 Model: Optional Y-cable
USB, Bluetooth, Ethernet, & GPS Models: RJ-9 4-pos
modjack

Power Requirements

5V to 32VDC

GPS Features

General: 12-channel, continuous tracking receiver
Protocols: NEMA 0183, TSIP, TAIP, DGPS, Aided GPS
through TSIP

Physical Description

RS-232, & USB Models:

4.3" L x 2.4" W x 0.94" H; 4.2 oz.
(11 cm x 6.1 cm x 2.4 cm: 119g)

Bluetooth Model:

2.8" L x 6.4" W x 1.2" H; 11.5 oz.
(7.1 cm x 16.3 cm x 3.0 cm: 326g)

Ethernet Model:

2.8" L x 6.4" W x 1.2" H; 11.5 oz.
(7.1 cm x 16.3 cm x 3.0 cm: 326g)

GPS Model:

2.8" L x 6.4" W x 1.2" H; 11.5 oz.
(7.1 cm x 16.3 cm x 3.0 cm: 326g)

Operating Environment

-30° to +70° C

Certifications:

CE Mark, R&TTE

EMC: FCC Part 2, 15, 22, 24, EN 55022, & EN 55024

Safety: cUL, UL 60950, EN 60950

Network: PTCRB

Ordering Information

Product	Description	Region
MTCBA-G*	GSM/GPRS Class 10 Modem	Regional

Ordering Codes

-F1	900/1800 MHz GSM/GPRS Modem
-F2	850/1900 MHz GSM/GPRS Modem
-AWS	For AT&T Networks (USA)
-U	USB Interface
-B	Bluetooth Interface
-EN	Ethernet Interface
-GP	GPS Functionality
-NAM	Includes US Style Power Cord
-EU	Includes Euro Style Power Cord
-GB/IE	Includes UK Style Power Cord

* Use ordering codes for specific build options. Check with your local carrier to see which frequency bands are required. Go to www.multitech.com for detailed product model numbers.

Made in Mounds View, MN, U.S.A.

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