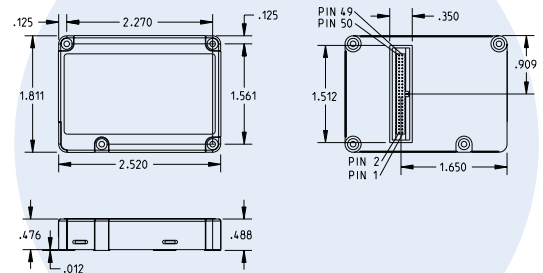# ModemModule™ GPRS

Embedded Wireless Modem

The Multi-Tech ModemModule™ GPRS wireless modem offers standards-based multi-band GPRS Class 10 performance. Packaged in a compact, rugged industrial chassis this quick-to-market module allows developers to add wireless communication to products with a minimum of development time and expense. The ModemModule GPRS wireless modem is based on industry-standard open interfaces and can be board-to-board or board-to-cable mounted.

Features

- GPRS Class 10
- Dual-band 850/1900 or 900/1800 MHz GSM/GPRS
- Packet data up to 85K bps
- Embedded TCP/IP stack
- Circuit-switched data (GSM) up to 14.4K bps transparent and non-transparent
- GSM Class 1 and Class 2 Group 3 Fax
- Short Message Services (SMS)
- Supports DTMF transmission
- Allows for emergency calls, Full Rate, Enhanced Full Rate and Half Rate (FR/EFR/HR)
- Compatible with supplementary services
- Advanced management features include phone book management, fixed dialing number, real time clock and alarm management
- MMCX antenna connector and SIM socket
- Board-to-board or board-to-cable mounting
- Serial interface supports DTE speeds to 115.2K bps
- AT command compatible
- MNP 2 error correction, V.42bis compression
- Two-year warranty

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Highlights

Applications. The ModemModule GPRS wireless modem is targeted at applications that periodically need to send or receive data over a wireless network. It is an ideal solution for:

- Appliances
- ATM terminals
- Automotive
- Data collection
- Gas pumps
- Industrial and medical remote monitoring systems
- Remote diagnostics
- Remote metering
- Security systems
- Vending/gaming machines
- Other devices requiring wireless connectivity

Reduces Development Time. The ModemModule GPRS wireless modem can make your existing and next generation device, machine, or system, communication-ready without requiring significant 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.

Internet-enabled. The ModemModule GPRS wireless modem includes an embedded TCP/IP protocol stack to bring Internet connectivity to any device. Using the Internet protocols and the wireless connection to an IP network, it sends and receives data over the Internet.

ModemModule Pin-Out. The ModemModule GPRS wireless modem interfaces easily with existing products through a standard serial communication channel. The serial DTE channel is capable of transfer speeds to 115.2K bps and can be interfaced directly to a UART or microcontroller. The complete on-board RF transceiver interfaces with an antenna for direct connection to wireless SMS, circuit-switched dial-up or packet data networks.

Developers Kit. The Developer's Kit allows you to plug in the module and use it for testing, programming and evaluation. The kit includes one development board with RS-232 DB-25 connector, universal power supply, antenna and RS-232 cable.

Pin Connector

GND	1	2	GND
+5V	3	4	+5V
CT109/DCD	5	6	GND
GPIO4	7	8	SPK2N
CT125/RI	9	10	SPK2P
Flashing LED	11	12	SPK1P
CT106/CTS	13	14	SPK1N
ON/~OFF	15	16	MIC2P
AUXV0	17	18	MIC2N
~RST	19	20	MIC1P
GND	21	22	MIC1N
BOOT	23	24	GND
CT103/TX	25	26	GPIO0
CT107/DSR	27	28	CT104/RX
CT108-2/DTR	29	30	CT105/RTS
COL3	31	32	COL4
COL1	33	34	COL2
ROW4	35	36	COL0
ROW2	37	38	ROW3
ROW0	39	40	ROW1
NC	41	42	SPI_EN
SPI_IO	43	44	SPI_CLK
SIMCLK	45	46	SIMRST
SIMVCC	47	48	SIMPRES
SIMDATA	49	50	GPO0

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, MNP 2 & V.42bis
Group 3 fax, Class 1 & Class 2

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

IP 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, CHAP, PAP

Connectors
50-pin
Antenna: MMCX
SIM: Standard 3V SIM receptacle (5V SIM with external level shifter)

Power Requirements
5VDC; 300mA Average, 1.3A Peak

Physical Description
2.5" w x 1.8" h x 0.48" d; 2.8 oz.
(6.4 cm x 4.6 cm x 1.2 cm; 79 g)

Operating Environment
-30° to +70° C

Certifications
CE Mark
EMC: FCC Part 2, 15, 22, 24, EN 55022, EN 55024
Safety: cUL, EN 60950, UL 60950
Network: PTCRB

Ordering Information

* 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.

Features and specifications are subject to change without notice.

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