

# SocketModem® iCell

## Intelligent GPRS Cellular Modem



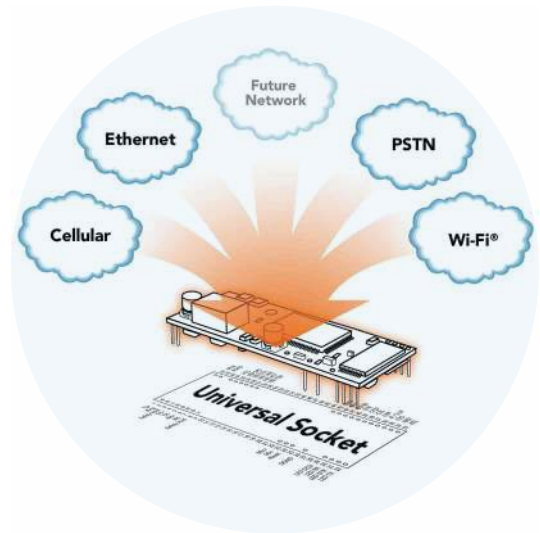
The SocketModem® iCell intelligent cellular modem is a complete, ready-to-integrate communications device that offers standards-based quad-band GSM/GPRS Class 10 performance. This quick-to-market communications device allows developers to add wireless communication and GPS tracking to products with a minimum of development time and expense. The intelligence of the embedded Universal IP® stack allows for automatic/persistent connectivity for mission critical applications and enhanced M2M functionality. The SocketModem iCell intelligent cellular modem is based on industry-standard open interfaces and utilizes Multi-Tech's Universal Socket design.

### Features

- GPRS Class 10
- Quad-band GSM 850/900/1800/1900 MHz
- Universal Socket connectivity
- Intelligent Universal IP stack for enhanced M2M functionality
- M2M applications include automatic connect/reconnect, device monitor, modem emulation, Ping and TCP keep alive, wake-up on Caller ID, and wake-up on ring
- Models with GPS tracking capability
- NMEA-0183 V3.01 compliant GPS messages
- Packet data up to 85.6K bps
- Circuit-switched data up to 14,400 bps transparent and non-transparent
- Short Message Services (SMS)
- UFL antenna connector and SIM socket
- Serial interface supports DTE speeds to 115.2K bps
- AT command compatible
- MNP 2 error correction, V.42bis compression
- PTCRB and carrier certified
- Two-year warranty

### Universal Socket Benefits

- Interchangeable communications devices
- Intelligent Universal IP stack
- Quick-to-market
- Easy migration to future networks



## Highlights

**Applications.** The SocketModem iCell intelligent cellular modem is targeted at applications that periodically need to send or receive data over a wireless network. It is ideal for asset tracking, fleet management, energy monitoring, mobile and home healthcare, ATM terminals, point-of-sale, security systems and remote monitoring applications.

**Universal Socket Connectivity.** Multi-Tech's Universal Socket is a flexible, comm-port architecture that provides cellular, Ethernet, PSTN or Wi-Fi network access with interchangeable communications devices. This means you can utilize one system design and populate it with your connectivity device of choice accommodating multiple connectivity requirements. In addition, you are assured a seamless migration to future technologies.

**Universal IP.** Multi-Tech's Universal IP consists of a common set of TCP/IP networking protocols and M2M (machine-to-machine) applications implemented using a standard AT command interface. Universal IP allows developers to write their host application one time while having the freedom to select from a growing number of Universal Socket communication devices.

**Reduces Development Time.** The SocketModem iCell intelligent

cellular modem enhances your product while you focus on developing its core features. It actually provides faster time-to-market because it relieves the burden and expense of obtaining PTCRB and RF approvals.

**SocketModem iCell Pin-Out.** The SocketModem iCell intelligent cellular 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. It also includes an onboard LED to display network status.

1	(I/O) Tip	1	41	SPK (O)
2	(I/O) Ring	2	42	GND (O)
3	Safety Void	3	43	MICV (I)
4	(O) TX+	4	44	VCC (I)
5	(O) TX-	5	45	-LED SPD (O)
6	(I) RX+	6	46	-LED CCLK (O)
7	(I) RX-	7	47	-LED LINK (O)
8	Safety Void	8	48	-LED ACT (O)
9		9	49	-LED FDX (O)
10		10	50	
11	(O) TXCLK	11	51	GPI0 (I/O)
12	(O) RXCLK	12	52	GPI1 (I/O)
13		13	53	GPI2 (I/O)
14		14	54	GPI3 (I/O)
15		15	55	GPI4 (I/O)
16		16	56	GPI5 (I/O)
17		17	57	GPI6 (I/O)
18		18	58	GPI7 (I/O)
19		19	59	
20		20	60	
21	(I) 21	21	61	SPK+ (O)
22	(I) Mic+	22	62	SPK- (O)
23	(I) Mic-	23	63	GND (I)
24	(I) -Reset	24	64	GND (I)
25	(I) USB_VBUS	25	65	-DTR (I)
26	(I) GND	26	66	-DCD (O)
27	(I/O) USB_DP	27	67	-CTS (O)
28	(I/O) USB_DM	28	68	-DSR (O)
29	(O) LED_DCD	29	69	-RI (O)
30	(O) LED_RX	30	70	-TXD (I)
31	(O) LED_DTR	31	71	-RD (I)
32	(O) LED_TX	32	72	-RTS (I)

**Developer's Kit.** The Developer's Kit allows you to plug in the communications device 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.

## Specifications

### Packet Data Features

GPRS Class 10, PBCCCH support  
Coding Schemes: CS1 to CS4

### Circuit Switched Data Features

Asynchronous, transparent & non-transparent up to 14.4K bps, MNP2 & V.42 bis

### SMS Features

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

### Connectors

Antenna: UFL (one each, cellular & GPS)  
SIM: Standard 3V SIM receptacle

### IP Protocols Supported

DNS resolve, FTP client, Ping, POP3 client, PPP (dial-out), SMTP client, TCP RAW client & server, UDP RAW client & server, PAP, CHAP authentication

### GPS

Position: 2.5 meters  
Acquisition: Hot start 1 second; cold start 29 seconds avg.  
Sensitivity: Tracking -161 dBm  
Protocol: NMEA-0183 V3.01, GGA, GLL, GSA, GSV, RMC, VTG

### Power Requirements

IP Models: Sleep: 80mA (.38W @ 5VDC); Typical: 135mA (.66W @ 5VDC); Max: 280mA (1.36W @ 5VDC); Peak: 1.25A  
GP Models: Sleep: 132mA (.65W @ 5VDC); Typical: 212mA (1W @ 5VDC); Max: 355mA (1.7W @ 5VDC); Peak: 1.5A

### Physical Description

3.1" L x 1.4" W x 0.5" H; 1 oz.  
(7.8 cm x 3.5 cm x 1.2 cm; 28 g)

### Operating Environment

-40° to +85° C

### Certifications (See Developers Guide for complete list)

CE Mark, R&TTE, RoHS Compliant  
EMC: FCC Part 15, 22, 24, EN 301 489-1, EN 301 489-7, RSS 132, 133  
Safety: cUL 60950-1, EN 60950-1, UL 60950-1, AS/NZS 60950-1  
Network: PTCRB

## Ordering Information

Product	Description	Region
MTSMC-G2	Intelligent GSM/GPRS Modem	Global
<b>Ordering Codes</b>		
-IP	Universal IP	
-GP	Dedicated GPS Receiver	
-ED	Euro Default, 900/1800 MHz (850/1900 Standard)	
.Rx	Version Control	

Produced in the US of US and non-US components.

Features and specifications are subject to change without notice.

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