

# SocketModem® Cell



## Embedded Cellular Modems

The SocketModem® Cell embedded cellular modem is a complete, ready-to-integrate communications device ideal for customers looking to add cellular communications to their solutions.

Choose a carrier approved and end-device certified embedded modem from Multi-Tech to decrease your time to market and save you money.

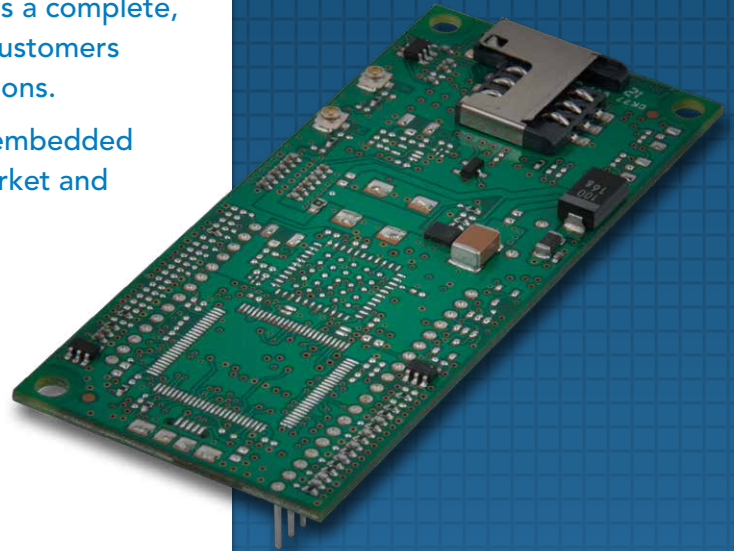
### Key Features & Benefits

#### Features

- 2G and 3G, GSM and CDMA models
- Universal Socket connectivity
- Short Message Services (SMS)
- Serial or USB interfaces
- Serial interface supports speeds up to 921.6K bps
- AT command compatible
- USB 2.0 HS compliant (H5 and EV3 only)
- Two-year warranty

#### Benefits

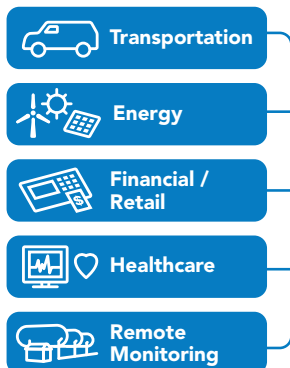
- **Approved by carriers and regulatory agencies** saving customers time, money, and protection from the risks associated with pursuing their own certifications
- **Quick to market** leveraging Multi-Tech's approvals
- **Interchangeable communications devices** for easy migration to future networks
- **Long solution lifecycle** reduces redesign time and cost
- **High quality, reliable solution** delivers on the promise of "M2M Simplified"
- Support from the **leading experts** in M2M technology



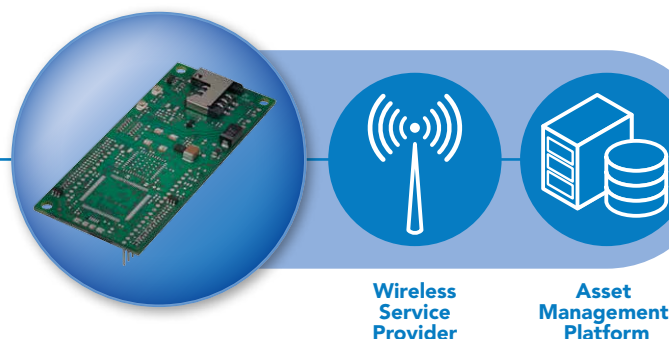
#### Applications

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

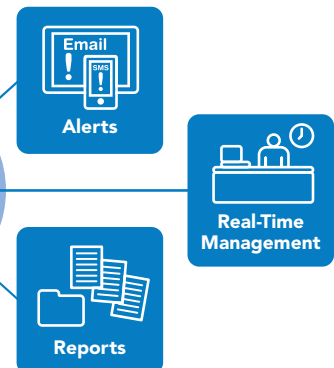
#### Your Devices & Data



#### Connecting Your Devices



#### Insight + Action + Control



## Specifications

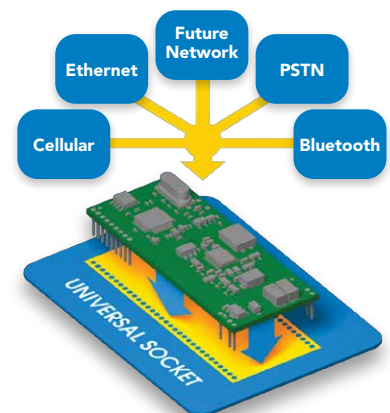
Models	MTSMC-H5	MTSMC-EV3
		
Performance	HSPA+	EV-DO Rev A
Frequency Bands	3G: 850/900/1700 (AWS)/1900/2100 MHz 2G: 850/900/1800/1900 MHz	800/1900 MHz
USB	USB 2.0 High Speed	
TCP/IP Functions	FTP, SMTP, TCP, & UDP	
Connectors	Antenna: 2 UFL (Cellular, Rx Diversity) Mini SIM; 1.8V & 3V	Up to 2 UFL (Cellular & Rx Diversity)
Dimensions	3.15" x 1.375" (80.010 mm x 34.925 mm)	
Power Draw*	5VDC; 19mA sleep, 28mA idle, 397mA maximum	5VDC; 22mA sleep, 34mA idle, 423mA maximum
Input Power	3.3V - 5VDC	
<b>Environmental</b>		
Operating Temperature	-35° to +85° C	-40° to +85° C
Storage Temperature	-40° to +85° C	
Humidity	20% to 90% RH, non-condensing	
<b>Certifications</b>		
EMC Compliance	FCC Part 15 Class B, EN55022, EN55024	FCC Part 15 Class B
Radio Compliance	FCC Part 22, FCC Part 24, RSS 132, RSS 133, EN 301 511, EN 301 489-1, EN 301 489-3, EN 301 489-7, EN 301 489-24	FCC Part 22, FCC Part 24
Safety	UL 60950-1 2nd ED, cUL 60950-1 2nd ED, IEC 60950-1 2nd ED	UL 60950-1 2nd ED, cUL 60950-1 2nd ED, IEC 60950-1 2nd ED
Network	PTCRB	N/A
Carrier	AT&T, Aeris, T-Mobile	Verizon

\* See device guides for additional information.

## Highlights

### Universal Socket Connectivity

Multi-Tech's Universal Socket is a flexible, comm-port architecture that provides cellular, Ethernet, PSTN or Bluetooth® 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.



## Specifications

Models	MTSMC-G2 MTSMC-G3	MTSMC-C2
		
Performance	GPRS Class 10	CDMA2000 1xRTT
Frequency Bands	850/900/1800/1900 MHz	800/1900 MHz
USB	N/A	
TCP/IP Functions	<b>G2 Models:</b> FTP, HTTP, POP3, SMTP, TCP Client & Server, & UDP Client <b>G3 Model:</b> FTP, SMTP, TCP, & UDP	FTP, SMTP, TCP, & UDP
Connectors	Antenna: 1 UFL Mini SIM; 1.8V & 3V	1 UFL
Dimensions	3.15" x 1.375" (80.010 mm x 34.925 mm)	
Power Draw*	<b>G2 Models:</b> 5VDC; 15mA sleep, 113mA typical, 240mA maximum <b>G3 Model:</b> 5VDC; 32mA sleep, 54mA idle, 358mA maximum	5VDC; 32mA sleep, 45mA idle, 552mA maximum
Input Power	<b>G2 Models:</b> 5VDC <b>G3 Model:</b> 3.3V - 5VDC	3.3V - 5VDC
<b>Environmental</b>		
Operating Temperature	-40° to +85° C	
Storage Temperature	-40° to +85° C	
Humidity	20% to 90% RH, non-condensing	
<b>Certifications</b>		
EMC Compliance	<b>G2 Models:</b> FCC Part 15 Class B, EN55022, EN55024 <b>G3 Model:</b> EN55024	FCC Part 15 Class B
Radio Compliance	<b>G2 Models:</b> FCC Part 22, FCC Part 24, RSS 132, RSS 133, EN 301 511, EN 301 489-1, EN 301 489-3, EN 301 489-7, AS/ACIF S042.1, AS/ACIF S042.3 <b>G3 Model:</b> EN 301 511, EN 301 489-1, EN 301 489-3, EN 301 489-7	FCC Part 22, FCC Part 24
Safety	<b>G2 Models:</b> UL 60950-1 2nd ED, cUL 60950-1 2nd ED, IEC 60950-1 2nd ED, AS/NZ 60950.1 <b>G3 Model:</b> IEC 60950-1 2nd ED	UL 60950-1 2nd ED, cUL 60950-1 2nd ED, IEC 60950-1 2nd ED
Network	<b>G2 Models:</b> PTCRB <b>G3 Model:</b> Uses a GCF certified module	N/A
Carrier	<b>G2 Models:</b> AT&T, Aeris, T-Mobile	Verizon Pending: Aeris, Sprint

\* See device guides for additional information.

## SocketModem Cell Pin-Out

The SocketModem Cell cellular modem interfaces easily with existing products through a standard serial communication channel. The serial DTE channel is capable of transfer speeds to 921.6K bps (depending on model) 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.

(I/O) Tip	1	o	64	SPKR (O)
(I/O) Ring	2	o	63	GND (O)
Safety Void	3	x	62	RTN (I)
(O) TX+	4	o	61	VCC (I)
(O) TX-	5	o	60	-LED SPD (O)
(I) RX+	6	o	59	-LED CCL (O)
(I) RX-	7	o	58	-LED LINK (O)
Safety Void	8	x	57	-LED ACT (O)
	9		56	-LED FDX (O)
	10		55	
(O) TXCLK	11	o	54	
(O) RXCLK	12	o	53	
	13		52	
	14		51	GPIO (I/O)
	15		50	GPIO (I/O)
	16		49	GPIO (I/O)
	17		48	GPIO (I/O)
	18		47	
	19		46	
	20		45	
(I) Mic+	21	o	44	
(I) Mic+	22	o	43	SPK+ (O)
(I) Mic-	23	o	42	SPK- (O)
(I) -Reset	24	o	41	GND (I)
(I) USB_VBUS	25	o	40	-DTR (I)
(I) GND	26	o	39	-DCD (O)
(I/O) USB_DP	27	o	38	-CTS (O)
(I/O) USB_DN	28	o	37	-DSR (O)
(O) LED_DCD	29	o	36	-RTN (O)
(O) LED_RX	30	o	35	-TXD (I)
(O) LED_DTR	31	o	34	-RXD (I)
(O) LED_TX	32	o	33	-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.



## Services & Warranty

Multi-Tech's comprehensive Support Services programs offer a full array of options to suit your specific needs. These services are aimed at protecting your investment, extending the life of your solution or product, and reducing total cost of ownership. Our seasoned technical experts, with an average tenure of more than 10 years, can walk you through smooth installations, troubleshoot issues and help you with configurations. Products include a 2-year warranty.

## Installation Support

Multi-Tech's Installation Support Service delivers priority service with the ability to work one-on-one with an experienced Multi-Tech technical support engineer, to guide you through the installation process for our products.

## Technical Support Services

At Multi-Tech, we're committed to providing you personalized attention and quality service while providing you a quick response to your product support needs. We have several options of support for you to choose from.

For additional information on Support Services as well as other service offerings, please contact your Multi-Tech representative or visit [www.multitech.com/support.go](http://www.multitech.com/support.go).

## World Headquarters

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## Ordering Information

### HSPA+ Models

Product	Description	Region
MTSMC-H5	HSPA+ Embedded Modem (Serial Interface)	Global
MTSMC-H5-U	HSPA+ Embedded Modem (USB Interface)	Global

### EV-DO Models

Product	Description	Region
For Verizon Networks		
MTSMC-EV3-N3	EV-DO Rev A Embedded Modem (Serial Interface)	US
MTSMC-EV3-U-N3	EV-DO Rev A Embedded Modem (USB Interface)	US

### GPRS Models

Product	Description	Region
MTSMC-G2	850/1900 MHz GSM/GPRS Modem	Global
MTSMC-G2-ED	900/1800 MHz GSM/GPRS Modem	Global
MTSMC-G2-V	850/1900 MHz GSM/GPRS Modem w/Voice	Global
MTSMC-G2-V-ED	900/1800 MHz GSM/GPRS Modem w/Voice	Global
MTSMC-G3-EU	850/900/1800/1900 MHz GSM/GPRS Modem	Euro/GB

### CDMA Models

Product	Description	Region
For Sprint Networks		
MTSMC-C2-N2	CDMA2000 1xRTT Modem (Serial Interface)	US
For Verizon Networks		
MTSMC-C2-N3	CDMA2000 1xRTT Modem (Serial Interface)	US
For Aeris Networks		
MTSMC-C2-N16	CDMA2000 1xRTT Modem (Serial Interface)	US