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[Multi-Tech Systems, Inc.](#)  
[MTSMC-EV2-IP-N16-SP](#)

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# SocketModem® iCell

## Intelligent EV-DO Cellular Modem



The SocketModem® iCell intelligent cellular modem is a complete, ready-to-integrate communications device that offers standards-based dual-band EV-DO Rev A 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.

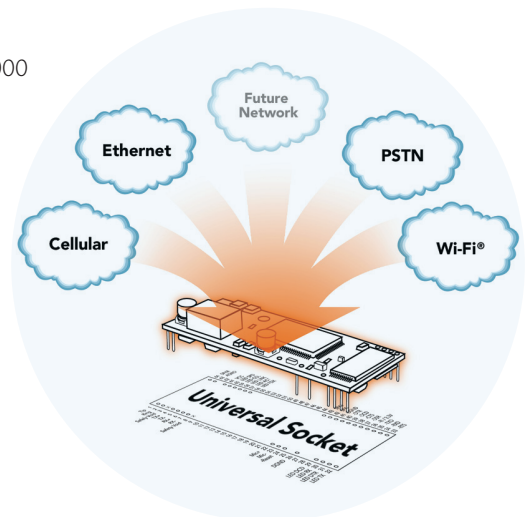
### Features

- EV-DO Rev A, backwards compatible to EV-DO Rev 0 and CDMA2000 1xRTT
- Dual-band 800/1900 MHz
- Universal Socket connectivity
- Intelligent Universal IP stack for enhanced M2M functionality
- Models with GPS tracking capability
- NMEA-0183 V3.01 compliant GPS messages
- Event monitoring and reporting via four programmable GPIOs
- Circuit-switched data up to 14.4K bps
- Short Message Services (SMS)
- UFL antenna connector
- Serial only or Serial/USB models
- Serial interface supports DTE speeds to 921.6K bps\*
- AT command compatible
- Carrier approved
- Two-year warranty

\* Effective throughput is 700-750K bps

### Universal Socket Benefits

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



## Highlights

**Applications.** With increased 3G packet data rates, the SocketModem iCell intelligent cellular modem will support highly data-intensive applications such as remote video surveillance, multimedia POS/ATM terminals as well as other data-intensive applications. For asset tracking and fleet management applications, models with a dedicated GPS receiver are available.

**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 machine-to-machine (M2M) 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 CDG 1 and 2 network and RF approvals.

**SocketModem iCell Pin-Out.** The SocketModem iCell intelligent cellular modem interfaces easily with existing products through a standard serial or USB 2.0 interface. The serial DTE channel is capable of transfer speeds to 921.6K 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.

**Developer's Kit.** The Developer's Kit allows you to plug in the communications device and use it for testing, programming and evaluation. For a complete listing of the Developer Kit contents, visit [www.multitech.com/pdfs/devkit.go](http://www.multitech.com/pdfs/devkit.go)

## Specifications

### Packet Data Features

EV-DO Rev A / CDMA2000 1xRTT

### Frequency Bands

800/1900 MHz

### Connectors

Antenna: UFL (one each, cellular & GPS)

### GPIO Functions (MI builds only)

Pins 48 & 49: Programmable digital input/output

Pins 50 & 51: Programmable digital input/output or ADC

### 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

Aquisition: Hot start 1 second; cold start 29 seconds average

Sensitivity: Tracking - 161 dBm

Protocol: NMEA-0183 V3.01, GGA, GLL, GSA, GSV, RMC, VTG

### M2M Applications

Automatic connect/reconnect, device monitor, modem emulation, Ping & TCP keep alive, wake-up on Caller ID, wake-up on ring, GPIO event monitoring & alerts

### Power Requirements

5VDC

IP Models: Sleep: 173mA; Typical: 400mA; Maximum: 1.2A

GP Models: Sleep: 180mA; Typical: 420mA; Maximum: 1.2A

### Physical Description

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

### Operating Environment

-40° to +85° C

### Certifications

EMC: FCC Part 15 Class B

Radio Compliance: FCC Part 22 & 24

Safety: UL 60950-1, IEC 60950-1

Network: CDG 1 & 2

RoHS Compliant

## Ordering Information

| Product         | Description                                 | Region   |
|-----------------|---|----------|
| MTSMC-EV2-IP    | EV-DO Rev A Serial Embedded Modem           | Regional |
| MTSMC-EV2-GP    | EV-DO Rev A Serial Embedded Modem (GPS)     | Regional |
| MTSMC-EV2-MI-IP | EV-DO Rev A Serial/USB Embedded Modem       | Regional |
| MTSMC-EV2-MI-GP | EV-DO Rev A Serial/USB Embedded Modem (GPS) | Regional |
| Ordering Codes  | Description                                 |          |
| -N2             | For Sprint Networks (USA)                   |          |
| -N3             | For Verizon Networks (USA)                  |          |
| -N16            | For Aeris Communications Networks (USA)     |          |

\* Use ordering codes for specific build options. Go to [www.multitech.com](http://www.multitech.com) for detailed product model numbers.

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

Features and specifications are subject to change without notice.

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