

MultiModem® iCell



Intelligent Cellular Modems

The MultiModem® iCell family of intelligent cellular modems offers a broad range of options including 2G and 3G models as well as a full line of GSM and CDMA models. All MultiModem iCell modems are fully certified and carrier approved so you can get to market extremely fast allowing customers to start obtaining the benefits of M2M. MultiTech products are designed specifically for M2M applications thus they are durable, stable, reliable, and easy to deploy. In addition, the MultiModem iCell includes Universal IP® stack which allows users to implement enhanced M2M functions such as persistent connectivity, event monitoring, and others.

Features

- 3G and 2G models available
- GSM and CDMA models available
- Models with GPS tracking capability
- USB and Serial connectors
- GPIO connectivity
- Universal IP stack for enhanced M2M functionality
- FCC, PTCRB, Industry Canada, and R&TTE certified
- Carrier approved
- Two year warranty, upgradable to five years



Benefits

- Quick deployments to shorten time to market
- Long and stable lifecycles
- Certified and carrier approved



Specifications

| Models | MTCMR-H5 | MTCMR-EV2 MTCMR-EV3 | MTCMR-E1 |
|---------------------------------|---|--|---|
| Technical Specifications | | | |
| Performance | HSPA+ | EV-DO Rev A backwards compatible to EV-DO Rev 0 and CDMA2000 1xRTT | EDGE: E-GPRS Class 12 GPRS: Multislot Class 12 |
| Frequency Band | Penta band 850/900/1700/1900/2100 MHz | Dual band 800/1900 MHz | Quad band 850/900/1800/1900 MHz |
| Packet Data* | HSDPA data service of up to 21.0 Mbps HSUPA data service of up to 5.76 Mbps | Up to 153.6K bps forward and reverse | EDGE: E-GPRS up to 240K bps, coding scheme MCS1-9, mobile station Class B, LLC layer, 4 time slots GPRS: Full PBCCH support, coding scheme 1-4, mobile station Class B |
| Circuit Switched Data | NA | IS-95A, IS-95B up to 14.4K bps forward and reverse | Up to 14.4 Kbps, non-transparent |
| SMS | Text & PDU, Point-to-Point, Cell broadcast | | |
| Universal IP Features | TCP/IP Features: DNS resolve, FTP client, Ping, POP3 client, PPP (dial out), SMTP client, TCP RAW client & server, UDP RAW client and server, PAP, CHAP | | |
| Voltage | 9V to 32VDC | | |
| Connectors | | | |
| RF Antenna Connector | 50 ohm SMA (female connector) | | |
| SIM Connector | Mini SIM; 1.8 and 3V | NA | Mini SIM; 1.8 and 3V |
| GPIO Connector | 6 pin 2x3 style | | |
| USB Connector | Type B | | |
| RS-232 Connector | DE9 | | |
| Power Connector | 2.5mm miniature (screw-on) | | |
| Physical Description | | | |
| Physical Dimensions (L x W x H) | 3.1" x 4.9" x 1.1" (7.9cm x 12.4cm x 2.8cm) | | |
| Physical Weight | 8 oz (227 g) | | |
| Chassis Type | Aluminum | | |
| Environmental | | | |
| Operating Temperature** | -22° to +167° F (-30° to +75° C) | -22° to +185° F (-30° to +85° C) | -31° to +167° F (-35° to +75° C) |
| Storage Temperature | -40° to +185° F (-40° to +85° C) | | |
| Humidity | Relative humidity 20% to 90% noncondensing | | |
| Certifications | | | |
| EMC Compliance Certifications | FCC Part 15 Class B, EN55022 Class B | FCC Part 15 Class B | FCC Part 15 Class B, EN55022 Class B |
| Radio Compliance Certifications | FCC Part 22, 24, RSS132, 133, EN301 489-1, EN489-3 (GPS models only), EN301 489-7, EN301 489-24, EN301 511, EN301 908, AS/ACIF S042.1, S042.3 | FCC Part 22, 24 | FCC Part 22, 24, RSS132, 133, EN301 489-1, EN489-3 (GPS models only), EN301 489-7, EN301 511, EN301 908, AS/ACIF S042.1, S042.3 |
| Safety Certifications | UL/cUL 60950-1 2nd Ed, IEC60950-1 2nd Ed am.1 | UL 60950-1 2nd Ed | UL/cUL 60950-1 2nd Ed, IEC60950-1 2nd Ed am.1 |
| Network Certifications | PTCRB | Verizon, Sprint | PTCRB |

Specifications

| Models | MTCMR-G2 | MTCMR-C2 |
|---------------------------------|---|--|
| Technical Specifications | | |
| Performance | GPRS Class 10 | CDMA2000 1xRTT |
| Frequency Band | Quad band 850/900/1800/1900 MHz | Dual band 800/1900 MHz |
| Packet Data* | Up to 85.6K bps, coding schemes CS1 to CS4 | Up to 153.6K bps forward and reverse |
| Circuit Switched Data | Up to 14.4 Kbps transparent and non-transparent | IS-95A, IS-95B up to 14.4K bps forward and reverse |
| SMS | Text & PDU, Point-to-Point, Cell broadcast | |
| Universal IP Features | TCP/IP Features: DNS resolve, FTP client, Ping, POP3 client, PPP (dial out), SMTP client, TCP RAW client & server, UDP RAW client and server, PAP, CHAP | |
| Voltage | 9V to 32V DC | |
| Connectors | | |
| RF Antenna Connector | 50 ohm SMA (female connector) | |
| SIM Connector | Mini SIM; 1.8 and 3V | NA |
| GPIO Connector | 6 pin 2x3 style | |
| USB Connector | Type B | |
| RS-232 Connector | DE9 | |
| Power Connector | 2.5mm miniature (screw-on) | |
| Physical Description | | |
| Physical Dimensions (L x W x H) | 3.1" x 4.9" x 1.1" (7.9cm x 12.4cm x 2.8cm) | |
| Physical Weight | 8 oz (227 g) | |
| Chassis Type | Aluminum | |
| Environmental | | |
| Operating Temperature** | -40° to +185° F (-40° to +85° C) | |
| Storage Temperature | -40° to +185° F (-40° to +85° C) | |
| Humidity | Relative humidity 20% to 90% noncondensing | |
| Certifications | | |
| EMC Compliance Certifications | FCC Part 15 Class B, EN55022 Class B | FCC Part 15 Class B |
| Radio Compliance Certifications | FCC Part 22, 24, RSS132, 133, EN301 489-1, EN489-3 (GPS models only), EN301 489-7, EN301 511, EN301 908, AS/ACIF S042.1, S042.3 | FCC Part 22, 24 |
| Safety Certifications | UL/cUL 60950-1 2nd Ed, IEC60950-1 2nd Ed am.1 | UL 60950-1 2nd Ed |
| Network Certifications | PTCRB | Verizon, Sprint, Aeris |

* Actual performance speeds may be affected by a variety of attributes such as cell tower distance, data loads, packet sizes, etc.

**UL Listed @ 40° C, limited by power supply. UL Certification does not apply or extend to an ambient above 40° C and has not been evaluated by UL for ambient greater than 40° C. "UL has evaluated this device for use in ordinary locations only. Installation in a vehicle or other outdoor locations has not been evaluated by UL. UL Certification does not apply or extend to use in vehicles or outdoor applications or in ambient above 40° C."

Specifications

GPS Specifications

| | |
|----------------------|--|
| Accuracy | Position 2.5m CEP, Velocity 0.1 m/sec |
| Open Sky TTFB | Hot start 1 second Cold start 29 seconds Reacquisition <1s |
| Sensitivity Tracking | -161 dBm |
| Protocol | NMEA-0183, V3.01, GGA, GLL, GSA, GSV, RMC, VTG |

GPIO Functions

| | |
|-------|--|
| Pin 1 | Digital input, 24V tolerance |
| Pin 2 | Digital input, 24V tolerance |
| Pin 3 | Configurable as either Digital input (5V tolerant TTL/CMOS levels) or Digital output (3.3V High) or as an ADC input (0 to 3.3V rail) |
| Pin 4 | Configurable as either Digital input (5V tolerant TTL/CMOS levels) or Digital output (3.3V High) or as an ADC input (0 to 3.3V rail) |
| Pin 5 | ADC input (0 to 3.3V rail) |
| Pin 6 | Ground and must be connected to the ground of the attached device |

Ordering Information

GSM Products

| Product | Description | Bundle Available | Region |
|-------------|----------------------------------|------------------|----------|
| MTCMR-H5 | Intelligent HSPA+ Modem | Yes* | Regional |
| MTCMR-H5-GP | Intelligent HSPA+ Modem with GPS | No | Regional |
| MTCMR-E1 | Intelligent EDGE Modem | Yes* | Global |
| MTCMR-E1-GP | Intelligent EDGE Modem with GPS | No | Global |
| MTCMR-G2 | Intelligent GPRS Modem | Yes* | Global |
| MTCMR-G2-GP | Intelligent GPRS Modem with GPS | No | Global |

* Bundles include power supply, antenna, and cables and are noted as follows.

-NAM Includes US style power plug

-EU Includes Euro style power plug

-GB/IE Includes UK style power plug

CDMA Products

| Product | Description | Bundle Available | Region |
|-------------------|--|------------------|----------|
| MTCMR-EV2-Nx** | Intelligent EV-DO Rev A Modem | Yes* | USA |
| MTCMR-EV2-GP-Nx** | Intelligent EV-DO Rev A Modem with GPS | No | USA |
| MTCMR-C2-Nx** | Intelligent 1xRTT Modem | Yes* | Regional |
| MTCMR-C2-GP-Nx** | Intelligent 1xRTT Modem with GPS | No | Regional |

* Bundles include power supply, antenna, and cables and are noted as follows.

-NAM Includes US style power plug

** Nx signifies the specific Carrier that the product is approved for

-N2 For Sprint Networks (USA)

-N3 For Verizon Wireless Networks (USA)

-N16 For Aeris Communications Networks (USA)

Use ordering codes for specific build options. Go to www.multitech.com for detailed product model numbers.

Services & Warranty

MultiTech'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 that can be extended up to 5 years via MultiTech's Extended Warranty program.

Extended Warranty

To give you peace-of-mind and protect your investment, our Extended Warranty Service Plans ensure your MultiTech products are covered for 1, 2, or 3 years beyond the manufacturer's warranty.

Installation Support

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

Technical Support Services

At MultiTech, 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 MultiTech representative or visit www.multitech.com/support.go.

World Headquarters

Multi-Tech Systems, Inc.
2205 Woodale Drive
Mounds View, MN 55112 U.S.A.
Tel: 763-785-3500
Toll-Free: 800-328-9717
Email: sales@multitech.com
www.multitech.com

EMEA Headquarters

Multi-Tech Systems (EMEA)
United Kingdom
Tel: +(44) 118 959 7774
Email: sales@multitech.co.uk

Produced in the U.S. of U.S. and non-U.S. components. Features and specifications are subject to change without notice.

Trademarks and Registered Trademarks: Multi-Tech and the Multi-Tech logo, MultiModem, Universal IP: Multi-Tech Systems, Inc. All other products and technologies are the trademarks or registered trademarks of their respective holders.

8/14 • 86002157 • © 2014 by Multi-Tech Systems, Inc. All rights reserved.

