

MultiModem® rCell



Intelligent Wireless Routers

The MultiModem® rCell family of intelligent wireless routers offers a comprehensive selection of features to cost-effectively meet most M2M (machine-to-machine) communications needs. Each MultiModem rCell is fully certified and carrier approved, allowing customers to get to market extremely fast and benefit from M2M sooner. Multi-Tech products are specifically designed for M2M applications, thus they are durable, stable, reliable, and easy to deploy. In addition, the MultiModem rCell includes an embedded operating systems that allows users to easily implement enhanced M2M functions, such as persistent connectivity, remote configuration and others.

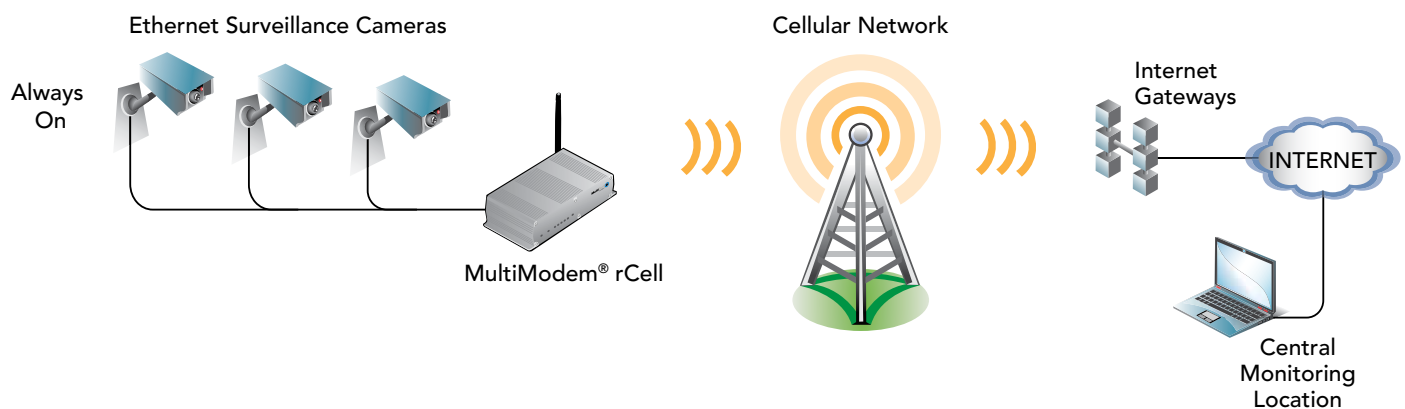


Features

- 3G and 2G models available
- GSM and CDMA models available
- Models with GPS tracking capability
- Ethernet and serial connectors
- Embedded operating system for enhanced M2M functionality
- FCC, PTCRB, Industry Canada, and R&TTE certified
- Carrier approved
- Two-year warranty

Benefits

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



Specifications

Models	MTCBA-H5-EN2	MTCBA-EV2-EN2
Technical Specifications		
Performance	HSPA+	EV-DO Rev A backwards compatible to EV-DO Rev 0 and CDMA2000 1xRTT
Frequency Band	Hepta-band 800/850/900/AWS 1700/1900/2100 MHz	Dual-band 800/1900 MHz
Packet Data*	Up to 21.0 Mbps downlink Up to 5.76 Mbps uplink	Up to 3.1 Mbps downlink Up to 1.8 Mbps uplink
Circuit Switched Data	NA	IS-95A, IS-95B up to 14.4K bps forward and reverse
SMS	Text & PDU, Point-to-Point, Cell broadcast	
Voltage	9V to 32V DC	9V to 32V DC
Connectors		
RF Antenna Connector	50 ohm SMA (female connector)	
SIM Connector	Mini SIM; 1.8 and 3V	N/A
LAN Connector	RJ-45, 10/100 BaseT	
RS-232 Connector	DE9	
Power Connector	2.5mm miniature (screw-on)	
Physical Description		
Physical Dimensions (L x W x H)	2.93" x 7.0" x 1.24" (7.44cm x 17.78cm x 3.15cm)	
Physical Weight	0.75 lbs (0.340 Kg)	
Chassis Type	Aluminum	
Environmental		
Operating Temperature**	-22°to 167° F (-30° to 75° C)	-40° to 167° F (-40° 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, EN55022 Class B, EN55024	FCC Part 15
Radio Compliance Certifications	FCC Part 22, 24, 27, RSS132, 133, 139, EN301 489-1, EN489-3 (GPS models only), EN301 489-7, EN301 489-24, EN301 511	FCC Part 22, 24, RSS132, 133
Safety Certifications	UL/cUL 60950-1 2nd Ed, IEC60950-1 2nd Ed am.1	
Network Certifications	PTCRB	
GPS Specifications		
Accuracy	Position 2.5m CEP, Velocity 0.1 m/sec	
Open Sky TTFF	Hot start 1 second, Cold start 29 seconds, Reacquisition <1s	
Sensitivity Tracking	-165 dBm	
Protocol	NMEA-0183, V3.01, GGA, GLL, GSA, GSV, RMC, VTG	

* 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

Models	MTCBA-E1-EN2	MTCBA-G2-EN2	MTCBA-C1-EN2
Technical Specifications			
Performance	EDGE: E-GPRS Class 12 GPRS: Multislot Class 12	GPRS Class 10	CDMA2000 1xRTT
Frequency Band	Quad-band 850/900/1800/1900 MHz	Quad-band 850/900/1800/1900 MHz	Dual-band 800/1900 MHz
Packet Data*	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	Up to 85.6K bps, coding schemes CS1 to CS4	Up to 153.6K bps downlink and uplink
Circuit Switched Data	Up to 14.4 Kbps, non-transparent	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		
Voltage	9V to 32V DC		
Connectors			
RF Antenna Connector	50 ohm SMA (female connector)		
SIM Connector	Mini SIM; 1.8 and 3V		N/A
LAN Connector	RJ-45, 10/100 BaseT		
RS-232 Connector	DE9		
Power Connector	2.5mm miniature (screw-on)		
Physical Description			
Physical Dimensions (L x W x H)	2.93" x 7.0" x 1.24" (7.44cm x 17.78cm x 3.15cm)		
Physical Weight	0.75 lbs (0.340 Kg)		
Chassis Type	Aluminum		
Environmental			
Operating Temperature**	-31° to +167° F (-35° to +75° C)	-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, EN55022, EN55022 Class B, EN55024	FCC Part 15, EN55022 Class B, EN55024	FCC Part 15
Radio Compliance Certifications	FCC Part 22, 24, RSS132, 133, EN301 489-1, EN489-3 (GPS models only), EN301 489-7, EN301 511, AS/ACIF S042.1, S042.3	FCC Part 22, 24, RSS132, 133, EN301 489-1, EN489-3 (GPS models only), EN301 489-7, EN301 511, AS/ACIF S042.1, S042.3	FCC Part 22, 24
Safety Certifications	UL/cUL 60950-1 2nd Ed, IEC60950-1 2nd Ed am.1		
Network Certifications	PTCRB		
GPS Specifications			
Accuracy	Position 2.5m CEP, Velocity 0.1 m/sec		
Open Sky TTFF	Hot start 1 second, Cold start 29 seconds, Reacquisition <1s		
Sensitivity Tracking	-165 dBm		
Protocol	NMEA-0183, V3.01, GGA, GLL, GSA, GSV, RMC, VTG		

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Highlights

Applications

The MultiModem rCell intelligent wireless routers can be used in a variety of applications, from asset tracking and fleet management to highly data-intensive, mission critical applications, such as remote video surveillance or home medical monitoring. Because the routers are certified and carrier approved, customers are able to quickly enable M2M functionality, as they do not have to incur the expense and take the time to obtain the appropriate certifications and approvals.

Embedded OS for Enhanced M2M Connectivity

Multi-Tech's embedded operating system provides a web-based programming interface providing easy access to many of the advanced features offered by the MultiModem rCell. For example, the router can be configured for one of three connectivity modes:

- Always on – When powered on, the router automatically establishes a connection to the wireless network and will re-establish the data link if the connection is lost.

- Wake-up on ring/Caller ID – This setting allows the router to establish a data link when the router detects any incoming ring or when the router detects an incoming ring based on a particular caller ID number.
- Dial-on demand – When the router is configured for dial-on demand, it will establish a data link when LAN activity is detected.

Secure VPN Connections

The MultiModem rCell intelligent wireless router uses the IPSec industry standard protocol, data encryption, and the Internet to provide high performance, secure VPN connections. For LAN-to-LAN connectivity, the MultiModem rCell utilizes the IPSec protocol to provide tunnels with strong 3DES or AES encryption using IKE and PSK key management. With support for two concurrent VPN tunnels, it is sized appropriately for M2M applications.

Ordering Information

GSM Products

Product	Description	Bundle Available	Region
MTCBA-H5-EN2	Intelligent HSPA+ Router	Yes*	Regional
MTCBA-H5-EN2-GP	Intelligent HSPA+ Router with GPS	No	Regional
MTCBA-E1-EN2	Intelligent EDGE Router	Yes*	Global
MTCBA-E1-EN2-GP	Intelligent EDGE Router with GPS	No	Global
MTCBA-G2-EN2	Intelligent GPRS Router	Yes*	Global
MTCBA-G2-EN2-GP	Intelligent GPRS Router with GPS	No	Global

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

Bundle Ordering Codes

-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
MTCBA-EV2-EN2-Nx**	Intelligent EV-DO Rev A Router	Yes*	Regional
MTCBA-EV2-EN2-GP2-Nx**	Intelligent EV-DO Rev A Router with GPS	No	Regional
MTCBA-C1-EN2-Nx**	Intelligent 1xRTT Router	Yes*	Regional
MTCBA-C1-EN2-GP-Nx**	Intelligent 1xRTT Router with GPS	No	Regional

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

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

Bundle Ordering Codes

-NAM	Includes US style power plug
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Carrier Ordering Codes

-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

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 that can be extended up to 5 years via Multi-Tech's Extended Warranty program, which offers the convenience of Overnight Service* for optimal uptime.

Extended Warranty & Overnight Services

To give you peace-of-mind and protect your investment, our Extended Warranty Service Plans ensure your Multi-Tech products are covered for 1, 2, or 3 years beyond the manufacturer's warranty with an optional Overnight Service plan*.

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.

* Overnight replacement service is currently available for U.S. customers.

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

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