

MultiConnect® rCell 100 Series



Cellular Routers

The MultiConnect® rCell 100 Series of cellular routers are a part of MultiTech's comprehensive portfolio of cellular connectivity products optimized for M2M (machine-to-machine) communications. With the Industry's most cost effective approach to remote device management and shared design approach across multiple cellular technologies, it provides the lowest total cost of ownership to our customers. The MultiConnect rCell 100 Series of cellular routers also offers a long, stable lifecycle, an important consideration for M2M solutions.

Features

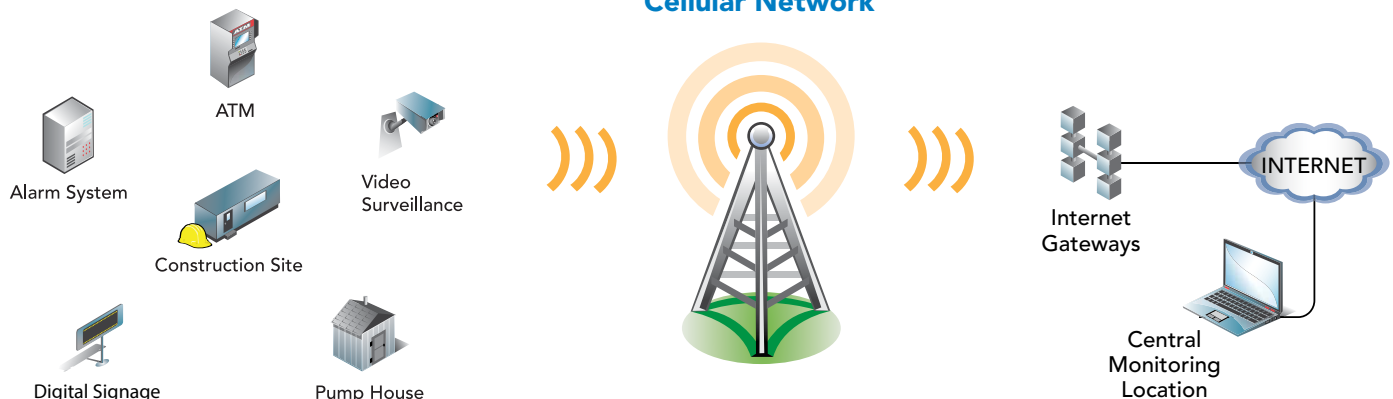
- Remote device management
- Class I Div 2 models
- 3G and 2G models available
- HSPA+, EV-DO, 1xRTT and GPRS
- Ethernet and Serial interfaces
- Supports IPSec VPN tunnels for secure LAN-to-LAN access
- IP Passthrough
- API
- Models with GPS connectivity
- Models with Wi-Fi®/Bluetooth® connectivity
- Rugged, military and SAE tested
- Carrier approved
- Two-year warranty, upgradable to five years



Benefits

- Lowest total cost of ownership
- Long and stable lifecycles
- Certified and carrier approved

Cellular Network



Specifications

Model	MTR-H5	MTR-H6
Performance	HSPA+	HSPA
Frequency Band	3G: Hepta-band 800/850/900/AWS 1700/1900/2100 MHz 2G: Quad-band 850/900/1800/1900 MHz	3G: Tri-band 850/900/2100 MHz 2G: Quad-band 850/900/1800/1900 MHz
Packet Data*	Up to 21.0 Mbps downlink, up to 5.76 Mbps uplink	Up to 7.2 Mbps downlink, up to 5.76 Mbps uplink
Diversity	Yes	No
SMS	Point-to-Point Messaging, Mobile-Terminated SMS, Mobile-Originated SMS	
Voltage	7V to 32VDC	
Connectors		
Cellular	Female SMA	
Wi-Fi	Reverse polarity female SMA	
GPS	Female SMA	
SIM	Mini SIM; 1.8 and 3V	
LAN	RJ-45, 10/100 BaseT	
RS-232	DE9	
Power	2.5 mm miniature (screw-on)	
Physical Description		
Physical Dimensions (L x W x H)	4.17" x 3.0" x 1.15" (10.6 cm x 7.6 cm x 2.9 cm)	
Physical Weight	0.51 lbs (0.231 Kg)	
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 15% to 93% noncondensing	
Certifications		
Regulatory	FCC Class B (US), IC (Canada), R&TTE (EU Economic Area), A-Tick (Australia/NZ)	R&TTE (EU Economic Area), A-Tick (Australia/NZ)
Safety	UL60950-1 (US), UL 201 (US), Class I Div 2 (US and Canada), cUL60950-1 (Canada), IEC60950-1 (EU Economic Area), AS/NZS 60950.1 (Australia/NZ)	IEC60950-1 (EU Economic Area), AS/NZS 60950.1 (Australia/NZ)
Network	PTCRB, GCF approved module, AT&T, T-Mobile, Telstra, EU carriers Pending: Rogers, Bell, Telus	Telstra, EU carriers
Quality	MIL-STD-810: High Temp, Low Temp, Cold Dwell, Random Vibration and Sine Vibration SAE J1455: Random Vibration and Sine Vibration	

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

† Device has been tested up to +85° C. UL Recognized @ 40° C, limited by AC power supply. UL Recognized @ 60° C when used with the fused DC power cable, part number FPC-532-DC. Note: The radio's performance may be affected at the temperature extremes. This is considered normal. There is no single cause for this function. Rather, it is the result of an interaction of several factors, such as the ambient temperature, the operating mode and the transmit power.

Wi-Fi/Bluetooth Specifications

The Wi-Fi interface can be set up in 802.11 b/g/n Access Point (AP) or client mode. In AP mode, the router can support up to 5 client connections. The Bluetooth serial interface allows you to set up a transparent data pipe from a Bluetooth device to a remote server. The router can be configured using TCP or UDP protocols and supports client and server modes giving you the flexibility you need for your particular application. RFCOM and SPP profile support. Contact MultiTech about additional Bluetooth profile support today.

Wi-Fi

- 802.11 b/g/n (1x1)
- WEP, WPA, and WPA2 support
- 65 Mbps maximum theoretical throughput

Bluetooth

- Version 2.1+EDR
- Power Class 1.5

Specifications

Model	MTR-EV3	MTR-G3	MTR-C2
Performance	EV-DO	GPRS Class 10	1xRTT
Frequency Band	Dual-band 800/1900 MHz	Quad-band 850/900/1800/1900 MHz	Dual-band 800/1900 MHz
Packet Data*	Up to 3.1 Mbps downlink Up to 1.8 Mbps uplink	Up to 85.6K downlink Up to 85.6K uplink	Up to 153.6K downlink Up to 153.6K uplink
Diversity	Yes	No	No
SMS	Point-to-Point Messaging, Mobile-Terminated SMS, Mobile-Originated SMS		
Voltage	7V to 32VDC		
Connectors			
Cellular	Female SMA		
Wi-Fi	Reverse polarity female SMA		
GPS	Female SMA		
SIM	N/A	Mini SIM; 1.8 and 3V	N/A
LAN	RJ-45, 10/100 BaseT		
RS-232	DE9		
Power	2.5 mm miniature (screw-on)		
Physical Description			
Physical Dimensions (L x W x H)	4.17" x 3.0" x 1.15" (10.6 cm x 7.6 cm x 2.9 cm)		
Physical Weight	0.51 lbs (0.231 Kg)		
Chassis Type	Aluminum		
Environmental			
Operating Temperature ¹	-40° to +185° F (-40° to +85° C)		
Storage Temperature	-40° to +185° F (-40° to +85° C)		
Humidity	Relative humidity 15% to 93% noncondensing		
Certifications			
Regulatory	FCC Class B (US)	R&TTE (EU Economic Area)	FCC Class B (US)
Safety	UL60950-1 (US), UL 201 (US), Class I Div 2 (US and Canada)	IEC60950-1 (EU Economic Area)	UL60950-1 (US), UL 201 (US)
Network	Aeris, Verizon Pending: Sprint	EU carriers	Verizon, Aeris
Quality	MIL-STD-810: High Temp, Low Temp, Cold Dwell, Random Vibration and Sine Vibration SAE J1455: Random Vibration and Sine Vibration		

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

† Device has been tested up to +85° C. UL Recognized @ 40° C, limited by AC power supply. UL Recognized @ 60° C when used with the fused DC power cable, part number FPC-532-DC. Note: The radio's performance may be affected at the temperature extremes. This is considered normal. There is no single cause for this function. Rather, it is the result of an interaction of several factors, such as the ambient temperature, the operating mode and the transmit power.

Highlights

Applications

The MultiConnect rCell 100 Series of cellular routers are used in a wide variety of applications such as digital signage, smart vending, smart energy or home medical monitoring. Because the routers are certified and carrier approved, customers are able to quickly deploy with cellular connectivity to realize new revenue streams, Opex reduction or improved service offering.

Security

The MultiConnect rCell 100 Series of cellular routers use IPSec industry standard data encryption to provide high performance, secure LAN-to-LAN VPN connections with 3DES or AES encryption using IKE and PSK key management. Support for five concurrent VPN tunnels.

Software Specifications

Security

SPI Firewall

Wizard for creating port forwarding and outbound traffic blocking rules
Advanced settings allows users to specify DNAT, SNAT, and Filter rules for accepting, rejecting, dropping, and logging packets

MAC Filtering

Accept, reject, drop and/or log packets based on their MAC address

Tunneling

IPsec VPN

IKE with 3DES, AES-128, 192 and 256 encryption (up to 5 connections)

GRE tunneling

VPN passthrough support

Easy to use Wizards

Configurable IP Defense

Denial-of-Service

ICMP/Ping Flood

Brute Force Access

Management

Hosted device management with MultiTech Device Manager

API (RESTful JSON over HTTPs)

Firmware Upgradeable through GUI, API or Device Manager

Configuration file save and restore

User-defined default configuration can be saved and recovered on device

Troubleshooting options provide

Downloadable logs

Remote Syslog

Auto-reboot

Configurable to time of day

Radio Terminal

Ping Test

Statistics on system performance, Ethernet, Wi-Fi, cellular, tunnel interfaces, and serial and Bluetooth usage

Useability

Start up wizard to activate and configure device

Context sensitive help/Help-On-Hover pop-ups

Documentation integrated into Web GUI

Customizable GUI

Upload logos, labels, and color schemes

Customize support contact information

Flexibility

IP Pass-through

Dynamic DNS (DDNS)

(Enables private LAN access with port forwarding)

Forwarding DNS Server

DHCP Server

Supports fixed and dynamic IP addresses

Configurable SNTP client

Serial Port (RS-232)

PAD – Packet Assembler/Disassembler

TCP/UDP protocols

Supports client and server modes

Configurable Modbus Pass-through

Bridges serial Modbus RTU traffic to Modbus TCP

Allows a Modbus TCP Master to communicate with a Modbus RTU slave connected to the serial port

Supports client and server modes

Persistent Connectivity/Keep-Alive

Active and passive cellular link monitoring (automatic repair of the cellular PPP connection)

Active mode (ICMP or TCP) feature is configurable to ping or connect to a server at specified intervals

Passive mode Monitors cellular connection for traffic for a configurable time period

Dial on Demand

Maintains cellular connection only when there is traffic to send

Wake Up on Call

Establishes a cellular connection upon a wake up event such as Ring, Caller ID or SMS

GPS

Server and client modes provide configurable NMEA data to external devices (LAN and/or WAN)

Serial port dump

Protocols

Network: TCP/IP, UDP/IP, DNS

Routing: NAT, Host Port Routing, DHCP, PPP, Static Routes

Application: Telnet/SSH

Serial: TCP/UDP PAD Mode, Modbus RTU

Bluetooth: TCP/UDP PAD Mode, SSP, RFCOMM

GPS: NMEA TCP/UDP Server/Client

M2M Focused Software Features

- Remote device management simplifies and scales the management of geographically dispersed devices. Monitor, upgrade and configure devices from a single location resulting in lower total cost of ownership and increased operational efficiency.
- Persistent connectivity options that automatically manage the cellular connection so the connection is available when it's needed most
- DDNS support for inbound connectivity
- Flexible Serial-to-IP configurations with client and server modes to support any communication architecture
- Flexible GPS configuration allows GPS data to be sent serially or via TCP/UDP protocols in client or server modes
- API (RESTful JSON over HTTPs) for managing all configurations and features of the device enabling integration into external applications
- Bridges serial Modbus traffic to Modbus TCP with support for client and server modes

Ordering Information

Class I Div 2 Hazardous Location Products

Product	Description	Bundle Available	Region
MTR-H5-B07-HZ	HSPA+ Router w/ Class I Div 2 Kit (US, CA Only)	Included	Global
MTR-H5-B10-HZ	HSPA+ Router w/ Wi-Fi/GPS & Class I Div 2 Kit (US, CA Only)	Included	Global

Note: All Class I Div 2 models include DC power cable, antennas, and Ethernet cable

HSPA+ Global Products

Model	Description	Bundle Available	Region
MTR-H5-B07-xx	HSPA+ Cellular Router	Yes	Global
MTR-H5-B08-xx	HSPA+ Cellular Router w/ GPS	Yes	Global
MTR-H5-B09-xx	HSPA+ Cellular Router w/ Wi-Fi/Bluetooth	Yes	Global
MTR-H5-B10-xx	HSPA+ Cellular Router w/ GPS/Wi-Fi/Bluetooth	Yes	Global

-xx Ordering Codes for MTR-H5 models

Blank	Device only, no accessories
-US	Includes US style power supply, antenna(s), and Ethernet cables
-EU	Includes Euro style power supply, antenna(s), and Ethernet cables
-GB	Includes UK style power supply, antenna(s), and Ethernet cables

HSPA Products for Europe and Australia

Model	Description	Bundle Available	Region
MTR-H6-B16-xx	HSPA Cellular Router	Yes	Regional
MTR-H6-B18-xx	HSPA Cellular Router w/ Wi-Fi/Bluetooth	Yes	Regional
MTR-H6-B19	HSPA+ Cellular Router w/ GPS/Wi-Fi/Bluetooth	No	Regional

-xx Ordering Codes for MTR-H6 models

Blank	Device only, no accessories
-EU	Includes EU style power supply, antenna(s), and Ethernet cable
-GB	Includes UK style power supply, antenna(s), and Ethernet cables

GPRS Products for Europe

Model	Description	Bundle Available	Region
MTR-G3-B16-xx	HSPA+ Cellular Router	Yes	Regional

-xx Ordering Codes for MTR-G3 models

Blank	Device only, no accessories
-EU-GB	Includes EU and UK style power supply, antenna(s), and Ethernet cable

EV-DO Products for United States

Model	Description	Bundle Available	Region
MTR-EV3-B07-Nxx-xx	EV-DO Cellular Router	Yes	US
MTR-EV3-B08-Nxx-xx	EV-DO Cellular Router w/ GPS	Yes	US
MTR-EV3-B09-Nxx-xx	EV-DO Cellular Router w/ Wi-Fi/Bluetooth	Yes	US
MTR-EV3-B10-Nxx-xx	EV-DO Cellular Router w/ GPS/Wi-Fi/Bluetooth	Yes	US

1xRTT Products for United States*

Model	Description	Bundle Available	Region
MTR-C2-B16-Nxx-xx	1xRTT Cellular Router	Yes	US
MTR-C2-B17-Nxx-xx	1xRTT Cellular Router w/ GPS	Yes	US

* Not available for Sprint Networks

-xx Ordering Codes for MTR-EV3 and MTR-C2 models

Blank	Device only, no accessories
-US	Includes US style power supply, antenna(s), and Ethernet cable

-Nxx Carrier Codes for MTR-EV3 and MTR-C2 models

-N2	For Sprint Networks
-N3	For Verizon Wireless Networks
-N16	For Aeris Communications Networks

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.

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