

MultiConnect[®] rCell 100 Series

Cellular Routers now supporting LPWA LTE Cat M1 & Cat M1/NB1



The MultiConnect[®] rCell 100 Series of cellular routers, optimized for M2M (machine-to-machine)/Internet of Things (IoT) applications, offer a robust Ethernet or serial network interface platform ready to deploy. The intuitive user interface and free cloud device management (no recurrent monthly fees) allows for quick configuration and over-the-air upgrades. Enhanced with features such as WAN Failover and Certificate Management, the MultiConnect rCell 100 Series creates an ideal environment for secure and redundant communications critical to the reliability of remote monitoring systems in a variety of industries.

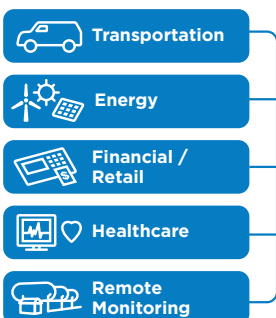
FEATURES

- 4G (Cat3, Cat M1 & Cat M1/NB1), 3G and 2G models
- Flexible Web API for developers based on RESTful JSON over HTTPs
- Ruggedized enclosure - Class I Div 2
- Designed, manufactured and tested in ISO 13485 facilities
- Remotely hosted device management platform

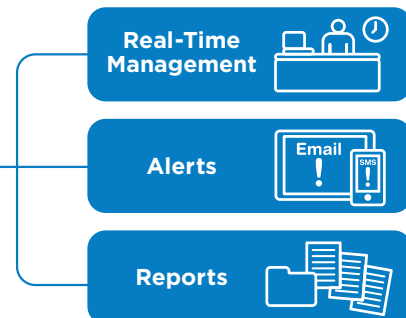
BENEFITS

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

Your Devices & Data



Insight + Action + Control



SPECIFICATIONS

Model	MTR-MAT1	MTR-MVW1	MTR-MEU1	MTR-LAT1	MTR-LVW2	MTR-LEU1
Performance	LTE Cat M1		LTE Cat M1/ NB1 Dual Mode	LTE Cat 3		
Frequency Band (MHz)	3GPP Rel. 13 B2 (1900MHz), B4 (AWS1700MHz), B12 (700MHz)	3GPP Rel. 13 B4 (AWS1700MHz) B13 (700MHz)	3GPP Rel. 13 B3 (1800MHz) B8 (900MHz) B20 (800MHz) 2G fallback: Quadband	4G: 700(B17)/850(B5) /AWS1700(B4)/ 1900(B2) 3G: 850(B5)/1900(B2) 2G: 850/1900	4G: 700(B13)/ AWS1700(B4)	4G: 800(B20)/ 1800(B3)/2600(B7) 3G: 850(B5)/ 900(B8)/2100(B1) 2G: 900/1800
Packet Data*	Cat. M1: Up to 300 Kb/s Downlink Up to 375 Kb/s Uplink NB1: Up to 250 Kb/s Downlink (multi-tone) Up to 20 Kb/s Uplink (single-tone)			Up to 100 Mbps downlink/ Up to 50 Mbps uplink (Category 3)		
Diversity/MIMO	N/A			Rx Diversity and MIMO DL 2x2		
SMS	Text & PDU, Point-to-Point			Point-to-Point Messaging, Mobile-Terminated SMS, Mobile- Originated SMS		
Voltage	7V to 32VDC					
Connectors						
Cellular	Female SMA					
Wi-Fi	Reverse polarity female SMA			N/A		
GPS	Female SMA					
SIM	Mini SIM (2FF); 1.8 and 3V					
LAN	RJ-45, 10/100 BaseT					
RS-232	DE9					
Power	2.5 mm miniature (screw-on)					
Physical Description						
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)					
Weight	0.51 lbs (0.231 Kg)					
Chassis Type	Aluminum					
Environmental						
Operating Temperature†	-40° to +176° F (-40° to +80° C)					
Storage Temperature	-40° to +185° F (-40° to +85° C)					
Humidity	Relative humidity 15% to 93% non-condensing					
Certifications						
Regulatory	FCC Class B (US), IC (Canada) (pending)	FCC Class B (US) (pending)	RED (EU Economic Area) (pending)	FCC Class B (US), IC (Canada)	FCC Class B (US)	RED (EU Economic Area)
Safety	UL 60950-1 (pending)	UL 60950-1 (pending)	IEC 60950-1 (EU Economic Area) (pending)	UL60950-1 (US), UL 201 (US) cUL60950-1 (Canada)	UL60950-1 (US), UL 201 (US)	IEC60950-1 (EU Economic Area)
Network	PTCRB AT&T, T-Mobile, Rogers (pending)	Verizon (pending)	EU Carriers (pending)	AT&T, T-Mobile, Rogers	Verizon	EU carriers
Quality	MIL-STD-810G: High Temp, Low Temp, Cold Dwell, Random Vibration and Sine Vibration SAE J1455: Random Vibration and Sine Vibration					
Build Options Available	B07, B10			B07, B08		

* 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, expense reduction or improved service offering.

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.

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.

Wi-Fi

- 802.11 b/g/n (1x1), 2.5GHz (20MHz BW)
- 11, 54 and 65 Mbps max theoretical throughput, for 802.11 b/g/n, respectively
- 20, 15 and 14.5 dBm output power, for 802.11 b/g/n, respectively
- WEP, WPA, and WPA2 support

Bluetooth

- Version 2.1+EDR
- Power Class 1.5
- Data rate 3 Mbps

SPECIFICATIONS

Model	MTR-H6	MTR-H5	MTR-EV3	MTR-G3	MTR-C2
Performance	HSPA	HSPA+	EV-DO	GPRS Class 10	1xRTT
Frequency Band (MHz)	3G: Tri-band 850/900/2100 2G: Quad-band 850/900/1800/1900	3G: WCDMA/HSDPA/ HSUPA 800/850/900/ AWS1700/1900/2100 2G: GSM/GPRS/EDGE 850/900/1800/1900	Dual-band 800/1900	Quad-band 850/900/1800/1900	Dual-band 800/1900
Packet Data*	Up to 7.2 Mbps downlink, up to 5.76 Mbps uplink	Up to 21.0 Mbps downlink, up to 5.76 Mbps uplink	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/MIMO	No	Yes	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			N/A	
GPS	Female SMA				
SIM	Mini SIM (2FF); 1.8 and 3V	Mini SIM (2FF); 1.8 and 3V	N/A	Mini SIM (2FF); 1.8 and 3V	N/A
LAN	RJ-45, 10/100 BaseT				
RS-232	DE9				
Power	2.5 mm miniature (screw-on)				
Physical Description					
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)				
Weight	0.51 lbs (0.231 Kg)				
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Environmental					
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Storage Temperature	-40° to +185° F (-40° to +85° C)				
Humidity	Relative humidity 15% to 93% noncondensing				
Certifications					
Regulatory	RED (EU Economic Area), RCM (Australia/ NZ)	FCC Class B (US), IC (Canada), RED (EU Economic Area), RCM (Australia/NZ)	FCC Class B (US)	RED (EU Economic Area)	FCC Class B (US)
Safety	IEC60950-1 (EU Economic Area), AS/ NZS 60950.1 (Australia/ NZ)	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)	UL60950-1 (US), UL 201 (US), Class 1 Div 2 (US and Canada)	IEC60950-1 (EU Economic Area)	UL60950-1 (US), UL 201 (US)
Network	GCF, Telstra, EU carriers	PTCRB, GCF approved module, AT&T, T-Mobile, Telstra, EU carriers Rogers, Pending: Bell, Telus	Aeris, Verizon, Sprint	EU carriers	Verizon, Aeris
Quality	MIL-STD-810G: High Temp, Low Temp, Cold Dwell, Random Vibration and Sine Vibration SAE J1455: Random Vibration and Sine Vibration				
Build Options Available	B16, B18, B19	B07, B08, B09, B10, Class I Div 2	B07, B08, B09, B10	B16	B16, B17

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BUILD / ORDERING OPTIONS (FOR MODELS WITH ACCESSORY KITS)

Build Number	Power Supply	Cellular Antenna	Ethernet Cable	GPS Antenna	Wi-Fi Antenna
B07	X	X	X		
B08	X	X	X	X	
B09	X	X	X		X
B10	X	X	X	X	X
B16	X	X	X		
B17	X	X	X	X	
B18	X	X	X		X

WIRELESS ACCESSORIES ORDERING GUIDE:
WWW.MULTITECH.COM/CPAG.GO

SOFTWARE SPECIFICATIONS

SECURITY	
VPN	Up to 5 concurrent tunnels IPSec IKEv1,v2 Open VPN Cipher suite: DHGroup 14 Configurable encryption: AES256, DES, 3DES Configurable hash: SHA-1,2, MD5, RSA Configurable TLS: 1.0,1.1,1.2 Encapsulation: ESP
MAC Filtering	Accept, reject, drop or log packets based on MAC address
SPI Firewall	Configurable DNAT, NAT-T, SNAT
IP Defense	Denial-of-service / ICMP/Ping flood / Brute force access
X.509 Certificates	Support generation and/or import of certificates through use of SHA-256
PAP/CHAP	Authentication protocols for secure PPP connections

MANAGEMENT	
SNMP	V1,2,3
RADIUS	Remote Authentication
HTTP server	Web UI for setup and help
SMS	Trouble shooting commands to store logs to DeviceHQ Remote reboot over SMS Commands to retrieve connection status, radio stats, Ethernet link status APN modification over SMS
Administration	Multiple user hierarchy and access rights
DeviceHQ	Remote device management platform provides device status and information in a clear graphical format. Manage , monitor, group, configure and upgrade devices remotely
Event Notifications (SNMP, SMS, Email) Time Stamped	Active/inactive interface status (serial, Ethernet, Wi-Fi, cellular link) Data traffic stats (Ethernet, Wi-Fi, Cellular) Data usage alerts
API	RESTful JSON over HTTPs
FOTA	Radio firmware update over the air - limited to H5/H6 models

USER INTERACTION	
User Interface	Secure graphical and intuitive web UI (requires user name and password)
Configuration	Set up wizard or manual option
Help	Context sensitive help. Documentation and step-by-step directions integrated into the web UI
Personalization	Customize support contact information, logos and color schemes

NETWORKING FLEXIBILITY	
WAN Failover	Wi-Fi to Cellular
Dynamic DNS (DDNS)	Automatically updates DNS
DHCP Server	Supports fixed and dynamic IP addressing
Bridge Mode	PPP/IP Pass-through
Clock	Configurable SNTP client
Serial RS-232	PAD, TCP/UDP client and server
MODBUS	Pass-through, RTU to TCP and vice versa, TCP slave query
Persistent Connectivity/ Keep Alive	Automatic repair of the cellular PPP connection Configurable ICMP or TCP ping at specified intervals
Dial on Demand	Cellular connection only when there is traffic to send
Wake up on Call	Cellular connection upon a wake up event such as ring, caller ID or SMS
GPS	Server and client
Wi-Fi	Server and client

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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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.

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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