MultiConnect® rCell 100 Series

Cellular Routers

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.
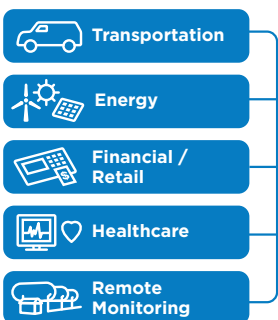
FEATURES

· 4G-LTE, 3G and 2G cellular technology support
· 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
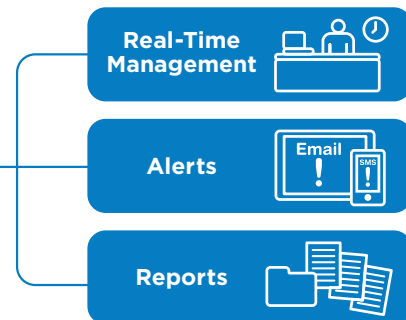· Remotely hosted device management platform

BENEFITS

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

Your Devices & Data

- Transportation
- Energy
- Financial / Retail
- Healthcare
- Remote Monitoring

Send + Receive
DeviceHQ®

Wireless Service Provider

Asset Management Platform

Insight + Action + Control

- Real-Time Management
- Alerts — Email / SMS
- Reports

SPECIFICATIONS

Model	MTR-LAT1	MTR-LVW2	MTR-LEU1	MTR-H5
Performance	LTE			HSPA+
Frequency Band (MHz)	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	3G: WCDMA/HSDPA/HSUPA 800/850/900/AWS1700/1900/2100 2G: GSM/GPRS/EDGE 850/900/1800/1900
Packet Data*	Up to 100 Mbps downlink/ Up to 50 Mbps uplink (Category 3)			Up to 21.0 Mbps downlink, up to 5.76 Mbps uplink
Diversity/MIMO	Rx Diversity and MIMO DL 2x2			Yes
SMS	Point-to-Point Messaging, Mobile-Terminated SMS, Mobile-Originated SMS			
Voltage	7V to 32VDC			
Connectors				
Cellular	Female SMA			
Wi-Fi	Not Available	Not Available	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				
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 +185° F (-40° to +80° C)			-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)	FCC Class B (US)	R&TTE (EU Economic Area)	FCC Class B (US), IC (Canada), R&TTE (EU Economic Area), A-Tick (Australia/NZ)
Safety	UL60950-1 (US), UL 201 (US) cUL60950-1 (Canada)	UL60950-1 (US), UL 201 (US)	IEC60950-1 (EU Economic Area)	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)
Network	AT&T, T-Mobile, Rogers	Verizon	EU carriers	PTCRB, GCF approved module, AT&T, T-Mobile, Telstra, EU carriers Rogers, Pending: Bell, Telus
Quality	MIL-STD-810: High Temp, Low Temp, Cold Dwell, Random Vibration and Sine Vibration SAE J1455: Random Vibration and Sine Vibration			
Build Options Available	B07, B08			B07, B08, B09, B10, Class I Div 2

* 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.

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/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), 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-EV3	MTR-G3	MTR-C2
Performance	HSPA	EV-DO	GPRS Class 10	1xRTT
Frequency Band (MHz)	3G: Tri-band 850/900/2100 2G: Quad-band 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 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	No	
SMS	Point-to-Point Messaging, Mobile-Terminated SMS, Mobile-Originated SMS			
Voltage	7V to 32VDC			
Connectors				
Cellular	Female SMA			
Wi-Fi	Not Available	Not Available	Reverse polarity female SMA	
GPS	Female SMA			
SIM	Mini SIM; 1.8 and 3V	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				
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 +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	R&TTE (EU Economic Area), A-Tick (Australia/NZ)	FCC Class B (US)	R&TTE (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 1 Div 2 (US and Canada)	IEC60950-1 (EU Economic Area)	UL60950-1 (US), UL 201 (US)
Network	GCF, Telstra, EU carriers	Aeris, Verizon, 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			
Build Options Available	B16, B18, B19	B07, B08, B09, B10	B16	B16, B17

* 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.

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

SPI Firewall
Wizard for creating port forwarding and outbound traffic blocking rules

Advanced settings allows users to specify DNAT, NAT-T, SNAT, and Filter rules for accepting, rejecting, dropping, and logging packets

SSL Certificate Management

SSL on Serial Port

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 DeviceHQ

API (RESTful JSON over HTTPs)

SMS messaging via API

Firmware Upgradeable through GUI, API or DeviceHQ

Configuration file save and restore

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

Troubleshooting options
Downloadable logs
Remote Syslog
Auto-reboot
Configurable to time of day
Diagnostics over SMS
Radio Terminal

Ping Test
RF survey tool
Remote reboot over SMS
Statistics on system performance, Ethernet, Wi-Fi, cellular, tunnel interfaces, and serial and Bluetooth usage

Data usage alerts
SMS and email

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

WAN Failover
Wi-Fi models only

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

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, SSL/TLS, PAP, CHAP, idle time

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

Application: Telnet/SSH

Serial: TCP/UDP PAD Mode, MODBUS RTU

Bluetooth: TCP/UDP PAD Mode, SPP, RFCOMM

GPS: NMEA TCP/UDP Server/ Client

CONNECT WITH A MULTITECH DISTRIBUTOR OR RESELLER TO ORDER YOURS TODAY
WWW.MULTITECH.COM/BUY

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

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)
Strata House
264-270 Bath Road
Harlington UB3 5JJ
United Kingdom
Tel: +(44) 118 959 7774
Email: sales@multitech.co.uk
www.multitech.co.uk

MULTITECH®