MULTITECH®

Anterix

MultiTech Dragonfly™
Embedded Cellular Modems
4G-LTE Models

MultiTech Dragonfly™ embedded cellular modem is a complete, ready-to-integrate communications device ideal for customers looking to add 4G-LTE cellular communications to their IoT/M2M solutions. These communications devices enable easy technology transitions and allow developers to add wireless communication to products with a minimum of development time and expense. The MultiTech Dragonfly embedded cellular modems are carrier approved and end-device certified, decreasing time to market while saving customers money.

BENEFITS
- End device certified by leading carriers
- Developer friendly to integrate, quick to deploy and scale assets
- Long solution lifecycle reduces redesign time and cost

FEATURES
- 4G-LTE Cat 4, Cat 1 and Cat M1 models
- Global capable Cat 4 and Cat 1 models
- On-board GNSS or GPS for fast and accurate location fix (select models)
- Anterix 900 MHz Network Capable
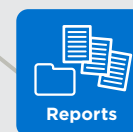- Design in or retrofit

Your Devices & Data
- Energy
- Financial / Retail
- Healthcare
- Remote Monitoring

Connecting Your Devices

Wireless Service Provider or Anterix Private LTE

Asset Management Platform

Insight + Action + Control
- Email SMS
- Alerts
- Reports
- Real-Time Management

HIGHLIGHTS

Host Your Applications

Power Saving Modes (Cat M1 Models)

Extended Discontinuous Reception (eDRX) mode increases the length of time the end device can sleep before it has to check in with the network which saves power. Power Saving Mode (PSM) allows the device to notify the network it is going to sleep or dormant indefinitely only waking up based on user defined timer. Once the device wakes up and transmits it will stay awake for a few frames of time in case the network needs to reach that device. A device using PSM transmitting a small amount of data once per day could last many years using 2 AA batteries. (Note: Some power saving modes will be available in a future firmware release.)

Developer Kits

The Developer Kits allow you to plug in the communications device and use it for testing, programming and evaluation.

The MTUDK2-ST-CELL developer kit is designed to work with all of our cellular Dragonfly and SocketModem® Cell cellular modems.

Developer kits include a development board and necessary accessories to get you up and running right out of the box.
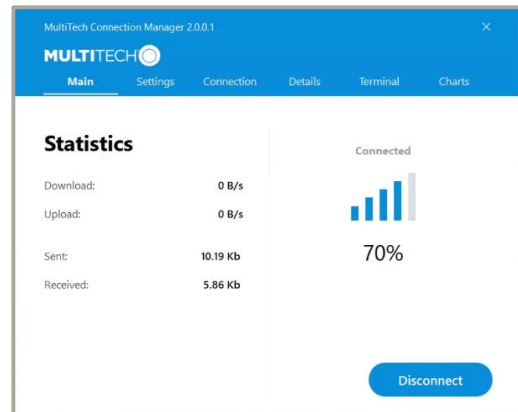
SPECIFICATIONS

Models	MTQ-L4G1-B02	MTQ-LNA7-B02	MTQ-LEU7-B02	MTQ-L1G2D-B02
Performance	LTE 3GPP Release 11 (Category 4; 150 Mbps peak downlink/50 Mbps peak uplink) with HSPA Fallback	LTE 3GPP Release 11 (Category 4; 150 Mbps peak downlink/50 Mbps peak uplink) with HSPA Fallback	LTE 3GPP Release 11 (Category 4; 150 Mbps peak downlink/50 Mbps peak uplink) with HSPA and GPRS Fallback	LTE 3GPP Release 10 (Category 1;c10 Mbps peak downlink/ 5 Mbps peak uplink) with 3G/2G Fallback
Frequency Band (MHz)	**4G FDD:** B1(2100), B2(1900), B3(1800), B4(AWS1700), B5(850), B7(2600), B8(900), B12/B13(700), B18(850), B19(850), B20(800), B25(1900), B26(850), B28(700) **TDD:** B38(2600), B39(1900), B40(2300), B41(2500) **3G:** B1(2100), B2(1900), B4(AWS1700), B5(850), B6(800), B8(900), B19(850) **2G:** B2(1900), B3(1800), B5(850), B8(900)	**4G:** B2(1900), B4(AWS1700), B5(850), B12(700), B13(700) **3G:** B2(1900), B4(AWS1700), B5(850)	**4G:** B1(2100), B3(1800), B7(2600), B8(900), B20(800), B28A(700) **3G:** B1(2100), B8(900) **2G:** B3(1800), B8(900)	**4G:** B1(2100), B2(1900), B3(1800), B4(AWS1700), B5(850), B7(2600), B8(900/Anterix), B9(1800), B12/B13(700), B14(700), B18(850), B19(850), B20(800), B25(1900), B26(850), B28(700) **3G:** B1(2100), B2(1900), B4(AWS1700), B5(850), B6(850), B8(900), B19(850) **2G:** B2(1900), B3(1800), B5(850), B8(900)
TCP/IP Functions	FTP, HTTP, SMTP, TCP, UDP, SSL			
GPS or GNSS Support	Yes		No	Yes
Connectors	3 UFL (Cellular, Rx Diversity & GPS) 1xMicro USB, 1x 40-Pin Board-to-Board, 1xMicro SIM (3FF)	3 UFL (Cellular, Rx Diversity & GPS) 1xMicro USB, 1x 40-Pin Board-to-Board, 1xMicro SIM (3FF)	2 UFL (Cellular, Rx Diversity/MIMO) 1xMicro USB, 1x 40-Pin Board-to-Board, 1xMicro SIM (3FF)	3 UFL (Cellular, Rx Diversity & GPS) 1xMicro USB, 1x 40-Pin Board-to-Board, 1xMicro SIM (3FF)
Host Processor	N/A			
I/O	1 x UART, 1 x HS USB			
Dimensions	58.4mm x 34.9mm (2.3 x 1.375 inches)			
Power Draw*	(B02) 5VDC; 562uA sleep/ power down mode, 27mA idle, 539mA max power	(B02) 5VDC; 8.6mA sleep/ power down mode, 28mA idle, 712mA max power	(B02) 5VDC; 9mA sleep/ power down mode, 792mA max power	(B02) 5VDC; 23mA sleep/ power down mode, 550mA max power
Input Voltage	3.3-5VDC			
Environmental				
Operating Temperature	-40° to +85° C			
Storage Temperature	-40° to +85° C			
Relative Humidity	20% to 90% RH, non-condensing			
Certifications				
EMC/Radio Compliance	FCC, IC, RED, RCM	FCC, IC	RED, RCM	FCC, IC, RED, RCM
Safety	UL/cUL 60950-1 2nd ED, IEC 60950-1 2nd ED	UL/cUL 60950-1 2nd ED	IEC60950-1 2nd ED	UL/cUL 60950-1 2nd ED, IEC 60950-1 2nd ED
Network	PTCRB		N/A	PTCRB
Carrier	AT&T, Verizon	AT&T, Verizon, T-Mobile†	EU Carriers	AT&T, Verizon
Warranty	2-Years / www.multitech.com/legal/warranty			

* See device guide for more information.   †Voice must be deactivated by AT commands to use on T-Mobile network, contact MultiTech for details

MultiTech Connection Manager

A software solution designed to greatly simplify and ease the installation, configuration and management of cellular connectivity in MultiTech USB and serial cellular modems that lack intelligence to manage these functions. Connection Manager ensures that IoT edge applications using cellular backhaul can always communicate to the Internet whenever needed by ensuring the cellular connection is always ready for transmission, ensuring the smooth operation of real-world IoT use cases. AT Commands, traditionally used to manage these functions, can prove time-consuming and difficult to the un-initiated. Connection Manager provides a much easier and faster method of managing USB and serial cellular modems to ensure persistent connectivity to the cellular network.

SPECIFICATIONS

Models	MTQ-MNA1-B01 / MTQ-MNA1-B02
Performance	LTE 3GPP Release 13 (Category M1; Up to 300 Kbps downlink & up to 375 Kbps uplink)
Frequency Band (MHz)	**AT&T:** B12(700), B4(AWS1700), B2(1900) **Verizon:** B13(700), B4(AWS1700)
TCP/IP Functions	FTP, HTTP, SMTP, TCP, UDP, SSL
GPS or GNSS Support	Yes
Connectors	2 UFL (Cellular, GPS) 1xMicro USB, 1x 40-Pin Board-to-Board, 1xMicro SIM (3FF)
Host Processor	(B01) Cortex M4 (STM32F411RET) 512 Kbytes of Flash memory and 96 Kbytes of SRAM
I/O	(B01) 1 x UART, 1 x HS USB, 1 x SPI, 1 x I2C, up to 6 analog inputs and up to 16 digital input/output (B02) 1 x UART, 1 x HS USB
Dimensions	58.4mm x 34.9mm (2.3 x 1.375 inches)
Power Draw*	(B01) 5VDC; 3.6mA sleep, 57mA idle, 195mA max power (B02) 5VDC; 3.4mA sleep, 37mA idle, 176mA max power
Input Voltage	5VDC
Environmental	
Operating Temperature	-40° to +85° C
Storage Temperature	-40° to +85° C
Relative Humidity	20% to 90% RH, non-condensing
Certifications	
EMC/Radio Compliance	FCC, IC
Safety	UL/cUL 60950-1 2nd ED
Network	PTCRB
Carrier	AT&T/Verizon
Warranty	2-Years / www.multitech.com/legal/warranty

* See device guide for more information.

ORDERING INFORMATION

MultiTech Dragonfly™

Model	Description	Region
MTQ-L4G1-B02	Embedded LTE Cat 4 Modem w/Fallback & GNSS	Global
MTQ-LNA7-B02	Embedded LTE Cat 4 Modem w/Fallback & GNSS (AT&T/Verizon)	US/Can
MTQ-LEU7-B02	Embedded LTE Cat 4 Modem w/Fallback	EU/AU
MTQ-L1G2D-B02	Embedded LTE Cat 1 Modem w/Fallback & GNSS	Global
MTQ-MNA1-B01	LTE Cat M1 Embedded Cellular SoM w/GNSS (AT&T/Verizon)	US/Can
MTQ-MNA1-B02	Embedded LTE Cat M1 Modem w/GNSS (AT&T/Verizon)	US/Can

Developer Kit

Model	Description	Region
MTUDK2-ST-CELL.R1	SocketModem® & Dragonfly Developer Kit (DB9 RS-232 Connector and USB)	Global
MTUDK2-ST-CELL	SocketModem® & Dragonfly Developer Kit	Global

Ordering part numbers as listed are 50 packs. To order a single pack add a –SP to the end of the ordering part number. (i.e. MTQ-L4G1-B02-SP)

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.

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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