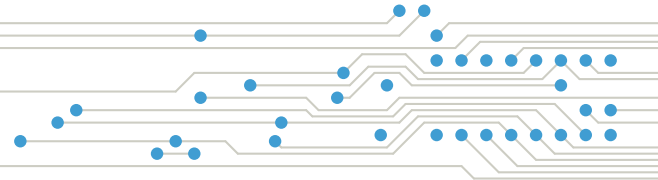
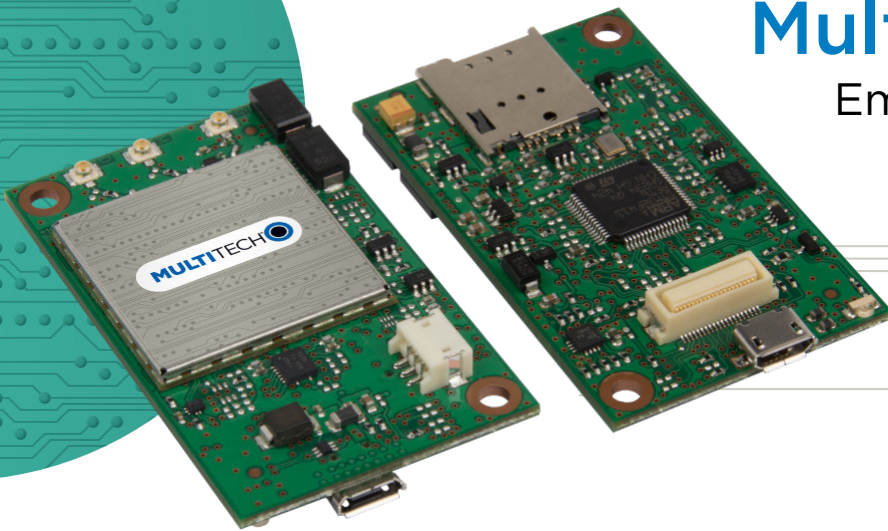


MultiTech Dragonfly[™]

Embedded Cellular Modem & SoM (System-on-Module)



MultiTech Dragonfly[™] embedded cellular modems and SoMs are fully certified and MNO approved, ready-to-integrate modules that offer developers the functionality of a programmable computing platform with the convenience of an onboard cellular radio all in one compact design. From a software perspective, Dragonfly is compatible with the Arm[®] Mbed[™] programming platform allowing for rapid prototyping, development and deployment. With its integrated Cortex[®]-M4 processor, developers can host their application and have access to a full suite of interfaces for connecting sensors or other remote assets.

As the first Arm Mbed cellular SoM listed on mbed.org that is industry certified and deployment ready, applications can be written and compiled quickly online using developer friendly libraries, downloaded and hosted within the Dragonfly.

Dragonfly can be used as an embedded cellular SoM providing the maximum in design and application flexibility or it can be used as an embedded cellular modem requiring little or no modification to your existing design.

This powerful suite of hardware and software products greatly reduces your time to market and makes your Internet of Things (IoT) device a reality today.

arm Mbed

BENEFITS

- End device certified by leading carriers
- 4G (Cat 1, Cat M1) and 3G models
- Developer friendly to integrate, quick to deploy and scale assets
- Long solution lifecycle reduces redesign time and cost

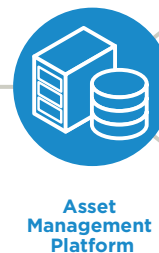
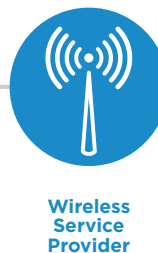
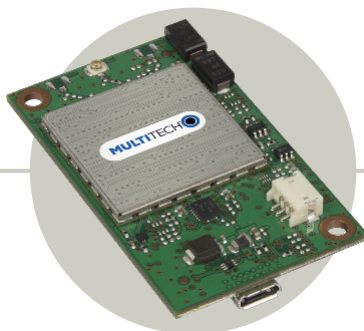
FEATURES

- Lightweight SoM ideal for most IoT applications
- On-board GNSS or GPS for fast and accurate location fix (LTE Cat 1 Sprint, LTE Cat M1 and 3G models)
- Multiple I/O interfaces for connecting most any “Thing”
- Design in or retrofit

Your Devices & Data



Connecting Your Devices



Insight + Action + Control



HIGHLIGHTS

Host Your Applications

As the first Arm® Mbed™ cellular SoM listed on mbed.org that is industry certified and deployment ready, applications can be written and compiled quickly online using developer friendly libraries, downloaded and hosted within the MultiTech Dragonfly. Decision making and control is distributed to the edge, enabling data to be more actionable without the heavy lift required to implement complex M2M middleware and security protocols needed to deploy a low touch install.

Design in or Retrofit

The Dragonfly can be used as an embedded cellular SoM providing the maximum in design and application flexibility or it can be used as an embedded cellular modem controlled through AT commands requiring little or no modification to your design. Connecting to the Dragonfly through its 40-pin board-to-board connector gives you access to all the programmable I/O interfaces. You can also connect to the Dragonfly using the industry standard micro USB port affording you the quickest time to market when your application only requires basic cellular connectivity.

SPECIFICATIONS

Models	MTQ-LAT3-B01 / MTQ-LAT3-B02 MTQ-LVW3-B01 / MTQ-LVW3-B02	MTQ-LSP3-B02	MTQ-MNA1-B01 / MTQ-MNA1-B02	MTQ-H5-B01 / MTQ-H5-B02
Performance	LAT3: LTE 3GPP Release 9 (Category 1; 10 Mbps peak downlink/5 Mbps peak uplink) with HSPA Fallback LVW3: LTE 3GPP Release 9 (Category 1; 10 Mbps peak downlink/5 Mbps peak uplink) (No Fallback)	LTE 3GPP Release 10 (Category 1; 10 Mbps peak downlink/ 5 Mbps peak uplink)	LTE 3GPP Release 13 (Category M1; Up to 300 Kbps downlink & up to 375 Kbps uplink)	HSPA+
Frequency Band (MHz)	LAT3: 4G: B12/B13(700), B5(850), B4(AWS1700), B2(1900) 3G: B5(850), B2(1900) LVW3: B13(700), B4(AWS1700), B2(1900)	4G: B12(700), B5/25(850), B4(AWS1700), B2/25(1900), B25(1900+)	AT&T: B12(700), B4(AWS1700), B2(1900) Verizon: B13(700), B4(AWS1700)	3G: 850/900/AWS 1700/1900/2100 MHz 2G: 850/900/1800/1900 MHz
TCP/IP Functions	FTP, HTTP, SMTP, TCP, UDP, SSL			
GPS or GNSS Support	No		Yes (GNSS)	
Connectors	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)	2 UFL (Cellular, 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)
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*	5VDC; 25mA sleep, 58mA idle, 540mA max power (MTQ-LAT3-B01) 5VDC; 25mA sleep, 38mA idle, 510mA max power (MTQ-LAT3-B02) 5VDC; 38mA sleep, 57mA idle, 462mA max power (MTQ-LVW3-B01) 5VDC; 26mA sleep, 37mA idle, 450mA max power (MTQ-LVW3-B02)	5VDC; 21mA sleep, 33mA idle, 634mA max power	5VDC; 3.6mA sleep, 57mA idle, 195mA max power (B01) 5VDC; 3.4mA sleep, 37mA idle, 176mA max power (B02)	5VDC; 25mA sleep, 64mA idle, 635mA max power (B01) 5VDC; 36mA sleep, 42mA idle, 676mA max power (B02)
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 Compliance	FCC Part 15 Class B	FCC Part 15 Class B	FCC Part 15 Class B	FCC Part 15 Class B, EN55022, EN55024
Radio Compliance	LAT3: FCC Part 22, 24, 27 LVW3: FCC Part 27	FCC Part 22, 24, 27	FCC Part 22, 24, 27	FCC Part 22, FCC Part 24, RSS 132, RSS 133, EN 301 511, EN 301 489-1, EN 301 489-7, EN 301 489-24
Safety	UL/cUL 60950-1 2nd ED, IEC 60950-1 2nd ED +Am.2	UL/cUL 60950-1 2nd ED, IEC 60950-1 2nd ED +Am.2	UL/cUL 60950-1 2nd ED, IEC 60950-1 2nd ED +Am.2	UL 60950-1 2nd ED, cUL 60950-1 2nd ED, EN 60950-1 2nd ED, AS/NZS 60950-1 2nd ED
Network	LAT3: PTCRB	N/A	PTCRB	PTCRB
Carrier	LAT3: AT&T / LVW3: Verizon	Sprint	AT&T/Verizon	AT&T
Warranty	2-Years			

* See device guide for more information.

ORDERING INFORMATION

MultiTech Dragonfly™

Model	Description	Region
MTQ-LAT3-B01	LTE Cat 1 Embedded Cellular SoM w/ Fallback (AT&T)	US/Can
MTQ-LAT3-B02	Embedded LTE Cat 1 Modem w/ Fallback (AT&T)	US/Can
MTQ-LVW3-B01	LTE Cat 1 Embedded Cellular SoM (Verizon)	USA
MTQ-LVW3-B02	Embedded LTE Cat 1 Modem (Verizon)	USA
MTQ-LSP3-B02	Embedded LTE Cat 1 Modem w/ GNSS (Sprint)	USA
MTQ-MNA1-B01	LTE Cat M1 Embedded Cellular SoM w/ GNSS (AT&T/Verizon)	USA
MTQ-MNA1-B02	Embedded LTE Cat M1 Modem w/ GNSS (AT&T/Verizon)	USA
MTQ-H5-B01	HSPA+ Embedded Cellular SoM w/GPS	Global
MTQ-H5-B02	Embedded HSPA+ Modem w/GPS	Global

Developer Kit

Model	Description	Region
MTUDK2-ST-CELL	SocketModem® & Dragonfly Developer Kit	Global

Go to www.multitech.com for detailed product model numbers.

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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