MultiTech Conduit® is the industry’s most configurable, manageable, and scalable cellular communications gateway for industrial IoT applications and now supports the AS923 channel plan. Designed specifically to operate in the Japanese market, this Conduit supports Listen Before Talk transmission to ensure regulatory conformance as well as optimum communications performance. Network engineers can remotely configure and optimize their Conduit performance through DeviceHQ®, the world’s first IoT Application Store and Device Management platform. The Conduit features GNSS and two accessory card slots that enable users to plug in MultiTech mCard™ accessory cards supporting their preferred wired or wireless interface to connect a wide range of assets locally to the gateway.

Available options include a LoRaWAN® mCard capable of supporting thousands of MultiTech xDot® long range RF modules connected to remote sensors or appliances. Quick-to-deploy and easy to customize and manage, the Conduit communications gateway realizes your IoT application.
Programmable embedded software provides enhanced security and enables task execution at the edge for reduced latency and cost optimization.

mPower™ Edge Intelligence is a new embedded software offering, building on its popular application enablement platform, to deliver programmability, network flexibility, enhanced security and manageability for scalable Industrial Internet of Things (IIoT) solutions.

mPower is the unification and evolution of well-established MultiTech smart router and gateway firmware platforms. In addition to ongoing support of the current feature-sets, gateway customers can enjoy the additional security features currently available on the MultiConnect™ rCell 100 Series.

mPower simplifies integration with a variety of popular upstream IoT platforms to streamline edge-to-cloud data management and analytics, while also providing the programmability and processing capability to execute critical tasks at the edge of the network to reduce latency; control network and cloud services costs, and ensure core functionality - even in instances when network connectivity may not be available.

In response to evolving customer security requirements, mPower incorporates a host of new security features including signed firmware validation, enhanced firewall and VPN settings, secure authentication and more.

mPower software specifications can be found here.

ACCESSORIES
MultiTech Conduit Accessories – From the Gateway to the Endpoint
MultiTech Conduit is the center of an integrated IoT platform and comes with the following options:

MultiTech mCard™
MultiTech mCards provide the flexibility needed to manage diverse infrastructures, supporting a wide range of interfaces and communication protocols including:
• Multi-Function Serial, GPIO, Ethernet
• LoRa LPWAN

MultiTech mDot™ & xDot®
Connecting the “Things”
MultiTech mDot and xDot are secure, regulatory-certified, Arm® Mbed™ programmable, low-power RF modules, providing long-range, low bit rate IoT data connectivity to sensors and actuators.

The mDot and xDot are LoRaWAN compliant, providing bi-directional data communication up to 10 miles line-of-sight and 2-3 miles in buildings, using the global sub-GHz ISM radio bands in North America, Europe, and the APAC regions.

The mDot was the first Arm Mbed platform listed on mbed.org that was deployment ready. The mDot supports applications written and compiled in the mbed online environment using developer friendly libraries. Decision making and control can be done at the edge, reducing the need to optimize RF performance and implement complex IoT middleware.

mDots and xDots bring intelligence, reduced complexity and a lower overall bill of material to the edge of the network while supporting a variety of interfaces to connect just about any battery-powered “thing”.

Easily Deploy and Manage Assets
Via DeviceHQ®
MultiTech DeviceHQ is the M2M industry’s first IoT online application store to enable customers to easily deploy and scale applications to their connected devices. Drag-and-drop tools easily allow customers to create and manage applications for in-field assets. The DeviceHQ application store gives your business the power to innovate operations management and create value-added services.

Benefits
• “Low Touch” asset deployment reduces costs, complexity and time
• Easily scales to your network needs
• Browse and download a wide variety of custom applications tailored to your business needs
• Reduce truck-rolls using remote performance management and asset updates
## SPECIFICATIONS

<table>
<thead>
<tr>
<th>Models</th>
<th>MTCDT-LDC3</th>
<th>MTCDT-LSB3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performance (Cellular Optional)</strong></td>
<td>Category 1 LTE 3GPP Release 13 (10 Mbps peak downlink/5 Mbps peak uplink)</td>
<td>4G No Fallback 2100(B1) / 850(B19) / 1500(B21)</td>
</tr>
<tr>
<td>Diversity</td>
<td>4G No Fallback 2100(B1) / 900(B8)</td>
<td></td>
</tr>
<tr>
<td><strong>Frequency Band (MHz)</strong></td>
<td>ARM9 processor with 32-Bit ARM &amp; 16-Bit Thumb instruction sets • 400 MHz • 16K Instruction Cache • 16K Data Cache • 128K/16M DDR RAM</td>
<td>2100(B1) / 900(B8)</td>
</tr>
<tr>
<td><strong>Packet Data</strong></td>
<td>Up to 100 Mbps downlink, Up to 50 Mbps uplink</td>
<td></td>
</tr>
</tbody>
</table>
| **Radio Frequency LoRa** | LoRa - a proprietary Digital Spread Spectrum technique / 8-B-Channel Gateway / 2 x 8-B-Channel Optional | mPower Only
| **Software**    | mPower & mLinux
| Open source embedded Linux distro based on the Yocto Project
| Tool chain for creating custom images
| LoRa network server & packet forwarder
| Ethernet, Wi-Fi or cellular
| Cellular PPP, DHCP client & server
| Firewall configuration via iptables
| MTAC-GPIO, MTAC-MFSER RS-232 or RS-485, MTAC-ETH and MTAC-LORAX
| Full root console access via SSH and serial debug port
| Out of the box support for Java, Perl, Ruby, Mono C#
| opkg package manager with limited package feed
| Basic router functionality built-in with Linux
| Five configurable LEDs
| Software configurable USB device port Lighttpd web server |
| **Antennas**    | LoRa
| Omni-directional radiation pattern for 360° / 3 dB gain / Vertical polarization / Weight: 25.6 grams / 1/8 wavelength dipole configuration / Dimensions: 195 ± 2 x 13mm / Frequency Range: 868-928 MHz / Reverse SMA Male connector |
| **Cellular**    | mPower
| 4G No Fallback
| MultiTech’s device management platform
| Cellular Connection Management
| Enhanced closed source embedded Linux platform
| Dynamic DNS
| Secure firewall with NAT and port forwarding
| Node-RED integration with built-in application development for: MTAC-GPIO, MTAC-MFSER and MTAC-LORAX
| Custom Static Routing
| Open VPN
| Graphical web interface for configuration and management
| Remote Access
| Configuration backup & restore
| Easy firmware upgrade through graphical web interface
| System and network statistics |
| **GNSS/GPS**    | 72-channel u-blox M8 engine / GPS, GLONASS, Galileo, BeiDou, QZSS and SBAS |
| 3 Concurrent GNSS / Standard Precision GNSS |
| **Antennas**    | MTAC LoRa mCard
| Listen Before Talk support / SPI interface / LoRaRAWN 1.0, 1.0.1 & 1.0.2 support
| Dimensions – 50.59 mm x 30 mm / 902-928 MHz ISM Band – AS923 MHz compliant |
| **Input Voltage** | AC Supply / MJSW090700N-5448 / Input current: 0.6A Max / Input voltage: 90V - 264V / Input frequency: 47-63Hz |
| **Connectors**  | 1 RJ-45 Ethernet 10/100 port |
| **Physical Description** | Standard Mini SIM/USIM (2FF) |
| **Dimensions (L x W x H)** | 6.35" x 4.23" x 1.69" (161.3 mm x 107.4 mm x 42.8 mm) |
| **Weight**      | 1.01 lbs (16.2 oz) with two accessory cards installed |
| **Chassis Type** | Metal |
| **Environmental** | Relative humidity 20% to 90%, non-condensing |
| **Certifications** | Japan: TELEC, Radio/Telecom Biz Act, GITEKI |
| **Radio Compliance** | Japan Giteki, Radio/Telecom Biz Act |
| **Safety**      | UL 60950-1 2nd Ed., cUL 60950-1 2nd Ed., IEC 60950-1 2nd Ed |
| **Network**     | NTT Docomo, Softbank |

* UL Listed @ 40° C, limited by AC power supply. UL Recognized @ 70° C when used with the fused DC power cable, part number FPC-S32-DC.

Installation in outdoor locations or ambient temperature above 40° C or 70° C has not been evaluated by UL. UL Certification does not apply or extend to use in outdoor applications. Optional power must be UL Listed ITE power supply marked LPS or Class 2 rated 12VDC, 5A. Certification does not apply or extend to voltages outside certified range, and has not been evaluated by UL for operating voltages beyond tested range.

Documentation and instructions on how to program mLinux Conduits can be found on our developer site at www.multitech.net
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