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Product Change Notification
Software Release Notes

mPower™ Edge Intelligence Software
mPower 5.3.5

MultiTech Conduit® AP Access Point
MultiTech Conduit® Programmable Gateway
MultiTech Conduit® IP67 Base Station
MultiTech Conduit® IP67 200 Series Base Station

Date: October 15, 2021

Product Change Notification (PCN) Number
PCN 10152021-002 (mPower - Conduit)

I. Overview
mPower 5.3.5 is for use on the MultiTech Conduit® Programmable Gateway, Conduit® AP Access Point, and Conduit® IP67 Base Station. mPower 5.3.5 is built using Yocto Thud (version 2.6.X)

- mPower 5.3.5 Includes:
    1. New Features
        - AT&T 3G Sunset – Impacts on 4G Devices
        - Israel Channel Plan (LoRaWAN)
    2. Bug Fixes
        - DeviceHQ/Node-RED Application
        - LoRa Packet Forwarder (LBT - Japan)

- Available for download starting October 2021.
  See part numbers impacted for details

II. Suggested Action Plan
Customers
1. Download mPower 5.3.5
2. Evaluate in their environment
3. Deploy to fleet of devices
4. Additional information
    - Technical inquiries: support.multitech.com
    - Sales inquiries: email sales@multitech.com

Contents

Distributors

- Forward this announcement to others within your organization who are actively involved in the sale or support of programmable IoT gateways
- Notify existing customers of this new firmware and encourage them to download, evaluate, and update their device fleet – **ESPECIALLY IF CUSTOMERS DEPLOY DEVICES ON THE AT&T NETWORK**

III. mPower 5.3.5 Overview

> mPower 5.3.5 is built upon mPower 5.3.3
>
> For details about mPower 5.3.3, refer to [Software Release Notes - mPower 5.3.3](#)

New Features (mPower 5.3.5):

mPower 5.3.5 includes the following new features:

1. AT&T 3G Sunset – Impacts on 4G Devices
    - mPower 5.3.5 includes important updates to the current cellular module firmware defaults. These changes will help avoid service interruption for certain MultiTech 4G products impacted by the impending AT&T 3G network sunset.
        - o Current cellular module default: CEMODE=1 (Voice Centric)
        - o New cellular module default: CEMODE=2 (Data Centric)
    - Overview of mPower 5.3.5 solution:
        - I. Once a device is updated to mPower 5.3.5, the wireless carrier for the cellular module will be determined.
        - II. If the wireless carrier is AT&T, mPower 5.3.5 updates the cellular module firmware default
            - a. Current default: CEMODE=1 (Voice Centric)
            - b. New default: CEMODE=2 (Data Centric)
        - III. Models Impacted:
            - a. Conduit Models: MTCDT-L4N1, MTCDT-LAT1
            - b. Conduit IP67 Models: MTCDTIP-L4N1, MTCDTIP-LAT1
            - c. Conduit AP Models: MTCAP-LNA3
        - IV. If a wireless carrier other than AT&T is recognized (i.e. Verizon Wireless), no changes to the cellular module firmware defaults are made
    - Additional Resources
        - o AT&T Overview of 3G Sunset: https://iotdevices.att.com/att-iot/3GSunset.aspx
        - o [MultiTech Overview of AT&T 3G Sunset Impact on 4G Devices](#)
            - ▪ [MultiTech PCN (LTE Cat 1, Cat 3, and Select Cat 4 Models)](#)
        - o 4G/LTE voice-capable cellular modules, integrated into many brands/vendors of cellular products, including MultiTech, are configured for voice-centric signaling by default. Many of these 4G/LTE devices are likely to arrive at a "No Service" condition after 3G sunset -- even for data-only applications unless action is taken beforehand
        - o To avoid service interruption for some 4G/LTE Category 1, 3 and 4 products impacted by the impending AT&T 3G network sunset, we recommend upgrading to mPower 5.3.5
    - [GP-988] [GP-1111]

2. LoRaWAN AS923-4 Channel Plan for use in Israel
   - Support for LoRaWAN operation in Israel has been added
     - Channel Plan: AS923-4
     - Band/Channels: 917 – 920 MHz
     - LoRaWAN Regional Parameters RP2-1.0.3
   - Models Impacted: Conduit devices using the MTAC-LORA-H-915 MultiTech mCard
   - [GP-1218]

Bug Fixes (mPower 5.3.5):
mPower 5.3.5 includes the following bug fixes:
   1. DeviceHQ/Node-RED Application Update
      - Overview of Bug:
        I.   DeviceHQ/Node-RED application is installed on a device with mPower 5.3.3. The application is now available in the user interface.
        II. User sets "Set Current Configuration as User-Defined Default" with " Enable Reset to User-Defined Default" enabled
        III. After configuration changes are made and user defined defaults is set, select "Save & Apply"
        IV. Reboot the device
        V.   After reboot is complete, DeviceHQ/Node-RED application is no longer available
      - Overview of Fix: Customers interested in using the DeviceHQ/Node-RED application should upgrade to mPower 5.3.5 to ensure that application is retained after user-defined default of device
      - [GP-1276] [TS-5105628]

   2. LoRa Packet Forwarder (Japan-LBT) Update
      - Overview of Bug:
        - Models impacted: Conduit devices using the MTAC-LORA-H-923-JP MultiTech mCard
        - LoRa Packet Forwarder does not transmit packets with a packet duration above 370 ms
      - Overview of Fix: Customers using MTAC-LORA-H-923-JP should upgrade to mPower 5.3.5 to help ensure proper LoRa packet forwarder performance.
      - [GP-1288] [TS-5107009]

IV. Schedule

There are multiple versions of mPower Edge Intelligence firmware available for customer evaluation and final release.
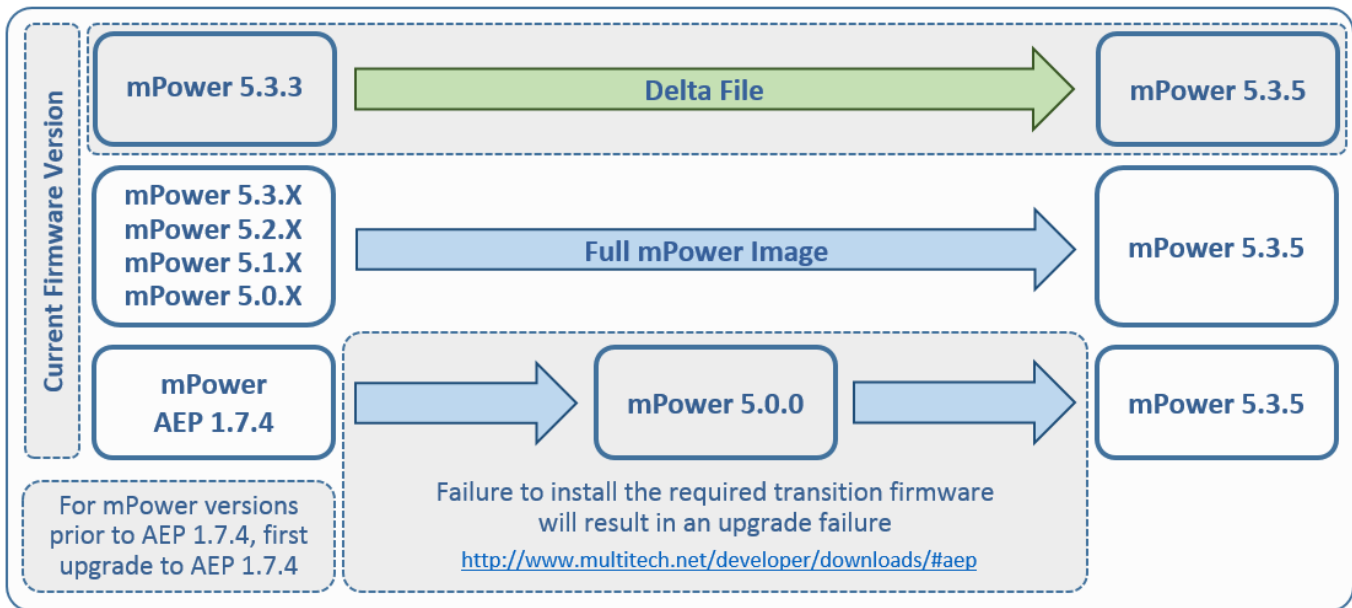   - DeviceHQ
     - Cloud-based IoT Device Management
     - MTCAP 5.3.5 Availability: October 2021
     - MTCDT 5.3.5 Availability: October 2021
     - DeviceHQ login: https://www.devicehq.com/sign_in
     - Instructions: Upgrading Firmware Using DeviceHQ

   - Downloadable Versions
     - MTCAP 5.3.5 Availability: October 2021
     - MTCDT 5.3.5 Availability: October 2021
     - Conduit models: visit http://www.multitech.net/developer/downloads/
     - Instructions: Upgrading Firmware Using Device Web Interface

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V. Upgrade Process

At any time in the upgrade process, customers can contact support.multitech.com.

Minimum System Requirements (mPower 5.3.5)

To install mPower 5.3.5, the Conduit gateway must be upgraded to mPower 5.0.0 or higher. Customers that are running earlier versions of mPower should use the following upgrade process:

Current Firmware Version

mPower 5.3.3	Delta File →	mPower 5.3.5
mPower 5.3.X mPower 5.2.X mPower 5.1.X mPower 5.0.X	Full mPower Image →	mPower 5.3.5
mPower AEP 1.7.4	→ mPower 5.0.0 →	mPower 5.3.5

For mPower versions prior to AEP 1.7.4, first upgrade to AEP 1.7.4

Failure to install the required transition firmware will result in an upgrade failure
http://www.multitech.net/developer/downloads/#aep

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V. Upgrade Process (continued)

Upgrade Using MultiTech DeviceHQ

At any time in the upgrade process, customers can contact support.multitech.com.

DeviceHQ can update the firmware running on any supported device. Since devices have no live connection to DeviceHQ, firmware updates are made the next time a device checks into DeviceHQ.

Instructions:

1. Visit https://www.devicehq.com
2. Sign in to your account using your **email address** and **password.**
3. Click **Devices**. The device list page opens.
4. Click the name of the device you want to update. You can update firmware on filtered devices or selected devices.
   - If you select individual devices, you update firmware on selected devices or the filtered devices.
   - If you do not select devices you update the firmware on the filtered devices.
5. Click **Schedule** and select **Upgrade Firmware**. From the list of firmware that appears, select the name of the firmware file. A confirmation message appears, informing you that the new firmware is to be applied to the device when the device next checks in.
6. To confirm that you want to update the firmware click **OK**.

   Updating Multiple Devices
   - It is recommended that updates be scheduled for no more than 25 devices at one time
   - If more than 25 devices are to be updated, schedule the second group of 25 devices after the first 25 updates are complete
   - Continue scheduling groups of 25 devices until the entire fleet is updated
   - Refer to help file within DeviceHQ for more information

Upgrade Using Device Web Interface

At any time in the upgrade process, customers can contact support.multitech.com.

It is recommended that customers backup their configuration before performing an upgrade.
- If the firmware upgrade fails, or it does not show the login page again, wait an additional 10 minutes.
- Power off and on the hardware and log in using the web interface to check the version.
- If the version does not show the latest, then the upgrade was not successful.
- Try to perform the firmware upgrade again by repeating all the steps.

Instructions:

1. Download the latest firmware file from http://www.multitech.net/developer/downloads/#aep

   NOTE: There are multiple versions of mPower firmware available.
   Please select the file that matches the hardware model being upgraded.

2. Log into the mPower Web interface.
3. In the left navigation pane, click **Administration > Firmware Upgrade**.
4. Click Browse and select the appropriate file.
5. Click **Start Upgrade**.

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6. After the firmware upgrade is complete, log back into the web GUI and verify the firmware version shown at the top of the page.

VI. Ordering Part Numbers Impacted

The following ordering part numbers are impacted by these updates:

Model Name Ordering Part Numbers	Ordering Part Numbers	Ordering Part Numbers
Conduit® IoT Programmable Gateways		
Status: Active [1]	**Status: Active [1]**	**Status: End of Life [2]**
MTCDT-246A-US-EU-GB [1] MTCDT-247A-US-EU-GB [1] MTCDT-LAP3-246A-AU [1] MTCDT-LDC3-246A-JP [1] MTCDT-LDC3-247A-JP [1] MTCDT-LSB3-246A-JP [1]	MTCDT-L4E1-246A-EU-GB [1] MTCDT-L4E1-247A-EU-GB [1] MTCDT-L4N1-246A-US [1] MTCDT-L4N1-247A [1] MTCDT-L4N1-247A-US [1] MTCDT-LAT3-240A-US [1]	MTCDT-LAT1-210A-US [2] MTCDT-LAT1-240A-US [2] MTCDT-LAT1-246A-915-US [2] MTCDT-LAT1-246A-US [2] MTCDT-LAT1-247A-915-US [2] MTCDT-LAT1-247A-US [2]
Conduit® IoT Programmable Gateways with LoRa Accessory Cards		
Status: Active [1]	**Status: Active [1]**	**Status: Active [1]**
MTCDT-246A-868-EU-GB [1] MTCDT-246A-915-US-EU-GB [1] MTCDT-246A-923-JP [1] MTCDT-246A-US-EU-GB-923KR [1] MTCDT-247A-868-EU-GB [1] MTCDT-247A-915-US-EU-GB [1]	MTCDT-L4E1-246A-868-EU-GB [1] MTCDT-L4E1-246A-915-EU-GB [1] MTCDT-L4E1-247A-868-EU-GB [1] MTCDT-L4E1-247A-915-EU-GB [1] MTCDT-L4N1-246A-915-US [1] MTCDT-L4N1-247A-915-US [1]	MTCDT-LAP3-246A-915-AU [1] MTCDT-LAP3-247A-915-AU [1] MTCDT-LDC3-246A-923-JP [1] MTCDT-LSB3-246A-923-JP [1]
Conduit® IP67 Geolocation Base Stations		
Status: Active [1]		
MTCDTIP-L4E1-270A-868 [1]		

Footnotes:

	Hardware Status	Manufacturing Updates	Comments
(1)	**Active**	n/a Download only	• Active devices continue to ship with earlier mPower versions • Customers are encouraged to evaluate mPower 5.3.5 firmware and update device fleets as needed
(2)	**EOL**	n/a Download only	• EOL devices are no longer shipping from MultiTech • Customers are encouraged to evaluate MTR 5.3.5 firmware and update device fleets as needed

VI. Ordering Part Numbers Impacted (continued)

The following ordering part numbers are impacted by these updates:

Model Name Ordering Part Numbers	Ordering Part Numbers	Ordering Part Numbers
Conduit® IP67 Base Stations		
Status: Active [1]	**Status: Active [1]**	**Status: End of Life [2]**
MTCDTIP-266A-868 [1] MTCDTIP-266A-868/2 [1] MTCDTIP-266A-915 [1] MTCDTIP-266A-915/2 [1] MTCDTIP-266A-923-JP [1] MTCDTIP-266A-923KR [1] MTCDTIP-267A-868 [1] MTCDTIP-267A-868/2 [1] MTCDTIP-267A-915 [1] MTCDTIP-267A-915/2 MTCDTIP-LAT3-266A-915 [1] MTCDTIP-LAT3-266A-915/2 [1] MTCDTIP-LAT3-267A-915 [1] MTCDTIP-LAT3-267A-915/2 [1]	MTCDTIP-L4E1-266A-868 [1] MTCDTIP-L4E1-266A-868/2 [1] MTCDTIP-L4E1-266A-915 [1] MTCDTIP-L4E1-267A-868 [1] MTCDTIP-L4N1-266A-915 [1] MTCDTIP-L4N1-266A-915/2 [1] MTCDTIP-L4N1-267A-915 [1] MTCDTIP-L4N1-267A-915/2 [1] MTCDTIP-LAP3-266A-915 [1] MTCDTIP-LAP3-266A-915/2 [1] MTCDTIP-LAP3-267A-915 [1] MTCDTIP-LDC3-266A-923-JP [1] MTCDTIP-LSB3-266A-923-JP	MTCDTIP-LAT1-266A-915 [2] MTCDTIP-LAT1-266A-915/2 [2] MTCDTIP-LAT1-267A-915 [2] MTCDTIP-LAT1-267A-915/2 [2]
Conduit® IP67 200 Series Base Stations		
Status: Active [1]	**Status: Active [1]**	
MTCDTIP2-EN-B11EKP-D1M [1] MTCDTIP2-EN-B11EKP-L1M [1]	MTCDTIP2-L4E1-B11EKP-D1M [1] MTCDTIP2-L4E1-B11EKP-L1M [1]	MTCDTIP2-EN-B11UKP-L1M [1] MTCDTIP2-LNA3-B11UKP-L1M [1]
Conduit® AP Access Points		
Status: Active [1]	**Status: Active [1]**	**Status: Active [1]**
MTCAP-868-001A [1] MTCAP-868-041A [1] MTCAP-915-001A [1] MTCAP-915-041A [1] MTCAP2-868-002A-POE [1] MTCAP2-868-042A-POE [1] MTCAP2-915-042A-POE [1]	MTCAP-L4E1-868-001A [1] MTCAP-L4E1-868-041A [1] MTCAP-LNA3-915-001A [1] MTCAP-LNA3-915-041A [1] MTCAP2-L4E1-868-002A-POE [1] MTCAP2-L4E1-868-042A-POE [1] MTCAP2-LNA3-915-042A-POE [1]	MTCAP-LAP3-915-001A [1] MTCAP-LAP3-915-041A [1] MTCAP-IN865-001A [1]

Footnotes:

	Hardware Status	Manufacturing Updates	Comments
(1)	**Active**	n/a Download only	• Active devices continue to ship with earlier mPower versions • Customers are encouraged to evaluate mPower 5.3.5 firmware and update devices as needed
(2)	**End of Life**	n/a Download only	• End of Life devices are no longer shipping from MultiTech • Customers are encouraged to evaluate mPower 5.3.5 firmware and update device fleets as needed

VII. mPower™ Edge Intelligence

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

mPower Edge Intelligence 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 Edge Intelligence incorporates a host of security features including signed firmware validation, enhanced firewall and VPN settings, secure authentication and more.

VIII. Additional Information

If you have any questions regarding this Product Change Notification/Software Release Notice, please contact your MultiTech sales representative or visit the technical resources listed below:

World Headquarters – USA
+1 (763) 785-3500 | sales@multitech.com

EMEA Headquarters – UK
+(44) 118 959 7774 | sales@multitech.co.uk

MultiTech Developer Resources:
www.multitech.net
An open environment where you can ask development related questions and hear back from MultiTech engineering or a member of this community.

Knowledge Base:
http://www.multitech.com/kb.go
Immediate access to support information and resolutions for all MultiTech products.

MultiTech Support Portal:
support.multitech.com
Create an account and submit a support case directly to our technical support team.

MultiTech Website:
www.multitech.com

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Revision History

Version	Author	Date	Change Description
-001	DT	09/17/2021	Original version
-002	DT	10/15/2021	Updates made

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