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XBee RR DigiMesh Release Notes

XBee RR DigiMesh

Version 3010 - April 18, 2022

INTRODUCTION

These release notes document changes made to the DigiMesh firmware on the XBee RR RF modules.

- [Product Information] (Product information page coming soon)
- [Documentation](#)
- [Support](#)

SUPPORTED PRODUCTS

- XBRR-24 - XBee RR 2.4 GHz radio module
 - Micro (MMT)

KNOWN ISSUES

1. The Diagnostic counts for transmissions (**EA** and **TR**) are not always as expected because sometimes there is an extra network retry. [*XBHAWKDM-200*]
2. The **FT** flow control threshold may not be calculating number of bytes properly. If **FT** is set to too low of a value (less than 0x20), CTS will assert indefinitely. [*XBHAWKDM-611*]
3. If a data transmission is attempted immediately after boot, there is a chance that the packet will be dropped. A small delay after a power cycle should alleviate this issue. [*XBHAWKDM-659*]
4. Duplicate packets can occur if streaming unicast data across multiple synchronous sleep cycles. [*XBHAWKDM-739*]
5. Self-addressed OTA updates may be unreliable. When updating a local device, the serial firmware update process should be used. [*XBHAWK-337*]
6. When using pins **P5** and/or **P6** for digital outputs the sleep current will be an additional ~15 uA for each of the pins configured an output. [*XBHAWK-926*]

UPDATE CONSIDERATIONS

XCTU (XBee Configuration and Test Utility) is recommended for updating the firmware of your radio module to the latest firmware version: www.digi.com/xctu

Initiating an OTA firmware update will erase the file system of the target device.

The file system will need to be formatted after a firmware update before it can be utilized. If a serial firmware update was performed, the file system and bundled code on the device is retained but can only be accessed by the version of firmware that was active at the time it was formatted.

Example: If the file system was formatted for version 3010, it would not be accessible after a serial firmware update to 3011. To make use of the file system, it should be formatted for version 3011. If instead the file system is left untouched and the firmware is serially downgraded back to 3010, the file system from before the firmware update would be accessible.

The following files are included in XBee RR RF firmware releases:

- Firmware
 - GBL: Firmware image for gateways and OEM serial updates
 - OTA: Firmware image for OTA firmware updates
 - OTB: Firmware + bootloader image for OTA updates
- Configuration
 - XML: XCTU-NG configuration file

UPDATE BEST PRACTICES

Digi recommends the following best practices:

1. Test the new release in a controlled environment with your application before you update production devices.
2. Unless otherwise noted, apply updates in the following order:
 1. Device firmware
 2. Modem firmware
 3. Configuration
 4. Application

Digi recommends Digi Remote Manager for automated device updates. For more information, go to <https://www.digi.com/products/iot-platform/digi-remote-manager>.

If you prefer manually updating one device at a time, follow these steps:

Serial firmware updates:

Invoke the bootloader using one of two methods:

- Issue the %P AT Command
- [Using hardware flow control lines](#)

Interface with the bootloader at 115200 baud and transfer a bootloader or firmware image as per the [user guide](#).

An [XBee MultiProgrammer](#) is available for serial firmware updates in a production environment.

OTA firmware/file system updates:

Refer to the [user guide](#) for information on performing an OTA firmware and file system update.

The OTA firmware update process for XBee 3 and XBee RR is the same across all supported RF firmwares and utilizes ZCL frames. To perform an OTA bootloader update, use the supplied *.OTB file, which is a combined firmware + bootloader image. The *.OTA file is just the firmware.

The [XBee Network Assistant](#) can be used to manage your network and optimize it's configuration prior to performing an OTA update.

TECHNICAL SUPPORT

Get the help you need via our Technical Support team and online resources. Digi offers multiple support levels and professional services to meet your needs. All Digi customers have access to product documentation, firmware, drivers, knowledge base and peer-to-peer support forums.

Visit us at <https://www.digi.com/support> to find out more.

CHANGE LOG

3010 - XBee RR DigiMesh 2.4 (April 18, 2022)

- This is the initial release
- Bootloader version: 1.11.5
- MMT Hardware revision: A

NEW FEATURES

- N/A

ENHANCEMENTS

1. The over-voltage detection limit is set for 3.85 volts which will output an API 0x8A Modem status of 0x0D value when the voltage limit is exceeded. [XBHAWK-924] Note: Xbee3 DM product has an over-voltage limit of 3.7 volts.

SECURITY FIXES

- N/A

BUG FIXES

- N/A
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