RWM605x

1. Device Errata Summary

This document supports the RWM6050 and RWM6051 devices.

Errata	Status
A-MPDU Delimiter Format Does Not Match 802.11ad Specification	No plan to fix

2. Device Errata

2.1 A-MPDU Delimiter Format Does Not Match 802.11ad Specification

2.1.1 Description

Missing last inversion in CRC8 result used in the A-MPDU delimiter. This CRC is used only on the delimiter length field (16-bits), and not the data packet itself.

2.1.2 Impact

1. There is no impact on systems using RapidWave modems at both sides of the link. The system solution will operate at full performance.

2. This errata will impact systems that use the RWM605x to link to a third-party WiGig device. Without A-MPDU support (frames larger than 7920 bytes), interoperability performance with third-party WiGig devices will be reduced as follows:

   - MCS1: 7%
   - MCS2: 13%
   - MCS3: 15%
   - MCS4: 18%
   - MCS5: 19%
   - MCS6: 22%
   - MCS7: 26%
   - MCS8: 30%
   - MCS9: 32%
   - MCS10: 36%
   - MCS11: 41%
   - MCS12: 45%

For example, the achievable data rate will be 32% lower at MCS9 with A-MPDU disabled versus a maximally sized A-MPDU of about 64KB.

2.1.3 Workaround

1. No workaround needed.

2. Detect if communicating with RWM605x devices, in which case, A-MPDU can be enabled. The software can check if communicating with RWM605x devices, or other vendor's device during the association by reading vendor-specific information contained within the association request. Once this has been determined, it can be

used to enable or disable A-MPDU support by refusing the block ACK agreement, which will cause the other node to not send A-MPDU, and the RWM605x would also not originate them.

3. Revision History

Revision	Date	Description
1.00	Mar 11, 2024	▪ Updated the status information for the device errata. ▪ Updated the document to the latest template.
-	May 30, 2019	Initial release.