

SD-Wi-Fi-FP91-88W8801

Firmware Release Notes for FreeRTOS



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Revision History

Table 1: Document revision history

Revision	Date	Change details
Rev.1	17-Jul-2020	Initial release
Rev.2	30-Nov-2020	Added Wi-Fi certification section. Updated Release Version
Rev.3	05-Jan-2021	Updated Release version and Bug Fixes/Enhancement section
Rev.4	07-Jul-2021	Section 1 and Section 2 updated Section 7 updated
Rev.5	06-Sep-2021	Section 1 updated Section 5 updated
Rev.6	05-Jan-2022	Section 1 and Section 2 updated Section 7 updated
Rev.7	19-Jan-2022	Section 1 and Section 2 updated
Rev.8	15-Mar-2022	Section 1 "Package Information" : updated package version Section 2 "Firmware Version Information" : updated FW version Section 5.1 "Throughput Test Setup" : added setup details Section 5.2 "STA Throughput" : updated TP numbers Section 5.3 "STA Throughput" : updated TP numbers Section 7 "Bug Fixes/Feature Enhancements" : updated

1 Package Information

- SDK Version: 2.11.1
- Wi-Fi FW version: 14.91.36.p191.3

Please refer to the Software feature list in the document : *SD-Wi-Fi-FP91-88W8801-Wi-Fi-Software-Features-for-FreeRTOS*

2 Firmware Version Information

- Wireless SoC : 88W8801
- Wi-Fi Firmware Version : 14.91.36.p191.3
 - 14 - Major Revision
 - 91 - Feature Pack
 - 36 - Release Version
 - p191.3 - Patch number

3 Host Platform

- All i.MX RT platform running FreeRTOS
- Interfaces used
 - Wi-Fi over SDIO (SDIO 2.0 support, SDIO Clock Frequency: 50 MHz)

Test Tools

- iperf (version 2.0.5)

4 Wi-Fi Certifications

The Wi-Fi certifications is obtained with the following combinations.

4.1 WFA Certifications

- STA | 802.11n
- STA | PMF

Refer *TN00066-WFA Derivative Certification Process* document available in SDK Package.

5 Wi-Fi Throughput

5.1 Throughput Test Setup

- Environment: Shield Room - Over the Air
- Access Point: Netgear RAX120
- DUT: W8801 AzureWave (Module: **AW-NM191NF-uSD**) with EVK-MIMXRT1060 platform
- Client: W9098-PCIE
- Channel : 6
- Wi-Fi application: wifi_cli
- Compiler used to build application: armgcc
- Compiler Version: gcc-arm-none-eabi-9-2020-q2-update
- iPerf Commands used in test:

TCP TX	TCP RX	UDP TX	UDP RX
iperf -c <remote_ip> -t 60	iperf -s	iperf -c <remote_ip> -t 60 -u -B <local_ip> -b 120 NOTE: Defaults data rate is 100mbps	iperf -s -u -B <local_ip>

Refer to **Section-2.3** in *UM11442-NXP Wi-Fi and Bluetooth Demo Applications User Guide for i.MX RT Platforms* to read more about the throughput test setup and topology.

5.2 STA Throughput

External AP: Asus-AX88U

STA Mode Throughput - BGN Mode 2.4GHz Band 20MHz				
Protocol	TCP(Mbps)		UDP(Mbps)	
Direction	Tx	Rx	Tx	Rx
Open Security	29.5	30.0	46.5	58.0
WPA2-PSK	28.3	30.0	44.6	57.0
WPA3-SAE	27.3	29.0	45.6	58.0

5.3 Mobile AP Throughput

External client: W9098-PCIE

Mobile AP Mode Throughput - BGN Mode 2.4GHz Band 20MHz				
Protocol	TCP(Mbps)		UDP(Mbps)	
Direction	Tx	Rx	Tx	Rx
Open Security	19.1	38.0	45.1	57.0
WPA2-PSK	19.0	36.0	42.0	57.0
WPA3-SAE	19.7	36.0	40.0	56.0

6 EU Conformance tests

- EU Adaptivity test - EN 300 328 v2.1.1 (for 2.4 GHz)

7 Bug Fixes/Feature Enhancements

Component	Description
Wi-Fi	<ul style="list-style-type: none">Added support for IPv6

8 Known Issues

Component	Description
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9 Notes

- None

10 Legal Information

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