



Qualcomm Technologies, Inc.

QCA9377-3 Bluetooth and WLAN

Release Notes

80-YC636-2 Rev. D

September 7, 2018

All Qualcomm products mentioned herein are products of Qualcomm Technologies, Inc. and/or its subsidiaries.

Qualcomm is a trademark of Qualcomm Incorporated, registered in the United States and other countries. Other product and brand names may be trademarks or registered trademarks of their respective owners.

This technical data may be subject to U.S. and international export, re-export, or transfer ("export") laws. Diversion contrary to U.S. and international law is strictly prohibited.

Qualcomm Technologies, Inc.
5775 Morehouse Drive
San Diego, CA 92121
U.S.A.

Revision history

Revision	Date	Description
A	March 2018	Initial release
B	April 2018	<ul style="list-style-type: none"> ▪ Added legal statement ▪ Removed Section 1 Purpose ▪ Renamed Section 1.1 Identification to Section 1 Introduction ▪ Updated Section 2 Supported hardware with current board information ▪ Updated Table 4 WLAN features with current feature set ▪ Updated Table 5 Bluetooth features with current hands-free profile and A2DP/AVDTP information ▪ Added Table 6 Wi-Fi Alliance precertification/Bluetooth SIG ▪ Updated Section 5 Installation to reference the specific porting guide and removed information about the AIO command line option ▪ Deleted parameter k information for Android from Table 7 Parameters to use in AIO script ▪ Deleted Section 6.1 Test coverage ▪ Deleted Section 6.2 Certification
C	May 2018	Updated Section 5 Features with WLAN enhancements and Bluetooth enhancements information
D	September 2018	<ul style="list-style-type: none"> ▪ Chapter 3 Supported OS: Added kernel 4.11 ▪ Chapter 5 Features: Added the list of major features supported in this release, and updated Table 5 and Table 6 with Bluetooth 5.0 support details ▪ Chapter 6 Installation: Updated te-f20 to te-f30, and added kernel 4.11

Contents

- 1 Introduction4**
- 2 Supported hardware4**
- 3 Supported OS.....4**
- 4 Firmware binary files4**
- 5 Features5**
- 6 Installation7**

1 Introduction

The software package contains firmware binary code for QCA9377-3 WLAN, Bluetooth with Fluoride Bluetooth stack, and All In One (AIO) software code for x86 Linux platform.

2 Supported hardware

Table 1 Supported hardware

Board	WLAN interface	Bluetooth interface
SX-SDMAC-2831S-SP	SDIO	UART

3 Supported OS

Table 2 Supported OS

Linux Embedded
Linux kernel version 4.4.15
Linux kernel version 4.9.11
Linux kernel version 4.11

4 Firmware binary files

Table 3 Firmware binary files

WLAN	SDIO	bdwlan30.bin, otp30.bin, qwlan30.bin, utf30.bin
Bluetooth	UART	rampatch_tlv_tf_1.1.tlv and nvm_tlv_tf_1.1.bin

5 Features

The major features supported in this release are as follows:

- Support for the 64-bit, 4.11 kernel with a Linux OS
- Support for the multiple BSSID feature, where two SoftAPs can operate concurrently with a STA. All three interfaces must operate on the same channel. This feature is not available when the WLAN host interface is USB.
- WLAN Tx throughputs that are more stable and show lower throughput variations during thermal throttling, if preset temperatures are exceeded.

Table 4 WLAN features

Category	Description
Basic HT (802.11n) support	<ul style="list-style-type: none"> ▪ 2.4/5 GHz ▪ STA mode ▪ Soft AP mode ▪ 20/40 MHz channel width ▪ A-MPDU ▪ A-MSDU ▪ SGI ▪ STBC ▪ LDPC
Basic VHT (802.11ac) support	<ul style="list-style-type: none"> ▪ 5 GHz ▪ STA mode ▪ Soft AP mode ▪ 20/40/80 MHz channel width ▪ A-MPDU ▪ A-MSDU ▪ SGI ▪ STBC ▪ LDPC
Encryption/decryption	<ul style="list-style-type: none"> ▪ WEP ▪ TKIP ▪ AES
Security modes	<ul style="list-style-type: none"> ▪ Open ▪ Shared key ▪ WPA-PSK/WPA2-PSK

Category	Description
Feature set	<ul style="list-style-type: none"> ▪ Legacy power save ▪ WMM ▪ WMM-PS ▪ WPS/WPS2.0 ▪ P2P group owner and client ▪ WoW ▪ DFS- master & client ▪ TxBFee ▪ MU-MIMO ▪ Tx power-saving feature (GreenTx) ▪ Roaming ▪ 802.11ai (FILS-SK in STA mode; roaming between APs is not supported) ▪ ETSI compliance STA mode: EN 301 893 V2.1.1 and EN300 328 V2.1.1 ▪ Regulatory ▪ Concurrency mode (STA+SAP, STA+P2P/GO, STA+P2P/CLI) ▪ WLAN Bluetooth coexistence on chip and external Bluetooth

Table 5 Bluetooth features

Profile/protocol	Role/version
Service discovery protocol	Bluetooth 5.0
Logical link control and adaptation protocol	Bluetooth 5.0
Generic Access Profile	Bluetooth 5.0
RFCOMM with TS 07.10	1.2
Serial Port Profile	1.2
Device ID Profile	1.3
Hands-Free Profile	<ul style="list-style-type: none"> ▪ Audio Gateway (AG)/1.7 ▪ Hands-Free (HF)/1.6 ▪ CVSD audio coding over SCO ▪ mSBC audio coding over eSCO
A2DP/AVDTP	<ul style="list-style-type: none"> ▪ Source 1.2 ▪ Sink 1.2
HID over GATT Profile	1.0
SPP Over BR/EDR	1.2
BLE Concurrent Central/Peripheral	Bluetooth 4.1
BLE Secure Connection	Bluetooth 4.2

Table 6 Wi-Fi Alliance precertification/Bluetooth SIG

Product	Characteristics
WLAN	<ul style="list-style-type: none"> ▪ 11n Interop Test Plan STA/AP, v2.12 ▪ WPS2.0 STA, v2.0.16 ▪ 11ac Interop Test Plan STA/AP, v2.3 ▪ PMF AP/STA, v1.4 ▪ Wi-Fi Direct, v1.4
Bluetooth	<ul style="list-style-type: none"> ▪ Bluetooth SIG certification ▪ Controller component (BT 5.0 QDID 110838) ▪ Host subsystem (BT 5.0 QDID 110382)

6 Installation

For more information on building and installing the QCA9377-3 software package, see *QCA6174A/QCA9377-3 WLAN and Bluetooth on Linux x86 Porting Guide (80-YC636-1)*.

Table 7 Parameters to use in AIO script

Parameter	Description	Value
t	Board type option for the script	te-f30
k	Kernel version (Linux)	v4.9.11, v4.4.15, or v4.11
i	Interface type	SDIO
w	WLAN driver version	4.5.22.7
b	Bluetooth stack	FLUORIDE
r	Picks up the release configuration for w, b, and i, as specified in release.te-f30	–