

Errata to TI SimpleLink™ CC3000 Module – Wi-Fi 802.11b/g Network Processor

This document is an errata to the *TI SimpleLink CC3000 Module – Wi-Fi 802.11b/g Network Processor Data Sheet* (SWRS126).

For conflicts between SWRS126 and this document, this document shall prevail.

1 Hardware Errata

1.1 *Recommended Operating Conditions for VBAT_IN*

Description

This errata item applies to the recommended operating conditions for VBAT_IN. The current range is 2.7 to 3.6 V until the specified maximum of 4.8 V is qualified.

2 Software Errata

A "service pack" refers to a package that was released by TI to distribute CC3000 fixes and new features. This software upgrade can be performed by reprogramming the device's 32-KB EEPROM. For additional details about the flashing procedure, please refer to the following links:

http://processors.wiki.ti.com/index.php/CC3000_Patch_Programmer

http://processors.wiki.ti.com/index.php/CC3000_Flashing_Guide

Table 1 maps known issues to the applicable service pack releases.

Table 1. Issues Corrected by Service Pack

Advisory	Description	Severity	Version 1.10.1	Version 1.10.2	Version 1.11
2.1	Connection to low RSSI APs	Low	Applies	Applies	Applies
2.2	Ping report	Low	Applies	Applies	Applies
2.3	"Connected" event arriving before connection process is completed	Low	Applies	Applies	Applies
2.4	Connection to BSSID	Low	Applies	Applies	Applies
2.5	UDP sendto does not transmit broadcast packets	High	Applies	Applies – Will be resolved in version 1.11	Does not apply
2.6	mdnsAdvertiser does not always work in congested environments	Medium	Applies	Applies – Will be resolved in version 1.11	Does not apply
2.7	WEP shared key connection fails	Low	Applies	Does not apply	Does not apply
2.8	UDP transmission may fail after receiving UDP packet	Medium	Applies	Does not apply	Does not apply
2.9	UDP recvfrom cannot receive broadcast packets when working in subnets	Medium	Applies	Does not apply	Does not apply
2.10	Smart config cannot store more than 3 profile	Low	Applies	Does not apply	Does not apply
2.11	Cleaning queues upon disconnection	Medium	Applies	Does not apply	Does not apply
2.12	IP fragmentation is not supported	High	Applies	Applies	Applies
2.13	UDP packets are not received one-by-one by the host	Low	Applies	Applies	Applies

2.1 Connection to low RSSI APs

Description

Connection process will not start for APs with RSSI lower than –75dBm.

Workaround

Establish connection to APs with RSSI stronger than –75dBm.

2.2 Ping report

Description

Ping report may not be accurate and may count incorrect number of received responses.

Workaround

Ping should not be used as a tool for accurately measuring responses.

2.3 "Connected" event arriving before connection process is completed

Description

When connecting to an AP using WPA2 security, "Connected" event may arrive before the connection process is completed.

Workaround

Wait for "DHCP Complete" event.

2.4 Connection to BSSID

Description

wlan_connect API supports connection to SSID, but not to BSSID.

Workaround

Establish connection based on SSID and not based on the BSSID.

2.5 UDP sendto does not transmit broadcast packets

Description

Device can not send any broadcast packet (includes working in subnets).

Workaround

None – will be resolved in V1.11 release.

2.6 mdnsAdvertiser does not always work in congested environments

Description

mDNS packet may not be transmitted in congested environments. Issue is related to mDNS socket not being completely cleared for each transmission.

Workaround

None – will be resolved in V1.11 release.

2.7 WEP Shared Key connection fails

Description

Added support for WEP shared connection. This connection mode was not working in previous versions.

Workaround

Configure the AP security to another type (that is, not WEP Shared). WPA2 is recommended for maximum security.

2.8 UDP transmission may fail after receiving UDP packet

Description

UDP data transmissions may not work after UDP data reception. Issue is related to incorrect remote IP address and UDP port obtained by calling the recvfrom API.

Workaround

UDP transmission should not be based on address obtained from the `recvfrom` API.

2.9 *UDP recvfrom cannot receive broadcast packets when working in subnets*

Description

Not receiving broadcast packets when working in subnets other than 255.255.255.0.

Workaround

Do not work with subnets when device is expected to receive broadcast packets.

2.10 *Smart config cannot store more than three profiles*

Description

Smart config can store only three profiles, not seven.

Workaround

None.

2.11 *Cleaning queues upon disconnection*

Description

Upon disconnection, data queues are cleaned without allowing the host to read the received content prior to disconnection event.

Workaround

None.

2.12 *IP fragmentation is not supported*

Description

IP fragmentation is not supported in the CC3000 network stack. When packets are fragmented on the IP level, CC3000 cannot receive the packets and defragment them. The limitation applies to TCP and UDP packets.

Workaround

For UDP, it is the user responsibility to send packets with a maximum UDP payload of 1460 bytes. In this case, UDP packets would not be fragmented by the peer device connected to CC3000.

For TCP, the limitation is bypassed by setting the TCP MSS (Maximum Segment Size) to 1460 bytes. This is done automatically by CC3000 and does not require any user intervention. In this way, CC3000 Network Stack signals the peer device's Network Stack that it is ready to accept packets with payload length of up to 1460 bytes.

2.13 *UDP packets are not received one-by-one by the host*

Description

When the `recvfrom()` API is invoked by the host, UDP data is sent from CC3000 to the host according to the requested size, not one packet at a time.

Workaround

The user should use a predefined packet length. On the host side, the host should invoke `recvfrom()` with the predefined packet length, thus ensuring that a single packet is received.

3 Revision History

The following table summarizes the Errata to TI SimpleLink CC3000 Module – Wi-Fi 802.11b/g Network Processor versions.

Table 2. Revision History

Version	Literature Number	Date	Notes
*	SWRZ044	November 2012	See ⁽¹⁾
A	SWRZ044A	March 2013	See ⁽²⁾

⁽¹⁾ *Errata to TI SimpleLink CC3000 Module – Wi-Fi 802.11b/g Network Processor (SWRZ044) – Initial release*

⁽²⁾ *Errata to TI SimpleLink CC3000 Module – Wi-Fi 802.11b/g Network Processor version A (SWRZ044A):*

- - Added new section and all contents in [Section 2](#).

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