

QTP840-TB1-GEVK Evaluation Board User's Manual

Introduction

QTP840-TB1-GEVK is dual RGMII test board for Quantenna® Wi-Fi® module. QTP840-TB1-GEVK has Quantenna QT3840BC on board, which communicates with Wi-Fi chipset through PCIe interface via mPCIe connector.

Description

The QT3840BC chipset has two RGMII and one PCIe interface. On QTP840-TB1-GEVK test board, QT3840BC chipset communicates with Quantenna Wi-Fi module chipset through PCIe via mPCIe connector. The dual RGMII ports support 1 Gbps/100 Mbps/10 Mbps separately.

I/O Interfaces and Features

- Explicit and Implicit Digital Transmit Beamforming
- Advanced MIMO Features STBC and Channel State Aware Link Management for Sustained Link Robustness
- Two ARC-based Network Processors with Hardware Assist to Manage Multiple Simultaneous
- 802.11a/n/ac Connections
- DSP Engine to Hardware Accelerate Aggregation, De-aggregation, and Packet Re-ordering
- MU-MIMO Support
- SuperDFS Support
- Expanded Support for 128 Users
- LDPC Support
- Works with Quantenna 4x4 5 GHz RFIC (QT2518B)
- DDR2/DDR3 Memory Support
- PCIe Gen2.0 with Embedded DMA
- Standards: 802.11ac/n/a
802.11i (WEP, WPA/WPA2, RADIUS)
802.11d
802.11e (WMM, WMM-PS)
802.11w
802.11h
802.11k
- Operating Frequencies: 4.9–5.85 GHz
- Maximum Data Rate (per Stream) – Rates are for 256 QAM Operation
 - ◆ 80 MHz: 1.7 Gbps (433.33 Mbps)
 - ◆ 40 MHz: 800 Mbps (200 Mbps)
 - ◆ 20 MHz: 346.8 Mbps (86.7 Mbps)



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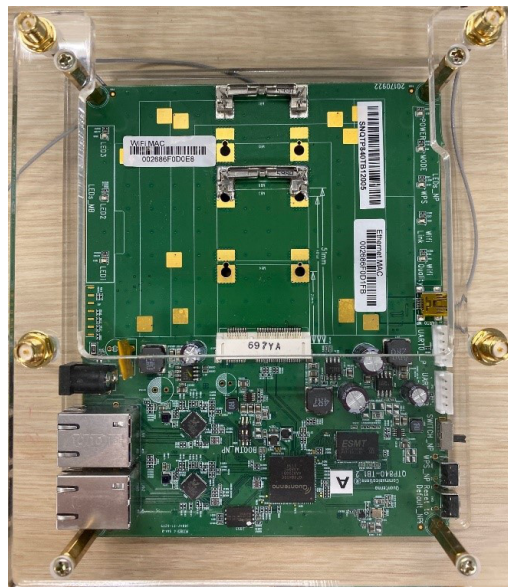


Figure 1. QTP840-TB1-GEVK Photo

EVBUM2689/D

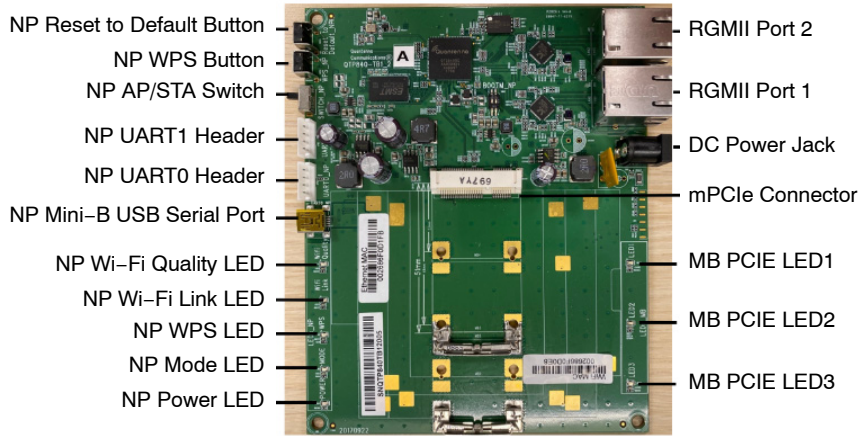


Figure 2. QTP840-TB1-GEVK Description

APPLICATIONS INFORMATION

Power Configuration

QTP840-TB1-GEVK is designed to be powered externally. The external power supply should be 12 V DC. When the board is powered on, the power LED will be steady green.

Reset to Default Button (NP)

Reserved (Reset to default Button).

WPS Button (NP)

Reserved (WPS Button).

AP/STA Switch (NP)

Reserved (AP/STA Switch)

RGMII Port 1/2

RGMII supports 1 Gbps/100 Mbps/10 Mbps UTP speed.

Mini-B USB Serial Port (NP)

The Serial port is mainly used for debug purpose.

Table 1. SERIAL PORT SETTING

Baud Rate	115200
Data	8 bit
Parity	None
Stop	1 bit
Flow Control	None

Boot Mode Switch

Boot mode switch controls serial port mode.

Table 2. BOOT MODE SWITCH DEFINITION

State	Definition
00	bootm
10	SPI-0 (Default)

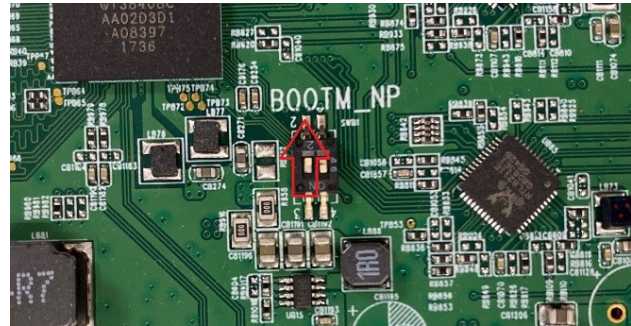


Figure 3. Default Setting (SPI-0)

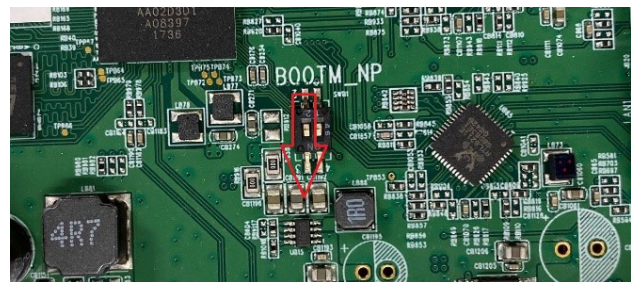


Figure 4. Bootm Setting

BOARD POWER UP

LED Indication When QTP840-TB1-GEVK Powers Up

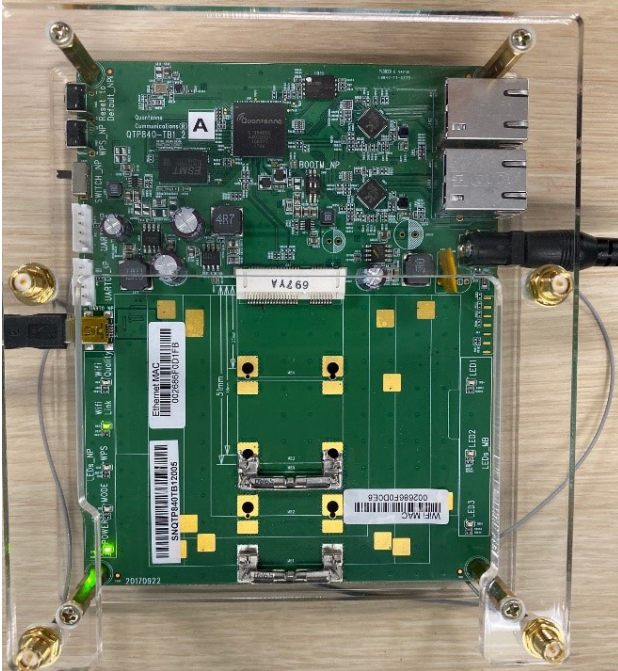


Figure 5. LED Indication When QTP840-TB1-GEVK Powers Up

Console Display When QTP840-TB1-GEVK Successfully Boots Up

When QTP840-TB1-GEVK successfully boots up, it will show “quantenna #”.

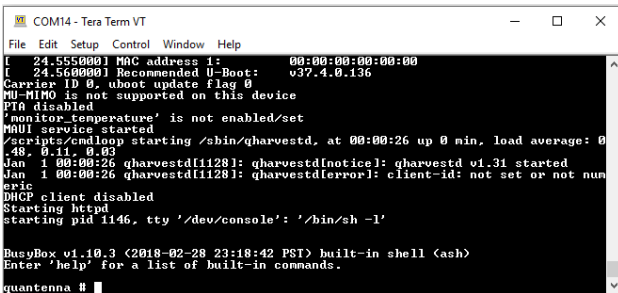


Figure 6. QTP840-TB1-GEVK Successfully Boots Up

Web GUI

QH840-5S7-GEVK default IP address is 192.168.1.200.

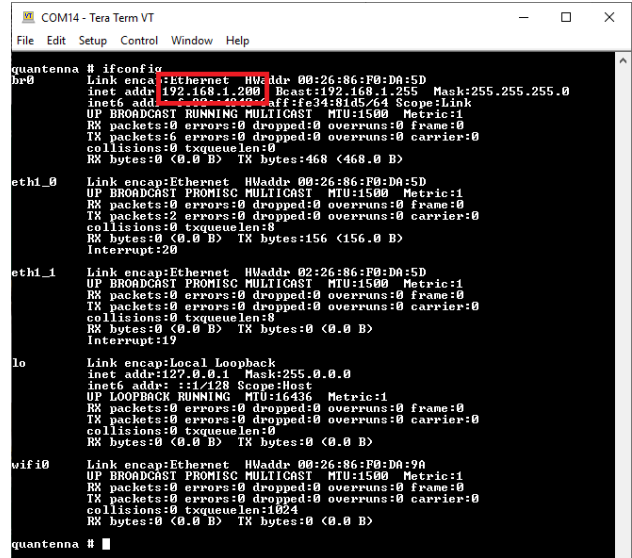
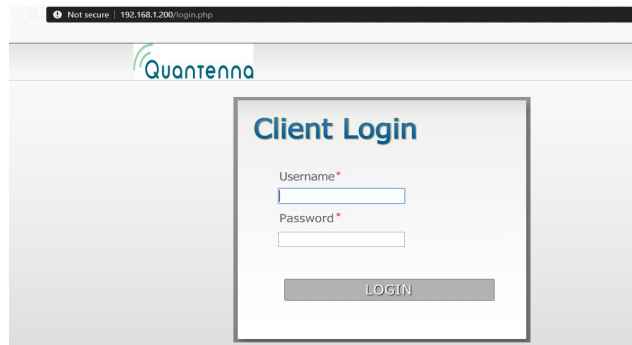


Figure 7. Default IP Address



Web GUI username: super
password: super

Figure 8. Web GUI Username and Password

Telnet

QTP840–TB1–GEVK could also be accessed through telnet. Use board IP address and the login username is “root”.

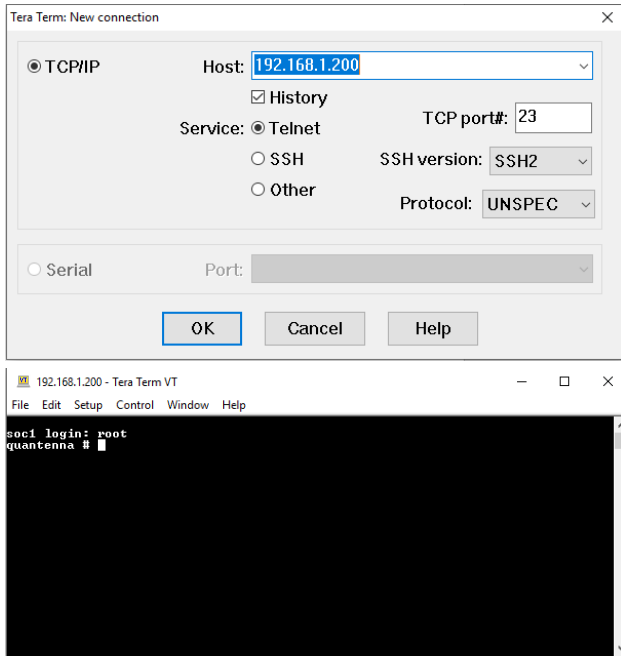


Figure 9. Access Through Telnet

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