

QTP840-5S2-GEVK Evaluation Board User's Manual

Introduction

QTP840-5S2-GEVK is mPCIe hardware reference module for Quantenna QT3840BC chipset. This module can be integrated with different Residential GW SoCs to provide up to 1.7 Gbps PHY/Data Link Speed in 80 MHz mode. It consists of one 11ac digital baseband chip and one 4 chain 5 GHz RFIC with Skyworks SKY85717-11 FEM.

Description

The QT3840BC chipset supports the 802.11ac/n/a standards and 4 streams in 4x4 MU-MIMO configuration.

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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EVAL BOARD USER'S MANUAL



Figure 1. QTP840-5S2-GEVK Photo

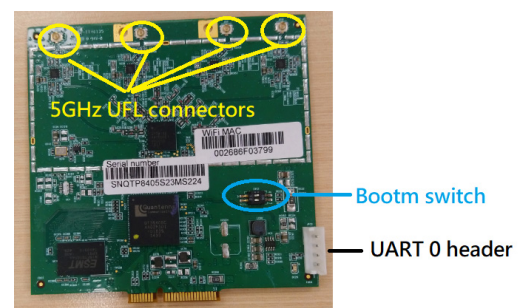


Figure 2. QTP840-5S2-GEVK Description

APPLICATIONS INFORMATION

Power Configuration

QTP840-5S2-GEVK is designed to be powered from mPCIe gold finger. When the board is powered on, the power LED will be steady green.

UART Header

The UART header is used to connect serial port 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)

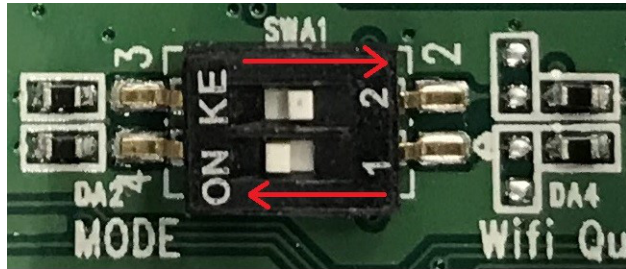


Figure 3. Default Setting (SPI-0)

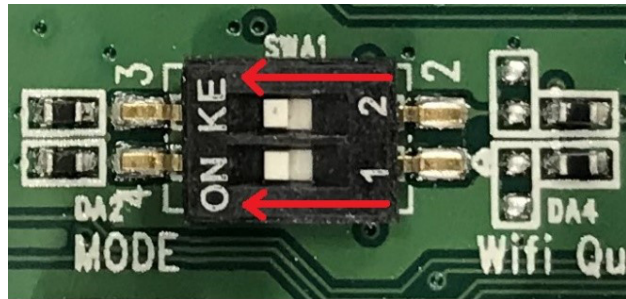


Figure 4. Bootm Setting

BOARD POWER UP

Console Display When QTP840-5S2-GEVK Successfully Boots Up

When QTP840-5S2-GEVK successfully boots up, it will show “quantenna #”.

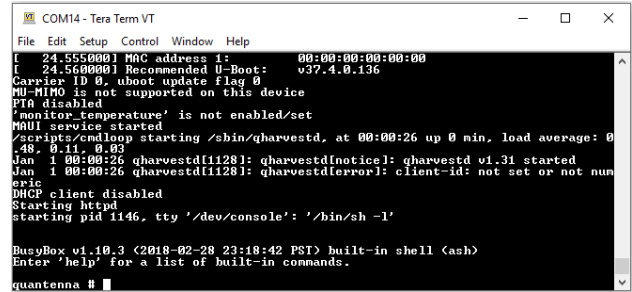


Figure 5. QTP840-5S2-GEVK Successfully Boots Up

Web GUI

QTP840-5S2-GEVK default IP address is 192.168.1.200.

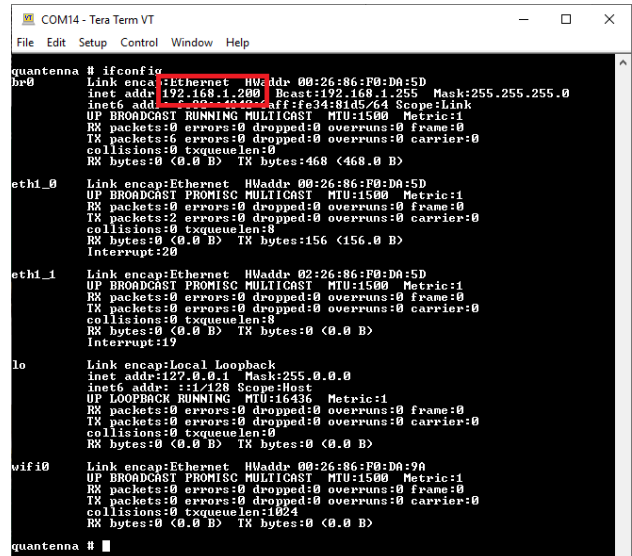
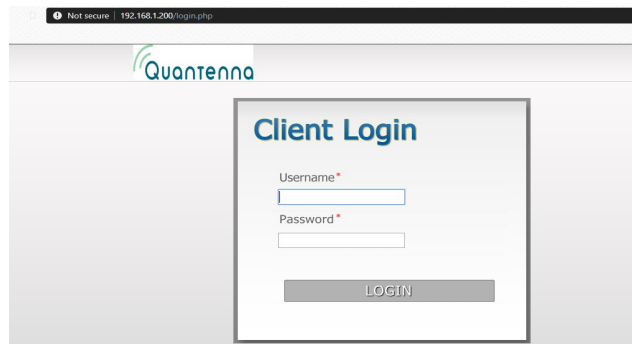


Figure 6. Default IP Address



Web GUI username: super
password: super

Figure 7. Web GUI Username and Password

Telnet

QTP840-5S2-GEVK could also be accessed through telnet. Use board IP address and the login username is “root”.

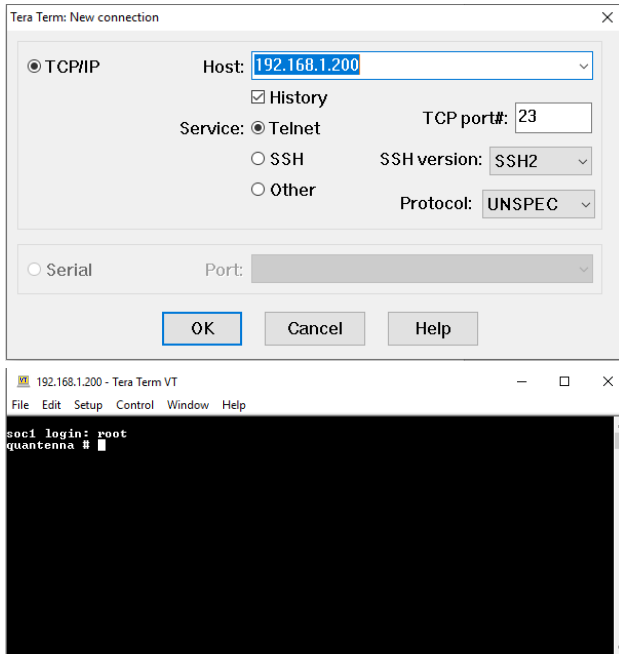


Figure 8. Access Through Telnet

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