EVBUM2690/D

QTP940-5S1-GEVK Evaluation Board User's Manual

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EVAL BOARD USER'S MANUAL

Introduction

QTP940−5S1−GEVK is mPCIe hardware reference module for Quantenna® QT3940BC 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 in receive direction. It consists of one 11ac digital baseband chip and one 4 chain 5 GHz RFIC with Skyworks SKY85717−11 FEM.

Description

The QT3940BC chipset is the industry's highest performance 2x4 802.11ac client solution for best coverage.

I/O Interfaces and Features

- 2x4 MIMO Configuration
- Digital Transmit Beamforming: Explicit and Blind (Implicit)
- Advanced MIMO Features STBC and Channel State Aware Link Management for Sustained Link Robustness
- Embedded Aggregation, De−aggregation, and Packet Re−ordering
- MU−MIMO Support for Two Users
- Expanded Support for 128 Users
- LDPC Support
- Works with Quantenna RFIC QT2518B and QT6020B
- DDR2/DDR3 Memory Support
- PCIe Gen2.0 with Embedded DMA
- Two RGMII/MII Interfaces
- 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
  - 40 MHz: 800 Mbps
  - 20 MHz: 346.8 Mbps

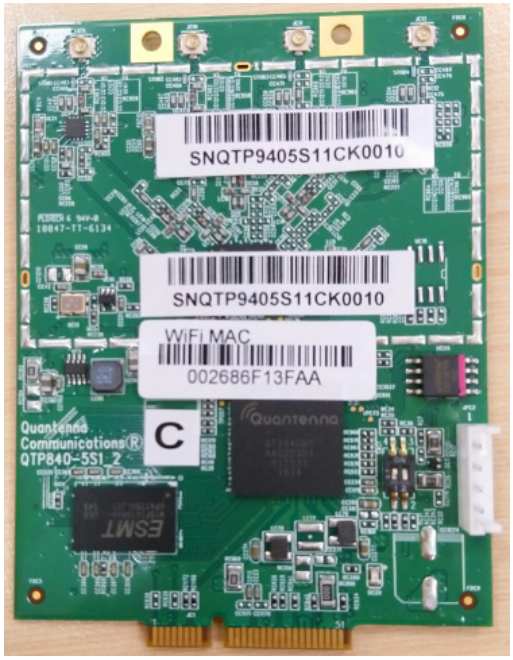

Figure 1. QTP940−5S1−GEVK Photo

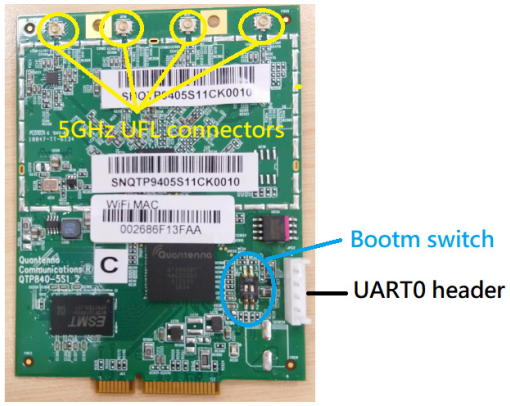

Figure 2. QTP940−5S1−GEVK Description

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APPLICATIONS INFORMATION

Power Configuration

QTP940−5S1−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)

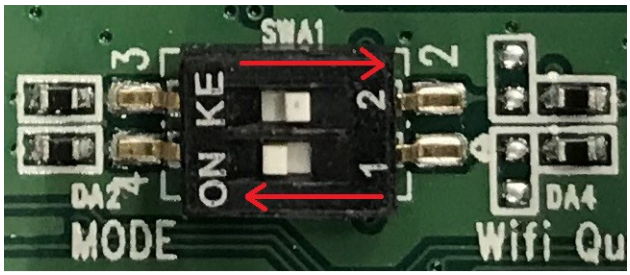


Figure 3. Default Setting (SPI−0)

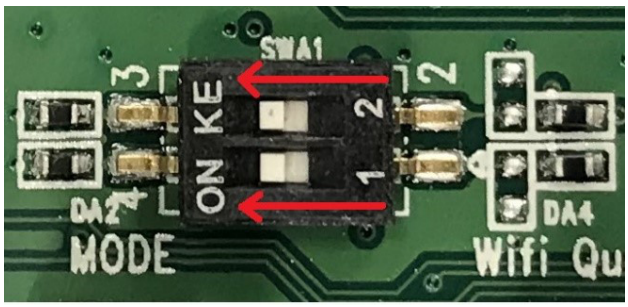


Figure 4. Bootm Setting

BOARD POWER UP

Console Display When QTP940−5S1−GEVK Successfully Boots Up

When QTP940−5S1−GEVK successfully boots up, it will show “quantenna #”.

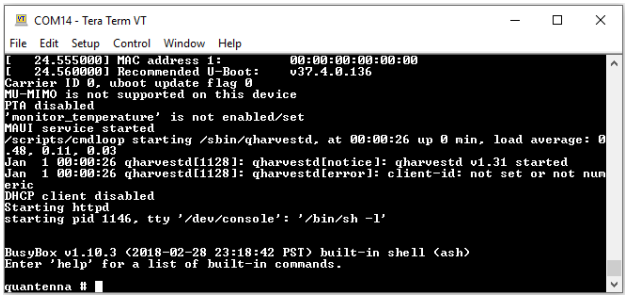


Figure 5. QTP940−5S1−GEVK Successfully Boots Up

Web GUI

QTP940−5S1−GEVK default IP address is 192.168.1.200.

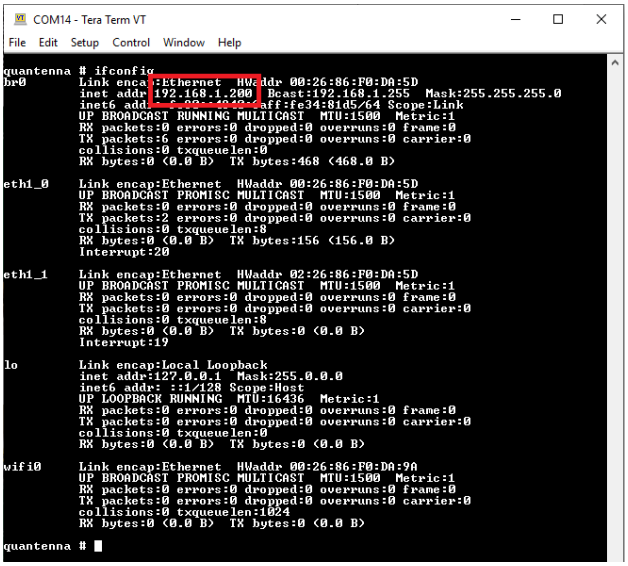
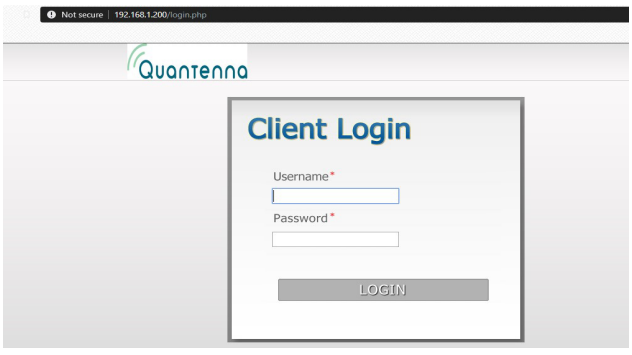


Figure 6. Default IP Address



Web GUI username: super
password: super

Figure 7. Web GUI Username and Password

Telnet

QTP940−5S1−GEVK could also be accessed through telnet. Use board IP address and the login username is “root”.

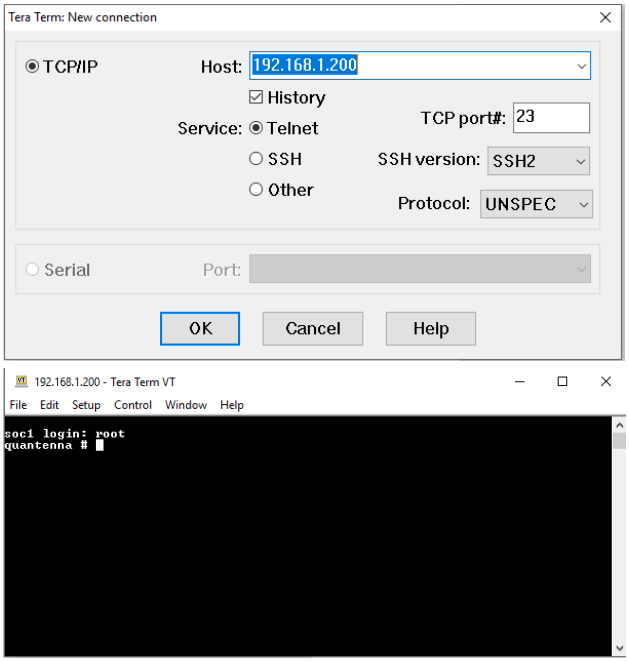


Figure 8. Access Through Telnet

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