

QHS860-DC2-GEVK Evaluation Board User's Manual

Introduction

QHS860-DC2-GEVK is the dual RGMII 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, one 4 chain 5 GHz RFIC with Skyworks SKY85717 FEM and one mPCIe connector.

Description

The QT3840BC chipset supports the 802.11ac/n/a standards. QHS860-DC2-GEVK has two RGMII ports, which support 1 Gbps/100 Mbps/10 Mbps separately. QHS860-DC2-GEVK supports 4x4 5 GHz MU-MIMO. QT3840BC chipset on QHS860-DC2-GEVK could communicate with other Wi-Fi® modules through PCIe interface via mPCIe connector.

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)



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EVAL BOARD USER'S MANUAL



Figure 1. QHS860-DC2-GEVK Photo

EVBUM2695/D

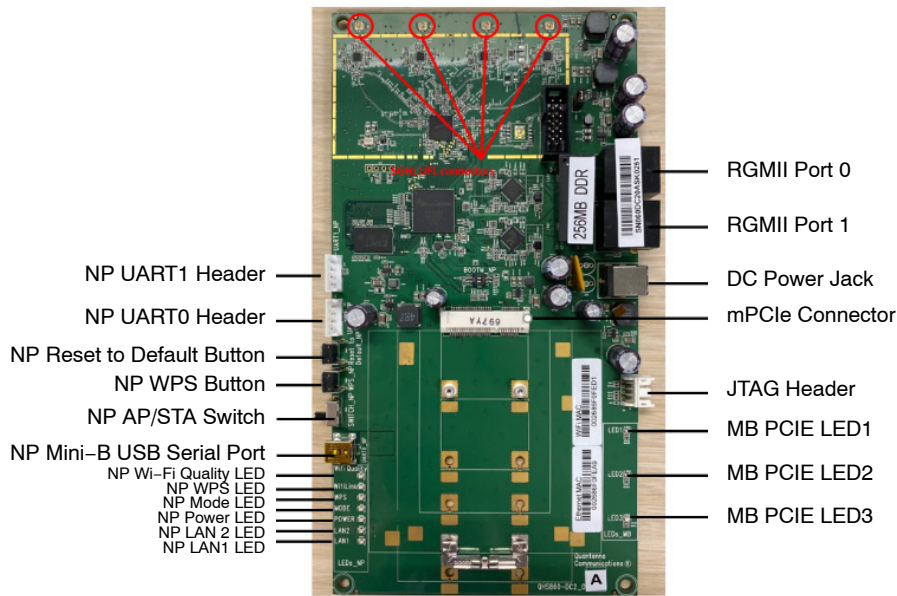


Figure 2. QHS860-DC2-GEVK Description

APPLICATIONS INFORMATION

Power Configuration

QHS860-DC2-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

Reserved (Reset to Default Button).

WPS Button

Reserved (WPS Button).

RGMII Port 0/1

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

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

BOARD POWER UP

LED Indication When QHS860-DC2-GEVK Powers Up



Figure 3. LED Indication When QHS860-DC2-GEVK Powers Up

Console Display When QHS860-DC2-GEVK Successfully Boots Up

When QHS860-DC2-GEVK successfully boots up, it will show “quantenna #”.

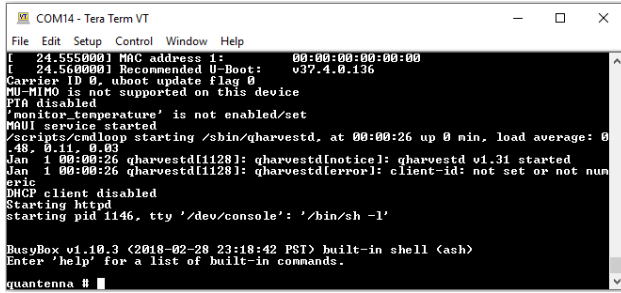


Figure 4. QHS860-DC2-GEVK Successfully Boots Up

Web GUI

QHS860-DC2-GEVK default IP address is 192.168.1.200.

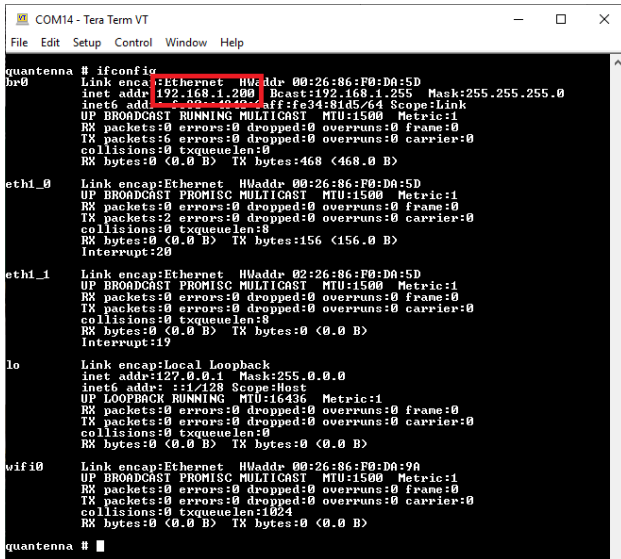
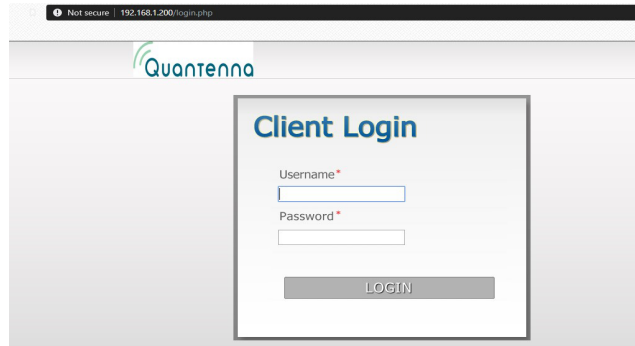


Figure 5. Default IP Address



Web GUI username: super
 password: super

Figure 6. Web GUI Username and Password

Telnet

QHS860-DC2-GEVK could also be accessed through telnet. Use board IP address and the login username is “root”.

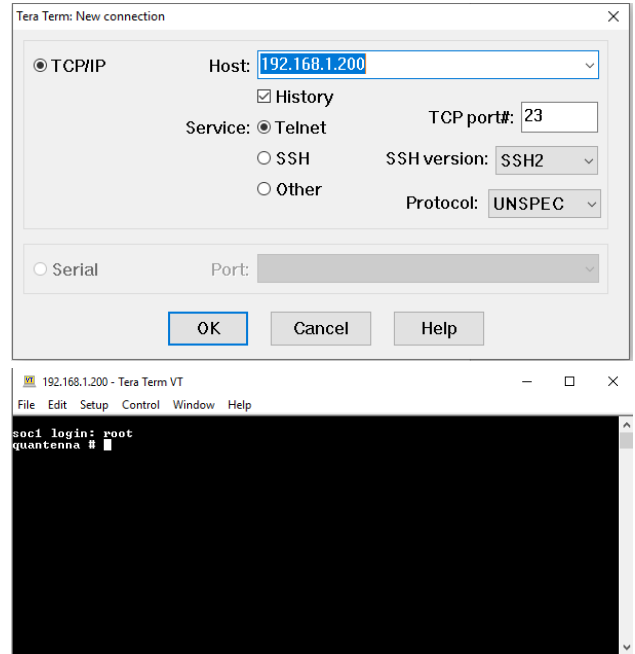


Figure 7. Access Through Telnet

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