

## QHS952-DS1-GEVK Evaluation Board User's Manual

### Introduction

QHS952-DS1-GEVK is single RGMII hardware reference module for Quantenna® QT3952BC 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 2 chain 5 GHz/2.4 GHz RFIC with Skyworks SKY85806 dual-band FEM.

### Description

The QT3952BC chipset supports the 802.11ac/n/a standards and 2 streams in 2x2 MU-MIMO configuration. Each FEM can be configured as 5 GHz or 2.4 GHz. QHS952-DS1-GEVK has single RGMII port, which supports 1 Gbps/100 Mbps/10 Mbps.

### I/O Interfaces and Features

- Baseband Chip for Cost Effective 2x2 5 GHz or 2.4/5 GHz Dual Band Selectable (DBS) Client Solution
- 2x2 MIMO Configuration: 2 Spatial Streams
- Digital Transmit Beamforming: Explicit and Blind (Implicit)
- Advanced MIMO Features STBC and Channel State Aware Link Management for Sustained Link Robustness
- DSP Engine to Hardware Accelerate Aggregation, De-aggregation, and Packet Re-ordering
- MU-MIMO Client
- LDPC Support
- Supports QT6225B RFIC for Either 2.4 GHz or 5 GHz Applications
  - ◆ 802.11ac/n/g/b/a Compliant
- Additional Standards:
  - ◆ 802.11e (QoS)
  - ◆ 802.11h (DFS & TPC)
  - ◆ 802.11i (Security)
  - ◆ 802.11k(RRM)
  - ◆ 802.11r (Fast Transitions)
  - ◆ 802.11v (Network Management)
  - ◆ 802.11w (PMF)



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## EVAl BOARD USER'S MANUAL



Figure 1. QHS952-DS1-GEVK Photo

# EVBUM2696/D

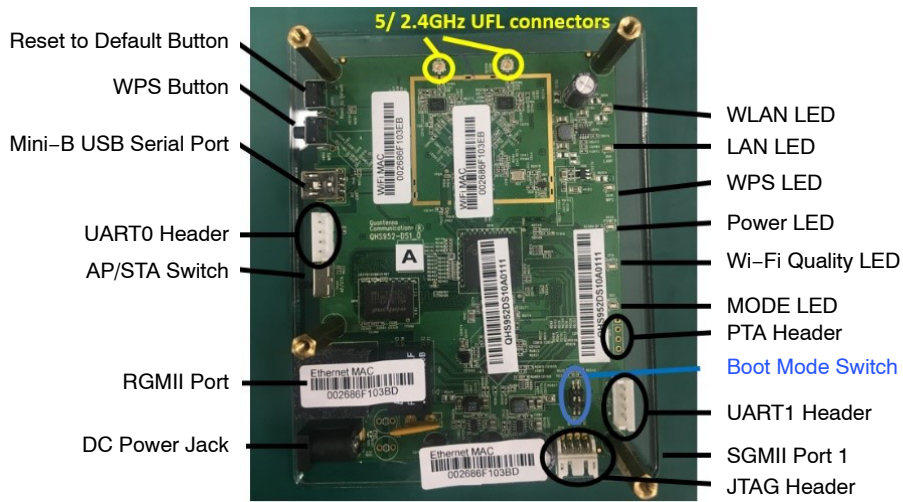


Figure 2. QHS952-DS1-GEVK Description

## APPLICATIONS INFORMATION

### Power Configuration

QHS952-DS1-GEVK is designed to be powered externally. The external power supply should be 5 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).

### AP/STA Switch

Reserved (AP/STA Switch)

### RGMII Port

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

### Mini-B USB Serial Port

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)

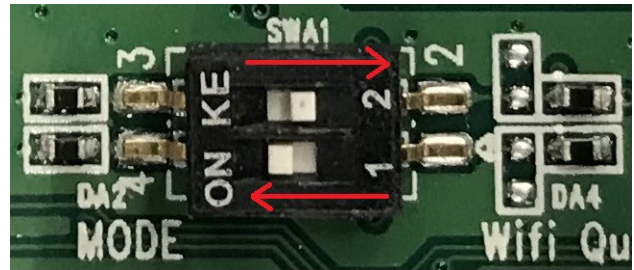


Figure 3. Default Setting (SPI-0)

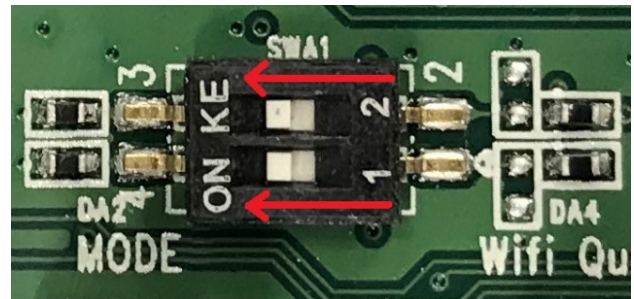


Figure 4. Bootm Setting

**BOARD POWER UP**

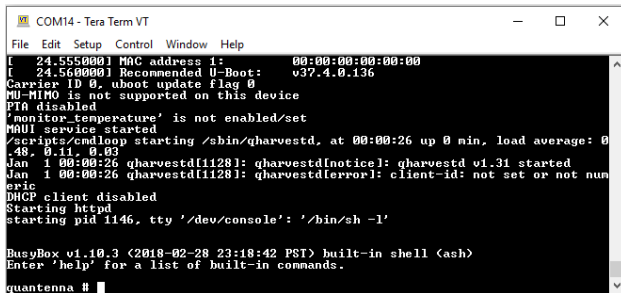
**LED Indication When QHS952-DS1-GEVK Powers Up**



**Figure 5. LED Indication When QHS952-DS1-GEVK Powers Up**

**Console Display When QHS952-DS1-GEVK Successfully Boots Up**

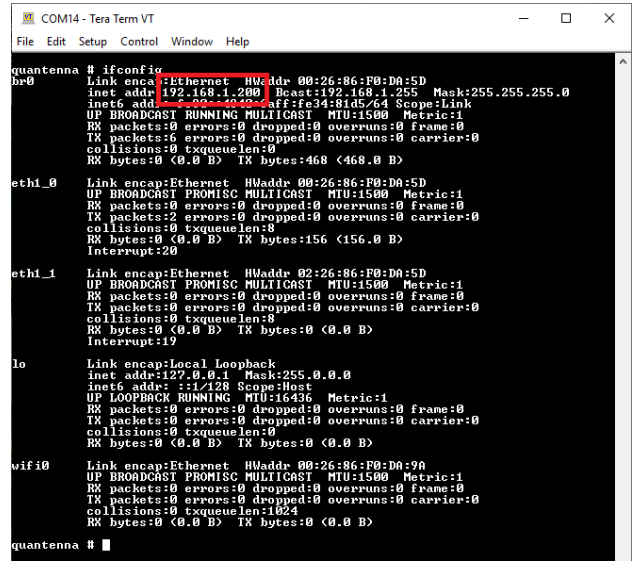
When QHS952-DS1-GEVK successfully boots up, it will show “quantenna #”.



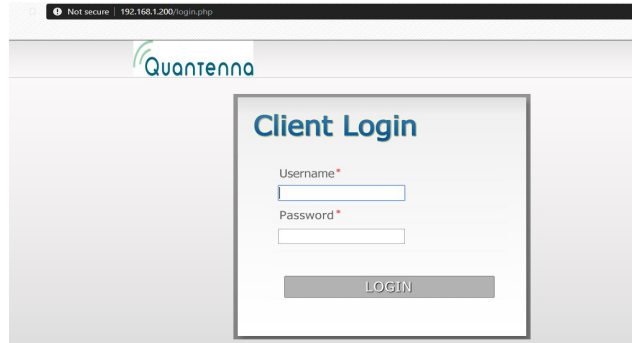
**Figure 6. QHS952-DS1-GEVK Successfully Boots Up**

**Web GUI**

QHS952-DS1-GEVK default IP address is 192.168.1.200.



**Figure 7. Default IP Address**

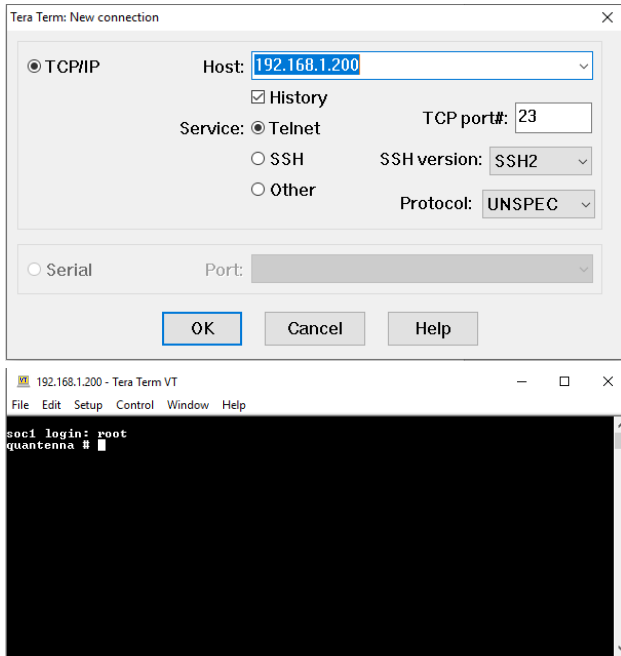


Web GUI username: super  
password: super

**Figure 8. Web GUI Username and Password**

**Telnet**

QHS952-DS1-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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