EVBUM2678/D

QBOX840-5S7-GEVK User's Manual

ON Semiconductor®

www.onsemi.com

EVAL BOARD USER'S MANUAL

Overview

QBOX840−5S7−GEVK is a Dual RGMII repeater with Quantenna® QT3840BD chipset. This repeater can 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.

Description

QBOX840−5S7−GEVK supports the 802.11ac/n/a standards and 4 streams in 4x4 MU−MIMO configuration. QBOX840−5S7−GEVK has dual RGMII ports, which 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
- 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)

Figure 1. QBOX840−5S7−GEVK Photo

Figure 2. QBOX840−5S7−GEVK Side Photo

APPLICATIONS INFORMATION

Power Configuration

QBOX840−5S7−GEVK use 5 V DC power supply. When the board is powered on, the power LED will be steady green.

Reset to Default Button

Reserved (Reset to default Button).

WPS Button

By pressing WPS button, associate with other Wi−Fi® devices.

AP/STA Switch

Switch between Access Point and Station mode.

LAN port 0/1

LAN 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

BOARD POWER UP

LED Indication When QBOX840−5S7−GEVK Powers Up

Figure 3. Console Display When QBOX840−5S7−GEVK Successfully Boots Up

When QBOX840−5S7−GEVK successfully boots up, it will show “quantenna #”.

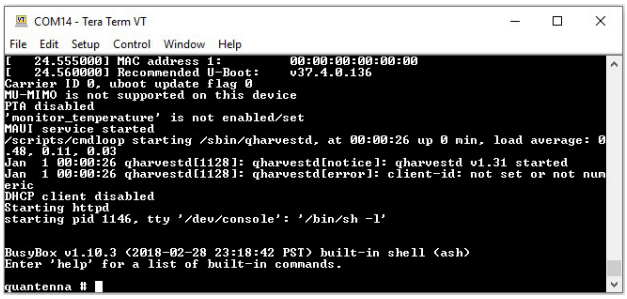

Figure 4. QBOX840−5S7−GEVK Successfully Boots Up

Telnet

QBOX840−5S7−GEVK could also be accessed through telnet. Use board IP address and the login username is “root”.

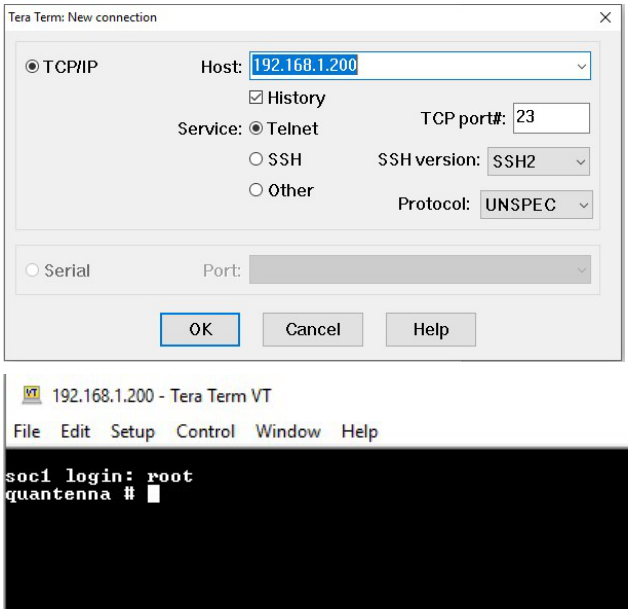

Figure 5. Access Through Telnet

Web GUI

QBOX840−5S7−GEVK default IP address is 192.168.1.200.

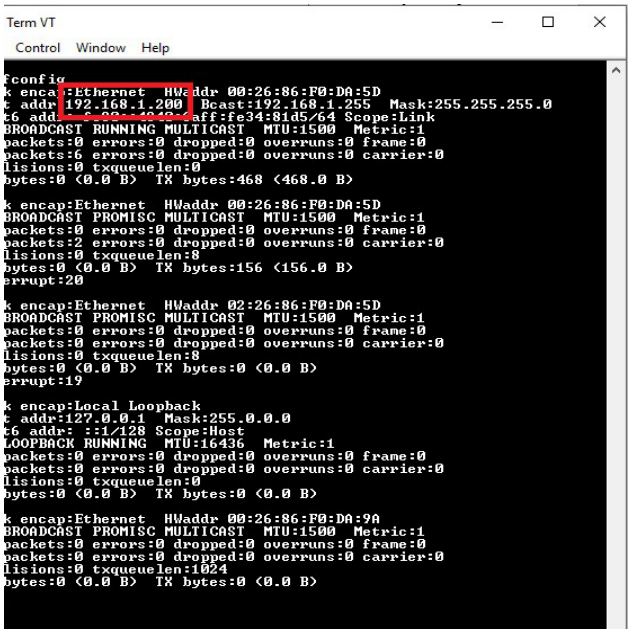

Figure 6. Default IP Address

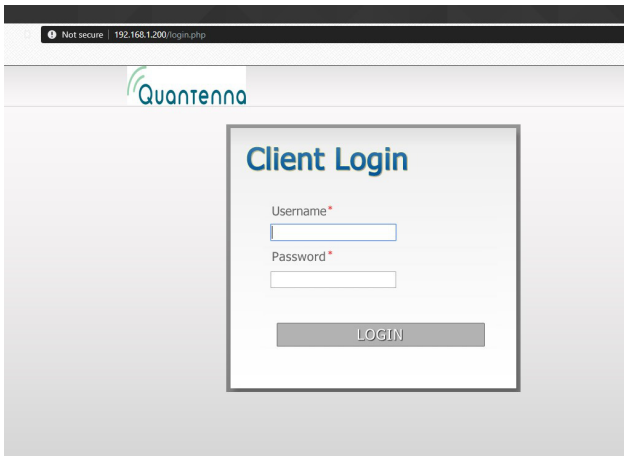

Figure 7. Web GUI Username and Password

Web GUI username: super
password: super

Status

Status shows QBOX840−5S7−GEVK basic information and current mode.

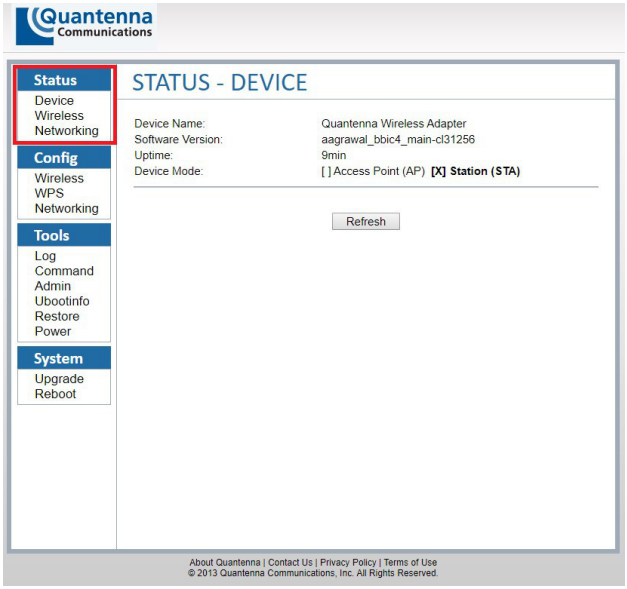

Figure 8. Status − Device

Config

Network setting and device association could be configured at Config part, more detailed settings is showed in *Advanced.*

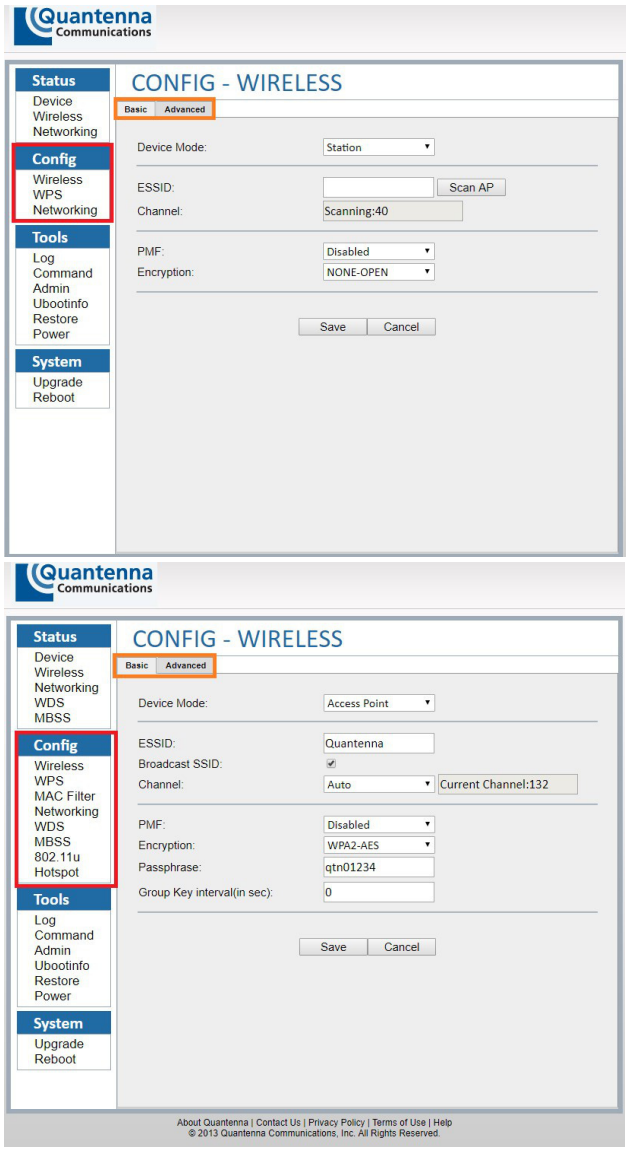

Figure 9. Config – Wireless

Tools

Tools are used for QBOX840−5S7−GEVK debug purpose.

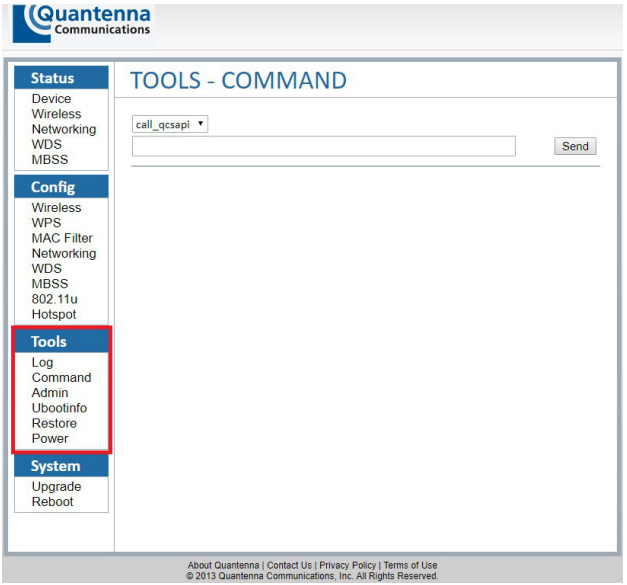

Figure 10. Tools – Command

System

System is used for QBOX840−5S7−GEVK firmware update and maintenance.

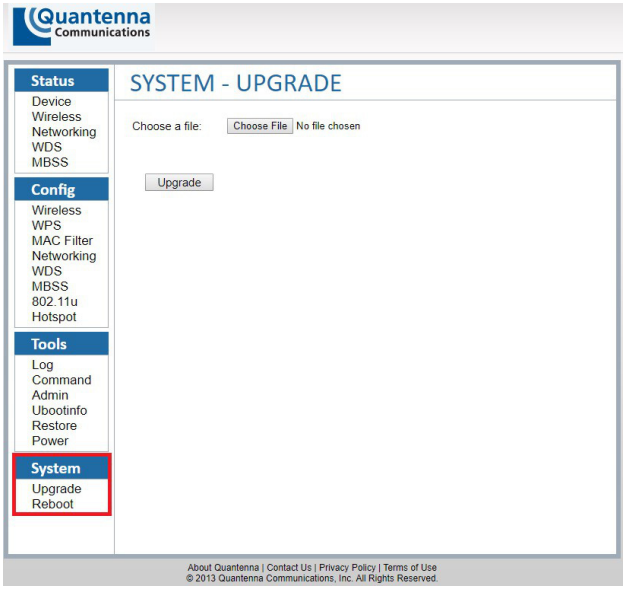

Figure 11. System – Upgrade

ADDITIONAL INFORMATION

TECHNICAL PUBLICATIONS:
Technical Library: www.onsemi.com/design/resources/technical−documentation
onsemi Website: www.onsemi.com

ONLINE SUPPORT: www.onsemi.com/support
For additional information, please contact your local Sales Representative at www.onsemi.com/support/sales