

MEC-WIFI-2632B-30

WLAN 802.11 a/b/g/n/ac 2T2R BT 5.0 NGFF Card

M.2 Type 2230 key-A-E

Product Datasheet



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Revision History

| Date | Revision | Description |
|------------|----------|----------------|
| 2020.07.20 | 1.0 | First Released |



Table of Contents

- Introduction and Product Features.....4
- Hardware Specification.....5
- Block Diagram.....6
- Mechanical Specification.....7



Introduction

MEC-WIFI-2632B-30 is a highly integrated single-chip that support 2-stream 802.11ac solutions with Multi-user MIMO (Multiple-Input , Multiple-Output) with Wireless LAN (WLAN) PCI Express network interface controller with integrated Bluetooth Smart Ready USB interface controller. It combines a WLAN MAC, a 2T2R capable WLAN baseband, and RF in s single chip.

MEC-WIFI-2632B-30 provides a complete solution for a high- performance integrated wireless and Bluetooth device.

Product Features

- Form factor: NGFF M.2 2230 type
- IEEE 802.11a/b/g/n/ac draft 2.0 compatible WLAN
- WLAN supports 2.4GHz and 5GHz channel
- 2T2R MIMO technology for extended reception robustness and exceptional throughput
- Bluetooth: BT 2.1/3.0/4.0/4.1/4.2/5.0
- Max. PHY data rate: 866.7Mbps using 80MHz bandwidth
- I/O: WLAN: PCIe1.1. BT: USB 2.0
- 2 x 50 Ohm RF connectors for 2.4G/5G diversity data transmission
- RoHS compliant

Hardware Specification

| General Specification | |
|----------------------------------|---|
| IEEE Networking Standard | IEEE 802.11 a/b/g/n/ac Wireless Local Area Networks |
| RF Frequency Range | 2.4G~2.5GHz / 5.15~5.85GHz ISM Dual Band |
| PHY Rate | 173Mbps using 20MHz bandwidth 300Mbps using 40MHz bandwidth 866.7Mbps using 80MHz bandwidth |
| MIMO Technology | 2T2R |
| IEEE 802.11i security mechanisms | WPA, WPA2. Open, shared key, pairwise key authentication |
| Other IEEE standard | 802.11e QoS Enhancement(WMM) 802.11h DFS, TPC, Spectrum measurement |
| Operating Voltage | +3.3V (±5%) |
| Interface | WLAN: PCIe 1.1 Bluetooth: USB2.0 |
| Board Specification | |
| WLAN Chip | Realtek RTL8822CE |
| BT Chip | Realtek RTL8822CE |
| Antenna | External antenna (not included) |
| RF connector | Dual MHF4 Antenna Connector |
| Form Factor | NGFF M.2 2230 type |
| RF Connector # | MHF4*2 |
| Antenna design | Two antenna for TX/RX, Diversity (Antenna is not included for standard package) |
| Environmental | |
| Operating | Operating temperature: 0 to 70 degree C Relative Humidity : 5-90% (non-condensing) |
| Storage | Temperature: -40 to 80 degree C Relative Humidity : 5-95% (non-condensing) |
| Software Support | |
| Operating System | Windows 10 Linux(kernel 2.6.24 ~ 5.3), Android 4.4, 6.x, 7.0, 8.0, 9.x and 10.x |
| EMI Test Report | FCC/CE/TELEC/KC ready |



Block Diagram

11ac Dual-Band 2x2 RF Application

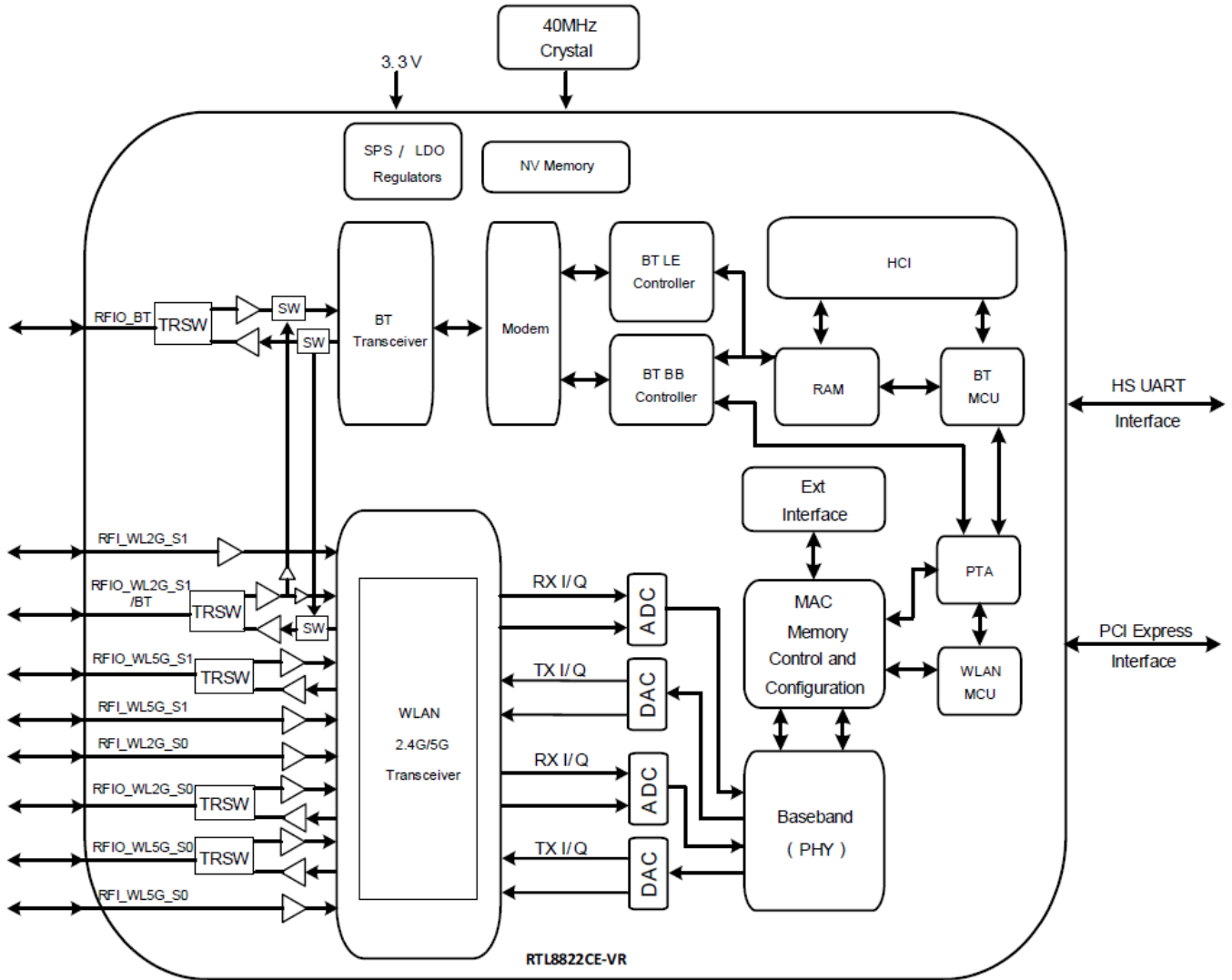


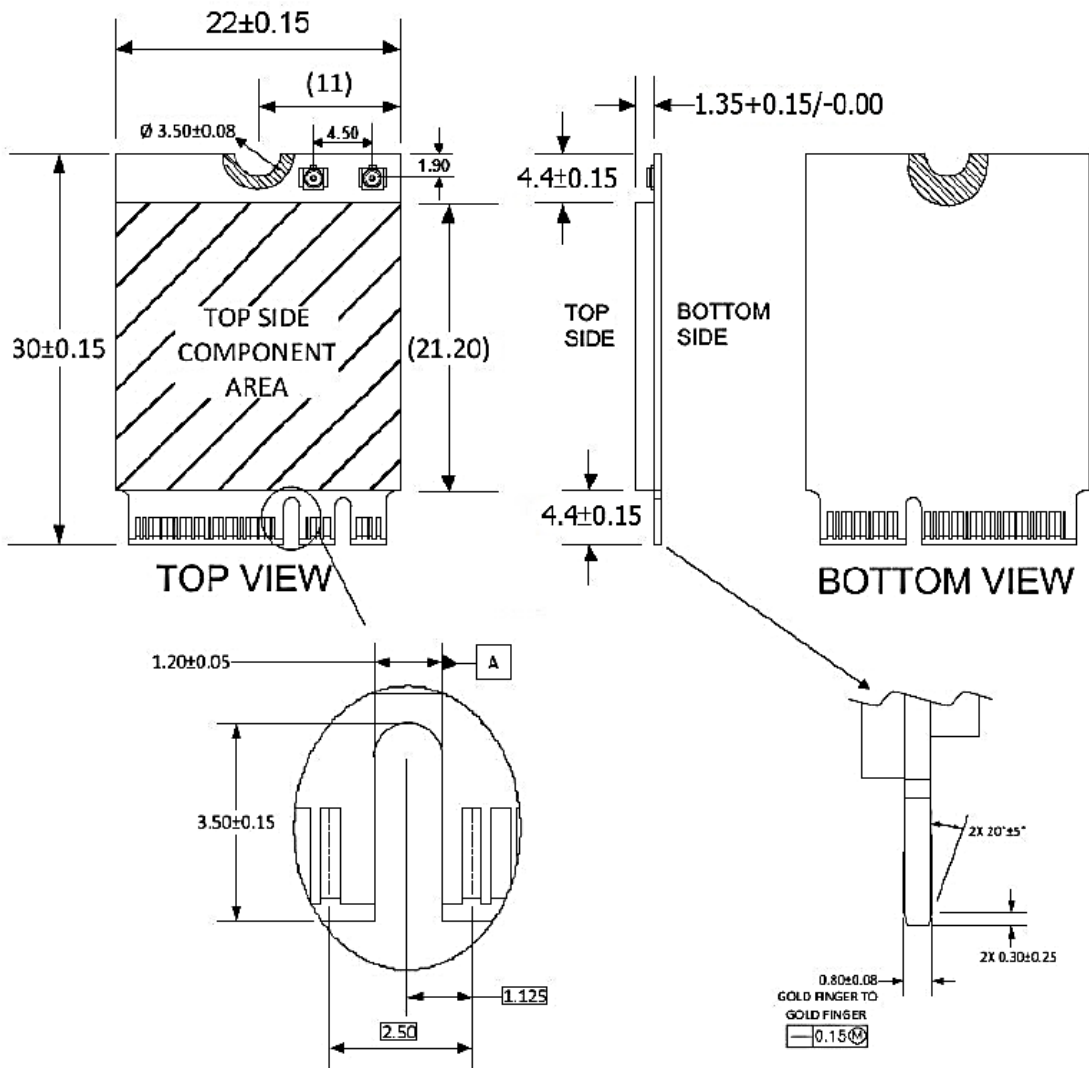
Figure 1. Dual-Band MIMO 2x2 Solution(11ac 2x2 MAC/BB/RF + PA) and Integrated Bluetooth Controller Solution --- RTL8822CE-VR-CG



Mechanical Specification

| Board Dimension | | | |
|---|-------------------|----------------|-------------------|
| Form factor | NGFF M.2 2230 | | |
| PCB Dimension | 30L*22W mm | | |
| PCB thickness | 0.8mm (+/- 0.1mm) | | |
| SMD | Single side | | |
| Max. height of components (from PCB) | Top side | Shielding case | 2.3mm (+/- 0.2mm) |
| | Bottom side | 0mm | |

Mechanical Drawing



Unit: mm