

Radicom Research, Inc.

2148 Bering Drive • San Jose, CA 95131

Tel: 408-383-9006 • Fax: 408-383-9007

www.radi.com**Universal USB/WiFi/LAN/Bluetooth LE Adapter – RW8300-B1 series****WiFi/BLE/RJ45 and mini USB**

Radicom RW8300-B1 WiFi single port router + Bluetooth Low Energy series is designed to fully integrate Ethernet LAN, Bluetooth V4.0 Smart® and Wi-Fi **IEEE802.11n™**, **IEEE802.11e™** and **IEEE802.11i™** standards. The RW8300-B1 series offers router or hotspot capability from Ethernet to WiFi as well as WiFi or Ethernet adapter from WiFi or Ethernet to USB interface. It can turn any Ethernet LAN port to a WiFi hotspot or connect PC or Laptop into a WiFi Wireless Access Point. It is a full embedded system for various Wi-Fi applications and doesn't require extra CPU host. RW8300-B1 also embeds the entire protocol stack of Bluetooth Low Energy for single mode Smart devices. It provides AT-Command set for communications. This versatile RW8300-B1 series of products offers configuration options to meet the specific system requirements.

RW8300 Series:

- RW8300M-B1: module with pin headers
- RW8300NE-B1: module with RJ45, mini USB connector
- RW8300E-B1: RJ45, mini USB connector with enclosure

Application:

- Single port router
- Hot spot sharing
- USB Ethernet adapter
- WiFi dongle
- LAN to WLAN adapter
- WLAN Bridge
- Bluetooth V4.0 Smart device

Features:**Wi-Fi**

- IEEE 802.11b/g/n compatible WLAN
- WiFi AP/Client
- Router capability
- WiFi USB adapter, USB Ethernet adapter
- 20MHz and 40MHz bandwidth transmission
- Backward compatible with 802.11b/g devices while operating at 802.11n data rates
- Frame aggregation for increased MAC efficiency (A-MSDU, A-MPDU)

**RW8300E-B1****RW8300NE-B1**

- Support WPS mode
- Low latency immediate High-Throughput Block Acknowledgement (HT-BA)
- Long NAV for media reservation with CF-End for NAV release
- PHY-level spoofing to enhance legacy compatibility
- Channel management and co-existence
- Support Wake-On-WLAN via Magic Packet and Wake-up frame
- Transmit Opportunity (TXOP) Short Inter-Frame Spaces (SIFS) bursting for higher multimedia bandwidth
- Short Guard Interval (400ns)
- DSSS with DBPSK and DQPSK, CCK modulation with long and short preamble
- Selectable digital transmit and receive FIR filters
- Built-in TCP/IP stack
- Support DHCP for LAN

Bluetooth 4.0 Smart (single mode)

- Bluetooth V4.0 single mode Smart device
- Support Host and client modes
- Integrated Bluetooth Low Energy stack: ATT, GATT, SMP, L2CAP, GAP
- Serial interface (UART/ SPI/ I2C) supported
- 12 digital PIOs, 3 analog AIOs
- 10-bit ADC embedded
- Support wake-up interrupt and watch dog timer
- Support passthrough data mode
- Options for on-board antenna or external antenna

General

- Operates in 2.4GHz Frequency Range
- Firmware upgradable
- Extended temperature of -40°C to +85°C
- FCC/IC/CE (pending), RoHS compliant