

Wi-Fi Module

Wi-Fi Module (Realtek RTL8871AM+RTL8761ATV)

WFM-230

The WFM230 provides one port (port4) integrated with one physical layer transceivers for I0Base-T and I00Base-TX. The port of the WFM230 may be configured as a LAN or WAN port.

The WFM230 supports flexible IEEE 802.3x full-duplex flow control and optional half-duplex backpressure control. For full-duplex, standard IEEE 802.3x flow control will enable pause ability only when both sides of UTP have auto-negotiation ability and have enabled pause ability. The WFM230 also provides optional forced mode IEEE 802.3x full-duplex flow control. Based on optimized packet memory management, the WFM230 is capable of Head-Of-Line blocking prevention.

L2 Switch Features: The WFM230 contains a 1024-entry address look-up table with a 10-bit 4- way XOR hashing algorithm for address searching and learning. Auto-aging of each entry is provided and the aging time is around 300-450 seconds.

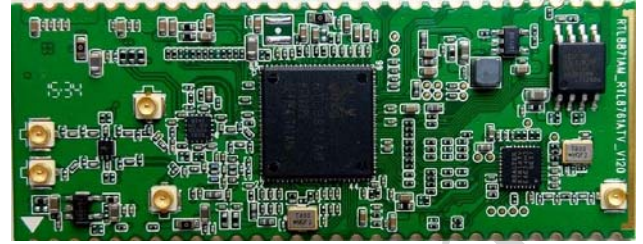
The WFM230 supports IEEE 802.3az, also known as Energy Efficient Ethernet (EEE). IEEE 802.3az operates with the IEEE 802.3 Media Access Control (MAC) Sublayer to support operation in Low Power Idle mode. When the Ethernet network is in low link utilization, EEE allows systems on both sides of the link to save power. Green Ethernet power saving provides: link-on and dynamic detection of cable length, and dynamic adjustment of power required for the detected cable length. This feature provides high performance with minimum power consumption. The WFM230 also implements link-down power saving on a per-port basis, greatly cutting power consumption when the network cable is disconnected.

The WFM230 Bluetooth controller complies with Bluetooth core specification v4.0, and supports dual mode (BR/EDR + AMP + Low Energy Controllers). It is compatible with previous versions, including v2.1 + EDR and v3.0 + HS. For BREDR, it supports scatternet topology and allows four active links in slave mode, and seven active links in master mode. For Low Energy, it supports multiple states and allows eight active links in master mode. The links in BR/EDR and LE can be active simultaneously.

Features

- Support IEEE 802.11 a/b/g/n/ac Standard
- Frequency range: 2.4GHz – 2.485GHz / 5.180GHz – 5.825 GHz
- CPU clock: 520MHz
- DDR I speed: 181.25MHz
- DDR I size: RTL8871AM inside 32Mbyte DDR I
- Memory capacity: 193.75MHz of DDR DRAM
96.875MHz of Flash
(when DRAM clock is 193.75MHz)
156MHz of SDR DRAM
- Flash size: 128MByte of SPI Flash
- Operating voltage: DC 3.3V / 1.2V
- Other interface: UART, I2S, I2C, USB, GPIO
- RoHS Compliant
- Dimension: 65 mm x 25 mm x 1 mm

Outline



Applications

- 802.11a/b/g/n, 11ac AP/Router
- Dualband Concurrent Router
- Network-Attached Storage(NAS)