Wireless LAN Module with Flash Memory

BP3599

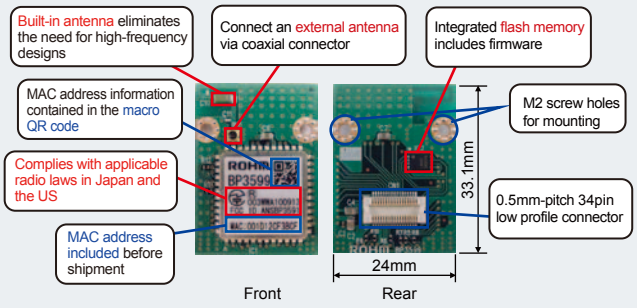
Enable wireless LAN communication by simply connecting to existing sets

Product Outline

The BP3599 takes the IEEE802.11b/g/n BP3591 wireless LAN module with built-in antenna and flash memory. In addition, the antenna design is identical to the BP3591, eliminating the need for high-frequency circuitry, and the BP3599 is pin-compatible with the BP3591, making replacement easy. The internal flash memory comes pre-loaded with firmware including TCP/IP stack, and the module is already certified* for use in Japan and the US, enabling implementation possible.

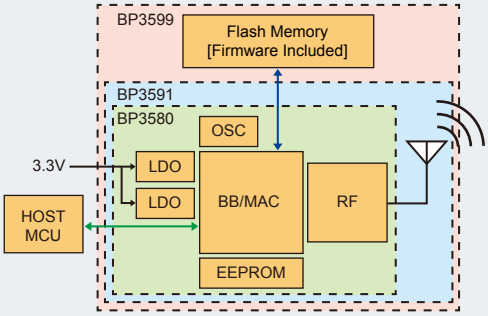
*Please inquire regarding applicable radio laws in other countries

All-in-one wireless LAN module



Firmware, including the TCP/IP stack, is pre-loaded in the internal flash memory. Stations and access points are written in Regions 1 and 2, respectively, making it easy to change operating modes by switching the FLASH_SEL pin from High to Low and vice versa.

Firmware with TCP/IP stack



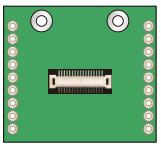
The firmware written in the flash memory includes protocols essential for wireless LAN communication, such as WPA-PSK, WPA2-PSK, and WPS. In addition, the pre-loaded TCP/IP stack enables both wireless LAN and network processing, making it easy to add IP communication to sets that previously could not support wireless LAN due to insufficient microcontroller processing capability or other restrictions.

Specifications

Wireless LAN Standards	IEEE802.11b,IEEE802.11g IEEE802.11n,IEEE802.11i
Host Interface	UART (~921600bps)
Integrated Flash Memory	4Mbit serial flash memory
Transmission Frequency	2,400MHz to 2,483.5MHz (ch1-ch13)
Transmission Power	IEEE802.11b : 15dBm±2dB
	IEEE802.11g : 13dBm±2dB
	IEEE802.11n : 12dBm±2dB
Communication Rate	IEEE802.11b : 1-11Mbps
	IEEE802.11g : 6-54Mbps
	IEEE802.11n : 6.5-72.2Mbps
Access Method	CSMA/CA
Access Mode	Infrastructure/Ad hoc
Security	64bit/128bit WEP, TKIP, AES
Supply Voltage	3.3V
Current Consumption	Continuous transmission : 300mA typ.
	Reception : 200mA Typ.
	Sleep : 500μA
Operating Environment	Temperature : -40 to +85°C
	Humidity : <85% (No condensation)
WPS (Wi-Fi Protected Setup)	PIN/PBC methods
Radio Act Certification	Japan and the US (Japan only when using external antenna)

Configuration Options

A dedicated 2.54mm-pitch conversion board is available, while adding an optional external antenna improves communication distance and enables mounting in sets with metallic housings for broader applicability.



Dedicated Conversion Board

External Antenna

Applications

- Industrial equipment, sensor networks, home networks
- Wireless LAN routers and peripheral devices
- Smartphones and the like
- Systems that could not support wireless LAN due to insufficient MCU
- Systems that could not support wireless LAN due to costs

Support:http://micro.rohm.com/en/download_support/wireless_lan_system/

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