Wireless Tri-Radio Module
Wi-Fi 6|Bluetooth 5|802.15.4

TRIA
AN AVNET COMPANY

TRIA SPB611

14 x 14 x 2,5 mm

1.5 W

-40 +85 °C

Highlights

- Full support for 802.11a/b/g/n/ac/ax
- Dual band 2.4/5 GHz
- 802.15.4 radio supporting Thread and Zigbee mesh networks
- Industrial temp -40 to +85°C
- Single supply, 3.3V
- Up to 600 Mbps with 802.11ax on 80 MHz channel
- Supports 802.11d/e/h/i/k/r/u/v/w/z/mc
- WPA2, WPA3 encryption
- Bluetooth 5.2 including LE long range and 2 Mbps
- No external components except decoupling on power supply
- Single antenna
- Low power consumption including sleep and standby modes
- Supporting STA, AP and P2P simultaneous operation
- Internal coexistence between WiFi/Bluetooth
- External coexistence interface to external radio such as LTE
- Extensive DMA hardware support for data flow to reduce CPUload.
- Advanced power management for optimum power consumption
- External interface is SDIO for WLAN and UART for Bluetooth
- PCM/I2C audio interface for Bluetooth
- On-board High Frequency High Precision Oscillator 40MHz
- Small footprint 14 x 14 mm (196 mm2) 41-pin
- RoHS Compliant

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Technical Data

Standards Support	802.11ax/ac/a/b/g/n, Bluetooth 5
Frequency Band	Dual 2.4 and 5GHz bands
Data rates	Up to 600Mbps
Hardware interfaces	4-bit SDIO 3.0, HS-UART
WLAN functions, QoS	Power save modes, automatic roaming, Ad-hoc, Soft AP, Wi-Fi Direct and Infrastructure mode
Wireless Security	WPA3, WEP 64 and 128bit with TKIP processing (WPA). AES/CCMP (WPA2). Enhanced AES. AES/CMAC in 11w. WAPI.
Dimensions	14x14 x 2,5 mm
Output power	802.11ax 12 dBm 802.11ac 14 dBm 802.11n 15 dBm Bluetooth 7dBm
Supply Voltage	3.3V +/- 5%
Operating Temp.	Industrial: -40 to + 85°C

Technical Data for TRIA SPB611

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Order Reference

Part No.	Description	Integrated PCB Antenna	802.15.4	LTE Filter	Chip
SPB-611-RNDM	WLAN BT module(without Antenna without LTE Filter)	No	No	No	IW611
SPB-611-RLDM	WLAN BT module(without Antenna with LTE Filter)	No	No	Yes	IW611
SPB-611-BNDM	WLAN BT module(with Antenna without LTE Filter)	Yes	No	No	IW611
SPB-611-BLDM	WLAN BT module(with Antenna with LTE Filter)	Yes	No	Yes	IW611
SPB-611-RNTM	WLAN BT 802.15.4 module(without Antenna without LTE Filter)	No	Yes	No	IW612
SPB-611-BNTM	WLAN BT 802.15.4 module(with Antenna without LTE Filter)	Yes	Yes	No	IW612

Ordering Information for available SPB611-versions