

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



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

Wireless Tri-Radio Module

Wi-Fi 6 | Bluetooth 5 | 802.15.4



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

Wireless Tri-Radio Module

Wi-Fi 6 | Bluetooth 5 | 802.15.4



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	IW611UK/A1IZ
SPB-611-RLDM	WLAN BT module(without Antenna with LTE Filter)	No	No	Yes	IW611UK/A1IZ
SPB-611-BNDM	WLAN BT module(with Antenna without LTE Filter)	Yes	No	No	IW611UK/A1IZ
SPB-611-BLDM	WLAN BT module(with Antenna with LTE Filter)	Yes	No	Yes	IW611UK/A1IZ
SPB-611-RNTM	WLAN BT 802.15.4 module(without Antenna without LTE Filter)	No	Yes	No	IW612UK/A1IZ
SPB-611-BNTM	WLAN BT 802.15.4 module(with Antenna without LTE Filter)	Yes	Yes	No	IW612UK/A1IZ

Ordering Information for available SPB611-versions

Tria Technologies GmbH
Industriestr. 16
76297 Stutensee
info@tria-technologies.com
tria-technologies.com

Copyright © 2024 Tria Technologies GmbH. All data is for information purposes only and is subject to change without notice. No guarantee for legal purposes is implied. Information in this document has been carefully checked, however, no responsibility for inaccuracies has to be assumed. All brand or product names may be trademarks and property of their respective owners.