

# Product Brief: SPB620

## WiFi 6, 802.11ax/ac/a/b/g/n, Bluetooth5 Module

PRELIMINARY

### Super Compact and High-Performance WiFi 6 Connectivity Module

With the SPB620 developers are targeting a wide range of applications with high performance and small footprint applications including

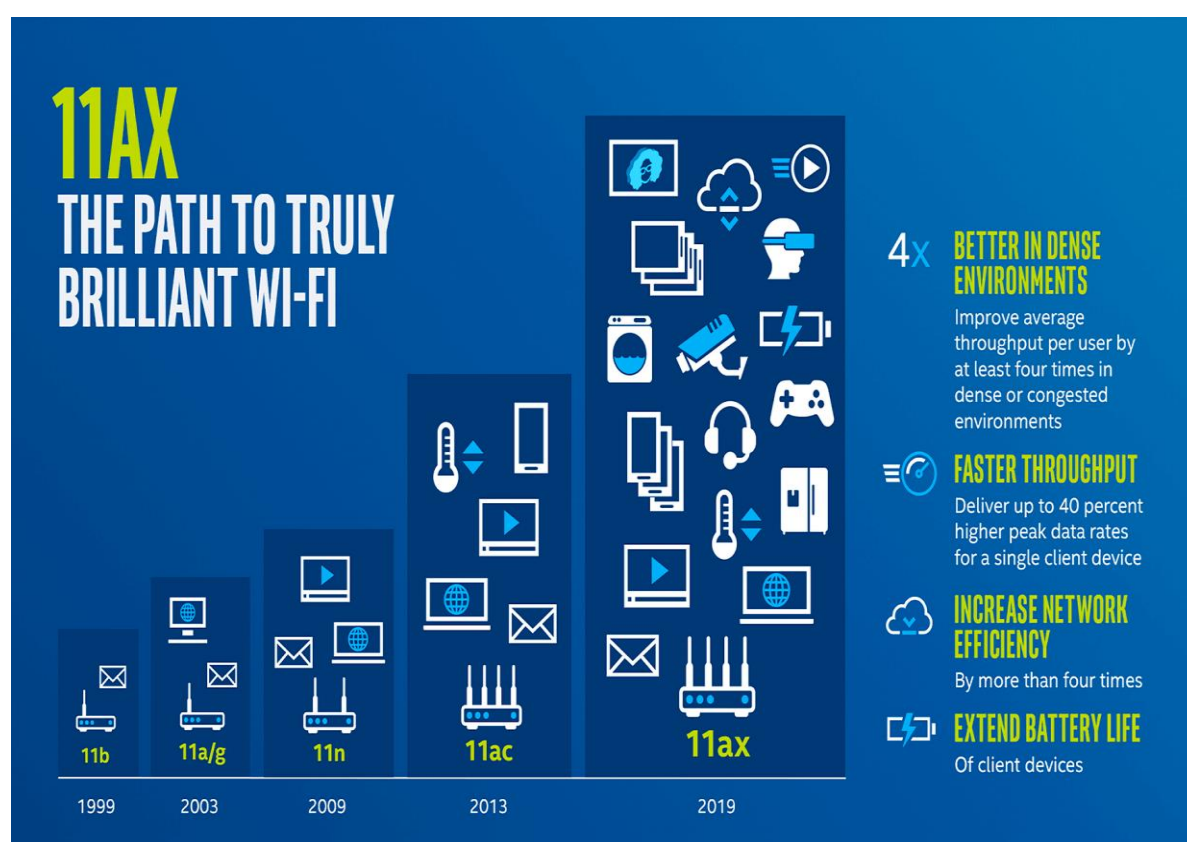
Smart home systems including home security and control, monitor systems and energy control.

Consumer electronic devices such as wearables, IP-radio, cameras, wireless speakers and IP audio devices

Industrial control and monitor systems, renewable energy systems and medical applications

SPB620 is a complete WiFi 6/Bluetooth 5 module with integrated EMC shield, ready for onboard integration in a hosted environment. SPB620 enables a cost efficient ultra-low power, high performance and feature rich client solution. It provides up to 1.658 Gbit/s data rate when operating in concurrent 2x2 MIMO configuration in both the 2.4 GHz and the 5 GHz bands

This highly integrated solution is optimized for customer applications running on a Linux host.



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### SPB620 Module

Concurrent Dual WiFi 6 and Bluetooth Multiradio for Internet of Things, Wearables, Gaming, Medical and Smart Home



### SPB620 WiFi6 2x2 concurrent dual Wi-Fi module

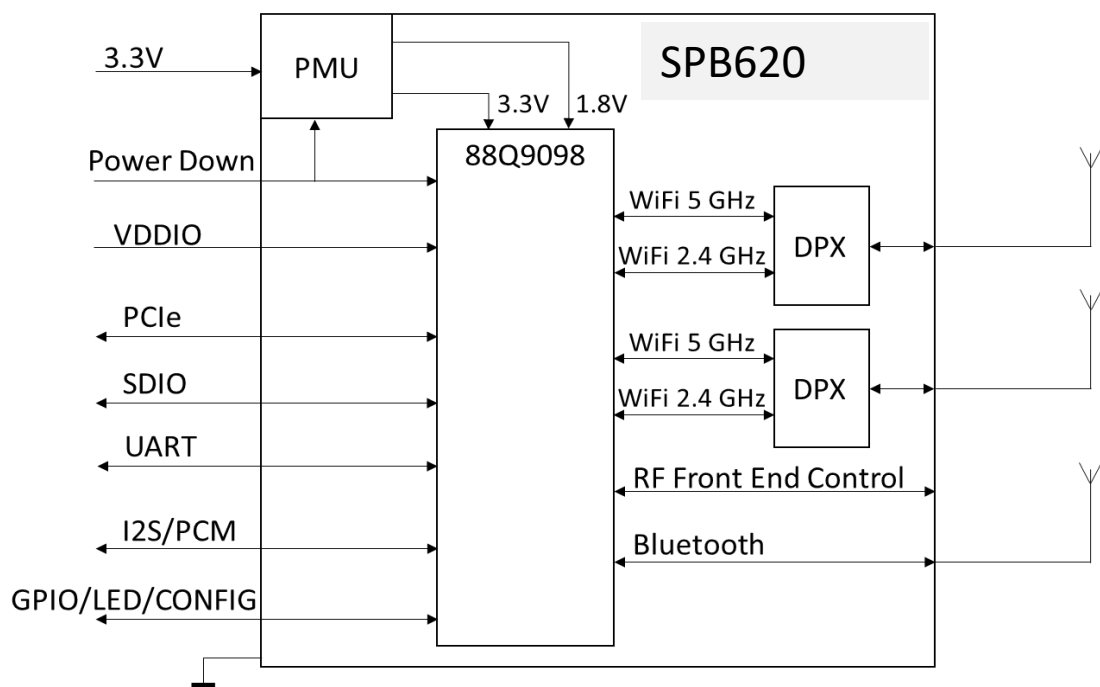
#### KEY FEATURES:

- Support for 802.11 ax/ac/a/b/g/n
- Dual band 2.4/5 GHz
- 2x2 MU-MIMO, 1024 QAM
- Industrial temp -40 to +85°C
- Single supply, 3.3V
- Concurrent WiFi 6 and WiFi 5
- Data Rates:
  - Up to 1.2 Gbps with 802.11ax on 80 MHz channel at 5 GHz and dual spatial streams
  - Up to 458 Mbps using 2.4 GHz PHY simultaneously with 5 GHz and Bluetooth
- Supports 802.11d/e/h/i/k/r/u/v/w/z/mc
- WPA2, WPA3 encryption
- Bluetooth 5.3 including LE long range and 2 Mbps
- No external components
- Low power consumption including sleep and standby modes
- Supporting STA, AP and P2P simultaneous operation
- Supports Bluetooth-WLAN coexistence and ISM-LTE coexistence
- Simultaneous WLAN and Bluetooth operation including BLE
- Extensive DMA hardware support for data flow to reduce CPU load.
- Advanced power management for optimum power consumption at varying load.
- External interfaces 4-bit SDIO 3.0 for WLAN/Bluetooth or PCIe for WLAN and UART for Bluetooth
- PCM/I2C audio interface for Bluetooth
- On-board High Frequency High Precision Oscillator 40MHz
- RoHS Compliant

# Product Brief Next Generation SPB620 WiFi 6, 802.11ax/ac/a/b/g/n, Bluetooth5 Module

**PRELIMINARY**

## Block Diagram



## Software

The SPB620 driver implements and reuses tools and interfaces that are de-facto standard in Linux and Android systems.

## Evaluation Package

SPB620 design is supported by the HDA231-PCIE development board in PCIe card format  
[support.hd-wireless.com](http://support.hd-wireless.com)

## Distribution

H&D Wireless products are available through several distribution channels. Contact your H&D Wireless Sales representative or visit the webpage

## For additional information please:

[sales@hd-wireless.se](mailto:sales@hd-wireless.se)  
[support.hd-wireless.com](http://support.hd-wireless.com)  
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## SPB620 Module

<b>Standards Support</b>	802.11ax/ac/a/b/g/n, Bluetooth 5
<b>Frequency Band</b>	Dual 2.4 and 5GHz bands
<b>Data rates</b>	Up to 1.2 Gbps with 802.11ax/n
<b>Hardware interfaces</b>	PCIe, 4-bit SDIO 3.0, HS-UART,
<b>WLAN functions, QoS</b>	Power save modes, automatic roaming, Ad-hoc, Soft AP, Wi-Fi Direct and Infrastructure mode
<b>Wireless Security</b>	WPA3, WEP 64 and 128bit with TKIP processing (WPA). AES/CCMP (WPA2). Enhanced AES. AES/CMAC in 11w. WAPI.
<b>Dimensions</b>	19,8 x 13,8 x 2,5 mm
<b>Output power</b>	802.11ax 12dBm 802.11ac 16dBm 802.11n 17dBm Bluetooth 7dBm
<b>Supply Voltage</b>	3,0 to 3,47V
<b>Operating Temp.</b>	Industrial: -40 to + 85°C



## Order information

SPB620-N No LTE coexistence filter mounted  
 SPB620-L LTE coexistence filter mounted

Part No.	Description
SPB620-N-2	SPB620 module on Tape&Reel, No LTE co-existence filter
SPB620-L-2	SPB620 module on Tape&Reel, Including LTE co-existence filter
SPB620-N-3	SPB620 module on Tray, No LTE co-existence filter
SPB620-L-3	SPB620 module on Tray, Including LTE co-existence filter
EVK HDA620-SDIO	Development board for SPB620 platform, SD card format
EVK HDA620-PCIe	Development board for SPB620 platform, PCIe card format