



## H&D Wireless Connectivity Guide 2024-2025

A Selector Guide for IoT, Industry 4.0, Medical and Digital Media market

[www.hd-wireless.com/products/connectivity-modules/](http://www.hd-wireless.com/products/connectivity-modules/)

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# Summary: H&D Wireless Connectivity Guide 2024-2025



Module part#	SPB620	SPB437	SPB611 / *SPB612	SPB209	SPB438
Data rates	Up to 1.6 Gbps	Up to 1.6 Gbps	Up to 600Mbps	Up to 433 Mbps	Up to 600Mbps
Wi-Fi	802.11ax/ac/a/b/g/n 2.4 and 5GHz 2x2 MU-MIMO	802.11ax/ac/a/b/g/n 2.4 and 5GHz 2x2 MU-MIMO	802.11ax/ac/a/b/g/n 2.4 and 5GHz 1x1 MU-MIMO	a/b/g/n/ac 2.4 and 5GHz Bluetooth 4.2 Classic and BLE	802.11ax/ac/a/b/g/n 2.4 and 5GHz 1x1 MU-MIMO
Bluetooth	Bluetooth 5.3	Bluetooth 5.3	Bluetooth 5 + *802.15.4	yes	Bluetooth 5
Dual band	yes	yes	yes	yes	yes
Dual mode	yes	yes	yes	yes	yes
Format	16x20mm, external antenna	M.2 2230 MODULE, 22x30mm	14x14mm, 14x21mm w. external ant.	14x14mm, 14x21 LTE filter	M.2 2230 MODULE, 22x30mm
Operating Temp	Industrial: -40 to +85 °C	Industrial: -40 to +85 °C	Industrial: -40 to +85 °C	Industrial: -40 to +85 °C	Industrial: -40 to +85 °C
I/F	PCIe, 4-bit SDIO 3.0, HS-UART,	PCIe, 4-bit SDIO 3.0, HS-UART,	4-bit SDIO 3.0, HS-UART, *SPI	SDIO 3.0, HS UART, PCM	4-bit SDIO 3.0, HS-UART,
EVK	HDA620	HDA437	HDA611	HDA209	HDA438 incl antennas
Samples available	June/2022	June/2022	Q4/2022	Yes	Q4/2022



Module part#	SPB228	SPB432
Data rates	Up to 800Mbps	Up to 800Mbps
Wi-Fi	802.11 a/b/g/n/ac 2.4 and 5GHz 2x2 Wave2 MU-MIMO	802.11 a/b/g/n/ac 2.4 and 5GHz 2x2 Wave2 MU-MIMO
Bluetooth	Bluetooth 5 Classic and BLE	Bluetooth 5 Classic and BLE
Dual band	yes	yes
Dual mode	yes	yes
Format	Industrial: -40 to +85 °C	Industrial: -40 to +85 °C
Operating Temp	M.2 12x16mm solder down standard	M.2 2230 MODULE, 22x30mm
I/F	PCIe 3.0, USB 3.0, SDIO 3.0, UART, PC	PCIe, SDIO and USB Interfaces
EVK	HDA228	HDA228
Samples available	Yes	Yes



Module part#	HDG235
Data rates	Up to 600Mbps
Wi-Fi	802.11ax/ac/a/b/g/n 2.4 and 5GHz 1x1 Mu-MIMO
Bluetooth	Bluetooth 5 Classic and BLE + *802.15.4
Dual band	yes
Dual mode	yes
Format	10x10 mm with integrated shield
Operating Temp	Industrial: -40 to +85 °C
I/F	SDIO 3.0, UART, *SPI
EVK	HDA235
Samples available	ES Q2/2024, MOQ: 50k
Contact	contact sales@hd-wireless.se

## Welcome to support.hd-wireless.com

This website aims to provide technical information about how to work with the H&D Wireless Wi-Fi and Bluetooth modules on Linux and Android based platforms.

You will be able to find here all the documentation we provide for our different modules including datasheet, schematics and application notes together with the Linux drivers.

Already have one of our evaluation boards? Check out our [getting started guides](#) to get it quickly up and running.



For order options and data sheets please contact: [sales@hd-wireless.se](mailto:sales@hd-wireless.se) and visit [www.hd-wireless.com](http://www.hd-wireless.com)

## SPB620



SPB620 WiFi6 2x2 concurrent dual Wi-Fi module

<b>Module</b>	SPB620
<b>Data rates</b>	Up to 1.6 Gbps
<b>Wi-Fi</b>	802.11ax/ac/a/b/g/n 2.4 and 5GHz 2x2 MU-MIMO
<b>Bluetooth</b>	Bluetooth 5.3
<b>Dual band</b>	yes
<b>Dual mode</b>	yes
<b>Format</b>	16x20mm, external antenna
<b>Operating Temp</b>	Industrial: -40 to +85 °C
<b>I/F</b>	PCIe, 4-bit SDIO 3.0, HS-UART,
<b>EVK</b>	HDA620
<b>Samples available</b>	June/2022

## SPB437



SPB437 WiFi6 2x2 concurrent dual Wi-Fi module

<b>Module</b>	SPB437
<b>Data rates</b>	Up to 1.6 Gbps
<b>Wi-Fi</b>	802.11ax/ac/a/b/g/n 2.4 and 5GHz 2x2 MU-MIMO
<b>Bluetooth</b>	Bluetooth 5.3
<b>Dual band</b>	yes
<b>Dual mode</b>	yes
<b>Format</b>	M.2 2230 MODULE, 22x30mm
<b>Operating Temp</b>	Industrial: -40 to +85 °C
<b>I/F</b>	PCIe, 4-bit SDIO 3.0, HS-UART,
<b>EVK</b>	HDA437
<b>Samples available</b>	June/2022

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## SPB611



SPB611 WiFi6 1x1 module / SDIO Interface \*802.15.4

<b>Module</b>	SPB611
<b>Data rates</b>	Up to 600Mbps
<b>Wi-Fi</b>	802.11ax/ac/a/b/g/n 2.4 and 5GHz 1x1 MU-MIMO
<b>Bluetooth</b>	Bluetooth 5
<b>Dual band</b>	yes
<b>Dual mode</b>	yes
<b>Format</b>	14x14mm, 14x21mm w. external antenna
<b>Operating Temp</b>	Industrial: -40 to +85 °C
<b>I/F</b>	4-bit SDIO 3.0, HS-UART,
<b>EVK</b>	HDA611
<b>Samples available</b>	Q4/2022

## SPB209



SPB209 WiFi5 1x1 module / SDIO Interface

<b>Module</b>	SPB209
<b>Data rates</b>	Up to 433 Mbps
<b>Wi-Fi</b>	a/b/g/n/ac 2.4 and 5GHz
<b>Bluetooth</b>	Bluetooth 4.2 Classic and BLE
<b>Dual band</b>	yes
<b>Dual mode</b>	yes
<b>Format</b>	14x14mm, 14x21mm w external antenna
<b>Options</b>	LTE filter, with antenna
<b>Operating Temp</b>	Industrial: -40 to +85 °C
<b>I/F</b>	SDIO 3.0, HS UART, PCM
<b>EVK</b>	HDA209
<b>Mass production</b>	Yes

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# SPB438

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SPB438 WiFi6 1x1 module / PCIe, SDIO Interface

<b>Module</b>	SPB438
<b>Data rates</b>	Up to 600Mbps
<b>Wi-Fi</b>	802.11ax/ac/a/b/g/n 2.4 and 5GHz 1x1 MU-MIMO
<b>Bluetooth</b>	Bluetooth 5
<b>Dual band</b>	yes
<b>Dual mode</b>	yes
<b>Format</b>	M.2 2230 Module 22x30mm
<b>Operating Temp</b>	Industrial: -40 to +85 °C
<b>I/F</b>	PCIe, 4-bit SDIO 3.0, HS-UART,
<b>EVK</b>	HDA438 incl antennas
<b>Samples available</b>	Q4/2022

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## SPB228



SPB228 WiFi5 2x2 module / PCIe / SDIO / USB Interface

<b>Module</b>	SPB228
<b>Data rates</b>	Up to 800Mbps
<b>Wi-Fi</b>	802.11 a/b/g/n/ac 2.4 and 5GHz 2x2 Wave2 MU-MIMO
<b>Bluetooth</b>	Bluetooth 5 Classic and BLE
<b>Dual band</b>	yes
<b>Dual mode</b>	yes
<b>Operating Temp</b>	Industrial: -40 to +85 °C
<b>Format</b>	M.2 12x16mm solder down standard pinning format
<b>I/F</b>	PCIe 3.0, USB 3.0, SDIO 3.0, UART, PCM
<b>EVK</b>	HDA228
<b>Mass production</b>	Yes

## SPB432



SPB432 WiFi5 2x2 M.2 card / PCIe / SDIO / USB Interface

<b>Module</b>	SPB432
<b>Data rates</b>	Up to 800Mbps
<b>Wi-Fi</b>	802.11 a/b/g/n/ac 2.4 and 5GHz 2x2 Wave2 MU-MIMO
<b>Bluetooth</b>	Bluetooth 5 Classic and BLE
<b>Dual band</b>	yes
<b>Dual mode</b>	yes
<b>Operating Temp</b>	Industrial: -40 to +85 °C
<b>Format</b>	M.2 2230 MODULE, 22x30mm
<b>I/F</b>	PCIe, SDIO and USB Interfaces
<b>EVK</b>	HDA228
<b>Mass production</b>	Yes

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# HDG235

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HDG235 WiFi6 1x1 SIP, MOQ: 50K

<b>Module</b>	HDG235
<b>Data rates</b>	Up to 600Mbps
<b>Wi-Fi</b>	802.11ax/ac/a/b/g/n 2.4 and 5GHz
<b>Bluetooth</b>	1x1 Mu-MIMO
<b>Dual band</b>	Bluetooth 5 Classic and BLE + *802.15.4
<b>Dual mode</b>	yes
<b>Format</b>	10x10 mm with integrated shield
<b>Operating Temp</b>	Industrial: -40 to +85 °C
<b>I/F</b>	SDIO 3.0, UART, *SPI
<b>EVK</b>	HDA235
<b>Availability</b>	ES Q2/2024, MOQ: 50k <b>contact <a href="mailto:sales@hd-wireless.se">sales@hd-wireless.se</a></b>

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