

SPB432 M.2 2230 Key E 802.11 ac/a/b/g/n 2x2 MU-MIMO Bluetooth 5 Highest Performance Dual Band Wi-Fi 2x2 MU-MIMO Bluetooth Combo Radio

SPB432 is a complete WLAN/BT-module with integrated EMC shield, ready for integration in a M.2 Key E slot.

The size and pinning is according to NGFF M.2 standard size 2230. It is using H&D Wireless module SPB228 that enables a cost efficient ultra-low power, high performance and feature rich client solution. It provides up to 866.7 Mbit/s data rate when operating in the 2x2 Multi-User MIMO OFDM mode and up to 11 Mbit/s data rate when operating in the DSSS/CCK mode.

SPB228 integrates RF, baseband/MAC, Bluetooth Package Engine, memory, RF filters, oscillator and EMC shield into a highly integrated and optimized module solution with high quality and reliability to a complete standalone solution with minimum need for external components. This highly integrated solution is optimized for customer applications running on a Linux host. The host interface supports PCIe, SDIO 3.0, USB and UART. Internal RAM comprises both code and data memory eliminating the need for external RAM, Flash or ROM memory interfaces. MAC address, trimming values etc. are stored in the on-board memory.

Please contact sales@hd-wireless.se for more information and data sheet.

**H&D Wireless AB is a Total System Solution Provider
Making Cloud Connectivity easy for IoT, Multimedia and
Industrial Apps and Networks**



H&D Wireless AB

Färögatan 33
164 51 Kista, Sweden
Tel: +46-8-7509977

sales@hd-wireless.se
www.hd-wireless.com

support.hd-wireless.com



SPB432 M.2 2230 Key E Module

Next generation Dual Band WiFi and Bluetooth Combo Radio for High Performance IoT Industrial Applications and Multimedia.



KEY FEATURES – SPB432

- ✓ M.2 2230 MODULE, 22x30mm
- ✓ Fully compability with 802.11 standards to 802.11n and ac MU-MIMO
- ✓ data rates up to 866.7 Mbps on 80Mhz channels
- ✓ 802.11 Wave2 MU-MIMO support for 2 spatial channels
- ✓ Driver support for Linux and Android
- ✓ Single supply voltage 3.3V
- ✓ Bluetooth 4.2 and 5 ✓ Bluetooth Class 1 and Class 2 operation
- ✓ Internal co-existence arbitration
- ✓ FCC, IC and CE approved reference design
- ✓ Complete integration including RF shield
- ✓ Interfaces PCIe 3.0, USB 3.0, SDIO 3.0, UART, PCM
- ✓ Industrial Temperature range -40 to +85°C
- ✓ Extensive DMA hardware support for data flow to reduce CPU load.
- ✓ RoHS compliant

SPB432 M.2 2230 Key E 802.11 ac/a/b/g/n 2x2 MU-MIMO Bluetooth 5 Highest Performance Dual Band Wi-Fi 2x2 MU-MIMO Bluetooth Combo Radio

Specification

Standards Support	802.11 abgn and ac 2x2 Wave2 MU-MIMO Bluetooth Classic and BLE 5
Frequency Band	Dual 2.4 and 5GHz bands
Data rates	Bluetooth EDR and BDR packets BLE 1Mbps and 2Mbps WLAN abgn standard rates WLAN 11ac MCS 0 to 9, Nss 1,2 20MHz/40MHz/80MHz channels Up to 866.7Mbps nominal rates
Interfaces	PCIe v3.0, USB 2.0/3.0, SDIO3.0 HS UART, PCM SPI, GPIO
WLAN functions	Power save modes, automatic roaming, Ad-hoc, Soft AP, Wi-Fi Direct and Infrastructure mode
Wireless Security	WEP 64 and 128bit with TKIP processing (WPA). AES/CCMP (WPA2). Enhanced AES. AES/CMAC in 11w. WAPI.
Location services	802.11mc WLAN indoor location BT Angle of Arrival location
Dimensions	22x30mm, nominal height 2,5mm
Output power	802.11g 17dBm 802.11a 15dBm 802.11n 5GHz HT20 14dBm 802.11n 5GHz HT40 14dBm Bluetooth 4/7dBm
Supply Voltage	3.0 to 3.47V
Operating Temp	Industrial: -40 to + 85°C

Software

The SPB432 device driver implements and reuses tools and interfaces that are de-facto standard in Linux and Android systems.



H&D Wireless AB
 Färögatan 33
 164 51 Kista, Sweden
 Tel: +46-8-7509977
sales@hd-wireless.se
www.hd-wireless.com
support.hd-wireless.com

Order information



Example:

Product Family
 SPB432

Host interface

- A = PCIe Host interface for WLAN and USB2 for BT, 3.3V IO
- B = SDIO host interface for both WLAN and BT, 3.3V IO
- C = PCIe Host interface for WLAN and UART for BT, 3.3V IO
- D = USB2 host interface for both WLAN and BT, 3.3V IO
- E = PCIe Host interface for WLAN and UART for BT, 1.8V IO
- F = PCIe Host interface for WLAN and UART for BT, IO supplied from con.

Delivery Package

- 1= ESD bag
- 3= Tray

Distribution

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

Available Order options

Part No.	Description
SPB432-A-1	M.2 2230 Key E module using PCIe Host interface for WLAN and USB2 for BT, 3.3V IO, in ESD bag
SPB432-A-3	M.2 2230 Key E module using PCIe Host interface for WLAN and USB2 for BT, 3.3V IO, on Tray
SPB432-B-1	M.2 2230 Key E module using SDIO host interface for both WLAN and BT, 3.3V IO, in ESD bag
SPB432-B-3	M.2 2230 Key E module using SDIO host interface for both WLAN and BT, 3.3V IO, on Tray
SPB432-C-1	M.2 2230 Key E module using PCIe Host interface for WLAN and UART for BT, 3.3V IO, in ESD bag
SPB432-C-3	M.2 2230 Key E module using PCIe Host interface for WLAN and UART for BT, 3.3V IO, on Tray
SPB432-D-1	M.2 2230 Key E module using USB2 host interface for both WLAN and BT, 3.3V IO, in ESD bag
SPB432-D-3	M.2 2230 Key E module using USB2 host interface for both WLAN and BT, 3.3V IO, on Tray
SPB432-E-1	M.2 2230 Key E module using PCIe Host interface for WLAN and UART for BT, 1.8V IO, in ESD bag
SPB432-E-3	M.2 2230 Key E module using PCIe Host interface for WLAN and UART for BT, 1.8V IO, on Tray
SPB432-F-1	M.2 2230 Key E module using PCIe Host interface for WLAN and UART for BT, IO supplied from connector, LDO mounted but not connected, in ESD bag
SPB432-F-3	M.2 2230 Key E module using PCIe Host interface for WLAN and UART for BT, IO supplied from connector, LDO mounted but not connected, on Tray