Accelerate® -
Wireless Solutions for the Digitalized World

H&D Wireless

Product Brief

Next Generation SPB228 WLAN and Bluetooth Module

Highest Performance Dual Band Wifi 2x2 MU-MIMO and Bluetooth 5 Combo Radio

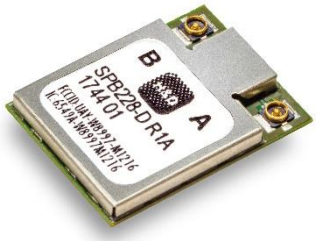
INTRODUCTION

SPB228 is a latest generation 28nm technology based ultra-high performance module that integrates all functions for a WLAN 2x2 MU-MIMO dual-band and Bluetooth 5 Combo Radio ready for integration into Linux and Android platforms. The low power, high performance SPB228 module enables a feature rich client solution providing a nominal 867Mbps data rate. SPB228 fully supports concurrent or independent operation of WLAN and Bluetooth.

The SPB228 has multiple high-speed interfaces to the host in order to simplify integration into host systems. It comes with dual MHF4 connectors for flexible choice of antennas and in an Industry Standard M.2 12x16 standard pinning format.

With the SPB228 developers are targeting a wide range of applications including

- Highly robust and secure industrial systems with high performance requirements
- Smart home systems including video, audio, home security and control
- Consumer electronic devices such as gaming, tablets, mobile computing and real-time video streaming



SPB228-D, 2x2 Wave2 MU-MIMO WLAN and Bluetooth 5 in a M.2 12x16mm solder down standard pinning format

SPB228 Combo Module

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

802.11 a/b/g/n/ac 2.4 and 5GHz 2x2 Wave2 MU-MIMO Bluetooth 5 Classic and BLE

KEY FEATURES – SPB228

- ✓ Fully compability with 802.11 standards to 802.11n and ac MU-MIMO with 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

H&D Wireless AB

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

www.hd-wireless.com

support.hd-wireless.com

Headquarters
H&D Wireless AB
Färögatan 33
164 51 Kista, Sweden
Tel: +46-8-7509977
Fax:+46-8-7509977

sales@hd-wireless.se

International
sales@hd-wireless.se

Global Presence & Distribution

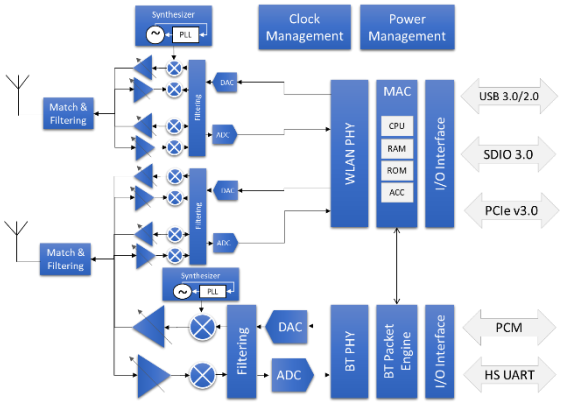
Technical Support

Software drivers
Wi-Fi Integration
Reference designs
Documentation

support.hd-wireless.com

www.hd-wireless.com

SPB228 Block diagram



The SPB228 is highly integrated and its complete and proven system functionality means quicker design cycles at lowest risk and simplified, cost efficient manufacturing. The 28nm design reduces power consumption and supports advanced signal processing that enhances link robustness and supports transmit beamforming for increased capacity and range.
The SPB228 solution is calibrated and FCC, CE certified resulting in lowest possible customer system cost.

Software

The SPB228 device driver implements and reuses tools and interfaces that are de-facto standard in Linux and Android systems.

Evaluation Package

SPB228 design is supported with HDA228 development board in SD-card format with SDIO and USB interfaces and in PCIe format with PCIe interface

Support for Application and Turnkey Development

- **Reference designs**
- **Reference design modification to customer specific needs**
- **Customer specific application support and development**

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 contact sales@hd-wireless.se

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	12x16mm M2 size standard solder down pinning
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

Specification is subject to change without notice

Order information

Part No.	Description
SPB228-D-2	M2 12x16mm solder down module on Tape & Reel
SPB228-D-3	M2 12x16mm solder down module on tray
HDA228-USB-SDIO	Development kit for SPB228 platform, SD card format. USB and SDIO interface.
HDA228-PCIe	Development kit for SPB228 platform in M2 2230 Key E format. PCIe interface.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for WiFi Modules (802.11) ***category:***

Click to view products by H&D Wireless ***manufacturer:***

Other Similar products are found below :

WISE-1520ITB-TDA1E SX-PCEAN2C-SP BCM43602KMLG 7265.NGWG.W ENW-49801A1JF WH-M2SD50NBT SX-680-2700-SP RN171-IRM481 FXX-3061-MIX 9668C52W10E EMIO-1533-00A2 EWM-W162M201E ISM43340-L77-TR BCM4352KMLG BCM43520KMLG BCM43217KMLG 7265.NGWWB.W PPC-WL-KIT02-R11 RC-CC2640-A M113DH3200PS3Q0 SX-PCEAN2c WT-01S WT8266-S3 ESP-07S WT8266-S6 ESP-12S WT-01F WT8266-S5 ESP-12F WT32-S1 ESP-WROOM-02UC ESP-WROOM-02DC WT-01N ESP32-WROOM-32UC ESP32-WROOM-32DC ESP-01 ESP-01S ESP32-WROOM-32(16MB) ESP32-WROVER-E(8MB) ESP32-WROVER-IB(16MB) ESP32-WROVER-E(16MB) ESP32-WROVER-IB(8MB) ESP32-WROOM-32D(16MB) ESP32-WROOM-32U(8MB) ESP32-WROOM-32U(16MB) ESP-WROOM-02(4MB) ESP-WROOM-02D(4MB) ESP32-WROVER-E(4MB) ESP32-WROVER-B(16MB) ESP32-WROVER(IPEX 4MB) EAR00370 EAR00373 EAR00364