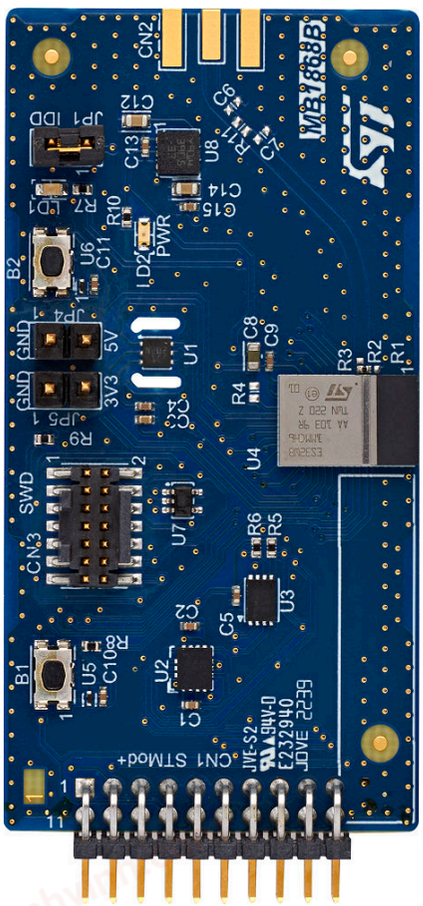
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B-WB1M-WPAN1

Data brief

STM32WB connectivity expansion board



B-WB1M-WPAN1 top view without add-on STMod+ adapter board. Picture is not contractual.

Product status link
B-WB1M-WPAN1

Features

- STM32WB connectivity expansion board embedding an STM32WB1MMC module including:
  - Ultra-low-power STM32WB15CCY dual-core Arm® Cortex®-M4/M0+, Bluetooth® Low Energy 5.4, AES-256, featuring 320 Kbytes of flash memory and 48 Kbytes of SRAM in a WLCSP49 package
  - RF transceiver multistandard radio Bluetooth® Low Energy, compliant with Bluetooth® specification 5.4 with 1 and 2 Mbit/s transfer rates
- 256-Kbit serial I^2C bus EEPROM
- MEMS sensors from STMicroelectronics:
  - Integrated high-accuracy temperature sensor
  - 3D accelerometer and 3D gyroscope
- User LED
- User and reset push-buttons
- Board connectors:
  - MIPI® debug
  - STMod+
  - USB Type-C® for power only on add-on STMod+ adapter board
- Flexible power supply options: external sources, or USB V_{BUS} from the add-on board
- Comprehensive free software libraries and examples available with the STM32CubeWB MCU Package
- Support of a wide choice of Integrated Development Environments (IDEs) including IAR Embedded Workbench®, MDK-ARM, and STM32CubeIDE

Description

The B-WB1M-WPAN1 STM32WB connectivity expansion board provides an affordable and flexible way for users to try out new concepts and build prototypes with the STM32WB series STM32WB1MMC microcontroller module.

The B-WB1M-WPAN1 product requires a separate probe for programming and debugging. The STLINK-V3SET debugger can be connected through a MIPI10/ STDC14 cable.

The B-WB1M-WPAN1 STM32WB connectivity expansion board is provided with a USB Type-C® connector (for power only) on an add-on STMod+ adapter board.

The B-WB1M-WPAN1 product is provided with the STM32WB comprehensive software HAL library and various packaged software examples available with the STM32CubeWB MCU Package.

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1 Ordering information

To order the B-WB1M-WPAN1 STM32WB connectivity expansion board, refer to Table 1. For a detailed description, refer to its user manual on the product web page. Additional information is available from the datasheet and reference manual of the STM32WB1MMC module.

Table 1. Ordering information

Order code	Board reference	User manual	Target STM32
B-WB1M-WPAN1	• MB1868(1) • MB1880(2)	UM3200	STM32WB1MMCH6TR

1. *Expansion board*
2. *STMod+ adapter board*

1.1 Product marking

The stickers located on the top or bottom side of all PCBs provide product information:

- First sticker: product order code and product identification, generally placed on the main board featuring the target device.
  Example:

  Product order code
  Product identification

- Second sticker: board reference with revision and serial number, available on each PCB.
  Example:

  MBxxxx-Variant-yzz
  syywwxxxxx

On the first sticker, the first line provides the product order code, and the second line the product identification.

On the second sticker, the first line has the following format: *"MBxxxx-Variant-yzz"*, where *"MBxxxx"* is the board reference, *"Variant"* (optional) identifies the mounting variant when several exist, *"y"* is the PCB revision, and *"zz"* is the assembly revision, for example B01. The second line shows the board serial number used for traceability.

Parts marked as *"ES"* or *"E"* are not yet qualified and therefore not approved for use in production. ST is not responsible for any consequences resulting from such use. In no event will ST be liable for the customer using any of these engineering samples in production. ST's Quality department must be contacted prior to any decision to use these engineering samples to run a qualification activity.

"ES" or *"E"* marking examples of location:

- On the targeted STM32 that is soldered on the board (for an illustration of STM32 marking, refer to the STM32 datasheet *Package information* paragraph at the *www.st.com* website).
- Next to the evaluation tool ordering part number that is stuck, or silk-screen printed on the board.

Some boards feature a specific STM32 device version, which allows the operation of any bundled commercial stack/library available. This STM32 device shows a *"U"* marking option at the end of the standard part number and is not available for sales.

To use the same commercial stack in their applications, the developers might need to purchase a part number specific to this stack/library. The price of those part numbers includes the stack/library royalties.

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1.2 Codification

The meaning of the codification is explained in Table 2.

Table 2. Codification explanation

B-XXYY-ZZZZT	Description	Example: B-WB1M-WPAN1
B	Expansion board	Connectivity expansion board
XX	MCU series in STM32 32-bit Arm Cortex MCUs	STM32WB series
YY	MCU product line in the series	STM32WB1M line
ZZZZ	Wireless network	Wireless personal area network based on Bluetooth® Low Energy 5.4 certified
T	Sequential number	First WPAN connectivity expansion board

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2 Development environment

The B-WB1M-WPAN1 STM32WB connectivity expansion board runs with the STM32WB1MMC module including the STM32WB15CCY 32-bit microcontroller based on the dual-core Arm® Cortex®-M4/M0+ processor.

Note: Arm is a registered trademark of Arm Limited (or its subsidiaries) in the US and/or elsewhere.

2.1 System requirements

- Multi-OS support: Windows® 10, Linux® 64-bit, or macOS®
- USB Type-A or USB Type-C® to USB Type-C® cable

Note: macOS® is a trademark of Apple Inc., registered in the U.S. and other countries and regions.

Linux® is a registered trademark of Linus Torvalds.

Windows is a trademark of the Microsoft group of companies.

2.2 Development toolchains

- IAR Systems® - IAR Embedded Workbench®(1)
- Keil® - MDK-ARM(1)
- STMicroelectronics - STM32CubeIDE

1. *On Windows® only.*

2.3 Demonstration software

The demonstration software, included in the STM32Cube MCU Package corresponding to the on-board microcontroller, is preloaded in the STM32 flash memory for easy demonstration of the device peripherals in standalone mode. The latest versions of the demonstration source code and associated documentation can be downloaded from *www.st.com*.

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Revision history

Table 3. **Document revision history**

Date	Revision	Changes
07-Sep-2023	1	Initial release.

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