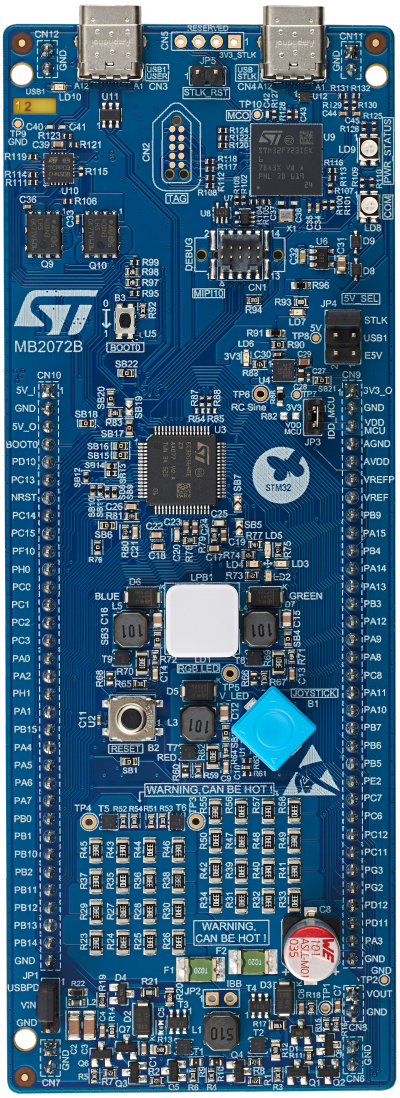
B-G564E-DPOW1

Data brief

Digital power Discovery kit with STM32G564RE MCU



B-G564E-DPOW1 top view
Picture is not contractual.

Product status
B-G564E-DPOW1

Features

- STM32G564REZ3 microcontroller based on the Arm® Cortex®-M33 core, featuring 512 Kbytes of flash memory and 112 Kbytes of SRAM, in a TQFP64-EP package
- USB Type-C® with USB 2.0 FS interface, DRP and DRD, with TCPP03-M20 USB PD 3.1 companion chip, SPR and PPS
- RGB power LED for bright lighting
- Digital power buck-boost converter with internal or external input voltage, onboard resistor loads, and current-sensing amplifiers
- Four user LEDs
- Two push-buttons (reset, and boot mode)
- 4-direction joystick with a selection key
- Board connectors:
  - User USB Type-C® connector
  - STLINK-V3EC USB Type-C® connector
  - MIPI10 debug connector
  - Tag-Connect™ 10-pin footprint connector
  - 2x 33-pin header, 2.54 mm pitch, extension for breadboard connection
- Flexible power-supply options: 5 V from STLINK-V3EC USB Type-C®, or user USB Type-C®, or 5 V external source
- On-board STLINK-V3EC debugger/programmer with USB re-enumeration capability: mass storage (optional), Virtual COM port, and debug port
- Comprehensive free software libraries and examples available with the STM32CubeG5 MCU Package
- Support of a wide choice of Integrated Development Environments (IDEs) including IAR Embedded Workbench®, MDK-ARM, and STM32CubeIDE
- Handled by STM32CubeMonitor-UCPD (STM32CubeMonUCPD) software tool

Description

The B-G564E-DPOW1 Discovery kit is a digital power solution, a complete demonstration and development platform for the STMicroelectronics STM32G564REZ3 microcontroller. It leverages new HRTIM-oriented features, 112 Kbytes of embedded RAM, math accelerator functions, and USB PD 3.0 offered by STM32G564REZ3. The B-G564E-DPOW1 Discovery kit offers a user USB Type-C® port, helping users to prototype digital power applications, such as a buck-boost converter and RGB power LED lighting.

The B-G564E-DPOW1 Discovery kit does not require a separate probe because it integrates the STLINK-V3EC debugger and programmer.

The B-G564E-DPOW1 Discovery kit comes with comprehensive software HAL library and various packaged software examples.

1 Ordering information

To order the B-G564E-DPOW1 Discovery kit, 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 target STM32.

Table 1. List of available products

Order code	Board reference	User manual	Target STM32
B-G564E-DPOW1	MB2072(1)	UM3731	STM32G564REZ3

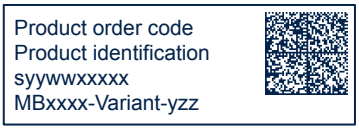
1. *Main board.*

1.1 Product marking

The product and each board composing the product are identified with one or several stickers. The stickers, located on the top or bottom side of each PCB, provide product information:

- Main board featuring the target device: product order code, product identification, serial number, and board reference with revision.

  Single-sticker example:

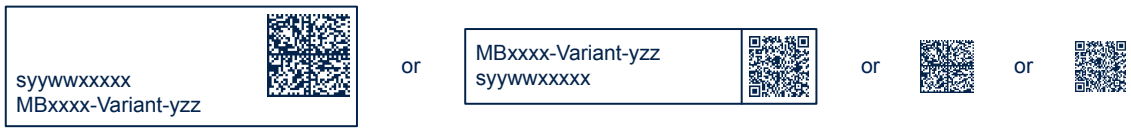
  

  Dual-sticker example:

- Other boards if any: board reference with revision and serial number.

  Examples:

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

On all board stickers, the line formatted as *"MBxxxx-Variant-yzz"* shows the board reference *"MBxxxx"*, the mounting variant *"Variant"* when several exist (optional), the PCB revision *"y"*, and the assembly revision *"zz"*, for example B01. The other line shows the board serial number used for traceability.

Products and parts labeled as *"ES"* or *"E"* are not yet qualified or feature devices that are not yet qualified. STMicroelectronics disclaims any responsibility for consequences arising from their use. Under no circumstances will STMicroelectronics be liable for the customer's use of these engineering samples. Before deciding to use these engineering samples for qualification activities, contact STMicroelectronics' quality department.

"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 ordering part number of the evaluation tool 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.

1.2 Codification

The meaning of the codification is explained in Table 2.

Table 2. Codification explanation

B-XXYYZ-DPOW1	Description	Example: B-G564E-DPOW1
B	Discovery kit	Discovery kit
XX	MCU series in STM32 32-bit Arm Cortex MCUs	STM32G5 series
YY	MCU product line in the series	STM32G5x4 product line
Z	STM32 flash memory size: • E for 512Kbytes	512 Kbytes
DPOW1	Application type	Digital power

2 Development environment

The B-G564E-DPOW1 Discovery kit runs with the 32-bit STM32G564REZ3 microcontroller based on the Arm® Cortex®-M33 core.

arm

Note: Arm and Cortex are registered trademarks of Arm Limited (or its subsidiaries or affiliates) in the US and/or elsewhere.

The Arm word and logo are trademarks of Arm Limited (or its subsidiaries) in the US and/or elsewhere. All rights reserved.

2.1 System requirements

- Multi-OS support: Windows® 10 or 11, 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*.

2.4 EDA resources

All board design resources, including schematics, EDA databases, manufacturing files, and the bill of materials, are available from the B-G564E-DPOW1 product page at *www.st.com*.

Revision history

Table 3. **Document revision history**

Date	Revision	Changes
16-Nov-2026	1	Initial release.

IMPORTANT NOTICE – READ CAREFULLY

STMicroelectronics NV and its subsidiaries (“ST”) reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice.

In the event of any conflict between the provisions of this document and the provisions of any contractual arrangement in force between the purchasers and ST, the provisions of such contractual arrangement shall prevail.

The purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST’s terms and conditions of sale in place at the time of order acknowledgment.

The purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of the purchasers’ products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

If the purchasers identify an ST product that meets their functional and performance requirements but that is not designated for the purchasers' market segment, the purchasers shall contact ST for more information.

ST and the ST logo are trademarks of ST. For additional information about ST trademarks, refer to www.st.com/trademarks. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2026 STMicroelectronics – All rights reserved