STM32G071B-DISCO

STM32G0 Discovery kit for USB Type-C™ and Power Delivery

Features

- STM32G071RBT6 microcontroller featuring 128 Kbytes of Flash memory and 32 Kbytes of RAM in LQFP64 package
- Plastic case
- 1" 128 x 64 pixels OLED LCD module with SPI interface
- USB Type-C™ interface plug cable and receptacle connector accessible by door with reed sensor detection
- 3 bidirectional current and power monitors with I^2C interface to measure V_{BUS}, CC1 and CC2 protected and isolated lines
- On-board DC/DC converter to sustain power supply with V_{BUS} varying from 3 V to 20 V (+/- 5 %)
- 4 user status LEDs about USB Type-C™ configuration
- 3 LEDs for power and ST-LINK communication
- 4-way joystick with selection button
- 1 reset push-button
- Board external connectors:
  - USB Type-C™ plug cable
  - USB Type-C™ receptacle connector
  - 8-pin user extension connector including ADC, SPI, USART and I^2C communication signals
  - USB with Micro-AB (ST-LINK)
- Board internal connectors:
  - 2 x 8-pin GPIOs free pins from microcontroller (accessible internally when case is removed)
  - USB Type-C™ test points for main signals
- Flexible power-supply options: ST-LINK USB V_{BUS} or USB Type-C™ V_{BUS}
- On-board ST-LINK/V2-1 debugger/programmer with USB enumeration capability: mass storage, Virtual COM port and debug port

Picture is not contractual.

- Comprehensive free software libraries and examples available with the STM32Cube™ MCU Package
- Support of a wide choice of integrated development environments (IDEs), including IAR™, Keil® and GCC-based IDEs

Description

The STM32G071B-DISCO Discovery board is a demonstration and development platform for the STMicroelectronics Arm® Cortex® -M0+ core-based STM32G071RB USB Type-C™ and Power Delivery microcontroller. The STM32G071B-DISCO Discovery board is presented with all necessary interfaces for easy connection and interoperability with other USB Type-C™ devices. The STM32G071B-DISCO Discovery board is intended for discovery and display of USB Type-C™ port characteristics such as data role, power role, V_{BUS} and I_{BUS} monitoring.

It offers an advanced user mode when associated with the STM32CubeMonUCPD software GUI and can be used as a USB Type-C™ and Power Delivery analyzer.

General information

The STM32G071B-DISCO embeds an STM32 32-bit microcontroller based on the Arm[®][(a)] Cortex[®]-M0+ processor.

System requirements

- Windows[®] OS (7, 8 and 10), Linux[®] 64-bit or macOS[®][(b)]
- USB Type-A to Micro-B cable

Development toolchains

- Keil[®] MDK-ARM[(c)]
- IAR™ EWARM[(c)]
- GCC-based IDEs

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

b. macOS[®] is a trademark of Apple Inc. registered in the U.S. and other countries.

c. On Windows[®] only

Ordering information

To order the STM32G071B-DISCO Discovery board, refer to *Table 1*:

Table 1. Ordering information

Order code	Target STM32
STM32G071B-DISCO	STM32G071RBT6

Revision history

Table 2. Document revision history

Date	Revision	Changes
13-Dec-2018	1	Initial version

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