32F412GDISCOVERY

Discovery kit with STM32F412ZG MCU

Data brief

Features

- STM32F412ZGT6 microcontroller featuring 1 Mbyte of Flash memory and 256 Kbytes of RAM in an LQFP144 package
- On-board ST-LINK/V2-1 SWD debugger supporting USB re-enumeration capability:
  - USB virtual COM port
  - mass storage
  - debug port
- 1.54 inch 240x240 pixel TFT color LCD with parallel interface and capacitive touchscreen
- I2S Audio CODEC, with a stereo headset jack, including analog microphone input and a loudspeaker output
- Stereo digital MEMS microphones
- MicroSD™ card connector extension
- I2C extension connector
- 128 Mbit Quad-SPI Nor Flash
- Reset button and Joystick
- Four color user LEDs.
- USB OTG FS with Micro-AB connector
- Four power supply options:
  - ST-LINK/V2-1 USB connector
  - User USB FS connector
  - VIN from Arduino™ connectors
  - + 5 V from Arduino™ connectors
- Two power supplies for MCU: 2.0 V and 3.3 V
- Compatible with Arduino™ Uno revision 3 connectors
- Extension connector for direct access to various features of STM32F412ZGT6 MCU
- Comprehensive free software including a variety of examples, part of STM32Cube package



1. Picture not contractual

Description

The STM32F412 Discovery kit (32F412GDISCOVERY) allows users to easily develop applications with the STM32F412 high performance MCUs with ARM® Cortex®-M4 core.

The Discovery kit combines STM32F412 features with 1.54 inch 240x240 pixel TFT color LCD with touchscreen, LEDs, Wakeup button, I2S Audio Codec, MEMS microphones, USB OTG FS, Quad-SPI NOR Flash memory, MicroSD™ card connector.

An embedded ST-LINK/V2-1 debugger/programmer is included; specialized add-on boards can be connected thanks to the Arduino™ Uno or to the expansion connectors.

For further information contact your local STMicroelectronics sales office. www.st.com

System requirements

- Windows® OS (XP, 7, 8) or Linux 64-bit or OS X®
- USB Type-A to Micro-B cable

Development toolchains

- Keil® MDK-ARM™(a)
- IAR® EWARM(a) (IAR Embedded Workbench®)
- GCC-based IDEs (free AC6: SW4STM32, Atollic® TrueSTUDIO®(a), ...)

Demonstration software

The demonstration software is preloaded in the STM32F412ZGT6 Flash memory and in MICRON N25Q128A. The latest version of the demonstration source code and associated documentation can be downloaded from the www.st.com/stm32f4-discovery webpage.

Ordering information

To order the Discovery kit based on the STM32F412ZG MCU, use the order code: **STM32F412G-DISCO**.

Technology partner

MICRON:

- 128-Mbit Quad-SPI NOR Flash memory device, part number **N25Q128A**

a. On Windows only.

1 Revision history

Table 1. Document revision history

Date	Revision	Changes
29-Jul-2016	1	Initial release.

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