

### Features

- STM32F746NGH6 microcontroller with 1 Mbyte Flash and 320+4 Kbytes RAM
- Six 5 V power supply options:
  - Power jack
  - ST-LINK/V2-1 USB connector
  - User USB HS connector
  - User USB FS1 connector
  - User USB FS2 connector
  - Daughterboard
- SAI Audio DAC, stereo audio jack which supports headset with microphone
- Stereo digital microphone, audio jack connector used to connect external speakers
- 2 Gbytes (or more) SDMMC interface microSD card
- RF-EEPROM on I2C compatible serial interface
- RS-232 communication
- IrDA transceiver
- JTAG/SWD and ETM trace debug support, ST-LINK/V2-1 embedded
- IEEE-802.3-2002 compliant Ethernet connector
- Camera module
- 8Mx32 bit SDRAM, 1Mx16 bit SRAM & 8Mx16 bit Nor Flash
- 512 Mbits QuadSPI Nor Flash
- 5.7 inch 640x480 pixel TFT color LCD with capacitive touch panel
- Joystick with 4-direction control and selector
- Reset, WakeUp/Tamper or key button
- 4 color user LEDs
- Extension connectors & memory connectors for daughterboard or wrapping board
- USB OTG HS and FS with Micro-AB connectors
- RTC with backup battery
- CAN 2.0A/B compliant connection



1. Picture not contractual

- Potentiometer
- Motor control connector

## 1 Description

The STM32746G-EVAL evaluation board is a complete demonstration and development platform for STMicroelectronics ARM® Cortex® -M7 core-based STM32F746NGH6 microcontrollers. It features four I<sup>2</sup>C interfaces, six SPIs with three multiplexed simplex I<sup>2</sup>S interfaces, SDMMC, four USARTs, two CANs, three 12-bit ADCs, two 12-bit DACs, two SAs, 8- to 14-bit digital camera module interface, internal 320+4 Kbytes SRAM and 1 Mbytes Flash, USB HS OTG and USB FS OTG, Ethernet MAC, FMC interface, Quad-SPI interface, JTAG debugging support. This evaluation board can be used as a reference design for user application development but it is not considered as a final application.

The full range of hardware features on the board helps the user to evaluate all peripherals (USB OTG HS, USB OTG FS, Ethernet, Motor Control, CAN, microSD Card, USART, Audio DAC and ADC, digital microphone, IrDA, RF-EEPROM, SRAM, Nor Flash, SDRAM, QuadSPI Flash, 5.7" TFT LCD with capacitive touch panel and others) and develop his own applications. Extension headers make it possible to easily connect a daughterboard for specific application.

The integrated ST-LINK/V2-1 provides an embedded in-circuit debugger and programmer for the STM32 MCU.

## 2 Order code

To order the evaluation board based on the STM32F746NG MCU, use the order code: STM32746G-EVAL2.

### 3 Revision History

Table 1. Document revision history

Date	Revision	Changes
20-Apr-2015	1	Initial release.

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