OPEN407V-D STANDARD

Brand Name:MicroShine
Model Number::Open407V-D Standard
Category::STM32F4 ARM Cortex-M4 Development Board
For use with::STM32F407V Development & STM32F4DISCOVERY Expansion
Features::Open & Modular design, features various communication interfaces
Supports::3.2inch 320x240 Touch LCD (B)
Communication interfaces::1xSDIO,1xDA,2xAD,1xUSART,1xUART,2xSPI, 2xI2S etc.
Place of Origin::Guangdong, China (Mainland)

STM32 development board designed for the ST official tool STM32F4DISCOVERY, and integrates various standard interfaces, pretty easy for peripheral expansions.

Overview

Open407V-D is an STM32 development board designed for the ST official tool STM32F4DISCOVERY, which features the STM32F407VGT6 microcontroller onboard.

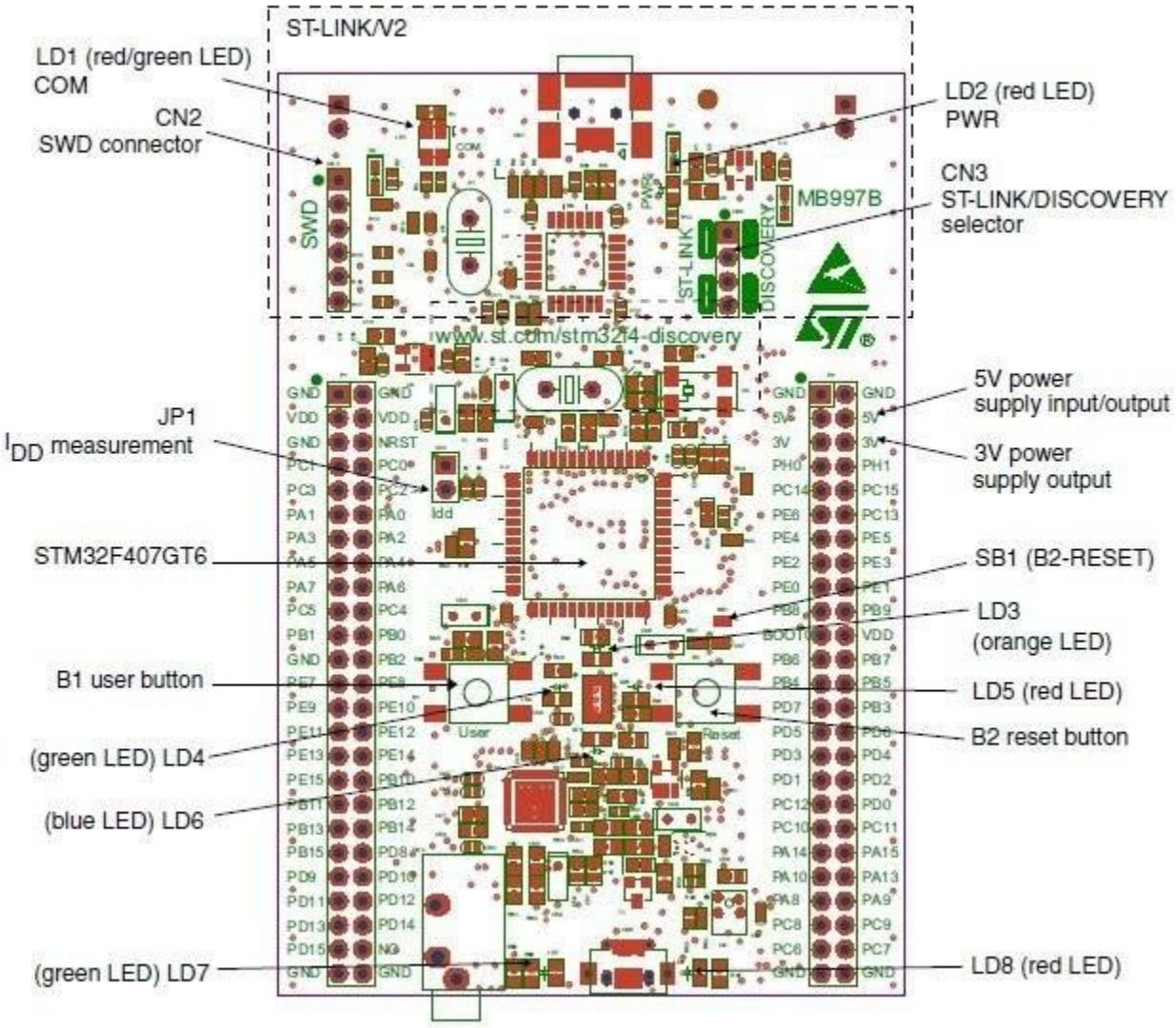
The **Open407V-D** supports further expansion with various optional accessory boards for specific application. The modular and open design makes it the ideal for starting application development with STM32F4 series microcontrollers.

What's on the mother Board

1. **STM32F4DISCOVERY socket:** for easily connecting the STM32F4DISCOVERY
2. **USART2 interface:** easily connects to RS232, RS485, USB TO 232, etc.
3. **SPI1/SPI2 + AD/DA interface**
   * easily connects to SPI peripherals such as DataFlash (AT45DBxx), SD card, MP3 module, etc.
   * SPI1 features AD/DA alternative function, supports connecting AD/DA module as well
4. **CAN1 interface:** communicates with accessory boards which feature the CAN device conveniently
5. **CAN2 interface:** communicates with accessory boards which feature the CAN device conveniently
6. **I2C1/I2C2 interface:** easily connects to I2C peripherals such as I/O expander (PCF8574), FRAM (FM24CLxx), etc.
7. **I2S2 / I2S3 / I2C1:** for connecting I2S peripherals, such as Audio module
8. **DCMI interface:** for connecting camera module
9. **SDIO interface:** for connecting Micro SD module, features much faster access speed rather than SPI
10. **FSMC + SPI interface (16-bit FSMC + SPI):** for connecting touch screen LCD
11. **FSMC interface (8-bit FSMC):** easily connects to peripherals such as NandFlash, Ethernet, etc.
12. **USART3 interface:** easily connects to RS232, RS485, USB TO 232, etc.
13. **ULPI interface:** for connecting high-speed USB peripheral (the STM32F407V integrates USB HS controller without any PHY device)
14. **Ethernet interface:** easily connects the MCU to ethernet network by using an additional ethernet module
15. **5V DC jack**
16. **5V/3.3 V power input/output:** usually used as power output, also common-grounding with other user board
17. **MCU pins connector:** all the MCU pins are accessible on expansion connectors for further expansion
18. **JTAG/SWD interface:** for debugging/programming
19. **SD Card Detect jumper**
20. **Joystick jumper**
   * short the jumper to connect the joystick to default I/Os used in example code
   * open the jumper to connect the joystick to custom I/Os via jumper wires
21. **Boot mode switch: for configuring BOOT0 pin**
22. **LCD backlight adjustment enable jumper**
   * short the jumper to enable LCD backlight adjustment
   * open the jumper to disable, and set free the I/O port

23. **AMS1117-3.3:** 3.3V voltage regulator
24. **Power supply switch:** 5V DC on/off switch
25. **Power indicator**
26. **Joystick:** five positions

What's on the STM32F4DISCOVERY



1. STM32F407VGT6 microcontroller featuring 32-bit ARM Cortex-M4F core, 1 MB Flash, 192 KB RAM in an LQFP100 package
2. On-board ST-LINK/V2 with selection mode switch to use the kit as a standalone ST-LINK/V2 (with SWD connector for programming and debugging)
3. Board power supply: through USB bus or from an external 5 V supply voltage
4. External application power supply: 3 V and 5 V

5. LIS302DL, ST MEMS motion sensor, 3-axis digital output accelerometer
6. MP45DT02, ST MEMS audio sensor, omni-directional digital microphone
7. CS43L22, audio DAC with integrated class D speaker driver
8. Eight LEDs:
    * LD1 (red/green) for USB communication
    * LD2 (red) for 3.3 V power on
    * Four user LEDs, LD3 (orange), LD4 (green), LD5 (red) and LD6 (blue)
    * 2 USB OTG LEDs LD7 (green) VBus and LD8 (red) over-current
9. Two push buttons (user and reset)
10. USB OTG FS with micro-AB connector
11. Extension header for all LQFP100 I/Os for quick connection to prototyping board and easy probing