



Olimex - STM32-103STK - MCU - Development Kit

Product Overview:

The ARM Cortex-M3 processor is the latest generation of ARM processors for embedded systems. It has been developed to provide a low-cost platform that meets the needs of MCU implementation, with a reduced pin count and low-power consumption, while delivering outstanding computational performance and an advanced system response to interrupts. The ARM Cortex-M3 32-bit RISC processor features exceptional code-efficiency, delivering the high-performance expected from an ARM core in the memory size usually associated with 8- and 16-bit devices.

The STM32F103 Performance Line family has an embedded ARM core and is therefore compatible with all ARM tools and software. It combines the high performance ARM Cortex-M3 CPU with an extensive range of peripheral functions and enhanced I/O capabilities.

STM32-103STK is starter kit board which allows you to explore all STM32F103 capabilities. It has NOKIA 3310 BW 84x48 LCD, buttons, SD-MMC card, Accelerometer, 2.4Ghz RF transceiver, Audio Input and Output, the power supply is made from single 1.5V AA cell battery.



Kit Contents:

- STM32-103STK Starter kit board
- STM32F103RBT6 microcontroller

Key Features:

- MCU: STM32F103RBT6 ARM 32 bit CORTEX M3™ with 128K Bytes Program Flash, 20K Bytes RAM, USB, CAN, x2 I2C, x2 ADC 12 bit, x3 UART, x2 SPI, x3 TIMERS, up to 72Mhz operation
- standard JTAG connector with ARM 2x10 pin layout for programming/debugging with ARM-JTAG

- USB mini connector
- LCD NOKIA 3310 BW 84x48 pixels
- 1.5V battery connector with step-up converter
- 3-axis accelerometer
- SD-MMC card
- 2.4 GHz transceiver with Nordic nRF23L01
- Audio input
- Audio output
- user buttons x2
- Joystick with 4 directions and push action
- UEXT connector for other Olimex's modules connection like MOD-MP3, etc.
- RESET button
- status LED
- 8 MHz crystal oscillator
- 32768 Hz crystal and RTC backup battery connector
- extension headers for all uC ports
- PCB: FR-4, 1.5 mm (0,062"), solder mask, silkscreen component print
- Dimensions: 90 x 65mm (3.5 x 2.5")

Ordering Information:

Products:

| Part Number | Manufacturer | Farnell P/N | Newark P/N |
|--------------|--------------|-------------|------------|
| STM32-103STK | Olimex | 1701515 | 25R5111 |

Associated Products:

| Part Number | Manufacturer | Description | Farnell P/N | Newark P/N |
|-------------|------------------|------------------------------|-------------|------------|
| 1-1634688-0 | Tyco Electronics | HEADER, BOX, STRAIGHT, 10WAY | 8395918 | 39K0556 |
| 534B1103JLB | Vishay | POTENTIOMETER, 2W 10K | 1144786 | NA |
| 15033626 | Duracell | BATTERY, PROCELL, AA, | 4951554 | NA |

| | | | | |
|---------------|-------|--|---------|---------|
| | | PK638 | | |
| 4106210394 | Varta | BATTERY, ALKALINE, AA, PK4 | 5088150 | 15J6468 |
| STM32F103RBT6 | ST | 32-Bit Microcontroller Controller Family/Series:(ARM Cortex) STM32; Memory Size, RAM:20KB; | 1447640 | 59M2183 |

Similar Products:

| Part Number | Manufacturer | Description | Support Device | Farnell P/N | Newark P/N |
|-------------|--------------|----------------------------------|----------------|-------------|------------|
| STM32-P103 | Olimesx | KIT, DEV, ST ARM CORTEX M3 BOARD | STM32F103RBT6 | 1701513 | 25R5110 |

Document List:

Datasheets:

| Part Number | Description | Size |
|--------------|---|-------|
| STM32-103STK | STM32-103STK Users Manual | 910KB |

Application Notes:

| File Name | Size |
|---|--------|
| Code Composer Studio tutorial how to use TMS320-P28016 board | 153KB |
| Flash programming on TMS320-P28016 | 543KB |
| STM32F10xxx devices: advanced I²C examples | 153KB |
| How to get the best ADC accuracy in STM32F10xxx devices | 122KB |
| Oscillator design guide for ST microcontrollers | 71.3KB |
| STM32F10xxx internal RC oscillator (HSI) calibration | 1.5MB |
| Implementing the ADPCM algorithm in high-density STM32F103xx microcontrollers | 72.9KB |
| STM8S and STM32™ MCUs: a consistent 8/32-bit product line for painless migration | 153KB |
| How to migrate from the STM32F10xxx firmware library V2.0.3 to the STM32F10xxx standard peripheral library V3.0.0 | 122KB |

Hardware & Software:

| File Name | Size |
|--|--------|
| STM32-103STK schematic | 64KB |
| JTAG connector (top view) | 63.7KB |
| Blinking LED C source and project for EW-ARM 5.11 | 122KB |
| Sample mouse driver with accelerometer, USB Audio device, USB Mass Storage, USB-to-RS232 Virtual COM port, Maze game with accelerometer and LCD C source and project for EW-ARM 5.11 | 71.3KB |
| USB Virtual COM port and bi-directional RF link between two STM32-103STK C source and project for EW-ARM 5.11 | 1.5MB |
| STM32-103STK test code shipped with every board for EW-ARM 5.11 | 72.9KB |
| Blinking LED project for GCC + Eclipse + OpenOCD | 153KB |
| OpenOCD + Eclipse set of projects 1.00 include flash write make file for STM32-103STK | 122KB |

Others Resources:

| File Name | Size |
|---|--------|
| The complete list of projects | 63.7KB |