

**STM8L DISCOVERY (C-YA-A-00181)**

STM8L-DISCOVERY is Development Kit for 8BIT STM8L MCU that is ULTRALOWER POWER from ST Company, it is inexpensive. It divides into 2 main groups according to use and study.



- Part of Training Board or use includes
  - MCU No.STM8L152C6T6, 32KB FLASH, 2KB RAM, 1KB EEPROM, 48PIN LQFP
  - LCD Display 28PIN DIP (24 SEGMENTS, 4 COMMANDS)
  - 6-Digit Display, 2 LEDs, 1 SW for testing
- Part of ST LINK
  - Use MCU No.STM32F103 to connect with computer PC through USB PORT (connector of board is as USB MINI)
  - Can do IN-CIRCUIT DEBUGGING directly and can interface SWIM with MCU from external board

(\*\*\* This STM8L DISCOVERY is imported, there is no any warranty for this product \*\*\*)

**STM32F4 DISCOVERY (C-YA-A-00162)**

This is inexpensive 32 BIT Microcontroller from ST Company; it is the new series of STM32 ARM CORTEX-M4F. This board consists of 2 main parts as listed below;



- ST-LINK/V2 is used to download and debug into MCU STM32F407VGT6 on board through PORT USB.
  - The part of ST-LINK/V2, it uses MCU No.STM32F103 to connect the operation between computer PC through USB PORT (CABLE USB TYPE A TO B MINI-B is OPTION, it is not included in the package).
  - IN-CIRCUIT DEBUG and PROGRAM with MCU STM32F4 on board.
  - Connector 6 PIN SWD is externally interfaced for DEBUG and PROGRAM with external board.

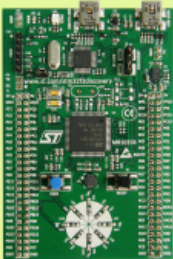
**2. STM32F4**

- Use MCU No.STM32F407VGT6, 32 BIT ARM CORTEX-M4F 1MB FLASH, 192KB RAM, LQFP100 TYPE
- Use +5V Power Supply from USB Connector or from External 5V Power Supply
- Has 3-AXIS ACCELEROMETER No.LIS302DL on board
- Has DIGITAL MICROPHONE No.MP45DT02 on board
- Has USB OTG FS with Connector MICRO-AB
- Body of Board is made as 2 of Connector PIN HEADER underneath PCB 25x2

(\*\* This STM32F4 DISCOVERY set is imported product, so there is no any warranty for this mode\*\*)

**STM32F3 DISCOVERY (C-YA-A-00177)**

This STM32F3 DISCOVERY is Development Kit in the family of STM32 from ST Company that uses MCU STM32F3 ARM CORTEX M4. There is the part of DOWNLOAD with DEBUG on board and the part of MCU with full of components such as INPUT, OUTPUT, etc.



- Part of ST-LINK/V2 is used to DOWNLOAD data and DEBUG on board, and Connector SWD for using and connecting outside board
- Use MCU No.STM32F303VCT6 with 256 KB FLASH, 48 KB RAM, 100 PIN LQFP
- Use Power from USB Connector or from external DC 3V or 5V
- Has 3-AXIS DIGITAL GYROSCOPE No.L3GD20 from ST Company on board
- Has ACCELERATION SENSOR and MAGNETIC SENSOR No.LSM303DLHC from ST Company on board

- Has 8-LED to display operating status of GYROSCOPE and ACCELERATION in the format of electronic compass
- Has 1-Port USB MINI Connector for interfacing with computer (OPTION: it is not included in the kit and user needs to additionally purchase if customer has not CABLE USB TO 5P MINI (A-CB-A-00044) and it uses Connector from MCU as USB MINI 1 PORT.
- Board is made as PIN HEADER, it can be connected with 2 of PCB 25x2 PIN

(\*\*\* This STM32F3 DISCOVERY is imported, there is no any warranty for this product \*\*\*)

**STM32F0 DISCOVERY (C-YA-A-00176)**

This development kit is 32 BIT Microcontroller in the series of STM32 ARM CORTEX-M0 from ST Company. There is the part of DOWNLOAD and DEBUG on board with STM32M0.



- The part of ST-LINK/V2, it is used to download data from USB PORT of computer; and, it uses Connector SWD for internal and external board.
- Use MCU No.STM32F051R8T6, 64 KB FLASH, 8KB RAM, LQFP 64 PIN
- Body of Board is made as Connector PIN HEADER underneath PCB 33x2
- Use Power Supply from USB PORT, Connector USB is in the format of USB MINI.
- Provide PCB in set



(\*\*\* This STM32F0 DISCOVERY is imported product, so there is no any warranty for this model\*\*\*)

**STM32L DISCOVERY (C-YA-A-00182)**

STM32L DISCOVERY is Development Kit for 32BIT MCU that is ARM CORTEX-M3 ULTRA-LOW-POWER from ST Company, it is inexpensive. It divides into 2 main groups;



- Part of Training Board or use includes
  - MCU No.STM32L152RBT6, 128 KB FLASH MEMORY, 16KB RAM, 4 KB EEPROM, RUN 32 MHz, IC TYPE 64-LQFP
  - LCD 28PIN DIP (24 SEGMENT, 4 COMMANDS) 6-Digit Display
  - 4 LED, LD1 for using with USB, LD3 POWER 3.3, LD3 and LD4 are connected from PORT
  - Has LINEAR TOUCH SENSOR or 4 TOUCH SW to test PIN HEADER 28x2 is connected from MCU for interfacing with external board
- Part of ST-LINK
  - Use MCU No.STM32F103, interface with computer PC through USB PORT (connector is as USB MINI)
  - Can do IN-CIRCUIT DEBUGGER with MCU on board directly, without using other Development Kit. Moreover, it can connect SWIM to use with MCU from external board.

(\*\*\* This STM32L DISCOVERY is imported, there is no any warranty for this product \*\*\*)

**STM32 VALUE LINE DISCOVERY (C-YA-A-00127)**

This is economical device to learn and develop STM32. STM32 VALUE LINE DISCOVERY is 32BIT STM32 ARM Cortex-M3 from ST to develop Microcontroller. It consists of 2 main devices in the package. Firstly, it is ST-LINK that is used to DOWNLOAD and DEBUG; secondly, it is Board MICRO STM32F100RBT6B.



- ST-LINK: It uses MCU No.STM32F103 to connect with computer PC through PORT USB (Connector USB MINI and Cable USB are not provided in the package).

- Do IC-CIRCUIT DEBUG and PROGRAM into MCU STM32 on board

- Has Connector 4PIN SWD that is externally connected to DEBUG and PROGRAM with external MCU

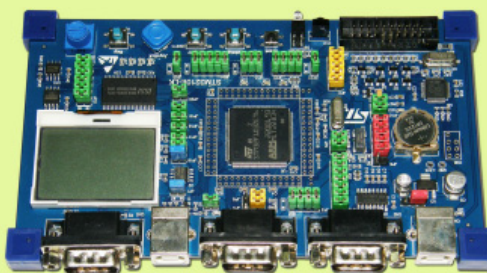
**2.Training Board**

- Use MCU No.STM32F100RBT6B that is ARM Cortex-M3, 64PIN LQFP, 128KB FLASH, 8KB RAM, 51 I/O, RUN 24MHz.

- Board is designed as Connector PIN HEADER under PCB 28 X 2PIN and 6PIN, so it can be actually used to connect or test the operation.

\*\* (STM32 VALUE LINE DISCOVERY is imported from abroad with limited amount, and no warranty).

**STM3210E-LK (C-YA-A-00139)**



STM3210E-LK is a learning kit to study the operation of 32BIT STM3210E-LK from ST Company, especially in the family of STM32 ARM CORTEX-M3. This board consists of 2 parts as follows;



- ST-LINK JTAG: It uses MCU No.STM32F103 to link the device to computer PC through USB PORT. Can operate as EMULATION, DEBUGGING and FLASH PROGRAMMING with Training Board that is connected on board. Has Connector 20PIN JTAG as ST-LINK to interface with external MCU STM32F10X

- Training Board: There are many devices on board that are useful to learn and study. Use MCU No.STM32F103ZET6, 512 KBYTE FLASH, 144-LQFP Circuits on board for testing the operation

- 128 KB FSMC SRAM
- 512 KB FSMC NOR FLASH
- 128 MB FSMC NAND FLASH
- 8 MB SPI FLASH
- RS232
- CAN
- USB
- SD CARD SOCKET
- 4 LED
- 128 X 64 DOT GRAPHIC LCD
- 1 VR TEST A/D
- 5-DIRECTION JOYSTICK
- IR LED TRANSMITTER & RECEIVER

- Use Connector USB as Power Supply of board

STM3210E-LK consists of... 1. Board STM3210E

2. 3 of CD-ROMs; IAR KICKSTART, KEIL RELEASE 1.2009 and STM32

3. Cable USB A-B TYPE, Cable RS232

