

**ET-STM32F103/512**  
(P-ET-A-00459)

**ET-STM32F103**  
(P-ET-A-00366)

32 Bit ARM Cortex-M3 Processor  
Run 72MHz Clock / 90MIPS (1.25DMIPS/MHz)  
128KByte Flash Memory / 20KByte Static RAM  
64LQFP Packet 51 Bit I/O (16 External Interrupt) with 5V-Tolerant Logic Level

7-Channel DMA For Peripherals ADC, SPI, I<sup>2</sup>C, USART  
16 CH / 12 Bit ADC Converter

4 x 16 Bit Timer (16-Input Capture / 16-Output Copare / 18-PWM)  
2-SPI / 2-I<sup>2</sup>C / 3-USART / 1-USB / 1-CAN / 2-WDG / RTC  
★ Support Debug with Serial wire Debugger (SWD) & JTAG Interface

STM32

ARM Cortex-M3  
72MHz/90MIPS  
128KByte Flash  
20KByte SRAM

USB 2.0 FULL SPEED

SD CARD SLOT

RS232

Support Debug with Serial wire Debugger (SWD) & JTAG Interface



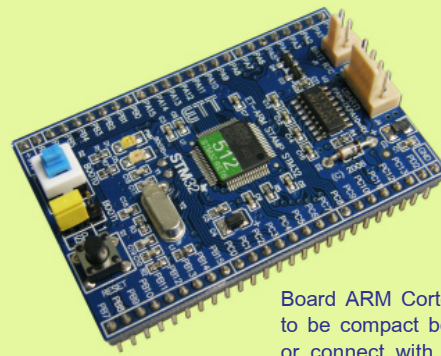
**Specification of Board**

- Use MCU 32 Bit ARM Cortex-M3 No.STM32F103RBT6 from ST Micro-electronics
  - Has 128KB Flash Memory and 20KB Static RAM internal MCU
  - Use Crystal 8.00 MHz + Phase-Locked Loop (PLL), Run 73MHz frequency with 1.25DMIPS/MHz speed to process data that is equal to 90 MIPS
  - RTC Circuit (Real Time Clock) with X'TAL 32.768 kHz and Battery Backup
  - Support In-System Programming (ISP) and In-Application Programming (IAP) through on-Chip Boot-Loader Software via PORT USART-1 (RS232)
  - Circuit to connect with standard 20 PIN JTAG ARM Interface to debug as Real Time
  - +5VDC Power Supply; in this case, user can use it from either USB Port or external CPA-2PIN Connector with +3.3V/3A Regulate Circuit internal board
  - Standard USB 2.0 as Full Speed
  - Circuit to connect with SD Card by using 1 Channel SPI Mode
  - RS232 Communication circuit by using 2-Channel standard ETT 4-PIN Connector
  - Circuit to connect with Dot-Matrix LCD with the circuit to adjust the brightness by using Standard ETT 14 PIN Connector with Jumper to select +3.3V or +5V Power Supply for LCD
  - 2 Push Button Switch Circuits
  - 8 LED Circuits to display status of testing Output
  - 1 Circuit to generate 0-3.3V voltage by using adjustable Resistor to test A/D
  - Has independent 46 Bit GPIO to apply to A/D,I2C,SPI and Input Output with Jumper to select ON/OFF signal for using as either GPIO or Hardware Self-Test such as 8 Bit LED, Push Button SW, Volume, USART2 and SD Card, so it makes user can select and use all functions perfectly without any limitation of Hardware system on board
    - Header 10Pin IDE (PA[0..7])
    - Header 10Pin IDE (PA[8..15])
    - Header 10Pin IDE (PB[0..7])
    - Header 10Pin IDE (PB[8..15])
    - Header 10Pin IDE (PC[0..7])
    - Header 10Pin IDE (PC[8..13])
- **ET-STM32F103** consists of...
1. Board ET-STM32F103
  2. CD-ROM User's Manual, Program DOWNLOAD, Example Programs
  3. Cable Download RS232 DB 9 Pin



**ET-ARM STAMP STM32F103/128**  
(P-ET-A-00370)

**ET-ARM STAMP STM32F103/512**  
(P-ET-A-00371)



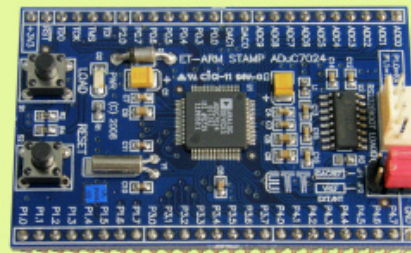
Board ARM Cortex-M3 32 BIT is designed to be compact board that is easy to apply or connect with PROJECT BOARD. There are 2 versions that are the same structures and circuits, but it only is different in the part of CPU as follows;

1. Version **ET-ARM STAMP STM32F103/128** uses CPU No.**STM32F103RBT6** that has **128 KBYTE FLASH** Memory and **20 KBYTE RAM**.
  2. Version **ET-ARM STAMP STM32F103/512** uses CPU No.**STM32F403RET6** that has **512 KBYTE FLASH** Memory and **64 KBYTE RAM**.
- 32 BIT ARM Cortex-M3, RUN 72 MHz CLOCK/90MIPS
  - 64 LQFP Packet 48 BIT I/O (16 External Interrupt) with 5V-Tolerant except A TO D that is not higher than 3.3V.
  - Support programming into CPU through RS232 PORT on 4 PIN ETT ICL3232 On Board
  - Board ET-ARM STAMP is placed on Connector 50 PIN HAEDER (25 PIN per each side with 2.54 mm. distance)
  - 3.3 VDC POWER SUPPLY
  - PCB Size: 40 x 65 mm.
  - **ET-ARM STAMP STM32** consists of...
1. Board
  2. Cable DOWNLOAD ET-RS232 DB 9 PIN
  3. CD-ROM User's Manual



**ET-ARM STAMP ADUC7024**  
(P-ET-A-00374)

It is ARM7 Board No.ADUC7024 from ANALOG DEVICE Company that is designed as mini size, so it is easy to adapt it for many application or interface with PROJECT BOARD.



- Use ARM7 TDMI CORE MCU No.ADUC7024; Signal CLOCK 32.768 KHz; and can operate as PHASE LOCK LOOP, RUN 41.78 MHz, 64 PIN LQFP TYPE
  - 62 KBYTE FLASH MEMORY, 8 KBYTE RAM
  - A TO D 12 BIT 10 CH. (0 - 2.5V)
  - D TO A 12 BIT 2 CH. (0 - 2.5V)
  - 5 PORT I/O; P0(6 BIT), P1(8 BIT), P2 (1 BIT), P3(8 BIT), P4(8 BIT)
  - I/O PIN is able to interface with Signal 5V
  - RS232 PORT 4 PIN ETT 1 CH
  - CONNECTOR is placed on 50 PIN HEADER in the distance range of 2.54 mm. (25 PIN per each side)
  - PCB SIZE: 40 x 65 mm.
  - 3.3 VDC POWER SUPPLY
  - Can directly download program from computer PC into internal FLASH Memory through PORT RS232.
  - **ET-ARM STAMP ADUC7024** includes...
1. BOARD ET-ARM STAMP ADUC7024
  2. CD-ROM User's Manual and Program
  3. CABLE DOWNLOAD ET-RS232 DB 9 PIN F

