

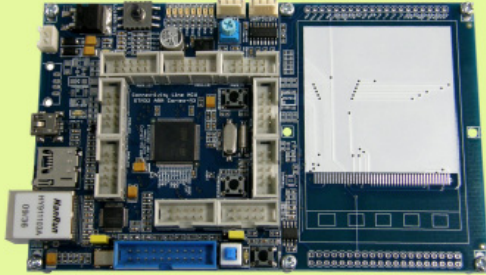
ET-STM32F ARM KIT (P-ET-A-00416)

ET-STM32F ARM KIT & TFT LCD (P-ET-A-00417)

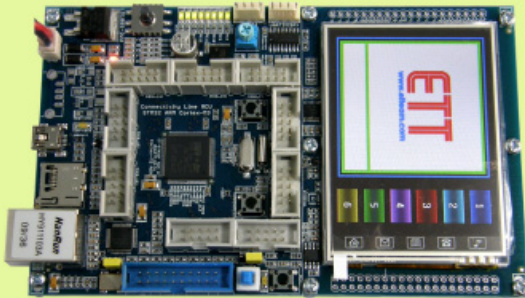
Board ET-STM32F ARM KIT is the Board Microcontroller in the family of ARM CORTEX M3 that is 32BIT 100PIN (LQFP) Microcontroller No.STM32F107VCT6 from ST Company. It is developed from version STM32F103 to improve its capacity higher. In this case, it adds ETHERNET LAN and USB to this board version.

ETT designs this board version to support the customers who require learning, studying, testing; and the customers who really require developing or modifying this board. The board's structure consists of basic devices that are necessary to learn and test various applications such as LED OUTPUT, PUSH BUTTON SW, JOY SW, and VOLUME to adjust A TO D. Moreover, there are high-level devices to support higher applications such as USB DEVICE/HOST/OTG, SD CARD, ETHERNET LAN, GRAPHIC LCD, RS232 and etc.

● **ET-STM32F ARM KIT**



● **ET-STM32F ARM KIT & TFT LCD**



Specifications of Board ET-STM32F ARM KIT and version TFT LCD

- Use IN-SYSTEM PROGRAMMING(ISP)through USART 2 BOOT-LOADER(RS232), without purchasing or using any COPY Programmer
 - Use ARM CORTEX M3 MCU No.STM32F107VCT6 that is 32BIT 100PIN(LQFP) MCU from ST Company
 - Has 256KB FLASH Memory, 64KB RAM, A TO D 12BIT 16-CHANNEL, D TO A 12BIT 2-CHANNEL
 - Use CRYSTAL 25.00MHZ; it is able to process data at the maximum high-speed of 72MHZ by using PLL internal MCU
 - Has Circuit RTC with X'TAL 32.768KHz and BATTERY BACKUP(OPTION)
 - Has circuit to interface with standard 20PIN JTAG RAM for REAL TIME DEBUG
 - Has USB 2.0 FULL SPEED to support the operation of DEVICE /(HOST/OTG(OPTION)) inside itself
 - Has ETHERNET LAN 10/100 Mb with Connector RJ45
 - Has SD CARD(MICRO SD) with SPI Interface
 - Has 2 sets of PUSH BUTTON SWITCH with SWITCH RESET
 - Has 5-Directional JOY SWITCH
 - Has 8 sets of LED OUTPUT with Circuit BUFFER
 - Has Adjustable Resistor to test A/D
 - Has Circuit RS232 Communication by using Connector 4PIN ETT 2-Channel
 - Has 80BIT GPIO; in this case, there are available 72BIT GPIO for independent application (it is able to connect with I/O at 5A, except A TO D that is not higher than 3.3V). There are 9 sets of Connector 10PIN IDE that can be chosen and used to be 72BIT GPIO or other functions such as A/D, D/A, I2C, CAN, ETHERNET
 - Use 5VDC POWER SUPPLY for board (it is able to use ET-SWITCHING ADAPTER 5V 1.2A TYPE B (A-AP-A-00079)) with Connector 2PIN and Circuit REGULATE No.LD1085-3V3
 - PCB Board size: 15.3 X 9 cm.
 - Both of board versions consist of...
1. Board
 2. CD-ROM, User's Manual and Example Programs
 3. Cable DOWNLOAD RS232 DB 9 PIN

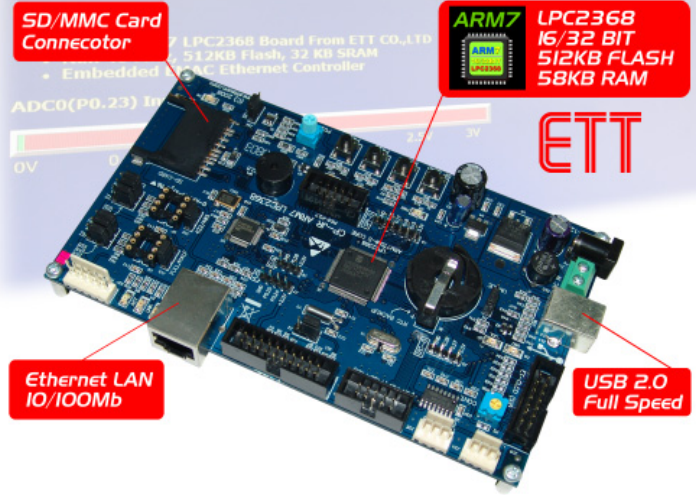


ET-STM32F ARM KIT & TFT LCD has more additional devices than ET-STM32F ARM KIT as follows;

- TFT COLOR LCD with 240 X 320 PIXEL TOUCH SCREEN, 3.2" Wide Screen, 65536 colored Resolution and it uses SINGLE CHIP DRIVER No.SPF5408A
 - CHIP TOUCH SCREEN CONTROLLER No.ADS7846 (ON BOARD)
- (*ETT does not recommend user to interface LCD TFT COLOR in another formats by self because this board maybe unacceptable, including no program to support).

CP-JR ARM7 LPC2368

(P-CP-A-00097)



CP-JR ARM7 LPC2368 is the Board Microcontroller in the family of ARM7 TMDI-S CORE No.LPC2368 from PHILIPS (NXP) with circuits such as ETHERNET LAN 10/100Mb, USB 2.0, SD CARD, RS232, RS485 and etc.

- Use MCU ARM7 TMDI-S No.LPC2368 from PHILIPS (NXP) 16/32 BIT, 100 PIN (LQFP), 512KB FLASH Memory, 58KB RAM, 10 BIT A TO D, 10 BIT D TO A, RTC, PWM, CAN
- 12.00MHZ CRYSTAL can be made PHASE-LOCKED LOOP; maximum rate to run is 72 MHz.
- IN-SYSTEM PROGRAMMER (ISP) through PORT PS232 ON BORAD
- PORT JTAG ARM 20 PIN STANDARD to DEBUG as REAL TIME
- PORT USB 2.0 as FULL SPEED, Connector TYPE B ON BOARD
- PORT ETHERNET LAN 10/100Mb, Connector RJ45 ON BOARD
- Circuit to connect with Memory CARD as SD or MMC with Connector
- PORT RS232 4 PIN ETT 2-Channel
- PORT RS422/485 6 PIN ETT 1-Channel (OPTION IC 75176 or MAX3088)
- 14 PIN LCD PORT as CHARACTER TYPE
- 3 TACT SW, 2 LED DOT, 1 MINI SPEAKER
- 1 VR 10K R to test A/D
- Independent 25 BIT GPIO for many applications such as A/D, D/A, I2C, SPI, and INPUT/OUTPUT (can be interfaced with I/O at 5V)
 - 10 PIN HEADER P2 (0-7) for GPIO or FULL-DUPLEX UART
 - 10 PIN HEADER P0 (4-7), P1 (20-23) for GPIO or KEY 4 X 4
 - 3 PIN HEADER P0 (26) for GPIO or D/A
 - 4 PIN HEADER P0 (24-25) for GPIO or A/D
 - 4 PIN HEADER P0 (27-28) for GPIO or I2C BUS
 - 6 PIN HEADER P0 (15-18) for GPIO or SPI BUS
- POWER SUPPLY can be used with Board that is 7 - 12VDC (can use version ET-SWITCHING ADAPTER 12V 0.5A TYPE J) and there is REGULATE 5V and 3.3 V ON BOARD
- PCB Size: 15.3 X 9 CM.
- **CP-JR ARM7 LPC2368** consists of...
 1. Board CP-JR ARM7 LPC2368
 2. CD-ROM of User's Manual and Program
 3. CABLE DOWNLOAD ET-RS232 DB P PIN



OPTION

 <p>● สาย LAN CROSS 2 M (P-CB-A-00027)</p> <p>● สาย LAN DIRECT 2 M (P-CB-A-00028)</p>	 <p>● CABLE USB 2.0 AM/BM 1.8M (A-CB-A-00043)</p>	 <p>● CABLE USB TO 5P MINI (A-CB-A-00044)</p>
 <p>● LCD 16 X 2 & CONVER 14 PIN (LCD 16 Character 2 Line with PCB to interface into Connect PORT 14 PIN LCD) (P-ET-A-00364)</p>	 <p>ET-SWITCHING ADAPTER 5V 1.2A TYPE B</p> <p>INPUT:100 - 240VAC</p> <p>OUTPUT:5VDC 1.2A</p>	
 <p>ET-SWITCHING ADAPTER 12V 0.5A TYPE J (A-AP-A-00057)</p> <p>INPUT:100 - 240VAC</p> <p>OUTPUT:12VDC 0.5A</p>		