

# LPC1768 ARM-CM3 Board Getting Started V1.0



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## 1. Packing List

- (1) One LPC1768 ARM-CM3 Board
- (2) One 2.4 inches TFT LCD (240\*320)
- (3) One RS-232 Serial Cable
- (4) One USB A-B cable
- (5) One RJ45 Ethernet Cable
- (6) One CD-ROM
- (7) Packing List
- (8) Getting Started – this paper

## 2. LPC1768 Board Picture

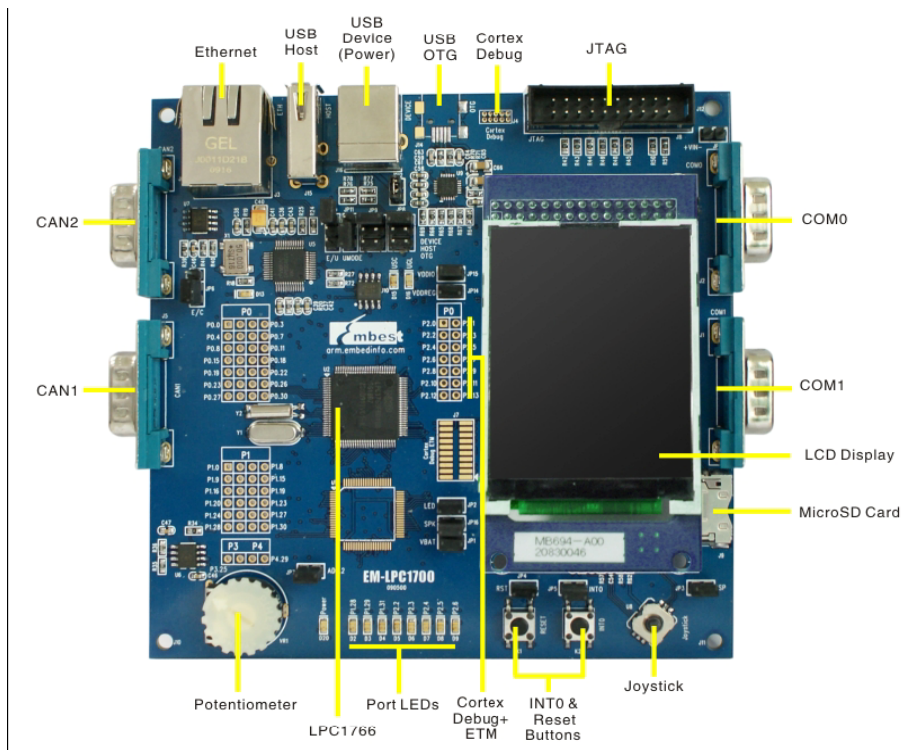


Figure 1 LPC1768 Board

## 3. Hardware Requirements

In order to make good use of this LPC1768 ARM-CM3 Board, We recommend you to prepare the following hardware devices:

- (1) One LPC1768 ARM-CM3 Board.
- (2) A PC with either of the following:
  - ◆ Two unused USB ports—one to supply power to the board and one for downloading and debugging.
  - ◆ An unused RS-232 COM port for Flash In-System Programming (ISP) via the Serial Interface.
- (3) One USB-JTAG Adapter.

You should prepare a JTAG Adapter which is able to debug cortex-m3 based processor, You can either use Keil ULink2 or **Emlink for ARM** produced by Embest.

- (4) Two USB cables.
- (5) Double Female Serial Cable

#### 4. Software Requirements

We recommend you to reach the following software requirements for embedded development based on LPC1768 processor.

##### (1) Windows Operating System

The Keil  $\mu$ Vision tool chain runs in these Windows Operating Systems:

- ◆ Microsoft Windows 2000
- ◆ Microsoft Windows XP

##### (2) Tools and Examples

To compile, link, and run applications on the LPC1768 Evaluation Board, please install the following products on your pc:

- ◆ Keil UVision IDE  
You can purchase the Keil UVision IDE, such as RealView MDK-ARM from Keil Corporation, or you can also download the evaluation version of RealView MDK for free of charge. Of course, you can use other IDE as well, such as IAR EWARM, but we suggest you using Keil UVision IDE, then you can use the example programs we provide in CD-ROM, otherwise, they would be useless.
- ◆ Example programs written for the LPC1768. These example programs are stored in the CD-ROM accompany with the LPC1768 board.

#### 5. Technical Data

Parameter	Description
Supply Voltage	5V DC (provided by the USB bus of a PC)
Supply Current	65mA typical, 120mA maximum
XTAL Frequency	12 MHz
Microcontroller	NXP LPC1768
Peripherals	2 × RS232 Interfaces 2 × CAN Interfaces 1 × Ethernet Interface 1 × JTAG Interface 1 × ETM Interface 2 × Cortex Debug Interfaces 1 × LCD Display 1 × USB Device/Host/OTG Interface 1 × Analog Output (connected to speaker by default) 1 × Analog Input (connected to potentiometer by default)
Board Size	119mm x 119mm (4.68 " x 4.68")

## 6. Power Supply

LPC1768 ARM-M3 board supports two power supply modes; you can select one of these two power supply modes below through JP12 configuration.

- (1) Supply 5V DC through power jack (JP11) on the board.
- (2) Supply power through USB connector (CON1) on the board, the current should be less than 500mA

## 7. Test this board

- (1) Start the PC
- (2) Connect relevant devices
  - ◆ Connect COM1 interface of the board to the COM interface of the PC by using a serial port cable for the information display and input;
  - ◆ Connect the PC's USB port to the USB port on board by using a USB cable for USB communication and power supply; the power LED lights when power is applied to the board.
- (3) When the board electrifies, press the Reset button on the board, then watch the phenomenon displaying on the LCD screen
- (4) Start the hyperterminal on the PC, press the Reset button on the board again, will you see the phenomenon displaying on the hyperterminal, and then run relevant programs according to the instructions referred on the hyperterminal.

## 8. What is in the CD-ROM?

- (1) Documents -- user manual, data sheet and the other development document.
- (2) Images -- image files for this product.
- (3) Software -- software programs or this product.
- (4) Tools -- the utilities tools and software.