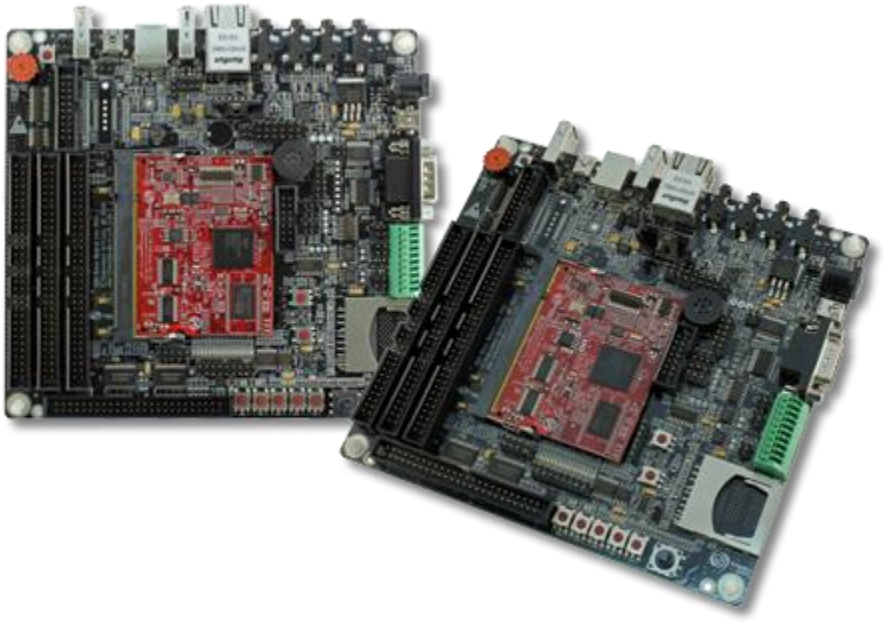
LPC1788-32 DEVELOPERS KIT



High Resolution Photos]
LPC1788-32 Developer's Kit
Embedded Artists' **LPC1788 Developer's Kit** lets you get up-and-running quickly with the LPC1788 OEM Board. The LPC1788 OEM Board is equipped with NXP's **Cortex-M3** based LPC1788 microcontroller suitable for a wide range of applications that requires advanced communication and high quality graphic displays.

Display Options

Note that display options are sold separately:

- 4.3 inch TFT LCD with touch - via LPC1788 on-chip LCD controller
- 7.0 inch TFT LCD with touch - via LPC1788 on-chip LCD controller
- Display Expansion Board, HDMI/DVI/VGA/LVDS - via LPC1788 on-chip LCD controller
- 1.35 inch Memory LCD - via Serial Expansion Connector
- 1.5 inch RGB OLED - via Serial Expansion Connector
- 2.7 inch E-paper display - via Serial Expansion Connector
- 3.2 inch LCD display using the QVGA Display Adapter Kit or the QVGA Display Adapter if you already have the display - via LPC1788 on-chip LCD controller

Specification

LPC1788 OEM Board

Processor	NXP's Cortex-M3 LPC1788 microcontroller in BGA package
Program Flash	128 MB NAND FLASH + 512 kB internal
Data Memory	32 MB SDRAM + 96 KB internal **32- or 16-bit data bus to SDRAM** *Note: The Developer's Kit initially only offer the 32-bit databus version.*
Ethernet	100/10M Ethernet interface based on SMSC LAN8720 Ethernet PHY
Clock Crystals	• 12.000 MHz crystal for CPU • 32.768 kHz crystal for RTC
Dimensions	66 x 48 mm
Power	• +3.3V powering
Connectors	• 200 pos expansion connector (as defined in SODIMM standard), 0.6mm pitch
Temperature Range	-40 to +85 degrees Celsius (applies to rev D of the board and later)
Other	• 256 Kbit I2C E2PROM for storing non-volatile parameters • Buffered 32- or 16-bit databus

OEM Base Board

Connectors and Interfaces	• 200 pos, 0.6mm pitch SODIMM connector for OEM Board • LCD expansion connector with control signals for touch screen interface • Expansion connector with all OEM Board signals • Ethernet connector (RJ45) • CAN interface & connector (provision for second CAN interface, but not mounted) • MMC/SD interface & connector • USB1: OTG or Host interface & connector • USB2: Device or Host interface & connector

	• Provision for NXP JN5148 RF module (former Jennic) interface (RF module not included) • Full modem RS232 (cannot be fully used on 32-bit databus OEM boards) • RS422/485 interface & connector • Provision for IrDA transceiver interface (transceiver not mounted) • I2S audio codec (mic in, line in, line out, headphone out) • SWD/JTAG connector • Trace connector and pads for ETM connector • Serial Expansion Connector, 14-pos connector with UART/I2C/SPI/GPIO pins
Power	• Power supply, either via USB or external 5V DC • Optional coin cell battery for RTC and LED on ALARM output (coin cell not included)
Other	• OEM Board current measuring • Parallel NOR flash on external memory bus • 16-bit register and LEDs on external memory bus • 5-key joystick • 3-axis accelerometer (I2C connected) • LM75 temperature sensor (I2C connected) • 5 push-button keys (four via I2C and one on ISP-ENABLE) • 9 LEDs (8 via I2C and one on ISP-ENABLE) • Trimming potentiometer to analog input • USB-to-serial bridge on UART #0 (FT232R) and ISP functionality • Reset push-button and LED • Speaker output on analog output from OEM Board, or from I2S audio codec • 160x150 mm in size