

# 5.7" VGA Touch Screen LCD Kit



**DK-57VTS-LPC1788**  
**For the NXP LPC1788**



## Highlights

- **SOMDIMM – CPU Module based on SODIMM form factor (Dual Inline Memory Module)**
  - LPC1788 120MHz Cortex-M3 based microcontroller
  - 512KB of Internal FLASH, 96KB of Internal SRAM, 4KB of Internal EEPROM 8MB of External SDRAM
  - 10/100 Ethernet PHY
  - Mini-JTAG Debug Connector
- **CARRIER – Generic Carrier Board for CPU and LCD Modules**
  - 200-pin SOMDIMM Socket, supporting various processor modules
  - 10/100 Ethernet Port, USB Host and Device ports
  - One CAN port (Male DB9), One RS-232 port (Male DB9), External I2C interface
  - 3-axis Digital Accelerometer & Temperature Sensor
  - Real-time Clock with SuperCap backup
  - TFT interface for Graphics LCD displays up to 1024x768 resolution, 18-bit color
  - Flexible Power Supply input can be wall supply or 5V USB
- **LCDCARRIER**
  - 5.7" VGA Display (640 x 480) with Touch Screen Interface
  - Optional 3.5" QVGA board, up to 10.4" XGA Board
- **Software Included**
  - FreeRTOS Operating System
  - uEZ® Rapid Development Platform
  - Complete COM Drivers and APIs with documentation
- **Supplied with easy-to-use application documents for all hardware and software**
- **Platform is based on a modular design for maximum flexibility**
- **Additional CPU DIMM and LCD Carrier boards under development**

The DK-57VTS-LPC1788 is optimized to save development time in typical embedded control applications. The modular format uses a base Carrier Board, a core CPU SOMDIMM and an LCD Carrier Board. The base Carrier Board includes expansion connectors for added flexibility and a range of configurations. FDI offers low cost customization services for customer specific hardware, software or packaging applications at volumes of 500 units or more.



## SOMDIMM-LPC1788 Description

The SOMDIMM-LPC1788 includes an NXP LPC1788 Cortex-M3 based microcontroller running the open source  $\mu$ EZ<sup>®</sup> +FreeRTOS software platform. The LPC1788 has 512KB of internal Flash memory, 96KB of internal SRAM, a 10/100 Ethernet Media Access Controller (MAC), a USB full speed device/host/OTG controller, four UARTs, two CAN channels and a collection of serial communications interfaces. The SOMDIMM-LPC1788 also includes 8MB of external SDRAM.

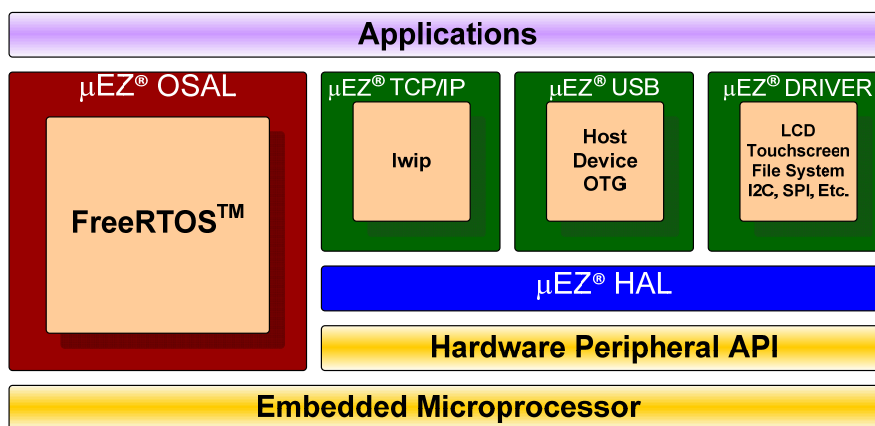
Actual PCB dimensions are 2.66" x 1.89"

## Software Included

$\mu$ EZ<sup>™</sup> (pronounced Muse) is an open source rapid development platform that supplies application developers with an extensive library of open source software, drivers, and processor support - all under a common framework.  $\mu$ EZ<sup>™</sup> allows companies to focus on innovation and their value-added applications while minimizing development time and maximizing software reuse.

The diagram below shows a typical embedded application stack. The  $\mu$ EZ<sup>™</sup> components comprise three primary categories to simplify embedded application development:

- Operating System Abstraction Layer ( $\mu$ EZ<sup>®</sup> OSAL)
- Sub-system drivers (ex:  $\mu$ EZ<sup>®</sup> TCP/IP,  $\mu$ EZ<sup>™</sup> USB,  $\mu$ EZ<sup>®</sup> Driver)
- Hardware Abstraction Layer ( $\mu$ EZ<sup>®</sup> HAL)



## Ordering Information

Part Number: DK-57VTS-LPC1788  
NXP Part Number: OM11xxx  
Order Online at: [www.digikey.com](http://www.digikey.com)

Warranty: 30-day money back guarantee  
Phone 256-883-1240 Fax 256-883-1241  
[www.teamfdi.com](http://www.teamfdi.com)

### Kit Contents:

- SOMDIMM-LPC1788 Board
- CARRIER Board
- LCD CARRIER Board & 5.7" VGA LCD Touch Screen
- 5VDC, 2.3A North American Power Supply
- USB and Ethernet Cables
- Segger JTAG Debugger with cables

Download Users Manual, documents, schematics, and software examples at:

**FDI** *Future Designs, Inc.*  
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