

# PRODUCT DATASHEET

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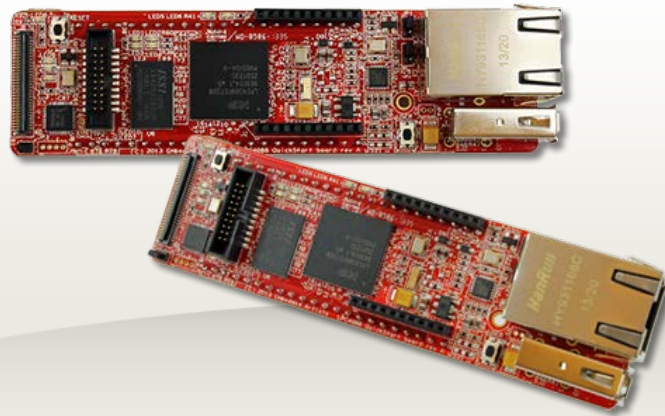
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**Datasheet begins on next page.**



Art. EA-QSB-016

[High Resolution Photos]

## LPC4088 QUICKSTART BOARD

Embedded Artists' **LPC4088 QuickStart Board** is an easy to use ARM Cortex-M4 rapid prototyping board in a standard through hole DIP package (44-pin), targeted at high-performance as well as low-power applications. Communication interfaces, large on-board memories and LCD controller enables graphical user interface applications.

The **LPC4088 QuickStart Board** is not just a piece of hardware - it's much, much more:

- The module hardware, which is a professional quality hardware developed for integration and simplicity-of-use.
- The mbed Software Development Kit (SDK), which is an open source C/C++ microcontroller software platform designed for a suitable level of hardware abstraction to simplify microcontroller programming.
- The mbed Compiler is a powerful online IDE that is tightly integrated with the mbed SDK and Developer's Website ([mbed.org](http://mbed.org), see below).
- The mbed Hardware Development Kit (HDK), which is an interface design that provides simple USB drag-n-drop programming and CMSIS-DAP debug interface for the LPC4088 microcontroller.
- The [mbed.org](http://mbed.org) community, with extensive documentation in the form of handbooks, cookbooks, project pages, [User Forums](#) for getting help and advice from other mbed users, etc.
- **Take advantage of Embedded Artists' competence to minimize your work and risk!**

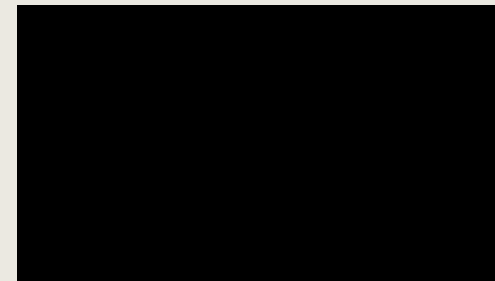
### Volume Pricing from Quantity 1

The module is priced with integration in mind. Enjoy a price that is normally associated with much higher volumes from the first module you buy!

### Pinning

Below is the pinning diagram (click for a larger picture), in typical mbed style.

### Introduction Video



### mbed

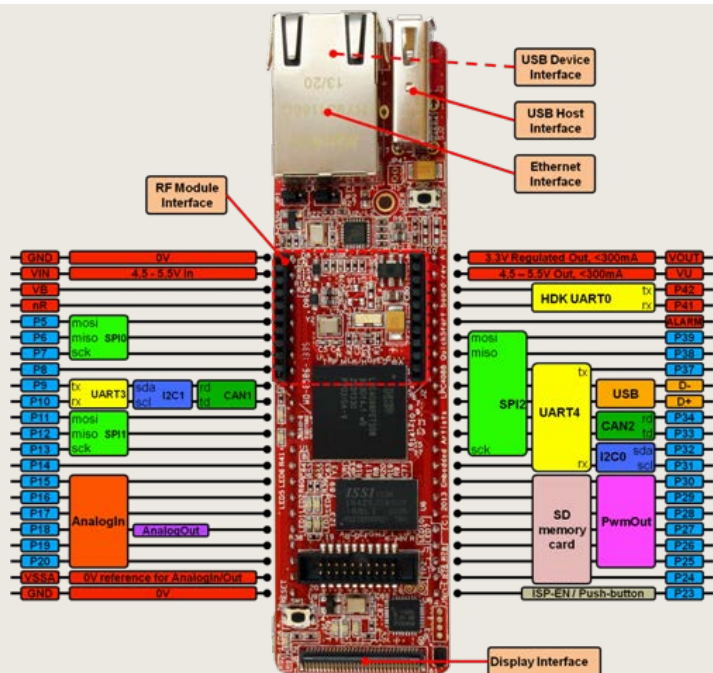
The **LPC4088 QuickStart Board** is **mbed Enabled**- meaning that the board take full advantage of the mbed platform!



The **LPC4088 QuickStart Board** is the most advanced mbed enabled board to date - it is the most integrated, has most memory, has graphical possibilities and highest speed!

Some mbed information:

- [mbed.org](http://mbed.org) website - this is the official mbed community website. It contains a lot of documentation with many different topics and angles on the information.



- **Explore mbed** - a four segment presentation of the mbed platform: Explore - Getting Started - Prototype - Production
- **mbed Developers website** - an introduction to the mbed Developers website.
- **Handbook** - gives an overview of the platform with all features.
- **Cookbook** - a wiki for publishing user-contributed libraries and resources.

## Documentation

All **documentation** about the board has been put on the **mbed.org** site.

## SPECIFICATION

### LPC4088 QuickStart Board

<i>Processor</i>	NXP's Cortex-M4 LPC4088 microcontroller in BGA package, running at up to 120 MHz
<i>Program Flash</i>	8 MB QSPI + 512 KB on-chip
<i>Data Memory</i>	32 MB SDRAM (x32 bit databus for high bandwidth access) + 96 KB on-chip SRAM + 4 KB on-chip E2PROM
<i>Clock Crystals</i>	12.000 MHz main and 32.768 kHz RTC crystals
<i>Interfaces / Connectors</i>	<ul style="list-style-type: none"> <li>• 2x22 pin edge pins</li> <li>• 10/100Mbps Ethernet (RJ45)</li> <li>• USB-A (USB Host interface)</li> <li>• USB-micro B (USB Device interface)</li> <li>• USB-micro B (mbed HDG debug interface)</li> <li>• 20 position SDW/Trace connector (ARM standard debug connector)</li> <li>• 61 pos 0.3 mm pitch FPC connector for display expansion</li> <li>• 20 pos XBee compatible connector for RF module add-on</li> </ul>
<i>Dimensions</i>	101 x 28 mm (104 x 28 mm with connectors)
<i>Power</i>	<ul style="list-style-type: none"> <li>• 4.5 - 5.5V input on pin 2, or</li> <li>• via micro-B USB HDK connector, or</li> <li>• via trace connector (+5V)</li> </ul>
<i>Other</i>	<ul style="list-style-type: none"> <li>• Proper ESD protection on communication interfaces</li> <li>• CMSIS-DAP Interface On-board (debug interface functions)</li> <li>• Supported by the mbed SDK and online tools</li> <li>• Supported by professional tools and middleware</li> <li>• Industrial temperature specified (-40 to +85 degrees Celsius)</li> <li>• ISO 9001:2008 produced</li> <li>• Production and shipping compensated for carbon dioxide emission</li> </ul>