Graphical design created in TouchGFX

Designing an
Intelligent Display Module
from ground up is a
big challenge and risk…

Do you have time for that?

The **LPC4088 Display Module** is an attractive alternative with many benefits:

- **Save months on your development time**
  - Get up-and-running immediately with your GUI and control application
  - Extensive getting started material - manuals, tutorials, videos, etc.
  - Free comprehensive software platform available
- **Designed for integration**
  - Proven professional design - ready for integration!
  - Simple expansion for customer specific I/O requirements
  - CE certified
- **Long-term availability**
  - Unique future-proof design securing long term supply
  - Lifecycle management handled by Embedded Artists,
    for example when components become obsolete
- **Best price/performance ratio on the market!**
  - Packed with features, see feature list
  - **Starting from 129 EUR / 149 USD** in 1K volume
   (4.3" LCD with projected capacitive touch)

NXP Partner

Embedded Artists is a partner of NXP. Together we give our customers an excellent base to
work from when creating advanced embedded systems. We have a close co-operation and know
everything there is to know about the NXP MCUs. Take advantage of our unique knowledge!

partner of
NXP

LPC4088 Display Module Feature Highlights

- 4.3" TFT (480 x 272 pixels) LCD with **projected capacitive touch** panel
- **120MHz Cortex-M4F LPC4088 MCU** from NXP with floating point and DSP instruction support in the core
- On-module memory
  - 512 Kbyte MCU-internal FLASH
  - 96 Kbyte MCU-internal SRAM
  - **32 Mbyte SDRAM**, via 32-bit databus
  - **16 Mbyte QSPI FLASH**
  - 4032 byte MCU-internal E2PROM
  - Ethernet MAC address, EUI-48™
- 100/10Mbps Ethernet interface with RJ45 connector
- USB Host/Device interface with A/mini-B connectors
- 20 pos XBee™ compatible connector for RF module add-on
- 46 pos expansion connector (100 mil pitch)
  - Second USB,UART,SPI,I2C,ADC,DAC,CAN,GPIO,timer
- LPC4088 on-chip RTC with super capacitor backup
- uSD/transflash memory card interface connector
- **On-module, mbed HDK debug interface** (CMSIS-DAP)
- Cortex Debug Connector, incl. Tag-Connect™ pads
- +5V DC powering
- Compact design with dimensions: 123 x 100 mm
- ISO 9001:2008 / ISO 14001:2004 produced. Compensated for carbon dioxide emission during production & shipping
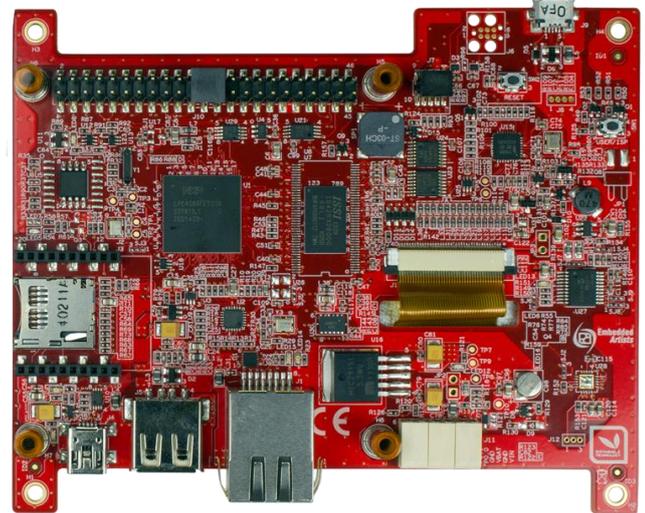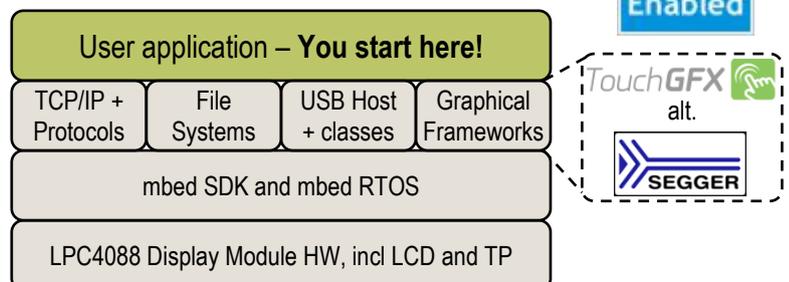
Optical, Visual, Temperature and Electrical Characteristics

- Viewable area: 95.04 x 53.856 mm, 4.3" diagonal
- Resolution: 480 x 272 pixels
- Color depth: 16.7M (16/18/24-bits supported by hw)
- Luminance: 300 cd/m^2 (typ)
- Back-light half-life time: 50000 h (typ)
- Contrast ratio: 500 (typ)

- Wide viewing angles: 80 degrees (typ)
  - 6 o'clock viewing direction
- Touch technology: Projected Capacitive Touch
  - 5 simultaneous touches
- -20° to +70° Celsius operating temperature range
- +5V input power supply: 4.65 - 5.65V

Software

The *LPC4088 Display Module* is **mbed enabled** – meaning that the board takes **full advantage of the mbed framework**, see developer.mbed.org

- Software platform based on mbed SDK including:
  - mbed-RTOS (Keil/ARM RTX)
  - FAT file systems (uSD, USB Host, QSPI)
  - TCP/IP with RPC, webserver, DHCP, etc.
  - USB Host (MSD, HID)
  - Graphical framework ports (may require commercial license)
- Comprehensive sample code package
- Possible to code without mbed SDK

mbed Enabled

User application – **You start here!**			
TCP/IP + Protocols	File Systems	USB Host + classes	Graphical Frameworks
mbed SDK and mbed RTOS			
LPC4088 Display Module HW, incl LCD and TP			

TouchGFX
alt.
SEGGER

Ordering Information

- EA part number: **EAD00234**, NXP part number: **OM13083**, suggested resale price: 199 EUR in single quantity.
- For more information (and display options), visit: www.embeddedartists.com/products/displaymodules/43ctp.php
- Contact Embedded Artists for a discussion around your requirements: info@EmbeddedArtists.com