

# FDI

## 4.3" PCAP Touch Screen LCD GUI

The 4.3" PCAP Touch Screen LCD GUI **UEZGUI-4088-43WQN-BA**, adds enhanced processing capabilities to FDI's standalone microcontroller-based  $\mu$ EZ<sup>®</sup> GUI product family. Featuring the high performance NXP LPC4088 microcontroller with Floating Point Unit and high speed SPIFI Flash, this product is optimal for math intensive applications including graphics processing at high speeds.

The Future Designs, Inc.  $\mu$ EZ<sup>®</sup> GUI product family is our standalone microcontroller-based solution designed for the easy integration of modern human machine interfaces (HMI) into a variety of end applications. Each  $\mu$ EZ GUI product includes a display with supporting hardware and FDI's open source  $\mu$ EZ / FreeRTOS software. FDI's  $\mu$ EZ GUI development kits include everything needed to kick off a  $\mu$ EZ GUI project including JTAG debugger, power supply, cables, microSD card and full documentation. Once your design is complete, we offer cost-effective production modules for prototypes or high-volume production.

FDI also offers engineering design and production support services. We are committed to saving our customers time, money and hassle. So, no matter how much (or little) support you need along the way, we can make your project concept a reality.

$\mu$ EZ GUI Products are available for immediate order at [www.TeamFDI.com](http://www.TeamFDI.com) or from any of our franchised distributors.



## Module Features

- 4.3" TFT WQVGA 480 x 272 PCAP Touch Screen LCD Panel
- NXP LPC4088 120MHz CPU with 512KB internal Flash
- 16MB of SPIFI Serial Flash (optional to 64MB)
- 8MB of SDRAM (optional to 32MB)
- High Speed SD interface supporting 15fps video playback
- MicroSD Memory Card Socket
- USB Device Mini-AB for 5.0 VDC power and PC communications
- USB Host support through adapter cable
- NV Data Storage via 4KB Internal EEPROM
- Internal Real-Time Clock with Supercap Backup
- Speaker, 3-axis Accelerometer, Temperature Sensor
- Pmod Type 2A connector with SPI and optional I2C
- Mini-JTAG Debug Connector
- External Expansion via two I/O Connectors (70 pins)
  - UART, I2C, SPI, USB Host/Device, RMII Ethernet

Development Kit Part #: **uEZGUI-4088-43WQN**  
Development Kit MSRP (Qty 1) : \$319.00 (USD)  
Production Module Part #: **uEZGUI-4088-43WQN-BA**  
Production Module MSRP (Volume) <\$175.00 (USD)

**Production guaranteed until 2030 or longer.**



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[TeamFDI.com](http://TeamFDI.com)



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## Technical Specifications

### Production Module

- Part number: **uEZGUI-4088-43WQN-BA**
- MSRP (Volume) <\$175.00 (USD)
- Contrast Ratio: 500 : 1 typical
- Brightness: 700 nits typical
- Horizontal Viewing Angle: 75° L / 75° R
- Vertical Viewing Angle 75° U / 75° D
- Power consumption typ/max: 500 / 650mA
- Overall Size: 116.8(W) x 72.1(H) x 14.2(D) mm
- Operating Temperature Range: -20°C to +70°C
- Viewable area: 95.0(W) x 53.8(H) mm
- Weight: 110g
- Touch Resolution: 480x272
- Number Simultaneous Touches:1
- Glass Overlay: 0.55mm
- Glass Hardness: 6H
- Backlight Life: 50k hrs typical

### Development Kit

- Part number: **uEZGUI-4088-43WQN**
- MSRP (Qty 1): \$319.00 (USD)
- Includes uEZGUI-4088-43WQN-BA Production Module
- AC power supply
- Mini JTAG debugger with cables
- USB device cables for power and PC communications
- 4GB (or larger) microSD Memory Card
- Documentation and Example Software



## uEZ Software

μEZ® (pronounced Muse) is an open source rapid development platform that allows companies to focus on innovation and their value-added applications while minimizing development time and maximizing software reuse. μEZ components comprise three primary categories to simplify embedded application development: Operating System Abstraction Layer (μEZ® OSAL), Sub-system drivers (ex: μEZ® TCP/IP, μEZ® USB, μEZ® Driver), and Hardware Abstraction Layer (μEZ® HAL)

FreeRTOS with Tasks, Semaphores, Mutex, Queues

SafeRTOS option for safety critical real-time applications

emWin Graphics library free with NXP ARM MCUs

FAT FS for USB/SD card with long-file name support

USB Host/Device including mass storage, HID Libraries

Wi-Fi library with integration into TCP/IP Stack from GainSpan

SEGGER JTAG development and production SW integration

10/100 Ethernet support with lwIP TCP/IP Stack

Memory SDRAM, NOR Flash, SPIFI Flash support

Audio PWM, DAC, and I2S support

TFT LCD support for QVGA, VGA, WQVGA, WVGA Displays

Multiple compilers and IDEs supported

Modbus TCP/IP and RTU support

Serial Comms I2C, SPI, UART, RS232, RS485, CAN & GPIO

Bootloader for field updates over SD/USB/Serial (affordable μEZ+)



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