# 4.3" No Touch LCD GUI

The 4.3" No Touch LCD GUI, uEZGUI-4088-43WQE-BA, adds a no touch option with enhanced processing capabilities and display features to FDI's standalone microcontroller-based µEZ<sup>®</sup> GUI product family. The high performance NXP LPC4088 microcontroller with Floating Point Unit and high speed SPIFI Flash is optimal for math intensive applications. This product features our brightest TFT LCD display with wider IPS-like viewing angles with no touch screen for applications requiring membrane keypad, rugged cap touch buttons or hot keys.

The Future Designs, Inc. µEZ<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 µEZ GUI product includes a display with supporting hardware and FDI's open source  $\mu EZ /$ FreeRTOS software. FDI's µEZ GUI development kits include everything needed to kick off a µEZ 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.

µEZ GUI Products are available for immediate order at www.TeamFDI.com from any of our franchised distributors.

### Module Features

- 4.3" WQVGA 480 x 272 No Touch LCD Panel
- NXP LPC4088 120MHz CPU with 512KB Internal Flash
- 16MB of SPIFI Flash (optional 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













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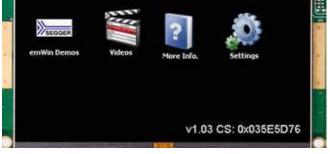
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Development Kit Part #: uEZGUI-4088-43WQE

Production Module Part #: uEZGUI-4088-43WQE-BA

Production quaranteed until 2014 or longer.



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### **Technical Specifications**

#### **Production Module**

- Part number: uEZGUI-1788-43WQE-BA
- Contrast Ratio: 500:1 typical
- Brightness: 850 nits typical
- Horizontal Viewing Angle: 75° L / 75° R
- Vertical Viewing Angle: 75° U / 75° D
- Power consumption typ/max: 600 / 750mA
- Overall Size: 116.8(W) x 72.1(H) x 11.7(D) mm
- Operating Temperature Range: -20°C to +70°C
- Viewable area: 95.0(W) x 53.9(H) mm
- Weight: 88g
- Resolution: 480x272
- Glass Overlay: 0.55mm

#### Development Kit

- Part number: uEZGUI-1788-43WQE
- Includes uEZGUI-1788-43WQE-BA Production Module
- AC power supply
- Mini JTAG debugger with cables
- USB device cables for power and PC communications
- 4GB (or larger) microSD memory ard
- Documentation and example software



#### uEZ Software

 $\mu$ EZ<sup>®</sup> (pronounced Muse) is an open source rapid development platform that allows companies to focus on innovation and their valueadded applications while minimizing development time and maximizing software reuse.  $\mu$ EZ 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), and Hardware Abstraction Layer ( $\mu$ EZ<sup>®</sup> HAL)

<u>FreeRTOS</u> with Tasks, Semaphores, Mutex, Queues	SafeRTOS option for safety critical real-time applications	<u>emWin Graphics</u> library free with NXP ARM MCUs	FAT FS for USB/SD card with long-file name support	<u>USB Host/Device</u> including mass storage, HID Libraries
<u>Wi-Fi</u> library with integration into TCP/IP Stack from GainSpan	SEGGER JTAG development and production SW integration	<u>10/100 Ethernet</u> support with IwIP TCP/IP Stack	<u>Memory</u> SDRAM, NOR Flash, SPIFI Flash support	<u>Audio</u> PWM, DAC, and I2S support
<u>TFT_LCD</u> support for QVGA, VGA, WQVGA, WVGA Displays	Multiple compilers and IDEs supported	<u>Modbus</u> TCP/IP and RTU support	<u>Serial Comms</u> I2C, SPI, UART, RS232, RS485, CAN & GPIO	<u>Bootloader</u> for field updates over SD/ USB/Serial (affordable µEZ+)



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