uEZGUI-EXP-DK
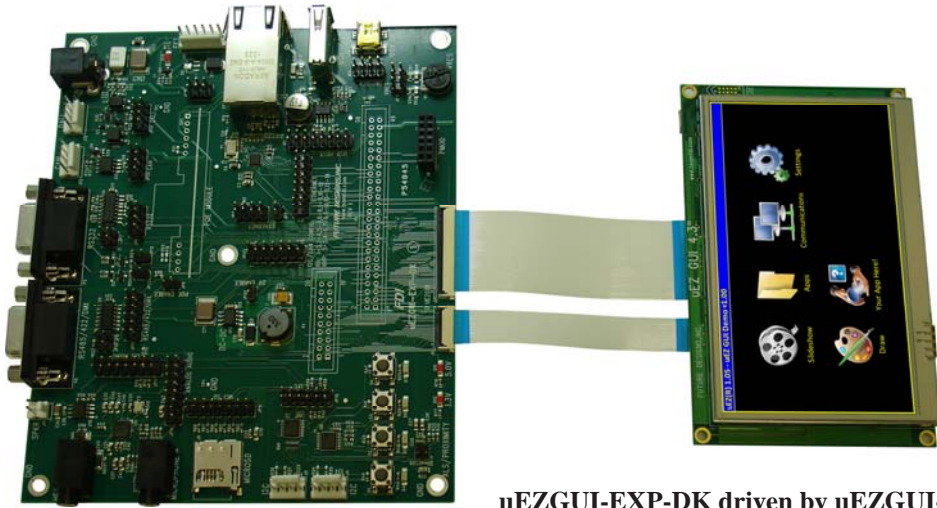
Expansion Board for uEZ® GUI Family

Features

- **USB Type A Host Port**
- **USB Mini-AB Device Port, also supports Host mode with optional OTG cable**
- **Ethernet and optional Power over Ethernet, via plug in module**
- **CAN port**
- **RS232 via DB9 female connector**
- **RS485 via DB9 female connector**
- **Optional DALI port**
- **Audio amplifier with on board speaker connection and digital volume control**
- **Audio options for both DAC or I2S audio**
  - **I2S supports microphone input and headphone output**
- **High speed microSD card socket (uses 4-bit mode)**
  - **Video playback support on most uEZ GUIs**
- **4x I2C ports provided through I2C mux**
  - **I2C GPIO expander with 4 pushbutton switches and 4 LEDs**
  - **ALS/Proximity sensor**
  - **2 x I2C ports brought out to header connections**
- **Fine pitch 50-pin and 20-pin flex cable I/O Connection to uEZ GUI unit**
- **DC Power Jack for external Wall Power (7-24V DC input)**
- **PMOD Type 2A header for interfacing with various SPI based modules**
- **FET driver with PWM connection**
- **Potentiometer connected to ADC input**

The **uEZGUI-EXP-DK** Expansion Board provides many different features. When paired with one of FDI's uEZ GUI units, all of the features can be enabled simultaneously except for PMOD. For Power over Ethernet (PoE) support, an optional 3rd party module is available. PoE support is plug-and-play and requires no software.

uEZGUI-EXP-DK driven by uEZGUI-1788-43WQR-BA

Hardware Overview

The uEZGUI-EXP-DK is designed to provide full hardware and connector support for most of the standard communications, I/O and interface options available on the 70-pin uEZ GUI Expansion Headers. This board is designed to turn the uEZ GUI unit into a full blown Hardware Development Kit, and allow customers to quickly test and prototype their application specific firmware before custom Expansion Board hardware is available. Common communication interfaces like USB Host and Device, Ethernet and optional Power over Ethernet (PoE), CAN, RS232 and RS485 are all provided along with ports for I2C, I2S or DAC Audio with microphone input and headphone output and even optional DALI. The high speed microSD card interface allows rapid file transfers at rates up to 60Mbps and even supports video playback on certain uEZ GUI units. Using the optional OTG Host adapter cable the USB Device port can also be converted to a 2nd USB Host port if required.

An industry standard SPI-based PMOD interface is also available to allow a variety of off-the-shelf 3rd party peripheral boards to be quickly and easily added. For easy prototyping there are 4 push button switches, 4 LED's, a FET driver output that is fed from a PWM pin and a potentiometer connected to an ADC pin for analog feedback.

Every signal on the fine pitch 70-pin Expansion Headers is also broken-out to standard 0.1" PTH headers for convenience in probing or adding hardware wires.

Software Drivers Available[*]

µEZ® (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. µEZ® allows companies to focus on innovation and their value-added applications while minimizing development time and maximizing software reuse.

[*]Drivers are available when the uEZGUI-EXP-DK is paired with a uEZGUI-1788-43WQR or similar unit.

Ordering Information

Part Number: uEZGUI-EXP-DK
Suggested Resale Price: $165.00 (USD)
Order Online at: www.uezgui.com

Warranty: 30-day money back guarantee
Phone 256-883-1240   Fax 256-883-1241
sales@teamfdi.com   www.teamfdi.com

Kit Contents:
- **uEZGUI-EXP-DK Board**
- **50 pin Flex Cable**
- **20 pin Flex Cable**

Download Users Manual, documents, schematics, and software examples at: www.uezgui.com

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