FTDI Introduces Easy-to-Use Graphic Controller for Wide-Ranging Display Applications

EVE, Embedded Video Engine, dramatically reduces overall system cost while enabling high quality GUI systems that incorporate display, audio, & touch functionality

FTDI Chip, long established as a leading developer and supplier of USB semiconductor and software solutions, has taken its first steps into another vital application sector. Addressing the need for ever more advanced forms of human-machine interaction, the company has announced the release of the FT800, the initial offering in its Embedded Video Engine (EVE) family.

Targeted at cost-effective, intelligent QVGA and WQVGA TFT display panels, the FT800's object oriented approach renders images in a line by line fashion with 1/16th of a pixel resolution, eliminating the expense of traditional frame buffer memory. Supporting 4-wire resistive touch sensing with built-in intelligent touch detection and an embedded audio processor allowing midi-like sounds combined with pulse code modulation (PCM) for audio playback, the controller's functionality sets new industry benchmarks. The combination of display, audio, and touch on a single-chip solution enables engineers to produce graphic user interfaces (GUIs) that deliver compelling user experiences.

The object orientated approach means objects such as images, fonts and audio elements can be easily implemented and manipulated via a low pin count SPI or I^2C interface. In order for the desired GUI to be realised, the engineer initialises

the object memory (up to 256 kBytes) and then controls the specified objects and their attributes through construction and interaction of a small display list buffer. As a result of this, even low end (8-bit) microcontrollers can be used as the host processor if desired. Up to 2000 objects can be controlled within an 8k byte display list. Eliminating frame buffer memory and the need for a high end MCU, together with integrating touch and audio in a 48LD space-saving package, provides substantial system cost savings.

The FT800Q is capable of providing 24-bit (true colour) support on an 18-bit interface. It comes preloaded with a useful set of fonts and sounds on its ROM to further facilitate completion of the development process as quickly and easily as possible. Anti-aliasing mechanisms enhance the appearance of the display's output when rendering lines and complex shapes or when implementing signatures on resistive touch screens. Built-in widgets mean that even complex objects (such as analogue clocks) can be implemented without difficulty, while ensuring a high quality image.

Supporting low power operation, the FT800 draws only 35 mA (typical) in active mode and 25 µA in sleep mode. It has a -40 °C to 85 °C operational temperature range and is packaged in a compact 7 mm x 7 mm x 0.9 mm 48-lead VQFN package.

"With EVE, FTDI Chip is redefining the cost/quality paradigm for GUI development and offering intelligent display solutions with far more competitive price points. The breadth of applications is extremely wide, allowing engineers to cost reduce current displays for point of sale equipment and printers, while enabling colour touch screen functionality to be added to thermostats, power meters, toys and common home appliances." states Fred Dart, CEO and founder of FTDI Chip. "EVE marks a new stage in the evolution of FTDI Chip, taking our ability to generate innovative technology then

applying it to new system areas to provide engineers with easy-to-use solutions of un-matched value."

Pricing for the FT800 in quantities of 100 k units is US $2.75. With the announcement, FTDI Chip is enlarging the scope of strategic customer engagements. Technical support, documentation and development tools can be found at http://www.ftdichip.com/EVE.htm

About FTDI Chip
FTDI Chip specialises in the design and delivery of advanced silicon and software solutions. The company focuses on providing engineers with feature-rich, easy to use, robust products that will speed to market and reduce development costs. Widely recognised for its broad portfolio of Universal Serial Bus (USB) products, FTDI Chip can offer a simple route to USB migration by combining easy-to-implement ICs with proven, ready-to-use, royalty-free firmware and driver software. It has everything from simple bridge devices for converting USB from RS232, RS422, RS485, I^2C, SPI, etc, to highly integrated system solutions with built in microcontrollers and sophisticated development platforms.

FTDI Chip has now further expanded its "made easy" philosophy, with the addition of simple to use display controllers that combine display, audio and touch functionality in a single compact package with accompanying development software, for creating Graphic User Interfaces (GUIs) suitable for a wide variety of low-power microcontrollers.

FTDI Chip is a fab-less semiconductor company, headquartered in Glasgow, UK, with research and development facilities located in both Glasgow, Singapore and Taipei, Taiwan, plus regional sales and technical support sites in Glasgow; Portland, Oregon, USA; Shanghai, China; and Taipei.

More information is available at http://www.ftdichip.com

Regional sales offices and distributor lists are available at
http://www.ftdichip.com/FTSalesNetwork.htm

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