FTDI Chip Unveils High Resolution EVE Devices

Delivering faster upload speeds, greater colour depth & improved video playback for next generation HMIs

FTDI Chip's highly-regarded Embedded Video Engine (EVE) portfolio for advanced human machine interface (HMI) implementation has been further strengthened with the introduction of 4 new ICs - the FT81xQ series. These new EVE devices support higher maximum screen resolutions than previously possible - increasing from the 512x512 pixels of the company's FT800Q/801Q offering up to 800x600 pixels, in order to address larger displays (7-inches and above) used in point-of-sales units, information kiosks, etc.

The FT810Q has 18-bit RGB interfacing and resistive touch functionality, while the FT811Q has 18-bit RGB interfacing and is designed for capacitive touchscreen implementation (with provision for 5-point touch detection). These are complemented by the FT812Q and FT813Q for use respectively with resistive and capacitive touchscreens, but each with 24-bit RGB.

As a direct result of algorithm enhancements, the devices in the FT81xQ series have much smoother video playback. Furthermore, screen rotation through 90° is far easier to achieve, permitting both landscape and portrait orientations - a clear benefit when these ICs are utilised in handheld designs. The memory capacity has also been increased from 256kBytes up to 1Mbytes and a quad SPI interface accelerates data transfer rates. Multiple palettes are supported, covering 16-bit and 32-bit colours with transparency. Extra-large ROM fonts

have also been added so that there is greater scope when it comes to using different text options.

These devices are to a high degree code compatible with the previous generation of resistive (FT800) and capacitive (FT801) EVE ICs. Their features result in major performance improvements, with JPEG loading being 500 to 1000 times faster than previously possible and the ability to draw up to 16 pixels within every clock cycle (compared with 4 for the FT800/801 offering). Firmware memory operations (such as copy, fill and CRC) are 2 to 4 times faster due to the tuned inner loops that have been utilized, while the CMD SNAPSHOT function is now hundreds of times faster. An analogue pin on the FT812/FT813 allows the monitoring of temperature or light data (for adjustment purposes) and can be used to detect the presence of sound.

“It is now two years since the first EVE devices were introduced to the market and in that time we have seen considerable buy-in to the concept, due to the simplified HMI system architecture that EVE enables. Now with these latest additions to the offering we are giving engineers higher resolution, greater colour depth, larger memory capacity and audio input, so that they can construct HMIs that have a much higher degree of sophistication and enhance the overall user experience,” explains Fred Dart, CEO and Founder of FTDI Chip.

FTDI Chip’s award-winning EVE technology allows display, audio and touch functionality to be incorporated into a single IC. It takes an unconventional approach to HMI implementation, whereby images, overlays, fonts, bitmap images, templates, beeps and chirps are treated as objects. Acting as a companion chip to the system microcontroller, an EVE device will significantly simplify the implementation process, so that graphics are rendered line-by-line at 1/16th pixel resolution, rather than pixel-by-pixel - with the upshot that there is no longer a requirement for large Flash memories, frame buffers or high

performance microcontrollers. Furthermore, the inclusion of both audio and touch control functionality dispenses with the need for separate controllers for each. Thanks to the combination of its object-oriented approach and high level of integration, EVE enables the development time, bill of materials cost, board space that are normally associated with HMI implementation to all be reduced dramatically.

The FT810Q and FT811Q are bother supplied in 48-pin VQFN packages, while the FT812Q and FT813Q come in 56-pin VQFN packages. For more information on the FT81x series and other EVE devices go to:

http://www.ftdichip.com/EVE

About FTDI Chip

FTDI Chip develops innovative silicon solutions that enhance interaction with the latest in global technology. The major objective from the company is to 'bridge technologies' in order to support engineeers with highly sophisticated, feature-rich, robust and simple-to-use product platforms. These platforms enable creation of electronic designs with high performance, low peripheral component requirements, low power budgets and minimal board real estate.

FTDI Chip's long-established, continuously expanding Universal Serial Bus (USB) product line boasts such universally recognized product brands as the ubiquitous R-Chip, X-Chip, Hi-Speed and SuperSpeed USB 3.0 series. In addition to both host and bridge chips, it includes highly-integrated system solutions with built-in microcontroller functionality. The company's Embedded Video Engine (EVE) graphic controllers each pack display, audio and touch functionality onto a single chip. The unique, streamlined approach utilised by these ICs allow dramatic reductions in the development time and bill-of-materials costs involved in next generation Human Machine Interface (HMI) implementation. FTDI Chip also provides families of highly-differentiated, speed-optimised microcontroller units (MCUs) with augmented connectivity features, specifically designed with compatibility to its USB and Display product lines in mind. These MCUs are targeted for key applications where they can add value with their superior processing performance and high levels of operational efficiency.

FTDI Chip is a fab-less semiconductor company, partnered with the world's leading foundries. The headquarter is located in Glasgow, UK and is supported with research and development facilities in Glasgow, Singapore and Taipei (Taiwan) plus regional sales and techical support sites in Glasgow, Taipei, Tigard (Oregon, USA) and Shanghai (China).

For more information go to http://www.ftdichip.com

For further information and reader enquiries:

Susan Glasgow - FTDI Chip
Unit 1, 2 Seaward Place, Centurion Business Park, Glasgow, G41 1HH, UK
Tel: +44 (0) 141 429 2777 Fax: +44 (0) 141 429 2758
E-mail: marketing@ftdichip.com

Issued by:
Mike Green - Pinnacle Marketing Communications Ltd
Tel: +44 (0)20 84296543
E-mail: m.green@pinnaclemarcom.com
Web: www.pinnacle-marketing.com

February 2015 Ref: FTDIPR55