



**FTDI**  
**Chip**

*BRIDGING  
TECHNOLOGIES*

## **FTDI Introduces Compact Dual & Quad Channel Hi-Speed USB Interface ICs with Accompanying Hardware**

To provide engineers with a greater breadth of IO options and also address demands to conserve board real estate, FTDI has announced new versions of its highly popular FT2232H and FT4232H devices. These configurable USB 2.0 Hi-Speed (supporting 480Mbit/s operation) ICs are now available in 56-pin VQFN packages, which complement the 64-pin LQFP package format. As a result they are now easier to place and route on to PCBs, as well as being better suited to space-constrained electronic designs.

The FT2232H and FT4232H incorporate 2 and 4 UARTs respectively. To maximize application flexibility, both channels on the FT2232H and 2 of the 4 channels on the FT4232H can be independently configured in a wide variety of different industry-standard serial interfaces. This is accomplished via a multi-protocol synchronous serial engine (MPSSE), which allows emulation of JTAG, SPI, I<sup>2</sup>C, bit-bang or other synchronous serial modes. Both the FT2232H-56Q and FT4232H-56Q are also offered in mini modules. These small dual-inline PCBs have attached micro-USB connectors to ease interfacing with external infrastructure.

Key applications for these ICs/modules are the upgrading legacy peripheral designs to accept USB and field updating of equipment. Other items where they will be utilized include USB instrumentation, smart card readers, industrial control systems, bar code readers, USB flash drive reader/writers and interfaces for portable electronics goods (MP3 players, digital cameras, etc.)

The highly integrated nature of FT2232H/FT4232H offering enables more streamlined implementations to be undertaken. Among the functionality packed into each IC is a 1.8V LDO voltage regulator, integrated POR and clock multiplier PLL (covering frequencies from 12MHz to 480MHz). The baud rate generator allows data transfer at non-standard as well as standard speeds. Since the USB protocol is taken care of on chip, there is no need for USB specific firmware to be created (thereby reducing development times). These ICs are supported by a broad array of USB drivers, for Windows, Mac and Linux operating systems. The -40°C to 85°C operating temperature range means they are suited to industrial deployment.

<http://www.ftdichip.com/Products/ICs/FT2232H.html>

<http://www.ftdichip.com/Products/ICs/FT4232H.htm>

### **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 engineers 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 technical support sites in Glasgow, Taipei, Tigard (Oregon, USA) and Shanghai (China).

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

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**April 2016 Ref: FTDIPR67**