



## **FTDI's Pioneering Arduino-Compatible Touch-Enabled Display Shield Starts Shipping**

After the incredible response to its crowdfunding project earlier this year, which raised 3.25 times the original target, FTDI Chip now announces the full availability of the *CleO* product (and accompanying accessories) through its distribution partners, as well as directly via the company's website. FTDI Chip will also give engineers complete access to a comprehensive development resource, which has step-by-step tutorials and projects, plus a series of software tools. In addition, a new forum has been set up ([www.CleOstuff.com](http://www.CleOstuff.com)) on which design tips, application ideas and other information can be shared.

*CleO* is a simple to program, intelligent TFT display solution that allows the construction of human machine interfaces (HMIs) with much higher performance than conventional Arduino display shields are able to deliver. By using it, engineers of all different levels of aptitude (from seasoned professionals right through to keen amateurs) can develop next generation HMIs exhibiting elevated levels of functionality and superior graphical qualities. The initial *CleO* offering comprises a HVGA resolution, 3.5-inch TFT display incorporating a resistive touchscreen and supporting both portrait and landscape implementations. An FTDI Chip FT810 high resolution embedded video engine (EVE) graphic

controller executes the HMI operation, while one of the company's 310DMIPs FT903 microcontrollers addresses all additional processing tasks. This highly advanced display shield provides incredibly smooth animation of graphical content, even at 60fps frame rates. Furthermore, its anti-aliased graphics capabilities render images in finer detail - eliminating the unwanted presence of jagged edges.

When *CleO* is combined with FTDI Chip's *NerO* - an energy efficient Arduino design capable of operating up to 1W - it offers a far more powerful solution than a normal Arduino UNO/display shield package. However, its Arduino compatibility means it can also connect with the wide variety of different shields (sensors, motors, switches, etc.) available for this platform.

*CleO* has an array of useful accessories to further assist engineers. With dimensions of 57.15mm x 54.35mm, the *CleO*-RIO module provides a mechanism for stacking the *CleO* shield and an Arduino board together. The *CleO*-Speaker module (which measures 63mm x 63mm x 23.8mm) facilitates the playback music/tones for HMIs where audio functionality has been incorporated. There is also an audio line for input of audio from external sources. The *CleO*-Camera module has an OV5640 1/4-inch 5Mpixel CMOS image sensor plus flash LEDs and a 24-pin 0.5mm pitch FFC cable. There is also a 9V power adaptor which provides the *NerO*/*CleO* solution with up to 1A of current.

"*CleO* capitalises on the widespread popularity of Arduino and the countless compatible shields that are out there, as well as drawing our own industry-leading display and high speed bridging technologies," Fred Dart, FTDI Chip's CEO and Founder, comments. "As a consequence, far more ambitious HMI projects can be embarked upon. By referring to our detailed tutorials, even the least

experienced of engineers will gradually gain greater confidence and be able to create highly sophisticated designs.”

FTDI Chip's *CleO* offering has a unit price of \$69/£48. For more information on this product, go to: <http://www.ftdichip.com/CleO>

### **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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