



**FTDI
Chip**

**BRIDGING
TECHNOLOGIES**

FTDI Kickstarter Project: *NerO* Provides Arduino UNO R3 Compatibility & Enhancements Whilst Keeping Things Cool

UNO R3 compatible board supports higher current demands as well as offering other useful additional features

2nd December 2015 - FTDI Chip has always looked for imaginative ways to solve today's electronics engineering problems. Now it is also experimenting with how to bring new solutions to market - with its latest product, *NerO*, being introduced on KickStarter. The objective of *NerO* is to deal with the fundamental drawbacks of the widely-used Arduino UNO R3 and, by utilizing a crowd-funding platform, get the engineering community involved right from the very beginning.

Many contemporary embedded system designs will need quite a substantial amount of current in order to power all the constituent elements - as well as running a TFT display there might be the need to drive a motor, illuminate LEDs, maintain a WLAN datalink, etc. This can easily add up to 400mA or 500mA (in some cases it might be closer to 1A). With a standard UNO board (and likewise with the many clones now available) the LDO voltage regulator will tend to dissipate a sizeable quantity of heat when handling these sort of currents (the units' temperature being pushed from over 90°C to 100°C). This inefficient operation means that the power consumption is raised, as energy is unnecessarily wasted. It can also lead to reliability problems.

Thanks to the energy efficient switching regulator that has been incorporated into *NerO*, it is capable of supplying a full 1A with its temperature being well below 100°C at maximum load. This Arduino UNO R3 compatible board covers an input voltage of 7V to 20V (with 9V or 12V recommended). It is supplied with FCC and CE certification, so operational integrity is assured. Placed in an attractive price bracket (under \$20), *NerO* has a 16MHz ATmega328 microcontroller with Optiboot bootloader. FTDI's FT231XS takes care of USB connectivity providing more reliable communications and FTDI's renowned drivers and support. A micro-USB connector is specified, rather than the bulkier full size type B connector used on UNOs. This means that the board is more in line with the requirements of larger volume commercial designs, as well as those of hobbyists. As per UNO, *NerO* has 14 digital interface pins plus 6 analog inputs. As the status and PWR LEDs are located at the edge of the PCB, it ensures they remain fully visible even when an Arduino shield has been attached. An on/off switch allows the unit to be powered up or down as needed, for greater convenience.

"With *NerO* we wanted to take a whole new approach from how we normally initiated our development projects," explains FTDI Chip CEO and Founder, Fred Dart. "Although I have personally helped to support over 50 KickStarter projects in the past, this is the first time we have used this platform to bring one of our own products to market. This will allow professional and amateur engineers to play a part in the project. Everyone is very excited by the prospect and believe this product has the ability to shake up the Arduino sector, by exhibiting some real differentiation."

The FTDI *NerO* will have a unit price of \$19.75, but backers will benefit from a 25% discount. Following the launch, *NerO* schematic and PCB design will be made available as Open Source Hardware under OSHW terms.

To learn more about this project and make your pledge, go to:

<http://www.ftdichip.com/kickstarter>

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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