

THOUGHT
DISPLAY DESIGN
WAS DIFFICULT?

LEAVE IT
TO EVE



Introducing EVE, The Embedded Video Engine

FTDI Chip is redefining the cost and quality paradigm for graphic user interface (GUI) development with the introduction of the FT800, Embedded Video Engine (EVE). Targeted at cost effective intelligent QVGA and WQVGA TFT display panels, EVE's object oriented approach eliminates the traditional frame buffer memory as it renders an image, on a line by line basis, to 1/16th pixel resolution. Objects can be images, fonts, audio etc.

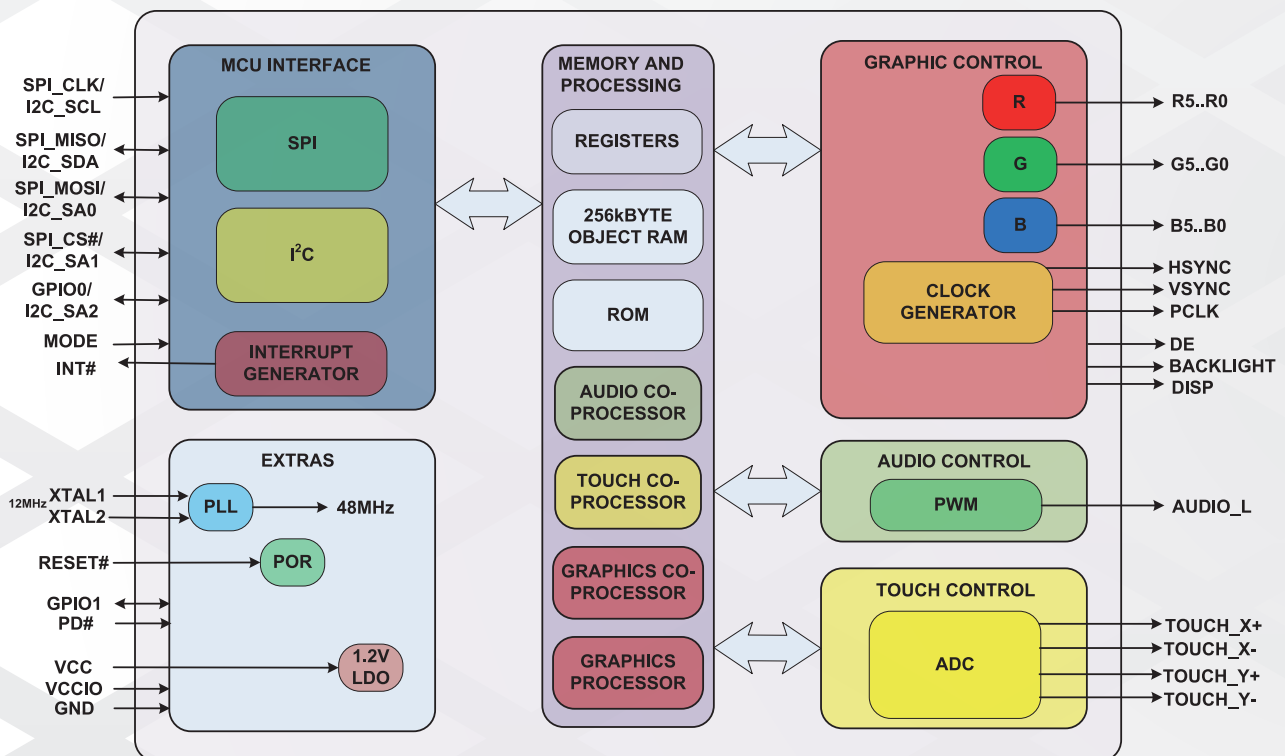
Simply, initialize the object memory, then control the objects and their attributes by creating and manipulating a small display list buffer, which can be done even with a low-end 8-bit CPU.



Anti-aliasing support comes as standard with the FT800 eliminating 'jaggies' and greatly enhancing display appearance. The inbuilt support for 4-wire resistive touch panels together with intelligent touch detection makes touch control a snap.

The embedded audio controller allows midi-like sounds or PCM audio playback. Packaged in a space-saving 48LD QFN package, the FT800 comes preloaded with a useful set of fonts and sounds in ROM, making it suitable for many applications.

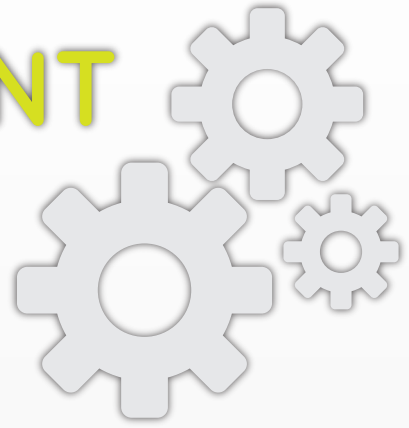
- Targeted at QVGA and WQVGA resolution TFT displays with parallel RGB interface
- Dithering hardware provides 24-bit (true colour) support on an 18-bit interface
- 256k internal object memory
- Store up to 2000 objects in 8k byte display list
- Inbuilt controller supports 4-wire resistive touch panels
- PWM output for programmable display brightness
- Anti-aliasing support improves display perception
- Low-power – 40mA typical in active mode down to micro-amps in sleep mode
- Inbuilt widgets allow easy creation of complex objects (e.g. analog clocks)
- Integrated audio output – play beeps, tones or recorded audio
- SPI or I²C interface to system microcontroller
- Space saving 48LD QFN package



FT800 Functional Block Diagram



EVE's DEVELOPMENT SUPPORT



First class technical support

An extensive programming guide with source code and application notes are provided so that experienced developers can create their own unique display lists and incorporate with microcontroller tool environments to produce complete graphics systems.

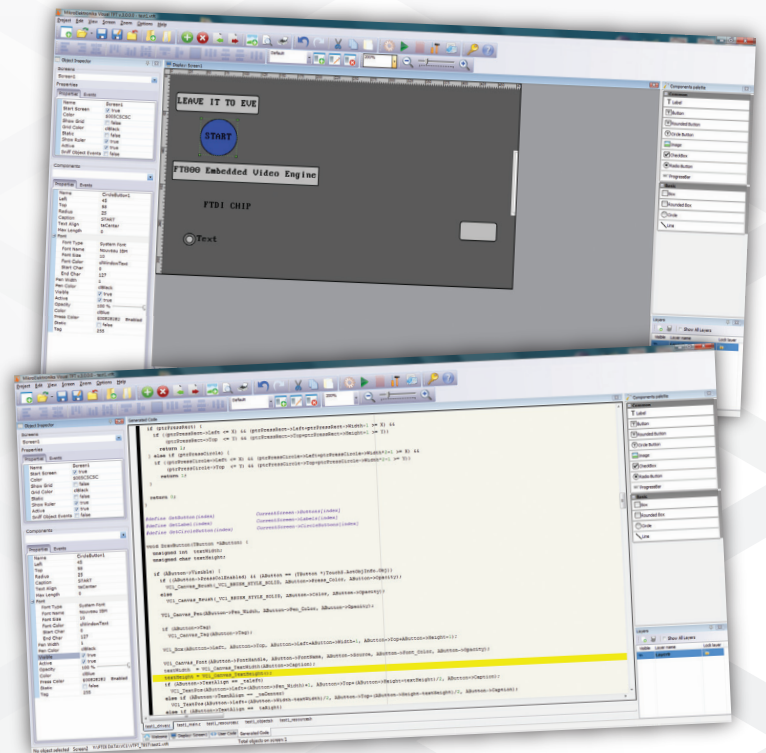
GUI based tool (VisualTFT)

FTDI Chip has collaborated with MikroElektronika to provide libraries to access their easy to use GUI based tool (VisualTFT) for developing display images that can be compiled to code for your system microcontroller.

The tools allow for users to drag and drop objects onto a palette to create the image that the processor must display. The VisualTFT tool will convert this graphical input to text code which may be compiled by the many compilers supported by MikroElektronika.

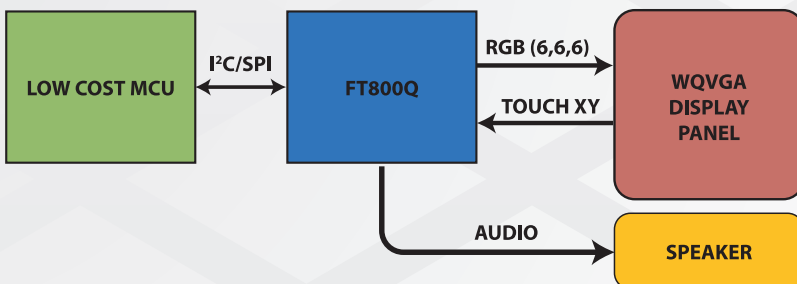
Code may be further edited in the text editor to alter location and colour, etc of the objects placed on the palette.

As the FT800 also supports touch and audio functions, code for this may be added to the MikroElektronika project via the text editor and compiled for runtime execution.



UMFT800 Development System

Finally, no matter if your development uses MikroElektronika or your own customized tool flow, the UMFT800 Development System can be used to prototype and validate your graphic system. This board comes with I²C and SPI interfaces that interface to your system host, and a parallel RGB interface to drive your display.



FT800 Application Block Diagram



For more than a decade mikroElektronika has been one of few companies in the world that produce entire development tool chains for all major microcontroller architectures.

Visit www.mikroe.com for details.

With complex graphics made easy, combined with unparalleled value in embedded design technology, the FT800 can benefit a wide-range of current display applications and enable display, audio and touch solutions in new applications, such as:



- Point of sale terminals
- Multi-function printers
- Barcode scanners
- Digital tachographs
- Signature capture devices
- Credit card signature pads
- Universal remote controllers
- Smart home display panels
- Medical appliances
- Domestic appliances
- Industrial control panels
- Portable instrumentation
- Audio/visual equipment
- Home security systems
- Bedside clocks
- Gas chromatography equipment
- Power metering displays
- Security alarm panels
- Elevator displays
- Door intercom systems
- GPS displays
- Taxi meter displays
- Automotive touch screens
- Office phones & switch boards
- Tourist info kiosks
- Thermostats
- Museum & tour guide displays
- Tele/video conference systems
- Game consoles, toys
- Fitness equipment
- Public transport
- Cameras
- Mobile phones
- e-Book readers
- Picture book frames
- Petrol pump displays
- Touch screen telephone (POTs) with DTMF tones included in FT800 audio library
- Vending machine selector panels
- Hi tech supermarket shelving price display

Redefine the cost/quality paradigm with the FT800's intelligent display technology. Get started today and see how easy display development can be with **EVE**, the Embedded Video Engine from FTDI Chip.



FTDI Chip specialise in the design and supply of silicon and software solutions. Our focus is on providing easy to use, robust products that enable fast time to market while offering differentiated solutions through unique features that bring value to customers' end equipment designs.

The company is widely recognised for its industry leading USB products that offer a simple route to USB migration (USB Made Easy), by combining easy to implement IC devices with proven, ready to use, royalty-free USB firmware and driver software.

FTDI Chip has now expanded its "made easy" philosophy with the addition of easy to use display controllers offering display, audio and touch functionality in a simple compact package with simple to use development software for creating graphical interfaces for a variety of low powered microcontrollers.

For more information on FTDI Chip, visit: www.ftdichip.com and follow us on @FTDICHIP

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