GLYN Newsletter
High-Tech Distribution

News Highlights – November 2006:

FTDI Releases VDIP1 Module for Easier Vinculum USB Host Controller Prototyping

FTDI, available through Glyn High-Tech Distribution, announces the release of the VDIP1 module for its Vinculum family of embedded USB Host Controller devices. The VDIP1 module is an MCU to embedded USB host controller development module for the Vinculum VNC1L-1A IC device. The VDIP1 is supplied on a PCB designed to fit into a 24 pin DIP socket, and provides access to the UART, parallel FIFO, and SPI interface pins on the VNC1L-1A device, via its AD and AC bus pins. Not only is it ideal for developing and rapid prototyping of VNC1L-1A designs, but also an attractive quantity discount structure makes this module suitable for incorporation into low and medium volume finished product designs.

Key VDIP1 features include:

- On board VNC1L-1A embedded USB host controller IC
- Jumper selectable UART, SPI or FIFO MCU Interfaces
- USB "A" type socket to interface with USB peripherals
- Second USB interface port available via module pins, if required
- Single 5V supply input
- Auxiliary 3.3V / 200mA power output to external logic
- Power indicator and USB traffic indicator LEDs
- VNC1L firmware on the VDIP1 can be programmed or updated via USB Flash disk or via UART / parallel FIFO / SPI interface.
- VNC1L-1A firmware programming control pins PROG# and RESET# brought out onto jumper interface
- VDIP1 is a Pb-free, RoHS compliant development module

The Vinculum VNC1L-1A is the first of FTDI's Vinculum family of Embedded USB host controller integrated circuit devices. Not only is it able to handle the USB Host Interface, and data transfer functions but owing to the inbuilt MCU and embedded Flash memory, Vinculum can encapsulate the USB device classes as well. When interfacing to mass storage devices such as USB Flash drives, Vinculum also transparently handles the FAT File structure communicating via UART, SPI or parallel FIFO interfaces via a simple to implement command set. Vinculum provides a new cost effective solution for providing USB Host capability into products that previously did not have the

hardware resources available. The VNC1L-1A is available in Pb-free (RoHS compliant) compact 48-Lead LQFP package.

EDT Introduces New 3.5” and 5.7” Colour TFT LCD QVGA Modules

Emerging Display Technologies (EDT), available from GLYN High-Tech Distribution, recently introduced new RoHS-compliant versions of the 3.5” and 5.7” transmissive colour TFT LCD modules with options for integrated DC/DC converter circuitry and 4-wire resistive touch panel.

Both TFT LCD modules have a QVGA resolution (320 x 240 RGB pixels), 16.7 million colours (24 bit), digital parallel RGB interface, white LED backlight system, operating temperature range of -10°C to 60°C, and 3.3V power supply. The 3.5” module has an operating current of 200mA (typical).

Both modules have excellent visibility in bright and low light conditions with a typical brightness of 250 cd/m^2 for the 3.5” module and 195 cd/m^2 for the 5.7” module. In addition, both modules have a 6 o’clock viewing direction, high contrast ratio of 300 (typical) and wide viewing angle of 67 degrees (typical).

Active area dimensions are 70.08W x 52.56H mm for the 3.5” module and 115.2W x 86.4H mm for the 5.7” module. Module size dimensions are 76.8W x 63.8H x 4.4D mm for the 3.5” module and 124.7W x 100.0H x 7.5D mm for the 5.7” module. Dot sizes are 0.073W x 0.219H mm for the 3.5” module and 0.12W x 0.36H mm for the 5.7” module.

The customer system can interface to these TFT LCD modules via a 33-pin digital parallel RGB interface with an 8-bit data bus for each R, G, and B pixel (24 pins total for the three colours), 2 power supply pins, 6 control pins, and a clock input pin.

These TFT LCD modules are ideal in a wide variety of applications such as point-of-sale equipment, barcode scanners, GSM/navigation devices, PDAs, handheld game consoles as well as portable medical equipment. These modules have also been tested for durability (over 1,000,000 times of stylus hitting and over 100,000 times pen touch sliding), making it suitable for rugged applications.

UNIVISION Introduces New Low Cost 0.85" Monochrome OLED Module

Univision, available through GLYN High-Tech Distribution, has introduced a new low cost, 0.85" diagonal screen size, monochrome (light blue) OLED module (part number UG-0416ALBAG01). With a resolution of 104 x 16 pixels, Univision continues to widen its OLED display product range that will revolutionise small user interfaces.

The optical clarity of this tiny display with a panel size of just 31.30 x 9.20 x 1.85mm, an active area of 21.305 x 3.28mm, and a pixel size of 0.19 x 0.19mm makes it ideal for a wide variety of applications where excellent readability in a small form factor is required.

With a dark room contrast ratio of over 1:100 (typical), brightness at 60cd/m² (typical, with polarizer), viewing angles of over 160˚ and ultra fast response times (2.5us minimum clock cycle) allowing motion video, those yellow green character displays of the past can be replaced with the latest OLED display technology from today!

The SSD0300Z controller with built-in driver used in this OLED module can communicate with an external MCU using I^2C protocol. An 8-pin module interface is provided for the I^2C bus, power supply pins, reset, and current reference resistor. Vdd supply voltage can range from 2.6 to 3.5V (2.8V typical) while the Vcc driver supply voltage can range from 6.5 to 7.5V (7V typical). Idd operating current is 95uA (typical) while Icc operating current is 2mA (typical) with 50% of the display turned on, making it suitable for low power applications.

Whilst OLEDs have been accepted as having superior optical qualities than alternative technologies such as LCDs, factors such as lifetime, price and operating temperature have limited their applications in the past. Dramatic improvement in OLED process technology overcomes these problems and this display has an average operating half life of 10,000 hours at room temperature, and an operating temperature at -30˚ to +70˚C with prices competitive over LCD technologies.

An evaluation kit and sample codes are also available for easier product evaluation and development. This OLED module is ideally suited for a wide range of applications such as audio and consumer electronic equipment, measurement equipment, caller ID telephone, handheld radio, and other portable devices.

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