

DLP DESIGN USB Interface Products



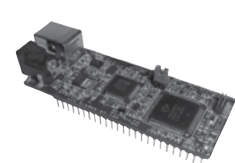
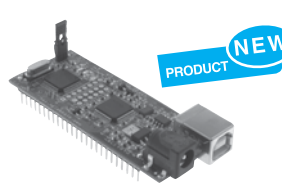

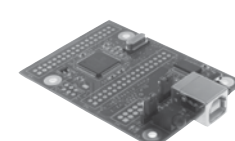
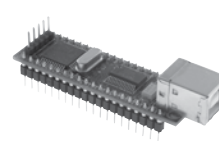
Embedded Modules

DLP Design

"Add USB to your next project - it's easier than you might think!"

DLP Design's USB Interface products provide a high-speed, hot-swappable, user-friendly connection between your electronic device and a host PC. The USB interface will provide up to 500mA at 5 volts of power for your electronics. These boards make the extremely complex USB Interface easy for just about anyone to start using, without requiring any in-depth prior knowledge.

USB MICROCONTROLLER DEVELOPMENT BOARDS

<p>DLP-2232H-PSOC5</p> <ul style="list-style-type: none"> Cypress CY8C5588 Programmable System-on-Chip (PSOC[®]) 5 containing: <ul style="list-style-type: none"> - 32-bit ARM Cortex-M3 CPU Core - Up to 67MHz Operation - 256 KBytes Flash Program Memory - 64 KBytes SRAM Memory - Internal Non-Volatile Configuration Memory for All Programmable Features - One Configurable Delta-Sigma ADC with 8- to 20-Bit Resolution - Two Configurable SAR ADC's with 8- to 12-bit Resolution - Four 8-bit DAC's Configurable for Current or Voltage Mode Operation - Four Comparators and Four OpAmps - Four Configurable Multifunction Analog Blocks - 24 Programmable Logic Device (PLD-Based) Universal Digital Blocks (UDB) High-Speed USB 2.0 Interface Featuring FTDI FT232H Silicon- Both Parallel and Serial Interfaces are Supported 40 User I/O Channels plus 2 Output/Dedicated Peripheral Usage Pins USB Port Powered or 5V External Power Barrel Jack USB 1.1- and 2.0-Compatible Interface Small Footprint: 3.0 x 1.2-Inch PCB and Standard 50-Pin, 0.9-Inch DIP Interface 	
<p>DLP-2232MSP</p> <p>The DLP-2232MSP combines the same USB interface used in the DLP-2232H and the DLP-1232H modules with a Texas Instruments microcontroller to form a rapid development tool. The MSP430F2618 microcontroller is preprogrammed with basic functionality for accessing the port pins and can be reprogrammed with user firmware via a 10-pin header using a device programmer (purchased separately).</p> 	<p>DLP-232PC</p> <ul style="list-style-type: none"> Single byte commands to all functions Designed to fit into a standard 18 pin, 0.3-inch wide DIP footprint providing 14 I/O channels PIC18F2410 Microcontroller can be reprogrammed with user firmware Microcontroller communicates with host PC at up to 460,800 baud data rate USB 1.1/2.0 Compatible Rev 3 silicon from FTDI No in-depth knowledge of USB required <p>Measuring in at only 1.375x0.6 inches, this new module is our lowest cost and smallest USB to Microcontroller module to date. The DLP-232PC uses single byte commands and FTDI's Virtual COM Port (VCP) drivers to provide an easy to use USB interface to a PIC 18F2410 microcontroller. Features include 14 I/O channels (8 can be used for analog inputs measuring 0-5 volts), a standard 0.3 inch wide DIP footprint and preprogrammed firmware for easy access to the I/Os and external digital temperature sensors (purchased separately).</p> 
<p>DLP-245PL-G</p> <ul style="list-style-type: none"> Simple USB-FIFO interface to PIC Microchip 18F8722 microcontroller 50 I/O pins (including A/D inputs) plus 8-bit data bus Example source code provided for Token firmware feature Up to 2 megabit per second data rate to host computer USB 1.1/2.0 compatible Rev 2 silicon from FTDI No in-depth knowledge of USB required RoHS Compliant <p>The DLP-245PL is a powerful integrated module based on the DLP-USB245M USB-FIFO adapter coupled with a PIC 18F8722 MPU and royalty free USB drivers. The 18F8722 microcontroller is preprogrammed with basic functionality for accessing the port pins and can be reprogrammed with user hex code via a 5-pin header that is compatible with Microchip's MPLAB ICD2 device programmer/debugger (purchased separately). Refer to the datasheet for full details.</p> 	<p>DLP-245PB-G</p> <ul style="list-style-type: none"> Simple USB-FIFO interface to PIC Microchip 16F877A microcontroller Plugs into a standard 40-pin, 0.6in wide DIP socket Example source code provided for Token firmware feature Up to 2 megabit per second data rate to host computer USB 1.1/2.0 Compatible Rev 2 silicon from FTDI No in-depth knowledge of USB required <p>The DLP-245PB-G is a powerful integrated module based on the DLP-USB245M USB-FIFO adapter coupled with a PIC 16F877 MPU and royalty free USB drivers. It plugs into a standard 40 pin 0.6in wide DIP socket and is ideal for rapid prototyping and development of USB / PIC based designs. Token I/O code pre-programmed into the 16F877's ROM for basic port pin input/output capability including access to the A/D, EEPROM, and external digital temperature sensors. The 16F877's Flash ROM can be easily erased and reprogrammed if required using the optional DLP-Flash Programmer. Refer to the datasheet for full details.</p> 

MOUSER STOCK NO.	DLP Part No.	Description	Price Each		
			1	10	25
626-DLP-2232H-PSOC5	DLP-2232H-PSOC5	CY8C5588 Programmable System-on-Chip Module	99.95	-	-
626-DLP-2232MSP	DLP-2232MSP	DLP-2232MSP MSP430F2618 Microcontroller module	69.96	65.75	61.99
626-DLP-2232MSPF	DLP-2232MSPF	USB Interface Microcontroller Module	59.95	58.29	56.75
626-DLP-232PC	DLP-232PC	DLP-232PC USB to PIC18F2410 Microcontroller Module	29.95	29.00	28.75
626-DLP-245PL-G	DLP-245PL-G	DLP-245PL USB/Microcontroller PCB	65.00	62.50	60.00
626-DLP-245PB-G	DLP-245PB-G	USB to PIC16F877A Microcontroller Module	40.00	38.50	37.25

MAVRK DEVELOPMENT KIT MODULES

The DLP-MAV-LCD1 combines a 2x16 character LCD module with a 5 switch joystick. Demonstration firmware that runs on the MAVRK main processor will be made available for developers wishing to incorporate this module into their project. The firmware will adhere to the communications requirements imposed by the MAVRK main processor and is completely compatible with the MAVRK (purchased separately) platform.

MOUSER STOCK NO.	DLP Part No.	Description	Price Each
626-DLP-MAV-LCD1	DLP-MAV-LCD1	Module for Texas Instruments MAVRK Development Platform: 2x16 LCD Module with a 5 switch joystick	69.96

FPGA MODULES

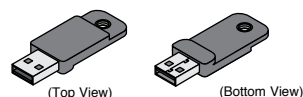
- Features:**
- Micron 32M x 8 DDR2 SDRAM Memory
 - Built-In Configuration Loader; Writes the Bit File Directly to SPI Flash via High-Speed USB 2.0 Interface
 - 63 User I/O Channels: 24 Differential Pairs and 8 Global Clocks
 - 66MHz Oscillator
 - 133 MHz DDR2 Interface Reference Design Provided
 - USB Port Powered or 5V External Power Barrel Jack
 - USB 1.1 and 2.0 Compatible Interface
 - Small Footprint: 3.0 x 1.2-Inch PCB and Standard 50-Pin, 0.9-Inch DIP Interface

MOUSER STOCK NO.	DLP Part No.	Description	Price Each
626-DLP-HS-FPGA2	DLP-HS-FPGA2	Xilinx XC3S400A-4FTG256C FPGA Prototyping Module	179.95
626-DLP-HS-FPGA3	DLP-HS-FPGA3	Xilinx XC3S1400A-4FTG256C FPGA Prototyping Module	219.95

DLP-D USB BASED SECURITY DONGLE

The DLP-D Security Dongle is pre-programmed with a unique identification number (Serial Number) that is readable over USB but cannot be altered by any means. Since each serial number is unique, this device provides a way of linking application software to a specific hardware dongle with a high level of security.

- Features:**
- Hard-coded, unique serial number
 - USB 1.1 and 2.0 compatible interface
 - Small size; easily fits on key chain
 - 3rd-Party support for application development
- Applications:**
- Access control
 - Copy protection



MOUSER STOCK NO.	DLP Part No.	Description	Price Each
626-DLP-D-G	DLP-D-G	USB Security Dongle	14.99

USB DATA ACQUISITION BOARDS

Schematics available on-line. USB 1.1 Compliant. The onboard PIC12F629 microcontroller can be reprogrammed with user code (requires programmer). Drivers and test applications can be downloaded from the website



MOUSER STOCK NO.	DLP Part No.	Fig.	Description	Price Each		
				1	10	25
626-DLP-TEMP-G	DLP-TEMP-G	A	2 - Channel	25.00	23.00	21.00
626-DLP-IO14	DLP-IO14	B	14 Channels, ±5V Input Range, USB Powered	44.95	44.05	43.35
626-DLP-IO20	DLP-IO20	C	20 - Channel	49.95	49.05	48.50