CY7C6XXX Series Of USB Microcontrollers

Cypress offers the industry's broadest line of USB microcontrollers, as well as a full set of development tools, supporting cost-driven applications such as keyboards and mice, as well as high-performance application like printers, scanners, xDSL modems, and digital cameras. Cypress has a wide range of solutions for Low-Speed USB applications, Full-Speed USB Applications and USB Hub Applications. Temperature range , commercial (0-70° F).

The CY7C630/1XXA is a family of 8-bit RISC One Time Programmable (OTP) microcontrollers with a built-in 1.5-Mbps USB Serial Interface Engine (SIE). The microcontroller features 35 instructions that are optimized for USB applications. In addition, the microcontroller features 128 bytes of internal RAM and either 2 or 4 Kbytes of program memory space. The Cypress USB Controller accepts a 6-MHz ceramic resonator as its clock source. This clock signal is doubled within the chip to provide a 12-MHz clock for the microprocessor.

The CY7C64013 and CY7C64113 are 8-bit One Time Programmable microcontrollers that are designed for full-speed USB applications. The instruction set has been optimized specifically for USB operations, although the microcontrollers can be used for a variety of non-USB embedded applications.

The CY7C646xx (EZ-USB FX) is Cypress Semiconductor's second-generation full-speed USB family. FX products offer higher performance and a higher level of integration than first-generation EZ-USB products. The FX builds on the EZ-USB feature set, including an intelligent USB core, enhanced 8051, 8-Kbyte RAM, and high-performance I/O. The CY7C646xx enhances the EZ-USB family by providing faster operation and more ways to transfer data into and out of the chip at very high speed.

The CY7C65100 Series offers high-performance, fixed-function Universal Serial Bus (USB) hub devices which comply with USB Specification, Revision 1.1. Up to four downstream USB ports are available to expand the USB attachment points available in your PC system. These self-contained devices require no firmware development for your design, thereby reducing the design risk associated with some microcontroller solutions. These Application-Specific Standard Products (ASSP) can improve time-to-market in a number of USB designs, including standalone hubs, motherboard hubs, and monitor hubs.

CY7C68013-56PVC (EZ-USB FX2) Single-chip integrated USB 2.0 Transceiver, Serial Interface Engine (SIE), and Enhanced 8051 Microprocessor, High Speed 480Mbits/sec. Enhanced 8051 microcontroller, and a programmable peripheral interface in a single chip. Integrated I²C-compatible controller, runs at 100 or 400 kHz, 48-MHz, 24 MHz, or 12 MHz 8051 operation. Four integrated FIFOs, brings glue and FIFO inside for lower system cost. Automatic conversion to and from 16-bit buses, master or slave operation. FIFOs can use externally supplied clock or asynchronous strobes. Easy interface to ASIC and DSP ICs, up to 40 general purpose I/Os.

B

Memory Size Prom	Ram	Speed EXT Oscillator	Config-uration	USB Application Speed	Number I/O	Core Arch.	Temp. Range	Voltage	Pin Count Package	Digi-Key Part No.	Price Each 1	25	100	Cypress Part No.
Low Speed USB Microcontrollers — 4.4V to 5V														
4K	128	6-MHz Resonator	OTP	1.5-Mbps	12	M-8	0-70°C	4.4-5.0	20-SOIC	428-1313-ND	2.66	1.66	1.33	CY7C63001A-SC
4K	128	6-MHz Resonator	OTP	1.5-Mbps	16	M-8	0-70°C	4.4-5.0	24-QSOP	428-1314-ND	3.14	1.94	1.58	CY7C63101A-QC
3K	256	6-MHz Resonator	OTP	1.5-Mbps	10	M-8	0-70°C	4.4-5.0	16-DIP	428-1316-ND	2.60	1.60	1.30	CY7C63221A-PC
3K	256	6-MHz Resonator	OTP	1.5-Mbps	12	M-8	0-70°C	4.4-5.0	18-SOIC	428-1317-ND	2.66	1.66	1.33	CY7C63231A-SC
8K	256	6-MHz Resonator	OTP	1.5-Mbps	32	M-8	0-70°C	4.4-5.0	40-DIP	428-1318-ND	3.45	2.14	1.73	CY7C63413-PC
8K	256	6-MHz Resonator	OTP	1.5-Mbps	32	M-8	0-70°C	4.4-5.0	48-SSOP	428-1319-ND	3.45	2.14	1.73	CY7C63413-PVC
8K	256	6-MHz Resonator	OTP	1.5-Mbps	32	M-8	0-70°C	4.4-5.0	48-SSOP	428-1320-ND	3.79	2.34	1.90	CY7C63513-PVC
8K	256	6-MHz Resonator	OTP	1.5-Mbps	16	M-8	0-70°C	4.4-5.0	24-SOIC	428-1321-ND	3.33	2.06	1.67	CY7C63613-SC
8K	256	6-MHz Resonator	OTP	1.5-Mbps	11	M-8	0-70°C	4.4-5.0	18-DIP	428-1322-ND	3.10	1.94	1.56	CY7C63723-PC
8K	256	6-MHz Resonator	OTP	1.5-Mbps	11	M-8	0-70°C	4.4-5.0	18-SOIC	428-1323-ND	3.10	1.94	1.56	CY7C63723-SC
8K	256	6-MHz Resonator	OTP	1.5-Mbps	17	M-8	0-70°C	4.4-5.0	24-DIP	428-1324-ND	3.33	2.06	1.67	CY7C63743-PC
8K	256	6-MHz Resonator	OTP	1.5-Mbps	17	M-8	0-70°C	4.4-5.0	24-SOIC	428-1325-ND	3.33	2.06	1.67	CY7C63743-SC
Medium Performance Full-Speed Microcontrollers — 3.3V														
8K	256	6-MHz Xtal	OTP	12-Mbps	19	M-8	0-70°C	3.3	28-SDIP	428-1326-ND	5.08	3.02	2.54	CY7C64013-PC
8K	256	6-MHz Xtal	OTP	12-Mbps	19	M-8	0-70°C	3.3	28-SOIC	428-1327-ND	5.06	2.93	2.53	CY7C64013-SC
8K	256	6-MHz Xtal	OTP	12-Mbps	36	M-8	0-70°C	3.3	48-SSOP	428-1328-ND	5.56	3.27	2.78	CY7C64113-PVC
EZ-USB FX Full Speed USB Microcontrollers — 3.3V														
—	8K	12-MHz Xtal	Ram	12-Mbps	40	8051	0-70°C	3.3	128-PQFP	428-1310-ND	12.97	8.02	6.49	CY7C64613-128NC
—	8K	12-MHz Xtal	Ram	12-Mbps	16	8051	0-70°C	3.3	52-PQFP	428-1311-ND	11.76	7.26	5.89	CY7C64613-52NC
—	8K	12-MHz Xtal	Ram	12-Mbps	32	8051	0-70°C	3.3	80-PQFP	428-1312-ND	11.76	7.26	5.89	CY7C64613-80NC
Full Speed USB Peripheral Controllers														
6K	3K	12-48 MHz Xtal	Ram	12-Mbps	32	16-Bit RISC	0-65°C	3.3	100-TQFP	428-1462-ND	8.14	5.04	4.07	SL11R
USB 2.0 (High Speed) — 3.3V														
—	8K	24-MHz Xtal	Ram	Periphal Controller 12/480-Mbps	24	8051	0-70°C	3.3	56-TSSOP	428-1332-ND	12.89	7.94	6.45	CY7C68013-56PVC
USB HUB and Integrated HUB Solutions — 3.3V														
—	—	6-MHz Xtal	OTP	12-Mbps Hub	4-port	No CPU	0-70°C	3.3	28-SOIC	428-1329-ND	4.11	2.54	2.06	CY7C65100-SC
8K	256	6-MHz Xtal	OTP	12-Mbps Hub	31 (4-port)	M-8	0-70°C	3.3	56-TSSOP	428-1330-ND	5.95	3.67	2.98	CY7C66113-PVC
8K	256	6-MHz Xtal	OTP	12-Mbps Hub	11 (7-port)	M-8	0-70°C	3.3	48-SOIC	428-1331-ND	4.51	2.83	2.26	CY7C65113-SC
USB Mass Storage Bridge														
—	256	30-MHz Xtal	Ram	Bridge 12/480-Mbps	10	—	-40-85°C	3.3	100-TQFP	428-1459-ND	8.77	4.57	4.39	ISD-300A1
USB Host/Slave Controller														
—	256	12-48 MHz Xtal	Ram	1.5-12 Mbps	8	No CPU	0-65°C	3.3	28-PLCC	428-1463-ND	6.90	5.52	4.66	SL811HS
—	256	12-48 MHz Xtal	Ram	1.5-12 Mbps	8	No CPU	0-65°C	3.3	48-TQFP	428-1464-ND	6.74	5.39	4.55	SL811HST-AC

EZ-USB Microcontrollers

The **EZ-USB** chip packs the intelligence required by a USB peripheral interface into a compact integrated circuit. A Serial Interface Engine (SIE) decodes and encodes the serial data and performs error correction, bit stuffing, and other signaling-level details required by USB, and ultimately transfers data bytes to and from the USB interface.

The internal microprocessor is enhanced 8051 with fast execution time and added features. It uses internal RAM for program and data storage, making the EZ-USB family a soft solution. The USB host downloads 8051 program code and device personality into RAM over the USB bus, and then the EZ-USB chip reconnects as the custom device as defined by the loaded code.

The EZ-USB family uses an enhanced SIE/USB interface (called the "USB Core") which has the intelligence to function as a full USB device even before the 8051. The enhanced core simplifies 8051 code by implementing much of the USB protocol itself. EZ-USB chips operate at 3.3V. This simplifies the design of bus-powered USB devices, since the 5V power available in the USB connector (which the USB specification allows to be as low as 4.4V) can drive a 3.3V regulator to deliver clean isolated power to the EZ-USB chip.

AN2131-DK001 The development kit for the EZ-USB family provides complete hardware and software solutions for accelerating the firmware and device driver development for all the members of the families. The development kits use the actual silicon for the entire development. Cypress' software utilities and example firmware allow the user to generate USB traffic in hours, not weeks!

An evaluation version of the 8051 Keil Software Tools is included in the EZ-USB Development Kits. The evaluation version of the C-Compiler lets the designer write 8051 microcontroller applications in C and still get the efficiency and speed of assembly language. Advanced features from Keil tools include the ability to single step through code. The supplied Keil tools are fully functional, but are limited in object size to 4 Kbytes.

Kit includes: EZ-USB Development Board with AN2131QC, peripheral Board for prototyping, a USB cable, and an RS-232 9-pin to 9-pin cable.

Required Tools not included: Microsoft Visual C++, WDM DDK, and Windows 98 PC

Memory Size Ram	Speed EXT Oscillator	Config.	USB Application Speed	Number I/O	Core Architecture	Temperature Range	Pin Count Pkg.	Digi-Key Part No.	Price Each 1	25	100	Cypress Part No.
8-KB	12MHz Xtal	Ram	12-Mbps	24	8051	-40 - 85 C	80-PQFP	428-1307-ND	8.49	5.28	4.25	AN2131QC
8-KB	12MHz Xtal	Ram	12-Mbps	18	8051	-40 - 85 C	44-PQFP	428-1306-ND	8.49	5.28	4.25	AN2131SC
8-KB	12MHz Xtal	Ram	12-Mbps	8	8051	-40 - 85 C	44-PQFP	428-1308-ND	8.49	5.28	4.25	AN2135SC
EZ-USB Xcelerator Development Kit							44-PQFP	428-1333-ND	398.87	—	—	AN2131-DK001

Developer Kit: CY3671

The development kit for the **EZ-USB FX** family provides complete hardware and software solutions for accelerating the firmware and device driver development for all the members of the families. The development kits use the actual silicon for the entire development. Cypress' software utilities and example firmware allow the user to generate USB traffic in hours, not weeks!

Devices Supported: CY7C64603-128NC, CY7C64603-52NC, CY7C64603-80NC, CY7C64613-128NC, CY7C64613-52NC, CY7C64613-80NC

Cypress includes an evaluation version of the 8051 Keil Software Tools in the CY3671 Development Kit. The evaluation version of the C-Compiler lets the designer write 8051 microcontroller applications in C and still get the efficiency and speed of assembly language. Advanced features from Keil tools include the ability to single step through code. This makes it easy to detect errors, handle source level debugging, and set breakpoints. With the ability to debug code one line at a time and to quickly compile and one-step download new code, developers have a more efficient means to complete firmware faster than using emulators. The supplied Keil tools are fully functional, but are limited in object size to 4 Kbytes.

Kit includes: EZ-USB Development Board with CY7C64613-128NC, a Peripheral Board for prototyping, a USB cable and an RS-232 9-pin to 9-pin cable.

428-1334-ND EZ-USB FX Development Board.....**398.87**

Developer Kit: SL11R-DK

The SL11R from Cypress, is a low cost, full speed Universal Serial Bus (USB) RISC based Controller. The SL11R contains a 16-bit RISC processor with built-in BIOS ROM that greatly reduces firmware development time. This unique architecture provides the ability to upgrade products, in the field, without changing the peripheral hardware. The processor can execute code either from internal ROM/RAM or external DRAM, SRAM and ROM.

The SL11R-DK Developer's kit comes with the following components • HW reference design for SL11R evaluation board • Assembler/Debugger and built in emulator • Application notes, BIOS ROM information • System Software demo program source code • Generic WDM mini-port driver for WIN98/2000-object code • 2 sample chips • Email support

Kit Includes: HW reference design for SL11R evaluation board, Assembler/Debugger and built in emulator, Application notes, BIOS ROM information, System Software demo program source code, Generic WDM mini-port driver for WIN98/2000-object code, and 2 sample chips.
Devices Supported: SL11R-IDE

428-1344-ND SL11 Development Tools **398.87**

Developer Kit: CY3650

The Cypress USB Developer's Kit is a powerful tool that enables customers to develop USB hardware and firmware with emulated Cypress USB ICs.The development system can be run in two modes. In the typical development system environment, the board is controlled through a PC-based interface. Software running on the PC facilitates debugging through breakpoints, single stepping, and display and modification of registers and data RAM. In this mode, firmware can be implemented in on-board EPROM, or downloaded to program RAM. The RAM option provides a quick and easy method for testing firmware revisions.

Devices Supported: CY7C63101A-SC

The CY3650 Development Kit includes a CY3650 USB development board, a power supply, a USB cable, an RS-232 9-pin to 9-pin cable, and a 9-pin to 25-pin adapter

428-1342-ND USB Development Kit-LO Speed, Low I/O **413.83**

All prices in Euro and include duty and brokerage fees.

CYPRESS
"Connecting from Last Mile To First Mile."

Developer Kit: CY3654

CY3654 Base-Board
The CY3654 is the common base board for a variety of our M8 Series products. To emulate a specific USB device within a family, the appropriate personality board needs to be purchased (CY3654-Pxx). Each USB family will have a unique personality board. The base board (CY3654) will only work when supplemented by one of the family specific personality boards.

Personality Boards:
Cypress offers a variety of Personality Boards that accompany the CY3654 Base Board for use in specific applications. The following is a list of current offerings:

CY3654 and CY3654-P02:
Base Board and Personality Board is a development environment in support of a variety of applications such as keyboards and other low speed devices requiring more I/O. The CY3654 and CY3654-P02 is designed for use with Cypress's CY7C634XX, CY7C635XX, and CY7C636XX M8 based parts.

CY3654 and CY3654-P03:
Base Board and Personality Board is a development environment in support of a variety of applications such as full-speed peripherals, hubs, and hub plus integrated peripheral applications. The CY3654 and CY3654-P03 is designed for use with Cypress's CY7C64x13 (full-speed), CY7C65x13 and CY7C66x13 (hubs) M8 based parts.

CY3654 and CY3654-P05:

Base Board and Personality Board is a development environment in support of a variety of applications such as mice or other low speed USB peripherals. The CY3654 and CY3654-P05 is designed for use with Cypress's CY7C632XXA, and CY7C637XX M8 based parts.

Note: A Complete Development Kit consists of the Base Board plus a Personality Board. Other Personality Boards can be used with the same CY3654 Base Board. Please specify both the base-board CY3654, and Personality board CY3654-P02, when ordering this particular kit.

CY3654 Development Kit includes a CY3654 Base board, a RS-232 Cable, and a Power Supply. Personality Kits include a CY3654Px00 Personality Board, a CY3654Dx00 Applications Board, Target µC Adapters, a target Flex Cable, and application Cables.

Description	Devices Supported	Digi-Key Part No.	Price Each	Cypress Part No.
Base Board	All USB Personality Boards CY series	428-1337-ND	700.04	CY3654
Personality Board	CY7C634XX, CY7C635XX, and CY7C636XX	428-1338-ND	322.32	CY3654-P02
Personality Board	CY7C64X13 (full-speed), CY7C65X13,and CY7C66X13	428-1339-ND	580.18	CY3654-P03
Personality Board	CY7C632XXA, and CY7C637XX	428-1340-ND	322.32	CY3654-P05

Reference Design: CY4601

USB to Serial

The USB to Serial Reference Design is a single chip solution for seamlessly upgrading a serial interface to USB. On the host side we provide a custom Windows driver that provides serial port emulation. On the peripheral side we provide firmware for different USB microcontrollers to support a range of application throughput needs. The design architecture enables easy migration to a true USB device in the future.

Key Features:
• 3 chip families supported - enCoRe: 600-56K baud (800 bytes/sec) - CY7C64013: 600-56K baud (4K bytes/sec) • Includes COM port emulation driver • Supports RI, CD, RTS, CTS, DTR, and DSR control and monitoring • Full control of baud rate, data bytes, stop bits and parity bits

Devices Supported: • CY7C63722-PC, CY7C63722-SC, CY7C63723-PC, CY7C63723-SC, CY7C63742-PC, CY7C63742-SC, CY7C63743-PC, CY7C63743-SC, CY7C64013-PC, CY7C64013-SC

This Reference Design Kit includes:
• Documentation Design Notes for enCoRe and CY7C64013 Quick Start/User Guide
• Serial port emulation driver, Windows based support applications, Firmware source code

Notes: (1) No board comes with the reference design kit. It is intended to be used in conjunction with the development kit for the corresponding part: enCoRe – CY3654 plus CY3654-P05, CY7C64013 – CY4654 plus CY3654-P03 (2) Sample, untested source code for the EZ-USB microcontroller is also included

428-1343-ND Reference Design Kit **160.35**

Reference Design: CY4620

Multimedia Combi Keyboard Hub

This reference design implements a combination USB-PS/2 keyboard with an integrated 4 port hub using the single CY7C66113 USB microcontroller. This same solution can be used for a simple USB Keyboard Hub by using only the USB cable. Devices Supported: CY7C66113-PVC

Features: • Fully Integrated Keyboard and Hub Functions using a Single 56 Pin SSOP Solution • Auto Detection of USB or PS/2 keyboard interface • 4 Downstream Ports • Supports up to 21 x 8 Scan matrix • Internal EPROM allows for easy change to scan matrix • 1 Kbyte of EPROM available for customer user code • Supports Multimedia and Power Management Keys: Power Off, E-mail, Next, Sleep, Search, Previous, Wakeup, Favorites, Volume Up, Calculator, Play/Pause, Volume Down, Home, Stop, and Mute

The Reference Design Kit Includes: • Design Notes for implementing a combi keyboard hub • Firmware source and object code • Hardware files: Schematics, Gerber Files, and Bill of Materials • Combi keyboard hub demonstration unit

428-1467-ND Reference Design Kit **160.35**

Reference Design: CY4612

High Speed USB to ATA

The ISD300A1 is the fastest, easiest way to implement a USB to ATA/ATAPI bridge. This fixed function device minimizes risk and reduces design cycle time, but still allows flexibility through EEPROM configuration options. Multiple complete hardware design options are included. Devices Supported: ISD-300A1

Features: Single chip solution, Supports PIO modes 0-4 and UDMA modes 0-4, Compatible with Windows and MAC OS class drivers, Windows 98 driver included, EEPROM, Tri-statable output lines

This Reference Design Kit Includes: ISD301A development board, ISD310 sample production board, 80-pin ATA cable, "Y" power adapter cable, USB cable, ISD-300A1 Datasheet CD-ROM containing: Hardware design databases for 4 different board layouts, Schematic, Bill of Materials, Gerber files, Orcad files, Windows 98 driver, Sample EEPROM programming utility, and other technical support documents.

428-1465-ND Reference Design Kit **160.35**

Developer Kit: CY3681

The development kit for the EZ-USB FX2 family provides complete hardware and software solutions for accelerating the firmware and device driver development for all the members of the families. The development kits use the actual silicon for the entire development. Cypress' software utilities and example firmware allow the user to generate USB traffic in hours, not weeks!

Cypress includes an evaluation version of the 8051 Keil Software Tools in the USB 2.0 Development Kit. The evaluation version of the C-Compiler lets the designer write 8051 microcontroller applications in C and still get the efficiency and speed of assembly language. Advanced features from Keil tools include the ability to single step through code. This makes it easy to detect errors, handle source level debugging, and set breakpoints. With the ability to debug code one line at a time and to quickly compile and one-step download new code, developers have a more efficient means to complete firmware faster than using emulators. The supplied Keil tools are fully functional, but are limited in object size to 4 Kbytes.

Devices Supported: CY7C68013-100AC, CY7C68013-128AC, CY7C68013-56PVC

The kit includes the following: EZ-USB Development Board with CY7C68013-128AC, peripheral Board for prototyping, USB cable, and an RS-232 9-pin to 9-pin cable.

428-1335-ND USB 2.0 Development Kit **398.87**

Reference Design: CY4610

Full Speed USB to ATA and Compact Flash

The Cypress EZ-USB family of microcontrollers provides an ideal USB interface to a Mass Storage device. The 16 bit General Programmable Interface of our EZ-USB FX and the 8 bit interface of our EZ-USB provide a glueless interface to the attached drive. Our single chip designs provide low cost, flexible and high performance solutions.

Devices Supported: AN2135SC, CY7C64613-128NC, CY7C64613-80NC

Supported Interfaces: • The EZ-USB FX design supports USB to ATA - IDE: Hard Drives - ATAPI: ZIP, LS-120, CDs, DVDs • The EZ-USB design supports - Compact Flash

Key Features: • Single chip device supports ATA or Compact Flash interfaces • Sustained transfer rates of 1 Mbyte/second • Field Upgradeable Firmware • Large internal RAM allows data buffer and double-buffer bulk endpoints • Compatible with Mass Storage Class drivers in standard operating systems • Windows 98 Driver included

The Reference Design Kit includes: • Design Notes for USB to ATA and USB to Compact Flash • Firmware source and object code • Windows, Mac OS, and DOS drivers • Hardware files for USB to ATA and USB to CompactFlash - Schematics - Gerber Files - Bill of Materials • USB to ATA demonstration board

428-1336-ND Reference Design Kit **160.35**

FTG Programming Kit: CY3670

The CY3670 FTG programming kit provides users with a PC the ability to program Cypress EPROM Field-Programmable Clock Generators quickly and easily. The two setup requirements are a power connection and a serial port connection with the PC.

Features: • Supports multiple Cypress EPROM Field Programmable Clock Generators: CY2071AF, CY2291F, CY2292F, CY2292FZ, CY2907F8, and CY2907F14 • Separate device-specific socket adapters • Allows quick and easy prototyping • Compact design for ease of portability • Easy to use interface: Windows 95, Windows 98, and Windows NT 4.0 compatible • User-friendly CYClocks™ software for JEDEC file development

Kit Contents: • Programmer Unit • Serial Port Cable • AC/DC Adapter • CD containing • CyClocks™ Software • CY_FTG_V2 Programmer Software • Data sheets of supported devices • Device-specific socket adapters for the CY2071AF and CY2292F (socket adapters for the other devices are ordered separately)

428-1457-ND FTG Programming Kit **349.52**

FTG Programming Kit: CY3672

The CY3672 programming kit enables any user with a PC the ability to program Field Programmable Clock generators quickly and easily. The only two setup requirements are a power connection and a parallel port connection with the PC.

Features: • Supports Field Programmable Clock Generators: CY2077FS, CY2077FZ, CY22050F, CY22150F, CY22381F, CY22392F, CY22393F, CY22394F, and CY22395F • Allows quick and easy prototyping • Compact design for ease of portability • Easy to use Windows 95, 98, NT, 2K, ME, XP compatible interface • User friendly CYClocksRT™ software for JEDEC file development

Kit Contents: • Three Sockets: CY3695, CY3698, CY3699 • Parallel Port cable • AC/DC adapter • CD containing: CyClocksRT™ software, CY3672 programmer interface software, and data sheets.

428-1458-ND FTG Programming Kit **440.17**

Reference Design: CY4611

USB 2.0 USB to ATA Design

With the EZ-USB FX2, Mass Storage applications can now take advantage of the high bandwidth capability of USB 2.0. This design supports ATA specification modes through UDMA 100 for the highest performance USB mass storage solution available. The General Programmable Interface of the FX2 allows glueless connection to the attached drive. This design provides all of the materials necessary to move right to production with the most flexible, highest performance solution available. Supported Interface: USB to ATA **Devices Supported:** CY7C68013-100AC, CY7C68013-128AC, CY7C68013-56PVC.

IDE: Hard Drives, CompactFlash, ATAPI: CD-ROM/R/RW, DVD-ROM/RAM/RW, ZIP, LS-120, and other ATAPI devices.

Key Features: Single chip interface to any mass storage device, Supports PIO and UDMA modes through UDMA Mode 5 (UDMA-100), Transfer rate limited only by USB 2.0 bandwidth, Field Upgradeable Firmware, Large internal RAM allows data buffer and quad-buffer bulk endpoints. Supported by Windows and Mac OS Class Drivers, Windows 98 Driver available, Shorter development time with complete Reference Design Kit.

The Reference Design Kit Includes: USB to ATA demonstration board, "Y" power cable Design Notes, Firmware source and object code Hardware files including: • Schematic • Gerber Files • Bill of Materials

428-1468-ND Reference Design Kit **160.35**

Developer Kit: SL811S-DK

The Cypress SL811S-DK developers kit designed to help you build your USB Embedded Host Application in just 2-3 weeks. Devices Supported: SL811S, SL811ST-AC

The Kit comes complete with the following: • SL811S/ISA peripheral evaluation board • HW reference design for SL811S/ISA board • Firmware source code example in "C" and/or 8051 Assembler (other processors firmware code is available too) • Application notes • System Software demo program source code in "C" under Win98/2000 • Generic WDM mini-port driver for WIN98/2000 - object code • Sample chips

SL811S and SL811ST DVK Includes: SL811S/ISA peripheral evaluation board, HW reference design for SL811S/ISA board, Firmware source code example in "C" and/or 8051 Assembler (other processors firmware code is available too), Application notes, System Software demo program source code in "C" under Win98/2000, Generic WDM mini-port driver for Win98/2000 - object code, Sample chips

428-1466-ND SL811 Development Tools **313.46**