



CY7B923 HOTLink



The **CY7B923 HOTLink Transmitter** and **CY7B933 HOTLink Receiver** are point-to-point communications building blocks that transfer data over high-speed serial links (fiber, coax, and twisted pair). Standard HOTLink data rates range from 160-330 Mb/s/second. Higher speed HOTLink is also available for high-speed applications (160-400 Mb/s/second), as well as for those low-cost applications HOTLink-155 (150-160 Mb/s/second operations).

Features:

- Fibre-Channel compliant • IBM ESCON compliant • DVB-ASI compliant • ATM compliant • B/10B coded or 10-bit unencoded • Standard HOTLink: 160–330Mbps • High-speed HOTLink 160–400 Mbps for high-speed applications • Low-speed HOTLink: 150–160Mbps for low-cost fiber

Applications:

- TTL synchronous I/O • No external phase-locked-loop (PLL) components • Triple PECL 100K serial outputs • Dual PECL 100K serial inputs • Low power: 350mW (Tx), 650mW (Rx) • Compatible with fiber optic modules, coaxial cable, and twisted pair media • Built-In Self-Test • Single +5V supply • 28-pin SOIC/PLCC/LCC • 0.8 BiCMOS

Description	Package	Digi-Key Part No.	1	Price Each 25	100	Cypress Part No.
Transmitter, Standard Speed	28-PLCC	428-1706-5-ND	56.20	44.96	37.94	CY7B923-JXC
	28-SOIC	428-1707-5-ND	56.20	44.96	37.94	CY7B923-SXC
Receiver, Standard Speed	28-PLCC	428-1708-5-ND	56.20	44.96	37.94	CY7B933-JXC
	28-SOIC	428-1709-5-ND	56.20	44.96	37.94	CY7B933-SXC

Developer Kits

CY3674

The development kits for the EZ-USB FX™ family provide complete hardware and software solutions for accelerating the firmware and device driver development for all the products in the family. The development kits use the actual silicon for the entire development. Software utilities and example of firmware allow the user to generate USB traffic in hours, not weeks! Includes an evaluation version of the 8051 Keil Software Tools in the Full Speed 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 kilobytes.

Devices Supported: CY7C64713-56LFXC, CY7C64713-100AXC, CY7C64713-128AXC

Kit Includes: • EZ-USB Development Board with CY7C64713-128AXC • Peripheral Board for prototyping • USB cable • RS-232 9-pin to 9-pin cable

428-1681-ND EZ-USB FX1 Development Kit \$490.00

CY3684

The CY3684 development kit for the EZ-USB FX2LP™ family provides complete hardware and software solutions for accelerating the firmware and device driver development for all of the products in the family. The development kits use the actual silicon for the entire development. Software utilities and example firmware allow the user to generate USB traffic in hours, not weeks! Includes an evaluation version of the 8051 Keil Software Tools. 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. The supplied Keil tools are fully functional, but are limited in object size to 4 kilobytes.

Kit includes: • EZ-USB development board • Peripheral board for prototyping • USB cable • RS232 9-pin to 9-pin cable

428-1677-ND Development Kit for EZ-USB FX2LP \$525.00

CY3654

CY3654 Base-Board: 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 will only work when supplemented by one of the family specific personality boards. CY3654 Development Kit includes a CY3654 Base board, a RS-232 Cable, and a Power Supply.

Personality Boards: Cypress offers a variety of Personality Boards that accompany the CY3654 Base Board for use in specific applications.

Kit Includes: • CY3654Px00 Personality Board • CY3654Dx00 Applications Board • Target µC Adapters • Target Flex Cable • Application Cables

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 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 CY7C64x13 (full-speed), CY7C65x13 and CY7C66x13 (hubs) M8 based parts.

CY3654: 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 is designed for use with 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.

Description	Devices Supported	Digi-Key Part No.	Price Each	Cypress Part No.
Base Board	All USB Personality Boards CY series	428-1337-ND	868.75	CY3654
Personality Board	CY7C634XX, CY7C635XX and CY7C636XX	428-1338-ND	400.00	CY3654-P02
	CY7C64X13 (full-speed), CY7C65X13 and CY7C66X13	428-1339-ND	720.00	CY3654-P03

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. 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 • 2 sample chips

Devices Supported: SL11R-IDE

428-1344-ND SL11 Development Tools \$495.00

CY4636

WirelessUSB LP RDK (CY4636) provides an exemplary implementation of a 2:1, bidirectional Wireless desktop keyboard and mouse to single wireless receiver. The RDK will help jump-start your Keyboard and Mouse development using WirelessUSB LP (CYRF6936) Radio System on Chip. WirelessUSB LP is the next generation WirelessUSB device, with high data throughput and low power designed to operate in 2.4 GHz ISM band. WirelessUSB has many powerful features that allow users to create never before seen radio applications.

Kit Includes: • CYRF6936 WirelessUSB LS transceiver • Optical Sensor Mouse • WirelessUSB keyboard • Batteries • CD

428-1858-ND Wireless USB REF Kit \$248.75

CY3655

The enCoRe™ II development system, based on the highly refined PSoC™ (Programmable System-on-Chip™) tools, supplies the user with an incircuit emulator (ICE) that works in conjunction with actual silicon to provide an accurate and efficient development system. The PSoC Designer™ software consists of a graphical user interface, assembler, C-Compiler, linker and debugger for a highly integrated code development environment. A compliant USB "User Module" along with PS/2 and other peripheral User Modules simplifies the learning curve and speeds development time.

Kit Includes:

• Application Board enCoRe II Pod • Wireless enCoRe II Pod • PDIP feet • Modular Programmer Base Board • Programming Adapter Plug • USB Cable PS/2 Male to Male Cable • Software • Printed Documentation

428-1773-ND Development Kit for enCoRe II \$1166.00

428-1774-ND Extension Kit for enCoRe II \$615.00

TOSHIBA

8, 16, and 32-Bit Flash Microcontrollers

Toshiba 8-bit microcontrollers feature low-power consumption and low voltage operation.

The on-chip peripherals options include LCD, VFT and LED display drivers.

The 870/C series has a single register bank to increase C-Compiler efficiency.

Features:

- Minimum Instruction cycle time: 0.25µs at 16MHz
- Low-power modes including HALT, IDLE and clock gear and dual clocks
- Powerful instruction set with 731 instructions including multiply, divide, 16-bit operations, bit manipulations, etc.
- On-chip peripherals including A/D, PWM, UARTS and LCD
- Operating Temperature: -40° ~ 85°C

Kits Include:

Evaluation Board, C-Compiler (3000 lines per module), Assembler, Linker, RS-232 Cable, Batteries, Quick Start Guide, Datasheet, Manuals, CD with Tools

Memory Size		I/O	Supply Voltage	Package	Digi-Key Part No.	Price Each			Toshiba Part No.
EPROM	RAM					1	25	100	
512K	24KB	143	2.7 - 3.6	193-FBGA	TMP19A43FDXBG-ND	12.63	11.37	10.09	TMP19A43FDXBG
2MB	64KB	209	2.7 - 3.6	281-FBGA	TMP19A64F20AXBG-ND	41.65	37.50	33.25	TMP19A64F20AXBG
32K	2K	39	1.8 - 3.6	64-QFP	TMP86FM29FG-ND	5.60	4.48	3.49	TMP86FM29FG
32K	2K	39	1.8 - 3.6	64-LQFP	TMP86FM29UG-ND	5.60	4.48	3.49	TMP86FM29UG
32K	2K	56	1.8 - 3.6	64-QFP	TMP86FM48FG-ND	8.00	6.40	5.40	TMP86FM48FG
32K	2K	56	1.8 - 3.6	64-LQFP	TMP86FM48UG-ND	7.90	6.32	5.34	TMP86FM48UG
48K	2K	48	1.8 - 3.6	80-LQFP	TMP86FP24F-ND	6.28	5.03	4.24	TMP86FP24F
48K	2K	48	1.8 - 3.6	80-LQFP	TMP86FP24FG-ND	6.28	5.03	4.24	TMP86FP24FG
8K	256	22	2.7 - 5.5	30-SSOP	TMP86F807MG-ND	5.40	4.32	3.36	TMP86F807MG (EY)
8K	256	24	2.7 - 5.5	30-SSOP	TMP86F808DMGEY-ND	5.40	4.32	3.36	TMP86F808DMG (EY)
16K	512	26	4.5 - 5.5	32-SDIP	TMP86FH09NGZM-ND	2.54	2.04	1.59	TMP86FH09NG(ZM)
16K	512	24	2.7 - 5.5	30-SSOP	TMP86FH12MGZ-ND	3.60	2.88	2.24	TMP86FH12MG(Z)
16K	512	33	2.7 - 5.5	42-SDIP	TMP86FH46ANGZ-ND	5.00	4.00	3.38	TMP86FH46ANG(Z)
16K	512	35	2.7 - 5.5	44-LQFP	TMP86FH47UG-ND	2.88	2.31	1.95	TMP86FH47UG
60K	2K	48	2.7 - 5.5	64-LQFP	TMP86FS23UGJZ-ND	4.78	3.83	2.98	TMP86FS23UG(JZ)
60K	1K	65	2.7 - 5.5	80-LQFP	TMP86FS27FG-ND	9.48	7.59	6.40	TMP86FS27FG
60K	2K	62	2.7 - 5.5	80-LQFP	TMP86FS28DFGJZ-ND	5.06	4.05	3.42	TMP86FS28DFG(JZ)
60K	2K	62	2.7 - 5.5	80-QFP	TMP86FS28FG(TZ)	5.06	4.05	3.42	TMP86FS28FG(TZ)
60K	2KB	56	2.7 - 5.5	60-QFP	TMP86FS49AFGZ-ND	5.20	4.16	3.51	TMP86FS49AFG(Z)
60K	2KB	56	2.7 - 5.5	60-LQFP	TMP86FS49AGJZ-ND	5.20	4.16	3.51	TMP86FS49AGJ(Z)
60K	2KB	91	2.7 - 5.5	100-QFP	TMP86FS64FGTZ-ND	5.54	4.44	3.45	TMP86FS64FG(TZ)
16K	512	32	1.8 - 5.5	44-LQFP	TMP86PH22UGJZ-ND	4.39	3.51	2.73	TMP86PH22UG(JZ)
128K	4KB	61	2.4 - 3.6	100-LQFP	TMP91FW40FGJZ-ND	7.46	5.97	5.04	TMP91FW40FG(JZ)
256K	16KB	81	2.4 - 3.6	100-LQFP	TMP91FY42FGJZ-ND	10.21	9.20	8.16	TMP91FY42FG(JZ)
128K	8KB	81	2.4 - 3.6	100-QFP	TMP91FW60DFGTZ-ND	7.46	5.97	5.04	TMP91FW60DFG(TZ)
128K	8KB	83	2.4 - 3.6	100-LQFP	TMP91FW60FGBJZ-ND	7.46	5.97	5.04	TMP91FW60FGB(JZ)
8K	288KB	136	2.4 - 3.6	228-FBGA	TMP92CZ26AXBG-ND	10.00	9.00	7.98	TMP92CZ26AXBG
86FH47 Starter Kit					BMSKTOPASF47AND-ND	98.95	—	—	BMSKTOPASF47(AND)
86FM29 Starter Kit					BMSKTOPASFMA-ND	98.95	—	—	BMSKTOPASFMA(AND)
86FM29 Starter Kit					BMSKTOPASF48AND-ND	98.95	—	—	BMSKTOPASF48(AND)
TMP86FS49 Evaluation Kit					BMSKTOPASF6FS49A-ND	98.95	—	—	BMSKTOPASF6FS49(A)

◆ RoHS Compliant

More Product Available Online: www.digikey.com

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Microcontrollers 8-Bit 8051-Compatible

The 8051 microcontroller family remains one of the most popular processors in the world. Its ease of use and relatively high performance make it ideal for many applications, including portable and handheld products. The introduction of a new line of high-performance derivatives has many positive implications for improving the power efficiency of 8051-based designs. First, the use of a high-speed 8051 microcontroller can significantly improve power efficiency. A high performance CPU allows the processor clock to be slowed, resulting in the same level of performance at less power. Alternatively, the performance of an existing system can be increased without increasing power consumption. Second, a device which incorporates all needed peripherals should be selected if possible. If extra data memory is required, a device such as the DS87C520 should be used, which incorporates 1 kilobyte of internal MOVX SRAM. One of the strengths of the 8051 product family is the wide variety of on-chip peripherals. Features such as watchdog timers, additional UARTs, and precision reset circuits are available on high-speed microcontrollers. The introduction of two new low-power modes provides a low-power alternative to the Idle mode.

Internal Program Memory	Internal MOVX SRAM	Serial Ports	16-Bit Timers	Watchdog	Power Fail Reset and Interrupt	Power Mgmt. Mode	Supply Voltage (V)	Feature	Speed (MHz)	Package	Digi-Key Part No.	Price Each	
												1	25
16kB EPROM	1kB	2	3	Yes	Yes	Yes	4.5 - 5.5	80C52 Compatible	33	44-PLCC	DS87C520-ONL+-ND	48.84	36.86
16kB EPROM	1kB	2	3	Yes	Yes	Yes	4.5 - 5.5	80C52 Compatible	33	44-PLCC	DS87C520-OCL+-ND	42.29	31.92
16kB EPROM	1kB	2	3	Yes	Yes	Yes	4.5 - 5.5	80C52 Compatible	33	40-DIP	DS87C520-MCL+-ND	44.20	33.36
16kB EPROM	1kB	2	3	Yes	Yes	Yes	4.5 - 5.5	80C52 Compatible	33	44-TQFP	DS87C520-ECL+-ND	44.31	33.44
16kB EPROM	1kB	2	3	Yes	Yes	Yes	4.5 - 5.5	80C52 Compatible	33	52-PLCC	DS87C520-OCL+-ND	47.33	35.72
16kB EPROM	1kB	2	3	Yes	Yes	Yes	4.5 - 5.5	80C52 Compatible	33	62-PLCC	DS87C520-ONL+-ND	54.38	41.04
ROM-less	—	1	3	No	No	No	4.5 - 5.5	80C32 Compatible	25	44-PQFP	DS80C310+FCG-ND	12.83	12.38
ROM-less	—	1	3	No	No	No	4.5 - 5.5	80C32 Compatible	25	40-DIP	DS80C310-MCG+-ND	14.10	10.64
ROM-less	—	1	3	No	No	No	4.5 - 5.5	80C32 Compatible	25	44-PLCC	DS80C310-QCG+-ND	12.72	9.60
ROM-less	—	2	3	Yes	Yes	No	4.5 - 5.5	80C32 Compatible	25	44-TQFP	DS80C320-ECG+-ND	22.15	16.72
ROM-less	—	2	3	Yes	Yes	No	4.5 - 5.5	80C32 Compatible	25	40-DIP	DS80C320-MCG+-ND	14.84	11.20
ROM-less	—	2	3	Yes	Yes	No	4.5 - 5.6	80C32 Compatible	33	40-DIP	DS80C320-MCL+-ND	20.14	15.20
ROM-less	—	2	3	Yes	Yes	No	4.5 - 5.6	80C32 Compatible	25	44-PLCC	DS80C320-QCG+-ND	19.13	14.44
ROM-less	—	2	3	Yes	Yes	No	4.5 - 5.6	80C32 Compatible	33	44-PLCC	DS80C320-OCL+-ND	22.15	16.72
ROM-less	—	2	3	Yes	Yes	No	4.5 - 5.5	80C32 Compatible	33	44-PLCC	DS80C320-QNG+-ND	22.15	16.72
—	—	2	3	Yes	Yes	No	4.5 - 5.5	80C32 Compatible	33	44-PLCC	DS80C320-ONL+-ND	25.68	19.38
—	—	2	3	Yes	Yes	No	2.7 - 5.5	80C32 Compatible	18	44-TQFP	DS80C323-ECG+-ND	7.18	5.42
—	—	2	3	Yes	Yes	No	2.7 - 5.5	80C32 Compatible	18	40-DIP	DS80C323-MCG+-ND	7.18	5.42
64kB ROM	1kB	3	4	Yes	Yes	Yes	1.8 - 3.3	80C32 Compatible	75	100-LQFP	DS80C400-FN+-ND	16.13	15.56
64kB Flash	1kB	2	3	Yes	Yes	Yes	4.5 - 5.5	80C52 Compatible	33	40-DIP	DS89C450-MNL+-ND NEW!	22.55	17.02

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DS80C400 Evaluation Kit

The DS80C400 Evaluation Kit is a proven platform to conveniently evaluate the capabilities of the DS80C400 networked microcontroller.

This kit contains the DSTINim400 evaluation module, a fully functional and tested reference design based on the DS80C400 networked microcontroller. In addition, the kit contains the DSTINis400 sockets board, which functions as the motherboard designed to host the DSTINim400 evaluation module.

Kit Includes:

- DSTINim400 Reference Board • DSTINis400 Socket Board • DS80C400 Software CD-ROM • Quick Start Guide • Cables

DS80C400-KIT#-ND Evaluation Kit for DS80C400..... **\$112.32**

Soft Microcontroller Module

DS5000(T) Soft Microcontroller Module is a fully 8051-compatible 8-bit CMOS microcontroller that offers "softness" in all aspects of its application. This is accomplished through the comprehensive use of nonvolatile technology to preserve all information in the absence of system Vcc. The internal program/data memory space is implemented using either 8 or 32 kilobytes of nonvolatile CMOS SRAM. **DS2250-32** has the same features as the DS5000 but with an added feature. The program/data memory space is implemented using 8, 32, or 64 kilobytes of nonvolatile CMOS SRAM.

Module with Internal Battery	NV RAM	Real-Time Memory Encryption Key	Real-Time Clock	Package	Speed (MHz)	Digi-Key Part No.	Price Each	
							1	25
Yes	32K x 8 Int.	40-Bit	No	40-EDIP	16	DS5000-32-16+-ND◆	125.88	95.00
Yes	32K x 8 Int.	40-Bit	No	40-EDIP	16	DS5000T-32-16+-ND◆	138.46	104.50
Yes	64K x 8 Int.	User Defined	Yes	40-SIMM	16	DS2250-32-16-ND	95.67	72.20

◆ RoHS Compliant

MAXQ™ 16-Bit RISC Microcontrollers

The MAXQ family of 16-bit reduced instruction set computing (RISC) microcontrollers is targeted toward low-cost, low-power, embedded-application designs. The flexible, modular architecture design used in these microcontrollers allows development of targeted designs for specific applications with minimal effort. Microcontrollers in the MAXQ family provide many different combinations of program memory, data memory, and peripherals while supporting a common feature set. This shared functionality provides maximum reusability for hardware and software systems developed using these microcontrollers.

Internal Program Memory	Internal MOVX SRAM	Serial Ports	1-Wire Master	Timers	PWM	Data Pointers	Watchdog	Power Management Mode	Ring Osc.	LCD	LCD Segments	Supply Voltage	Package	Digi-Key Part No.	Price Each			Dallas Part No.
															1	25	50	
64kB Flash	2kB	2	Yes	3 x 16-Bit	3	3	Yes	Yes	Yes	Yes	132	1.8 - 2.75	68-OFN	MAXQ2000-RAX+-ND	8.11	6.12	4.00	MAXQ2000-RAX+
32kB Flash	2kB	2	Yes	3 x 16-Bit	3	3	Yes	Yes	Yes	Yes	132	1.8 - 2.75	100-LQFP	MAXQ2000-RFX+-ND	8.11	6.12	4.90	MAXQ2000-RFX+
2kB	64B	—	—	1 x 16-Bit	—	2	Yes	Yes	—	—	—	6 - 9.5	24-TSSOP	MAXQ3210-EJX+-ND	4.48	3.38	2.88	MAXQ3210-EJX+
2kB	64B	—	—	1 x 16-Bit	—	2	Yes	Yes	—	—	—	6 - 9.5	24-DIP	MAXQ3210-EMX+-ND	4.74	3.58	3.05	MAXQ3210-EMX+
2kB	64B	—	—	1 x 16-Bit	—	2	Yes	Yes	—	—	—	4.5 - 5.5	24-TSSOP	MAXQ3212-EJX+-ND	4.48	3.38	2.88	MAXQ3212-EJX+

MAXQ2000 Evaluation Kit

The MAXQ2000 Evaluation Kit (EV kit) is a proven platform to conveniently evaluate the capabilities of the MAXQ2000 low-power LCD microcontroller. The kit contains the MAXQ2000 with pins brought out to headers, a JTAG programming interface, fixed and adjustable power supplies, a DB-9 serial connector, an LCD display, and switches and LEDs to control and display board operation. **Kit Includes:** • MAXQ2000 Evaluation Kit Board • Serial-to-JTAG Interface Board • JTAG Cable • MAXQ2000 LCD Display Daughterboard • MAXQ2000 Evaluation Kit CD-ROM

MAXQ2000-KIT-ND Evaluation Kit for MAXQ2000..... **\$174.90**

MAXQ3120 Evaluation Kit

The MAXQ3120 Evaluation Kit (EV kit) is a proven platform to conveniently evaluate the capabilities of the MAXQ3120 dual analog-to-digital converter (ADC) microcontroller. The kit contains the MAXQ3120 with the ADC inputs and spare GPIO pins brought out to headers, a JTAG programming interface, an on-board 3.3V power supply, and a 3.5 digit LCD. **Kit Includes:** • MAXQ3120 Evaluation Board • Serial-to-JTAG (MAXQJTAG) Interface Board • Serial Cable • JTAG Cable • MAXQ3120 Evaluation Kit CD • Third Party Compiler Tools Evaluation CD

MAXQ3120-KIT-ND Evaluation Kit for MAXQ3120..... **\$174.90**

MAXQ3210 Evaluation Kit

The MAXQ3210 evaluation kit (EV kit) is a proven platform to conveniently evaluate the capabilities of the MAXQ3210 voltage regulator microcontroller. The kit contains the MAXQ3210 with pins brought out to headers, JTAG programming interface, 9V battery clip, piezoelectric horn, pushbuttons, and LED's to control and display board operation. With the included power supply, software, serial-to-JTAG interface board, and an RS-232 cable connected to a personal computer, the kit provides a completely functional system ideal for evaluating the capabilities of the MAXQ3210

MAXQ3210-KIT-ND Evaluation Kit for MAXQ3210..... **\$177.44**

FDI NXP In-Circuit Programmers

USB-ICP supports In-Circuit Programming or ICP mode on NXP's microcontroller families such as the LPC9xx, 80C51, and ARM7. In-Circuit Programming uses a two-wire serial interface to program and erase ICP enabled microcontroller devices without removing them from the system. A small connector is all that is needed to interface your application to the USB-ICP programmer.

The USB-ICP-SAB9 Socket Adapter Board extends the USB-ICP for NXP Semiconductors LPC9xx devices to allow the user to program and test these devices outside of the application circuit. The SAB9 includes support for most NXP LPC9xx devices in the following packages: TSSOP, HVSON10, HVFN128, and DIP8 - DIP 28.

Supports: NXP's P89LPC900, P89C51, and ARM7 families of micro-controllers

Features: • USB port power, no external power supply required • Supports USB 2.0 **Includes:** • USB-ICP dongle • 18" cable for direct connection to board • ICP design guide

622-1001-ND (USB-ICP-80C51ISP).....	\$69.00
622-1002-ND (USB-ICP-LPC9XX).....	\$69.00
622-1005-ND (USB-ICP-LPC2K).....	\$69.00
622-1006-ND (USB-ICP-SAB9).....	\$169.00



USB Programming Dongle

The USB-Dongle provides a Virtual COM Port interface to the PC and allows hex files to be downloaded and programmed using Flash Magic or other common utilities. The USB-Dongle provides all power needed by the various Derivative Boards so no external power supply is required. The USB-Dongle plugs directly into any standard USB port on a PC and supports both USB 1.0/1.1 and USB 2.0.

622-1007-ND (USB-Dongle) USB Programming Dongle (Derivative Boards not included).....	\$16.99
622-1008-ND (DB-HVSON10-LPC9103) Board for LPC9103 10-HVSON.....	\$5.00
622-1009-ND (DB-DIP8-LPC901) Board for LPC901 8-DIP.....	\$5.00
622-1010-ND (DB-TSSOP-LPC922) Board for LPC922 TSSOP.....	\$6.00
622-1011-ND (DB-TSSOP-LPC938) Board for LPC938 TSSOP.....	\$6.00
622-1012-ND (DB-TQFP44-89V52X2) Board for P89V52X2 44-TQFP.....	\$7.50
622-1013-ND (DB-LQFP48-LPC2103) Board for LPC2103 48-LQFP.....	\$7.50
622-1014-ND (DB-TSSOP-SKT) Board for LPC9XX TSSOP.....	\$49.00
622-1015-ND (DB-S08-LPC908) Board for LPC908 8-SOIC.....	\$5.00
622-1016-ND (DB-PLCC44-LPC952) Board for P89LPC952FA 44-PLCC.....	\$7.50
622-1017-ND (DB-PLCC44SKT) Board for 44-ZIF PLCC Socket.....	\$49.00
622-1019-ND (DB-LQFP48-LPC2106) Board for LPC2106 48-LQFP.....	\$14.00
622-1021-ND NEW! (PB-1SP) Board for BGB203/H1/S06.....	\$25.00

LCD Demo Kit

The LCD Demo Kit is a reference design for a low-cost microcontroller and LCD solution. The Demo Board is controlled by a simple two-button user interface (MODE and SELECT). The Demo Board CD includes example code for several sample applications: An FM Radio display during a simulated channel scan, a 15 minute count down timer, a repeating pattern of 4 text lines and a scrolling message window. The user can edit this code and download to the reprogrammable Flash microcontroller via a 10-pin header included on the board using any external ICP style programmer.

622-1003-ND (LCD-DEMO-KIT)..... **\$49.00**

PCA9633 Demo Board

The PCA9633 Demo Board demonstrates the NXP PCA9633 Fast Mode Plus 4-bit I²C LED Driver IC. Four LEDs are connected to the PCA9633 and, through individual pulse width modulation (PWM) of each LED, show different levels of intensity. The board supports six different modes of operation including color wash and random color. The on-board Flash microcontroller is also user reprogrammable for endless variations of functionality. It also includes high-current FET drivers for off board LED circuitry. Power can be supplied by either the on-board 9VDC battery or through the external power connector.

622-1004-ND (PCA9633DEMO)..... **\$69.00**

LPC3180 Development Kit

The LPC3180 Development Kit provides a stable platform for building powerful user applications with the NXP Semiconductors LPC3180 within the ARM9 Linux environment. The kit provides the user with an array of popular mobile technologies making it an ideal development target for consumer communications software. Using existing Linux hardware drivers, developers can focus on building and improving their user interface applications without worrying about low-level hardware functionality.

622-1018-ND (LPC3180-DEV-KIT) **RoHS Compliant**..... **\$975.00**

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