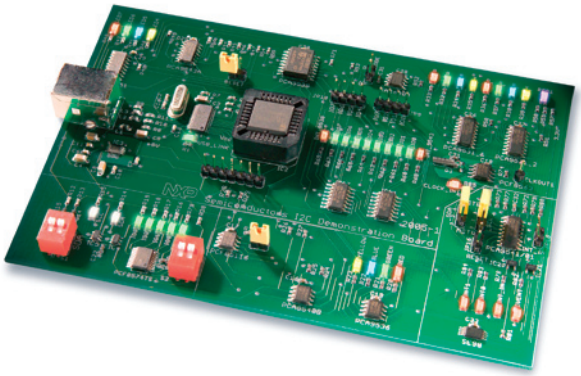

NXP I2C 2005-1 demonstration board kit

Easily test and demo I²C devices

This expandable, low-cost platform makes it easy to test and demonstrate general-purpose I²C logic devices in a real system environment.

Key features

- USB-based solution
- PC software for easy, point-and-click device control
- 12 I²C logic devices in nine general-purpose categories
- I²C speeds up to 400 kHz
- Software-controllable 3.3- and 5-V power supplies

Applications

- Promoting I²C-based solutions
- Learning I²C protocols
- Gaining experience with general-purpose I²C devices
- Training field applications engineers (FAEs)

NXP I²C demonstration board kit I2C 2005-1 includes a PCB populated with I²C devices, power supplies, connectors, and LEDs. It is supplied with a USB cable and, via download, a copy of Win-I2CUSB Lite software.

The board has twelve general-purpose I²C logic devices in the following categories: I/O expander, LED blinker, LED dimmer, EEPROM, temperature sensor, real-time clock, multiplexer, switch, and bus master selector.

The board's hardware connects to the USB port of a PC and uses the I²C protocol to provide bi-directional communications with the I²C devices. Power is provided by the PC's USB port, so there's no need for an additional external power supply.

Win-I2CUSB Lite software

Win-I2CUSB Lite is a custom version of the popular graphical user interface (GUI) supplied by The Boardshop. It's been modified to work only with the demonstration board and provides convenient access to all the I²C devices on the board.

Easy-to-use menus let you select the device you want, and a Universal mode makes it easy to create I²C commands. The I²C devices can be controlled at speeds of up to 400 kHz and, via the Options menu, it's possible to control the I²C frequency and the switched 3.3- and 5.0-V power supplies.

The software runs on Windows 98SE, ME, 2000, and XP, and is available for download at www.standardics.nxp.com/supports/boards/i2c20051.

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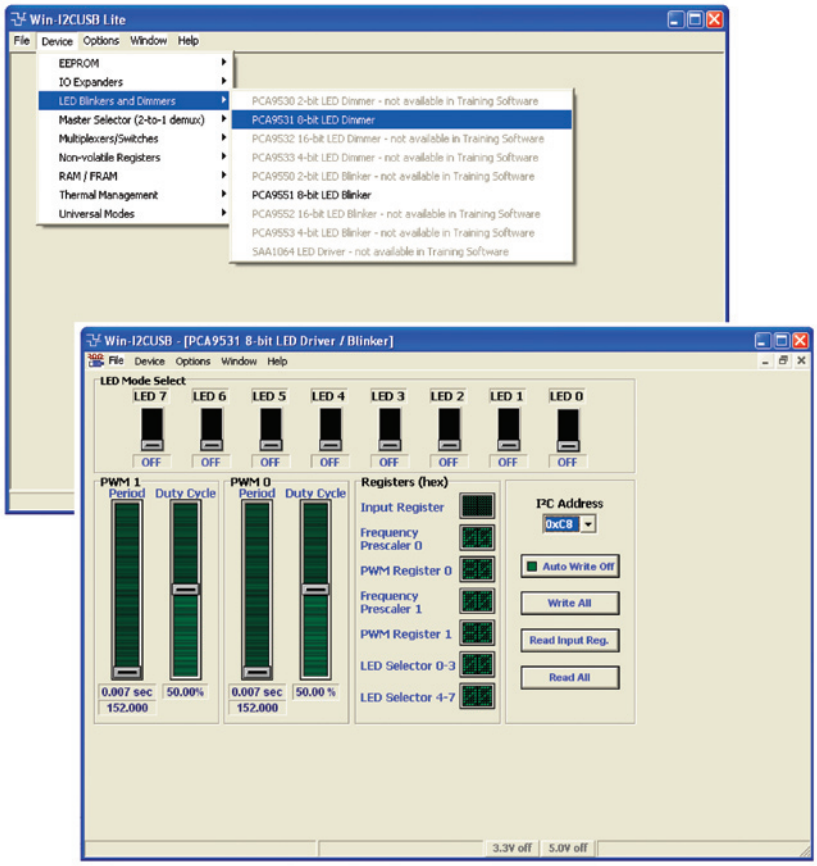
Downloaded from Arrow.com.

A full version of the GUI, called Win-I2CUSBDLL kit, can be purchased be purchased at www.demoboard.com. The full version has its own USB-to-I²C/SPI hardware adapter and is not compatible with the demonstration board microcontroller. To make the full GUI work with the demonstration board, remove the hardware adapter's microcontroller and mount it onto the demonstration board.

Minimum system requirements

The demonstration board requires a PC with a Pentium 60 processor (or equivalent), 8 MB of RAM, 10 MB of hard-disk space, and a USB port (either 1.1- or 2.0-compatible).

The order number for the training board is OM6275.



Screen shots of Win-I2CUSB Lite software

I²C devices on the demo board

Device	Description
PCF8574TS	8-bit I²C and SMBus I/O port with interrupt
PCA9536D	4-bit I²C and SMBus I/O port
PCA9540BD	2-channel I²C Multiplexer
PCF85116-3TD	2048 x 8-bit CMOS EEPROM with I²C-bus interface
PCF8563TD	I²C real-time clock / calendar
PCA9538D	8-bit I²C and SMBus low-power I/O port with interrupt and reset
PCA9551D	8-bit I²C LED driver with programmable blink rates
SA56004ED	±1 °C-accurate, SMBus-compatible, local and remote digital temperature sensor with over-temperature alarms
PCA9543AD	2-channel I²C switch with interrupt logic and reset
PCA9531D x 2	8-bit I²C LED dimmer
PCA9541D/01	2-to-1 I²C master selector with interrupt logic and reset
SE98PW	I²C local-only temperature sensor for SO-DIMM

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