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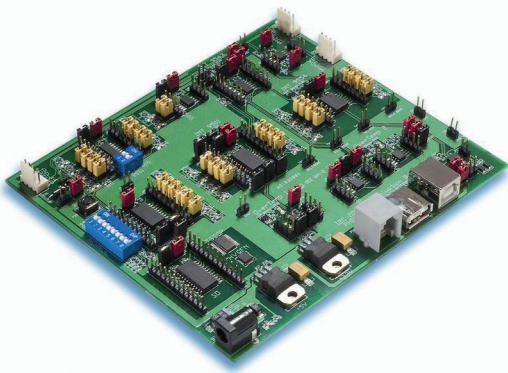
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# NXP I<sup>2</sup>C 2002-1A evaluation board kits OM6285 and OM6278



## Evaluate the I<sup>2</sup>C-bus with a comprehensive kit

This full-featured yet easy-to-use evaluation kit gives you everything you need to start experimenting with the many design options of NXP's general-purpose I<sup>2</sup>C-bus portfolio.

### OM6278 / Low Cost OM6285 (\*) kit features

- ▶ I2C 2002-1A evaluation board with 11 I<sup>2</sup>C-bus slave devices\*
- ▶ I2CPORT v2 adapter card with 4-wire connection cable
- ▶ USB adapter card\*
- ▶ 9-V power supply\*
- ▶ CD-ROM with operating instructions and Win-I2CNT application software

### Devices on I2C 2002-1A evaluation board

- ▶ PCA9501 8-bit GPIO with interrupt and 2K EEPROM
- ▶ PCA9561 Quad 6-bit multiplexed DIP-switch
- ▶ PCA9543 2-channel switch with interrupt logic and reset
- ▶ PCA9554 8-bit GPIO with interrupt
- ▶ PCA9555 16-bit GPIO with interrupt
- ▶ PCA9550 2-bit programmable LED blinker
- ▶ PCA9551 8-bit programmable LED blinker
- ▶ PCF8582C-2 256 x 8-bit CMOS EEPROM
- ▶ LM75A Digital temperature sensor with watchdog
- ▶ PCA9515 I<sup>2</sup>C-bus repeater
- ▶ P82B96 I<sup>2</sup>C-bus high voltage buffer

### Applications

- ▶ Explore I<sup>2</sup>C-bus features, including
  - Program and blink LEDs
  - Control temperature sensors and EEPROMS

The OM6278 evaluation kit provides a simple, easy-to-use introduction to the NXP portfolio of general-purpose I<sup>2</sup>C-bus devices. It includes an evaluation board, a port adapter card, a USB adapter card, a power supply, software, and complete instructions, and lets designers perform a variety of experiments.

Here are some of the things the kit will let you do:

#### ▶ Program and blink LEDs

Use the various GPIO and the LED blinkers to experiment with the LED functions. Note that the LED blinker can continue to blink the LEDs when the I<sup>2</sup>C-bus is disconnected.

#### ▶ Control temperature sensors and EEPROMs

Configure the two-channel switch PCA9534 as a multiplexer and a voltage translator (translating between 3.3 and 5 V), and work with the temperature sensors and the 2-k EEPROMs. See what happens when the master sends commands to devices with the same address at the same time, and see how the temperature sensors responds at different voltage levels.



### ► Replace the DIP switch

Program the multiplexer I<sup>2</sup>C-bus EEPROM to replace a DIP switch.

### OM6278 contents

The I<sup>2</sup>C 2002-1A evaluation board is a two-layer circuit board (6 x 5 inches) equipped with eleven different I<sup>2</sup>C-bus slave devices that represent NXP's general-purpose I<sup>2</sup>C-bus families.

The I2CPORT v2 adapter card plugs into the PC parallel port and provides the interface between the PC (bus master) and the evaluation board's I<sup>2</sup>C-bus slaves. The interface runs at over 100 kHz. The kit's 4-wire connection cable connects the I2CPORT v2 adapter card to the evaluation board at normal SDA/SCL signal levels.

The USB adapter card connects the I2CPORT v2 adapter card to the evaluation board via the P92B96 and a USB cable (not included). The connection isn't a standard USB connection; the USB cable and the USB connectors are used to carry the SCL/SDA signals at special P82B96 voltage levels.

The 9-volt power supply provides power to the devices and LEDs on the evaluation board. It operates from 100 to 240 V at 47 to 66 Hz Edison plus on one side, and from a 9-V mini-plug on the other.

On the kit's CD-ROM, there are operating instructions (including detailed applications notes, software operating instructions, and set-up procedures), and Win-I2CNT software.

Win-I2CNT is 32-bit application software compatible with Windows 95/98/ME/200/NT and XP operating systems. It provides the device-specific and universal-mode graphic interface between the PC and the adapter card, and controls the I<sup>2</sup>C-bus slave devices on the evaluation board.

### Low cost OM285 contents

Contains just the I<sup>2</sup>C slave devices and not the master or software to provide a low cost target board for use with your own master or controller.

### Ordering information

Purchase either board at [www.digikey.com](http://www.digikey.com) or [www.demoboard.com](http://www.demoboard.com).



The I2C 2002-1A evaluation board kit

[www.nxp.com/i2clogic](http://www.nxp.com/i2clogic)

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