

Demonstration and Evaluation Boards

Interface Products Aug 2007



Evaluation/Demo Board List

OM#	Description
OM6270	SPI/I ² C to UART Bridge Demoboard (SC16IS750)
OM6271	SPI to I ² C Master Bridge Demoboard (SC18IS600)
OM6272	UART to I ² C Master Bridge Demoboard (SC18IM700)
OM6273	SPI/I ² C to Dual UART/IRDA/GPIO Demoboard (SC16IS752)
OM6275	I2C 2005-1 Demo Board (15 I ² C devices w/USB control & GUI)
OM6276	PCA9633 Demo Board (Four Color PWM LED Control)
OM6277	PCA9564 Eval Board (I ² C Master)
OM6278	I2C 2002-1A Eval Board (11 I ² C devices w/printer port control & GUI)
OM6279	LED Dimmer Demo Board
OM6285	I2C 2002-1A Eval Board (without/printer port control & GUI)
OM10088	PCF8562 LCD Segment Display

More information: www.standardics.nxp.com/support/boards

Contact us: interface.support @ nxp.com or i2c.support @ nxp.com



Experience the variety of I²C peripherals with the latest I²C Training Board

- Fifteen different I²C devices on one board allows easy experimentation and training. (PCA9531, PCA9536, PCA9538, PCA9540B, PCA9541, PCA9543A, PCA9551, PCF8563, PCF8574, PCF85116-3, SA56004, SE98)
- Add Extra I/O Ports, Temperature Sensors, LED Drivers, Real-time Clock, I²C Bus Switching
- USB Connection to trial version (only devices on board and that fixed address is operational) Graphics Interface for Windows PC/Laptop
- www.standardics.nxp.com/support/boards/i2c20051/
- Target Board & USB based GUI (400 kHz) #OM6275







Get the color right with the single chip four color LED driver (R G B ?)

- Individual PWM for each component color, to set your perfect color
 25 mA per pin
- Global PWM, to set your perfect overall brightness or blink LEDs
- I²C interface for easy connection to Micro or Baseband IC
 - High drive on I²C bus for multiple devices or long distances
- www.standardics.nxp.com/support/boards/pca9633/
- Demo Board with on board micro #OM6276
 - Highlights PCA9633 and LPC900 MCU
 - On-board FETs can sink 300mA per LED







Blink an LED without bit banging Dim and LED with burning a PWM on the MCU

- Two PWMs to map across 2,4,8,16 outputs
 25 mA per pin
- I²C interface for easy connection to Micro or Baseband IC
- Demo Board with on board micro #OM6279
 - PCA9533, PCA9531
 - On-board NXP MCU demonstrates capabilities
 - <u>www.standardics.nxp.com/support/boards/leddemo</u>







Easily drive a LCD Segment Display with a very small MCU and PCF8562

- Good for a User Interface at the front panel of a system
- Scalable to match the complexity of the LCD display
- Simple code using industry-standard 8051 core
- Easily reprogram micro via USB adapter (#OM10083)
- http://www.teamfdi.com/products/lcddemo/lcddemo.shtml
- Demo Board with on board micro #OM10088





Need a "fresh" I²C Master ? NXP has three different options.

- Connect to a MCU's 8-bit peripheral port
 - PCA9564 I²C Bus Controller
 - http://www.standardics.nxp.com/support/boards/pca9564/
 - Demo Board with two on board micros #OM6277
- Connect to a MCU's SPI port
 - SC18IS600 SPI to I²C Master + GPIO Bridge
 - Demo Board #OM6271
- Connect to an extra Async port from MCU or Single Board Computer or ?
 - SC18IM700 Async to I²C Master + GPIO Bridge
 - Demo Board #ÓM6272



8 bit to I²C Bus Controller



SPI to I²C Master



Async to I²C Master



Break out of "Pin Mux Jail" Use what you have to make what you need

- Add new Async ports using available interfaces on MCUs, ASSPs, SoCs
- Code examples for NXP ARM7 MCUs
- Fast! Up to 5Mbps... perfect for Bluetooth 2.0 w/EDR
- Connects to MCU as a I²C Slave or SPI Slave
- Many add extra General Purpose I/O
- Dual Channel Demo Board #OM6273

 Features SC16IS752
- Single Channel Demo Board #OM6270
 - Features SC16IS750



I²C or SPI to Dual Async incl. RS-485 Support

www.standardics.nxp.com/support/boards/sc16is7xx/



Train on many I²C peripherals using parallel printer port to PC

- Eleven different I²C devices on one board allows easy experimentation and training (LM75A, P82B96/PCA9600, PCA9501, PCA9515, PCA9543, PCA9550, PCA9551, PCA9554, PCA9555, PCA9561, PCF8582C-2)
- Add Extra I/O Ports, Temperature Sensors, LED Drivers, I²C Bus Switching
- I²C Bus adapter uses parallel printer port for connection to full version (all devices and addresses operational) of Graphics Interface for Windows PC/Laptop
- www.standardics.nxp.com/support/boards/i2c20021/
- Target Board plus parallel printer port control (100 kHz) & GUI #OM6278
- Target Board only #OM6285







Product focus – UART/I²C/SPI Bridge

- New generation of interface solutions for managing communication among various bus interfaces
- Purpose : Overcome the limitation of the host bus interface to peripherals



- Benefit : Þ
 - Greater design flexibility
 - Ability to retain original design investment Faster time to market

 - Link legacy and new systems and vice versa



NXP Bridge

Leading in miniaturisation high speed low power

Competitive advantages: -First in the market with broad portfolio of high speed serial bridge solutions. -Soul sourced on most products -Small packaging (4x4 HVQFN) ideal for handheld -Low power -Industrial Temperature at commercial pricing	Customer benefits:-Serial (SPI/I2C/UART) interface simplifies host connectionGreater design flexibility-Ability to retain original design investment-Faster time to market-Link legacy and new systems and vice versa-Additional GPIO provides broader usage of ports.
Ideal for:-All types of applicationsWherever UART/SPI or I2C port expansion isrequired-Protocol conversion- Link legacy and new systems- Mobile Handheld, GPS, PDP, TelecomNetworking, Satellite radio, Car Infotainment	Product highlights: -New : Sc16IS602 : I2C to SPI master and GPIO. -New : WinCE driver for SC16IS7xx bridges



NXP Bridge IC – Demo Board Kits

I2C/SPI slave to UART	UART to I2C master	SPI to I2C master	I2C to SPI master
SC16IS7xx	SC18IM700	SC18IS600	SC18IS602
Kits include	Kits include	Kits include	Kits include
•Sample code: RS232, RS485, and IrDA •User Manual Key Benefit	•Sample code: RS232 and NXP I2C devices •User Manual Key Benefit	•Sample code: SPI and NXP I2C devices •User Manual Key Benefit	•Sample code: I2C and NXP SPI devices •User Manual Key Benefit
Easy interface to I2C/SPI host and IrDA, RS232/RS485, and GPIO devices. Selectable I2C or SPI- bus interface	Easy interface to UART host and various I2C and GPIO devices. On- board I2C EEPROM and I2C LED Dimmer	Easy interface to SPI host and various I2C and GPIO devices. On-board I2C EEPROM and I2C LED Dimmer	Easy interface to I2C host and SPI and GPIO devices. Up to 4 SPI chip selects
OM6270 – SC16IS750 OM6273 – SC16IS752	OM6271	OM6272	OM6274



