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NXP SC18IS602 I²C slave to SPI master/GPIO bridge demoboard

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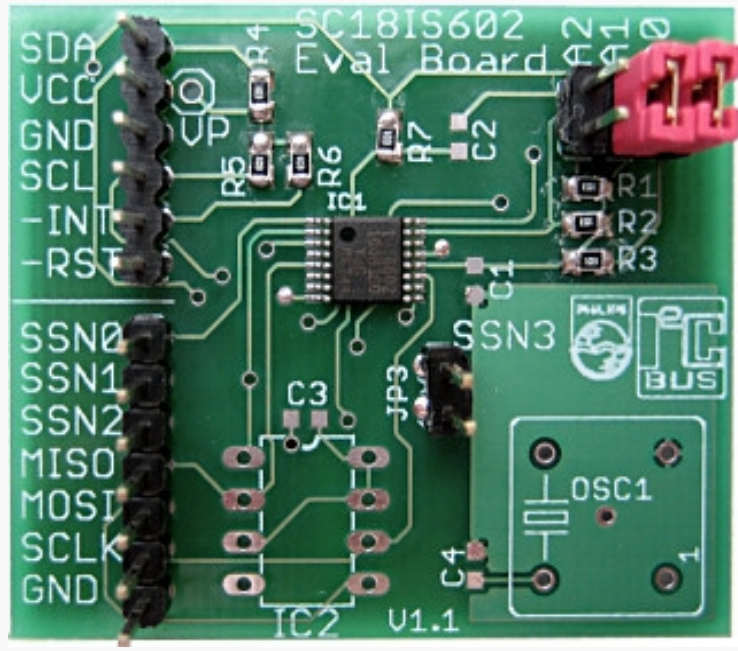
- Standard ICs sections
- Product families & functions
 - Literature brochures, leaflets, presentations
 - Support manuals, models, FAQ, software, demoboards, tools, training
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Introduction

This demoboard utilizes our NXP SC18IS602 I²C slave to SPI master w ith GPIO bridge. The demoboard interfaces to the host processor w ith an I²C-bus interface. Any combination of a total of four SPI devices or GPIOs can be controlled. The demoboard supports up to 8 selectable I²C device addresses via jumpers.

This demoboard can be used for demonstrating either the SC18IS602 or the SC18IS603 bridge. The SC18IS602 features an SPI master w ith speeds up to 1.8Mbps using an internal oscillator w hereas the SC18IS603 features an SPI master w ith speeds up to 4Mbps using an external oscillator. Both feature I²C-bus slave interfaces w ith speeds up to 400KHz.



Contents

Demoboard

The demoboard contains an SC18IS602 I²C slave to SPI master/GPIO bridge. The board includes 2 sets of headers to connect to the I²C and SPI buses. The SPI-bus header pins are shared w ith the configurable GPIO pins. Also included are jumpers for setting the I²C device address. Finally, for advanced users, a jumper and socket are provided for use w ith an external crystal/oscillator and an SC18IS603 (not included).

User Manual

The user manual is included or can be dow nloaded from our Standard ICs w ebsite below .

Sample Code

Sample code routines include I²C host initialization, I²C read and w rite routines, bridge configuration, and SPI slave device commands. The sample code is only available for dow nload from our Standard ICs w ebsite below .

Operation

The SC18IS602 demoboard gets pow er from the I²C host. I²C hosts can include a microcontroller, an embedded processor, or an ASIC. The I²C host communicates via the I²C headers (SDA, SCL, VCC, GND, -INT, -RST).

The SPI headers connect up to four external SPI slave devices or GPIO-connected peripherals such as LEDs and sw itches. Communication w ith multiple SPI slave devices can be chosen via SPI chip select pins (SSN0, SSN1, SSN2, SSN3) by sending appropriate I²C commands to the SC18IS602.

Eight selectable I²C device addresses can be chosen w ith the three jumpers (A0, A1, A2).

Products

SC18IS602	I ² C slave bridge to SPI master bridge w ith internal clock
SC18IS603	I ² C slave bridge to SPI master bridge w ith external clock

Support

Documents

- OM6274 SC18IS602 I²C-to-SPI/GPIO Bridge Demoboard Schematics (Jul 18, 2006)
- OM6274 SC18IS602 I²C-to-SPI/GPIO Bridge Demoboard User Guide (Nov 6, 2006)
- Sample Code for SC18IS602/SC18IS603 I²C on LPC900 (Apr 18, 2007)

Ordering Information

Part Number OM6274: NXP SC18IS602 I²C Slave-to-SPI Master w ith GPIO Bridge Demoboard (Internal Clock)

The demoboard can be purchased from authorized distributors:


- Order Online at **Digi-Key**
- Contact **Arrow**
- Contact **Avnet**
- Contact **Future**

Technical Support


[Contact Us](#) w ith Any Questions

More Information

Literature



Your complete choice for I²C-bus peripherals
Our invention, your solution to everyday design challenges
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Connect I²C/SPI slave or UART to I²C/SPI master or GPIO
NXP I²C/SPI master bridges SC18IS600/601, SC18IS602/603, and SC18IM700
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Links

[I²C Slave to Master/GPIO Bridges](#)

