

passed to the oscillator compensation function, which uses this parameter to compensate for frequency drift of the internal oscillator over temperature

Note:

- This program makes use of variables stored in OTP during factory test on 2806x TMS devices.
- These OTP locations on pre-TMS devices may not be populated. Ensure that the following memory locations in TI OTP are populated (not 0xFFFF) before use:
 - 0x3D7E90 to 0x3D7EA4

Watch Variables

- temp
- SysCtrlRegs.INTOSC1TRIM
- SysCtrlRegs.INTOSC2TRIM

4.49 SCI Echo Back(sci_echoback)

This test receives and echo-backs data through the SCI-A port.

The PC application 'hyperterminal' can be used to view the data from the SCI and to send information to the SCI. Characters received by the SCI port are sent back to the host.

Running the Application

1. Configure hyperterminal: Use the included hyperterminal configuration file SCI_96.ht. To load this configuration in hyperterminal
 - (a) Open hyperterminal
 - (b) Go to file->open
 - (c) Browse to the location of the project and select the SCI_96.ht file.
2. Check the COM port. The configuration file is currently setup for COM1. If this is not correct, disconnect (Call->Disconnect) Open the File-Properties dialog and select the correct COM port.
3. Connect hyperterminal Call->Call and then start the 2806x SCI echoback program execution.
4. The program will print out a greeting and then ask you to enter a character which it will echo back to hyperterminal.

Note:

If you are unable to open the .ht file, you can create a new one with the following settings

- Find correct COM port
- Bits per second = 9600
- Data Bits = 8
- Parity = None
- Stop Bits = 1
- Hardware Control = None

Watch Variables

- **LoopCount**, for the number of characters sent
- **ErrorCount**

External Connections

Connect the SCI-A port to a PC via a transceiver and cable.

- GPIO28 is SCI_A-RXD (Connect to Pin3, PC-TX, of serial DB9 cable)
- GPIO29 is SCI_A-TXD (Connect to Pin2, PC-RX, of serial DB9 cable)

4.50 SCI Digital Loop Back(scia_loopback)

This program uses the internal loop back test mode of the peripheral. Other than boot mode pin configuration, no other hardware configuration is required.

This test uses the loopback test mode of the SCI module to send characters starting with 0x00 through 0xFF. The test will send a character and then check the receive buffer for a correct match.

Watch Variables

- **LoopCount** , Number of characters sent
- **ErrorCount** , Number of errors detected
- **SendChar** , Character sent
- **ReceivedChar** , Character received

4.51 SCI Digital Loop Back with Interrupts(scia_loopback_interrupts)

This program uses the internal loop back test mode of the peripheral. Other than boot mode pin configuration, no other hardware configuration is required. Both interrupts and the SCI FIFOs are used.

A stream of data is sent and then compared to the received stream. The SCI-A sent data looks like this:

00 01

01 02

02 03

....

FE FF

FF 00

etc..

The pattern is repeated forever.

Watch Variables