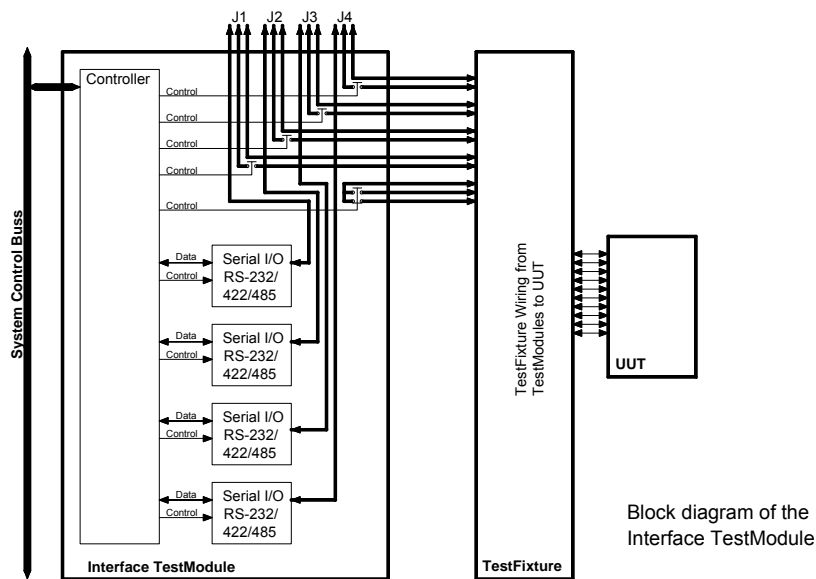
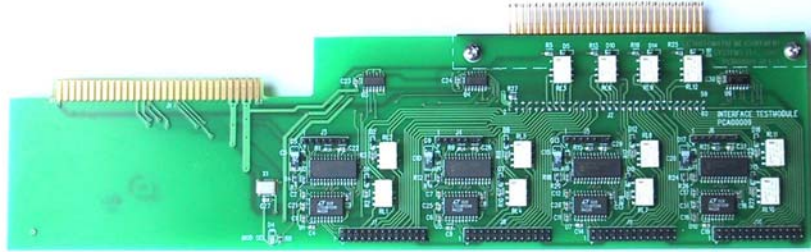


Measurement Systems

Overview

The Interface TestModule lets you connect external test instruments to the Circuit-Traq PRO Test System and control them from your test program. It supports off-the-shelf test instruments that have RS-232/422/485 ports. ISA/PCI/CompactPCI/PXI test instruments are also supported (test driver DLL is required).



Block diagram of the Interface TestModule

Architecture

As shown in the block diagram above, the Interface TestModule routes test signals between external test instruments (connected to J1-4) and the unit under test (UUT). The four port connectors J1-4 (DB-25) are located on the rear panel of the TestStation. Each connector provides the following signals:

- A serial port, configurable in software to be either RS-232, 422, or 485 (2 or 4 wire)
- Four programmable, relay-switched signal lines to the TestFixture (switched in pairs)
- Six direct signal lines, extra un-switched connections to the TestFixture

You can configure each serial port and its packet structure in software. You can send setup and test instructions to the external instruments from run-time commands in your test program. After you configure an external test instrument to work with the Automatiq Test System, communication with the instrument is handled transparently by the test system.

The interface TestModule also provides six undedicated, programmable relay contacts for switching signals in the TestFixture or UUT.

Only one Interface TestModule may be installed in a TestStation and it must be installed in Slot 19.

Features

The Circuit-Traq PRO Test System provides a variety of general purpose test signals that are sufficient to cover most production test needs.

In some applications, however, special purpose test signals or measurement capabilities might be needed that are not available in the Circuit-Traq PRO.

The Interface TestModule provides the ideal solution – an easy-to-use, programmable interface for third party test equipment.

The Interface TestModule lets you connect up to four external test instruments to the Circuit-Traq PRO, route their signals to and from the UUT, and control them in software as if they were an integral part of the system.

The Interface TestModule supports all test instruments that have RS-232, RS-422, or RS-485 programming/data ports. In addition, ISA, PCI, Compact PCI, and PXI bus instruments that are either installed in or connected to the host PC are also supported (an additional Test Driver DLL may have to be written).

A few examples of programmable test instruments that may be used with the Interface TestModule to extend the capabilities of the Circuit-Traq TestSystem are:

- Counter/timers
- High voltage AC and DC supplies
- High precision meters
- Signal/function/waveform generators
- Motion/motor controllers

Measurement Systems

SPECIFICATIONS

| | |
|-------------|----------------------|
| Test Module | Interface TestModule |
| Part Number | PCA00009 Rev B |
| Mfg. Code | 0 |
| Module Code | 9 |

PIN ASSIGNMENTS

The table below gives pin assignments, signal names, and functions for all I/O pins on the Interface TestModule, including range, accuracy, and resolution specifications.

J1 External Connector (DB-25)

| Pin | Name (Note 1) | Function | Range | Accuracy | Resolution | Notes |
|-----|----------------|-----------------|--------|----------|------------|--------|
| 1 | [RX_422/232_1] | [-Receive] | Note 2 | NA | NA | Note 2 |
| 2 | [TX_422/232_1] | [-Transmit] | Note 2 | NA | NA | Note 2 |
| 3 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 4 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 5 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 6 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 7 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 8 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 9 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 10 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 11 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 12 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 13 | [Case Ground] | Case Ground | | | | Note 3 |
| 14 | [RX+ 422_1] | [+Receive] | Note 2 | NA | NA | Note 2 |
| 15 | [TX+ 422_1] | [+Transmit] | Note 2 | NA | NA | Note 2 |
| 16 | [Sig1_1] | Switched Signal | NA | NA | NA | Note 4 |
| 17 | [Sig1_2] | Switched Signal | NA | NA | NA | Note 4 |
| 18 | [Sig1_3] | Switched Signal | NA | NA | NA | Note 4 |
| 19 | [Sig1_4] | Switched Signal | NA | NA | NA | Note 4 |
| 20 | [Sig1_5] | Direct Signal | NA | NA | NA | Note 4 |
| 21 | [Sig1_6] | Direct Signal | NA | NA | NA | Note 4 |
| 22 | [Sig1_7] | Direct Signal | NA | NA | NA | Note 4 |
| 23 | [Sig1_8] | Direct Signal | NA | NA | NA | Note 4 |
| 24 | [Sig1_9] | Direct Signal | NA | NA | NA | Note 4 |
| 25 | [Sig1_10] | Direct Signal | NA | NA | NA | Note 4 |

Measurement Systems

J2 External Connector (DB-25)

| Pin | Name (Note 1) | Function | Range | Accuracy | Resolution | Notes |
|-----|-----------------|-----------------|--------|----------|------------|--------|
| 1 | [RX-_422/232_2] | [-Receive] | Note 2 | NA | NA | Note 2 |
| 2 | [TX-_422/232_2] | [-Transmit] | Note 2 | NA | NA | Note 2 |
| 3 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 4 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 5 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 6 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 7 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 8 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 9 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 10 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 11 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 12 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 13 | [Case Ground] | Case Ground | | | | Note 3 |
| 14 | [RX+_422_2] | [+Receive] | Note 2 | NA | NA | Note 2 |
| 15 | [TX+_422_2] | [+Transmit] | Note 2 | NA | NA | Note 2 |
| 16 | [Sig2_1] | Switched Signal | NA | NA | NA | Note 4 |
| 17 | [Sig2_2] | Switched Signal | NA | NA | NA | Note 4 |
| 18 | [Sig2_3] | Switched Signal | NA | NA | NA | Note 4 |
| 19 | [Sig2_4] | Switched Signal | NA | NA | NA | Note 4 |
| 20 | [Sig2_5] | Direct Signal | NA | NA | NA | Note 4 |
| 21 | [Sig2_6] | Direct Signal | NA | NA | NA | Note 4 |
| 22 | [Sig2_7] | Direct Signal | NA | NA | NA | Note 4 |
| 23 | [Sig2_8] | Direct Signal | NA | NA | NA | Note 4 |
| 24 | [Sig2_9] | Direct Signal | NA | NA | NA | Note 4 |
| 25 | [Sig2_10] | Direct Signal | NA | NA | NA | Note 4 |

Measurement Systems

J3 External Connector (DB-25)

| Pin | Name (Note 1) | Function | Range | Accuracy | Resolution | Notes |
|-----|-----------------|-----------------|--------|----------|------------|--------|
| 1 | [RX_ 422/232_3] | [-Receive] | Note 2 | NA | NA | Note 2 |
| 2 | [TX_ 422/232_3] | [-Transmit] | Note 2 | NA | NA | Note 2 |
| 3 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 4 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 5 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 6 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 7 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 8 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 9 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 10 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 11 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 12 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 13 | [Case Ground] | Case Ground | | | | Note 3 |
| 14 | [RX+ 422_3] | [+Receive] | Note 2 | NA | NA | Note 2 |
| 15 | [TX+ 422_3] | [+Transmit] | Note 2 | NA | NA | Note 2 |
| 16 | [Sig3_1] | Switched Signal | NA | NA | NA | Note 4 |
| 17 | [Sig3_2] | Switched Signal | NA | NA | NA | Note 4 |
| 18 | [Sig3_3] | Switched Signal | NA | NA | NA | Note 4 |
| 19 | [Sig3_4] | Switched Signal | NA | NA | NA | Note 4 |
| 20 | [Sig3_5] | Direct Signal | NA | NA | NA | Note 4 |
| 21 | [Sig3_6] | Direct Signal | NA | NA | NA | Note 4 |
| 22 | [Sig3_7] | Direct Signal | NA | NA | NA | Note 4 |
| 23 | [Sig3_8] | Direct Signal | NA | NA | NA | Note 4 |
| 24 | [Sig3_9] | Direct Signal | NA | NA | NA | Note 4 |
| 25 | [Sig3_10] | Direct Signal | NA | NA | NA | Note 4 |

Measurement Systems

J4 External Connector (DB-25)

| Pin | Name (Note 1) | Function | Range | Accuracy | Resolution | Notes |
|-----|------------------|-----------------|--------|----------|------------|--------|
| 1 | [RX_ 422/232_ 4] | [-Receive] | Note 2 | NA | NA | Note 2 |
| 2 | [TX_ 422/232_ 4] | [-Transmit] | Note 2 | NA | NA | Note 2 |
| 3 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 4 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 5 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 6 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 7 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 8 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 9 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 10 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 11 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 12 | [UUT Ground] | Ground/Shield | | | | Note 3 |
| 13 | [Case Ground] | Case Ground | | | | Note 3 |
| 14 | [RX+ 422_ 4] | [+Receive] | Note 2 | NA | NA | Note 2 |
| 15 | [TX+ 422_ 4] | [+Transmit] | Note 2 | NA | NA | Note 2 |
| 16 | [Sig4_ 1] | Switched Signal | NA | NA | NA | Note 4 |
| 17 | [Sig4_ 2] | Switched Signal | NA | NA | NA | Note 4 |
| 18 | [Sig4_ 3] | Switched Signal | NA | NA | NA | Note 4 |
| 19 | [Sig4_ 4] | Switched Signal | NA | NA | NA | Note 4 |
| 20 | [Sig4_ 5] | Direct Signal | NA | NA | NA | Note 4 |
| 21 | [Sig4_ 6] | Direct Signal | NA | NA | NA | Note 4 |
| 22 | [Sig4_ 7] | Direct Signal | NA | NA | NA | Note 4 |
| 23 | [Sig4_ 8] | Direct Signal | NA | NA | NA | Note 4 |
| 24 | [Sig4_ 9] | Direct Signal | NA | NA | NA | Note 4 |
| 25 | [Sig4_ 10] | Direct Signal | NA | NA | NA | Note 4 |

Measurement Systems

J19 TestFixture Connector

| Pin | Name (Note 1) | Function | Range | Accuracy | Resolution | Notes |
|-----|---------------|--------------------|--------|----------|------------|--------|
| 1 | [UUT Ground] | | | | | Note 5 |
| 2 | [UUT Ground] | | | | | Note 5 |
| 3 | [UUT Ref Gnd] | | | | | |
| 4 | [Sig1_1] | Switched Signal | NA | NA | NA | Note 4 |
| | Sig1_1/2 | Switch Sig1 & Sig2 | On/Off | NA | 1 bit | Note 4 |
| 5 | [Sig1_2] | Switched Signal | NA | NA | NA | Note 4 |
| 6 | [Sig1_3] | Switched Signal | NA | NA | NA | Note 4 |
| | Sig1_3/4 | Switch Sig3 & Sig4 | On/Off | NA | 1 bit | Note 4 |
| 7 | [Sig1_4] | Switched Signal | NA | NA | NA | Note 4 |
| 8 | [Sig1_5] | Direct Signal | NA | NA | NA | |
| 9 | [Sig1_6] | Direct Signal | NA | NA | NA | |
| 10 | [Sig1_7] | Direct Signal | NA | NA | NA | |
| 11 | [Sig1_8] | Direct Signal | NA | NA | NA | |
| 12 | [Sig1_9] | Direct Signal | NA | NA | NA | |
| 13 | [Sig1_10] | Direct Signal | NA | NA | NA | |
| 14 | [Sw1A_1] | Sw1A Common | NA | NA | NA | Note 6 |
| | Sw1 | Switch Signal | On/Off | NA | 1 bit | Note 6 |
| 15 | [Sw1A_2] | Sw1A NC | NA | NA | NA | Note 6 |
| 16 | [Sw1A_3] | Sw1A NO | NA | NA | NA | Note 6 |
| 17 | [Sw1B_1] | Sw1B Common | NA | NA | NA | Note 6 |
| 18 | [Sw1B_2] | Sw1B NC | NA | NA | NA | Note 6 |
| 19 | [Sw1B_3] | Sw1B NO | NA | NA | NA | Note 6 |
| 20 | [Sig2_1] | Switched Signal | NA | NA | NA | Note 4 |
| | Sig2_1/2 | Switch Sig1 & Sig2 | On/Off | NA | 1 bit | Note 4 |
| 21 | [Sig2_2] | Switched Signal | NA | NA | NA | Note 4 |
| 22 | [Sig2_3] | Switched Signal | NA | NA | NA | Note 4 |
| | Sig2_3/4 | Switch Sig3 & Sig4 | On/Off | NA | 1 bit | Note 4 |
| 23 | [Sig2_4] | Switched Signal | NA | NA | NA | Note 4 |
| 24 | [Sig2_5] | Direct Signal | NA | NA | NA | |
| 25 | [Sig2_6] | Direct Signal | NA | NA | NA | |
| 26 | [Sig2_7] | Direct Signal | NA | NA | NA | |
| 27 | [Sig2_8] | Direct Signal | NA | NA | NA | |
| 28 | [Sig2_9] | Direct Signal | NA | NA | NA | |
| 29 | [Sig2_10] | Direct Signal | NA | NA | NA | |
| 30 | [Sw2A_1] | Sw2A Common | NA | NA | NA | Note 6 |
| | Sw2 | Switch Signal | On/Off | NA | 1 bit | Note 6 |
| 31 | [Sw2A_2] | Sw2A NC | NA | NA | NA | Note 6 |
| 32 | [Sw2A_3] | Sw2A NO | NA | NA | NA | Note 6 |
| 33 | [Sw2B_1] | Sw2B Common | NA | NA | NA | Note 6 |
| 34 | [Sw2B_2] | Sw2B NC | NA | NA | NA | Note 6 |
| 35 | [Sw2B_3] | Sw2B NO | NA | NA | NA | Note 6 |
| 36 | [Sig3_1] | Switched Signal | NA | NA | NA | Note 4 |
| | Sig3_1/2 | Switch Sig1 & Sig2 | On/Off | NA | 1 bit | Note 4 |
| 37 | [Sig3_2] | Switched Signal | NA | NA | NA | Note 4 |
| 38 | [Sig3_3] | Switched Signal | NA | NA | NA | Note 4 |
| | Sig3_3/4 | Switch Sig3 & Sig4 | On/Off | NA | 1 bit | Note 4 |
| 39 | [Sig3_4] | Switched Signal | NA | NA | NA | Note 4 |
| 40 | [Sig3_5] | Direct Signal | NA | NA | NA | |
| 41 | [Sig3_6] | Direct Signal | NA | NA | NA | |
| 42 | [Sig3_7] | Direct Signal | NA | NA | NA | |
| 43 | [Sig3_8] | Direct Signal | NA | NA | NA | |
| 44 | [Sig3_9] | Direct Signal | NA | NA | NA | |
| 45 | [Sig3_10] | Direct Signal | NA | NA | NA | |

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| Pin | Name (Note 1) | Function | Range | Accuracy | Resolution | Notes |
|-----|---------------|--------------------|--------|----------|------------|--------|
| 46 | [Sw3_1] | Sw3 Common | NA | NA | NA | Note 6 |
| | Sw3 | Switch Signal | On/Off | NA | 1 bit | Note 6 |
| 47 | [Sw3_2] | Sw3 NC | NA | NA | NA | Note 6 |
| 48 | [Sw3_3] | Sw3 NO | NA | NA | NA | Note 6 |
| 49 | [Sw4_1] | Sw4 Common | NA | NA | NA | Note 6 |
| | Sw4 | Switch Signal | On/Off | NA | 1 bit | Note 6 |
| 50 | [Sw4_3] | Sw4 NO | NA | NA | NA | Note 6 |
| 51 | [Sig4_1] | Switched Signal | NA | NA | NA | Note 4 |
| | Sig4_1/2 | Switch Sig1 & Sig2 | On/Off | NA | 1 bit | Note 4 |
| 52 | [Sig4_2] | Switched Signal | NA | NA | NA | Note 4 |
| | Sig4_3/4 | Switch Sig3 & Sig4 | On/Off | NA | 1 bit | Note 4 |
| 53 | [Sig4_3] | Switched Signal | NA | NA | NA | Note 4 |
| 54 | [Sig4_4] | Switched Signal | NA | NA | NA | Note 4 |
| 55 | [Sig4_5] | Direct Signal | NA | NA | NA | |
| 56 | [Sig4_6] | Direct Signal | NA | NA | NA | |
| 57 | [Sig4_7] | Direct Signal | NA | NA | NA | |
| 58 | [Sig4_8] | Direct Signal | NA | NA | NA | |
| 59 | [Sig4_9] | Direct Signal | NA | NA | NA | |
| 60 | [Sig4_10] | Direct Signal | NA | NA | NA | |
| 101 | Serial_Comm_1 | Serial Output | | | | Note 2 |
| | | Serial Input | | | | Note 2 |
| | | Baud Rate | | | | Note 2 |
| | | Serial Bits | | | | Note 2 |
| | | Parity | | | | Note 2 |
| | | Mode | | | | Note 2 |
| | | Duplex | | | | Note 2 |
| | | Slew Limiting | | | | Note 2 |
| 102 | Serial_Comm_2 | Serial Output | | | | Note 2 |
| | | Serial Input | | | | Note 2 |
| | | Baud Rate | | | | Note 2 |
| | | Serial Bits | | | | Note 2 |
| | | Parity | | | | Note 2 |
| | | Mode | | | | Note 2 |
| | | Duplex | | | | Note 2 |
| | | Slew Limiting | | | | Note 2 |
| 103 | Serial_Comm_3 | Serial Output | | | | Note 2 |
| | | Serial Input | | | | Note 2 |
| | | Baud Rate | | | | Note 2 |
| | | Serial Bits | | | | Note 2 |
| | | Parity | | | | Note 2 |
| | | Mode | | | | Note 2 |
| | | Duplex | | | | Note 2 |
| | | Slew Limiting | | | | Note 2 |
| 104 | Serial_Comm_4 | Serial Output | | | | Note 2 |
| | | Serial Input | | | | Note 2 |
| | | Baud Rate | | | | Note 2 |
| | | Serial Bits | | | | Note 2 |
| | | Parity | | | | Note 2 |
| | | Mode | | | | Note 2 |
| | | Duplex | | | | Note 2 |
| | | Slew Limiting | | | | Note 2 |

Measurement Systems

NOTES

- Names in brackets [] are not available for programming. Pin numbers beyond 100 are "dummy" references for programming and do not reference an actual pin.
- Serial connections may be programmed to be RS-232, RS-422, or RS-485 connections.

To use as RS-232:

- connect to pins 1 (receive) and 2 (transmit)
- set the Mode to 0
- set Duplex to 0 (Full Duplex)

To use as RS-422:

- connect to pins 14 & 1 (receive + & receive -) and 15 & 2 (transmit + & transmit -)
- set the Mode to 1
- set Duplex to 0 (Full Duplex)

To use as RS-485:

- connect pins 15 and 14 together (transmit/receive +) and pins 2 and 1 together (transmit/receive -)
- set the Mode to 1
- set Duplex to 1 (Half Duplex)

Serial Output – Send serial data out through the Serial Comm port. A maximum of 64 bytes of data can be sent. Clear the Serial Input buffer before starting to transmit. If Half Duplex is set, clear the Serial Input buffer after completion of transmission.

Note: The Serial Output is not buffered and held until a CLOCK command – it is sent immediately.

Serial Input – Get data received through the Serial Comm port. A maximum of 64 bytes of data can be received. The Serial Input buffer is cleared at the beginning of the Serial Output transmission. If Half Duplex is selected, the buffer is also cleared after the end of transmission.

Note: The Serial Input is not loaded with the CLOCK command. When it is read, the current buffer contents are returned.

Control Parameters: The following parameters control both the Serial Output and the Serial Input operation.

Serial Baud Rate – Specify the baud rate in bits per second (baud). The minimum rate is 1200 Baud and the maximum is 115,200 Baud. Rate error at standard rates (1200, 2400, 9600, 19200, 38400, 57600 and 115200) is less than 2%. Errors at nonstandard rates may be larger.

Serial Bits – Specify the number of serial bits including parity.

0 for 8 bits

1 for 9 bits (the 9th bit must be parity)

Parity – Specify the parity.

0 for no parity

1 for Even Parity

2 for Odd Parity

3 for always one (two stop bits)

Mode – Specify the physical interface mode.

0 for RS-232

1 for RS-422 or RS-485

Duplex – Specify half or full duplex.

0 for Full Duplex

1 for Half Duplex (output on only while transmitting)

Slew Rate – Specify slew rate limiting. This allows slow transmission on improperly terminated lines.

0 for No Slew Rate Limiting

1 for Slew Rate Limiting to 150kBaud (RS-422/485 only)

- Connect UUT Ground to isolated grounds only. To prevent ground noise, do not connect UUT Ground to case or earth ground.

Connect external case grounds to DB-25 pin 13 to avoid generating ground noise.

- The switched signal lines 1, 2, 3, and 4 are switched in pairs as follows:

- SigX_1 and SigX_2 are switched with a single relay controlled by SigX_1/2

- SigX_3 and SigX_4 are switched with a single relay controlled by SigX_3/4

- UUT Grounds are bused together on the TestFixture Interconnect board (the passive backplane board in the TestStation). They should be connected to the UUT Ground directly. Use as many wires as necessary to insure minimum line drop.

- Six undedicated relay contacts are provided on the 60-pin TestFixture connector. These are switched as follows:

- Sw1A and Sw1B are switched with a single relay controlled by Sw1

- Sw2A and Sw2B are switched with a single relay controlled by Sw2

- Sw3 is switched with a single relay controlled by Sw3

- Sw4 is switched with a single relay controlled by Sw4

Measurement Systems

PINOUT DIAGRAM

J19

| | | | |
|---------------|----|----|--------------|
| [UUT Ground] | 1 | 2 | [UUT Ground] |
| [UUT Ref Gnd] | 3 | 4 | Sig1_1 |
| Sig1_2 | 5 | 6 | Sig1_3 |
| Sig1_4 | 7 | 8 | Sig1_5 |
| Sig1_6 | 9 | 10 | Sig1_7 |
| Sig1_8 | 11 | 12 | Sig1_9 |
| Sig1_10 | 13 | 14 | Sw1A_1 |
| Sw1A_2 | 15 | 16 | Sw1A_3 |
| Sw1B_1 | 17 | 18 | Sw1B_2 |
| Sw1B_3 | 19 | 20 | Sig2_1 |
| Sig2_2 | 21 | 22 | Sig2_3 |
| Sig2_4 | 23 | 24 | Sig2_5 |
| Sig2_6 | 25 | 26 | Sig2_7 |
| Sig2_8 | 27 | 28 | Sig2_9 |
| Sig2_10 | 29 | 30 | Sw2A_1 |
| Sw2A_2 | 31 | 32 | Sw2A_3 |
| Sw2B_1 | 33 | 34 | Sw2B_2 |
| Sw2B_3 | 35 | 36 | Sig3_1 |
| Sig3_2 | 37 | 38 | Sig3_3 |
| Sig3_4 | 39 | 40 | Sig3_5 |
| Sig3_6 | 41 | 42 | Sig3_7 |
| Sig3_8 | 43 | 44 | Sig3_9 |
| Sig3_10 | 45 | 46 | Sw3_1 |
| Sw3_2 | 47 | 48 | Sw3_3 |
| Sw4_1 | 49 | 50 | Sw4_3 |
| Sig4_1 | 51 | 52 | Sig4_2 |
| Sig4_3 | 53 | 54 | Sig4_4 |
| Sig4_5 | 55 | 56 | Sig4_6 |
| Sig4_7 | 57 | 58 | Sig4_8 |
| Sig4_9 | 59 | 60 | Sig4_10 |

ORDERING INFORMATION

Description: Interface TestModule
 Part Number: PCA00009
 Price: US\$695.00
 Availability: Stock
 Note: Only one Interface TestModule may be installed in the Circuit-Traq PRO Test System and it must be installed in connector J19.

Description: Interface TestModule Wiring Harness
 Part Number: ASY00012
 Price: US\$100.00
 Availability: Stock
 Note: Wiring harness is required for installation of the Interface TestModule

HEADER 30x2 MODULE 19