

# Serial Interface Analyzer Module

## Technical Specifications

### Module Applications

Product	NIC Plus®, NIC 2.5G®	Power Consumption	< 3 W
Card Slots	One	Special Temperature Considerations	None

### RS-530

RS-530 Physical Interface	25-pin D-type (female)	Timing	Synchronous or Asynchronous
Impedance	78 ohms, 100 ohms, 124 ohms, 3.8 K ohms (unterminated)	Data Rate (asynchronous)	Up to 128 kbps
Interface Types	DCE and DTE	Data rate (synchronous)	Up to 15 Mbps
Electrical Connection Type	Balanced	Standards Compliance	EIA-530 (v.10 + v.11), EIA-530A (v.10 + v.11),
Test control	NIC/NAA GUI, SCPI (Standard Commands for Programmable Instruments)		

### RS-232

RS-232 Physical Interface	25-pin D-type (female)	Timing	Asynchronous
Interface Types	DCE and DTE	Data Rate (asynchronous)	50 bps - 125 kbps
Electrical Connection Type	Unbalanced	Standards Compliance	RS-232 (v.28)
Test control	NIC/NAA GUI, SCPI (Standard Commands for Programmable Instruments)		

### Analysis Functions

Emulation	DTE: LL Pin and RL pin can be toggled ON and OFF independently DCE-TT: TM and CTS pin can be toggled ON and OFF independently DCE-ST: TM and CTS pin can be toggled ON and OFF independently Signaling Control lead Polarity: POS or NEG		Sync Loss Threshold (Medium): 250 bit errors in less than 1000 bits of data Sync Loss Threshold (High): 20,000 bit errors in less than 100,000 bits of data Action on Sync Loss: Selectable as CLEAR, HALT, CONTINUE
Test Patterns	Synchronous Mode: MARK (All Ones), 1:1 (1010.. pattern), 63, 511, 2047, 2 <sup>15</sup> -1, 2 <sup>20</sup> -1, QRSS, PRGM, FOX, USER Asynchronous Mode: MARK (All Ones), 1:1 (1010.. pattern), 63, 511, 2047, 2 <sup>15</sup> -1, 2 <sup>20</sup> -1, FOX, USER Program Pattern (PRGM): Binary Pattern 3 to 24 bits User Pattern (USER): USER1, USER2, USER3, (Long=2048 (Hex) character) 1:7, T1-1, T1-2, T1-3, T1-4, T1-5, T1-6, DDS-1, DDS-2, DDS-3, DDS-4, DDS-5, DDS-6, 1020 Hz Tone Block Length: Programmable 100 to 1000000 bits Sync Loss Threshold (Low): 100 bit errors in less than 1000 bits of data	Tx Clock	User Pattern Sync Loss Threshold: Programmable to Pattern Length or any number of bytes between 10 and 2048 Sources: Internal Synthesizer, Datacom Interface 25-Pin D type Connector Polarity: Normal, Invert Programmable Mode: 50 Hz to 999.99 Hz in 0.01 Hz increments. 1 KHz to 9.999 KHz in 0.1 Hz increments. 10 KHz to 99.999 KHz in 1 Hz increments. 100 KHz to 999.99 KHz in 10 Hz increments. 1 MHz to 9.9999 MHz in 100 Hz increments. 10 MHz to 15 MHz in 1 KHz increments. Fixed Clock Rates (KHz): 1.2, 2.4, 4.8, 9.6, 19.2, 56.0, 64.0, 1544, 2048, 3152, 6312

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## Analysis Functions (Cont'd)

### Rx Clock

Source Synchronous DCE Mode: TT (Terminal Timing uses incoming clock from 25 pin D-Sub)

ST (Send Timing uses internal transmit clock output to 25 pin D-Sub)

Polarity: Normal, Invert

### Flow Control

Out of Band: Selectable using any combination of TR, DM, RS, CS & RR Control Leads

In Band: Via single byte, programmable, XON/XOFF characters

### Measurement Parameters

ERRORS: AVG BER, AVG BLER, BER, BITT ERRS, BLOCKS, BLK ERRS, CHAR ERR (Async Only), PAT SLIP (Sync Timing only)

TIME: EA SEC, EF EA SEC, ELAP SEC, ERR EA SEC, PATL SEC, %PATL SEC, TIME

SIGNAL: DELAY, TX-FREQ, RX-FREQ

ALARM: RECEIVER: CLOCK LOSSES, DAT LOSS, PAT-SYNC-LOSS, POWER-LOSS

PERFORMANCE (Sync Timing): AVL-SEC, %AVL-SEC, %DEG-MIN, %PAT-SEC, %SES, BER-SES, DEG-MIN, ERR-SES, G.821-%-OF-EFS, G.821-ERR-SEC, G.821-%EFS, SES, UNA-SEC

### Receiver Status

MARK: Indicator lights when Mark signal is present at input

SPACE: Indicator lights when Space signal is present at input

SYNC: Indicator green when Pattern Sync is established

SYNC LOST: Red history indicator will be red after sync loss

## 25 Pin D Type Connector Pin Assignments

25 Pin Designations						Description
A	B	EIA	CCITT	DTE	DCE	
1		Shield	-			Shield
7		AB	102			Signal Ground
2	14	BA	103	Out	In	Transmitted Data
3	16	BB	104	In	Out	Received Data
4	19	CA	105	Out	In	RTS
5	13	CB	106	In	Out	CTS
6	22	CC	107	In	Out	DSR
20	23	CD	108	Out	In	DTR
8	10	CF	109	In	Out	RLSD (DCD)
24	11	DA	113	Out	In	Transmit Signal Element Timing (DTE)
15	12	DB	114	In	Out	Transmit Signal Element Timing (DCE)
17	9	DD	115	In	Out	Receive Signal Element Timing (DCE)
18		LL	141	Out	In	Local Loopback
21		RL	140	Out	In	Remote Loopback
25		TM	142	In	Out	Test Mode

Specifications are subject to change without notice.



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