

# 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	50 bps - 125 kbps
Electrical Connection Type	Unbalanced	(asynchronous) Standards	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, 215-1, 220-1, QRSS, PRGM, FOX, USER Asynchronous Mode: MARK (All Ones), 1:1 (1010.. pattern), 63, 511, 2047, 215-1, 220-1, 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	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
	Tx Clock	

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## Technical Specifications

### 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		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
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	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
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		

### 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



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