

VIAVI T-BERD/MTS-5800

Datacom Extension Module

The combination of the VIAVI Datacom Extension Module (DEM) and a T-BERD®/MTS-5800 delivers power utility operators the broad-test capability to measure both legacy network technologies (Datacom, SONET/SDH, T1/E1, etc.) and new technologies (Ethernet, C37.94, etc). The DEM expands the test coverage of the already versatile T-BERD/MTS-5800, allowing technicians and engineers the broadest range of testing with the least amount of gear to carry.

Supported Serial Interfaces

RS-232 / V.28

Standard V.28 interface for serial data for connecting DTE or DCE computer serial ports.

RS-530/RS-530A

High speed serial data communication interface that uses a balanced V.11 signals to transmit and receive clock and data for DTE or DCE.

RS-449

High speed V.11 serial data communication interface that uses balanced paired signals to transmit and receive clock and data for DTE or DCE.

V.35

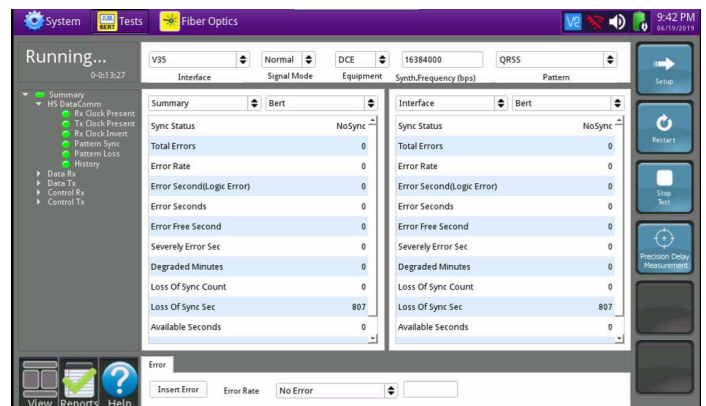
High speed data communication interface that can use balanced signals to transmit and receive for DTE or DCE.

RS-485

High speed serial data communication V.11 interface that uses balanced paired signals to transmit and receive clock and data for single point to point communications for DTE or DCE. This interface is supported using the RS-449 setting.

X.21

Serial data communications V.11 interface that uses a balanced clock and data for DTE or DCE.



Timing Configuration

Sync Mode

Data is transmitted with the clock signal and the transmitter and receiver share a common clock.

Async Mode

Data is transmitted without a clock signal. Start, stop, and parity bits are added to the signal and are adjustable. Transmitter and receiver use their own independent clock.

Frequency Range

Interfaces	Mode	Frequency Range	
		Low	High
RS-530	Sync	300 Hz	16.384 Mhz
RS-530A			
RS-449			
V.35			
RS-232	Sync	300 Hz	200 kHz
X.21	Sync	300 Hz	2.048 Mhz
All	Async	300 Hz	115.2 kHz
	Manch GE T	300 Hz	1.024 Mhz
	NRZI	.05 Mhz	10 Mhz
	ManchDiff	300 Hz	1.024 Mhz
	FMO	300 Hz	1.024 Mhz
	FM1	300 Hz	1.024 Mhz

BERT Patterns

The supported Bit Error Rate Test (BERT) Patterns include:

QRSS	NIU Loop Up and Loop Down codes
2 ⁶ -1	All Ones
2 ⁹ -1	All Zeroes
2 ¹¹ -1	1:1
2 ¹⁵ -1	1:7
2 ²⁰ -1	3 in 24
2 ²³ -1	Delay Pattern
CSU Loop Up and Loop Down codes	

Error Insertion

Single Errors can be inserted manually by the user interface.

Linear Error rates in the range of between 1E-3 down to 1E-9 can be adjusted by the user interface.

Serial Encoding

Manchester

NRZI

FM0

FM1

Differential Manchester async encoding

Clock Timing

Internal

Internal clock transmitted with data for timing.

External

External clock supported via a 50Ω coaxial cable.

Recovered

Timing recovered from received signal interface.

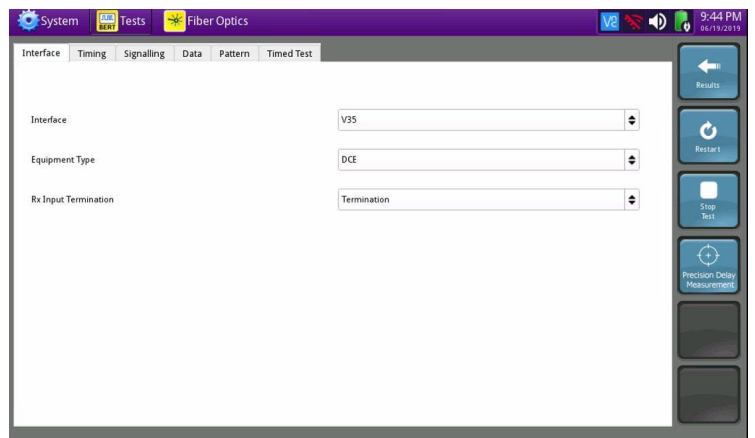
Termination Settings

Terminate

Emulates communication between devices. Able to transmit and receive data through DCE or DTE operation settings.

Monitor

Monitor data going between two communicating devices using monitor cables



Transmit Control Signals

Interface	TX Control Signals						
	RTS	DTR	RL	LL	RS	C	TR
RS-232	■	■	■	■			
RS-530/A	■	■	■	■			
V.35	■	■	■	■			
X.21						■	
RS-449			■	■	■		■

Receive Control Signals

Interface	RX Control Signals										
	CTS	DSR	RLSD	TM	RI	CS	I	DM	RR	IC	CI
RS-232	■	■	■	■	■						
RS-530	■	■	■	■							
RS-530A	■	■	■	■	■						
V.35	■	■	■	■							■
X.21							■				
RS-449				■		■		■	■	■	

Cable Ordering Information

Cable Catalog Number	Cable Description
CB-44348	V.24 EIA-530 Y Monitor Cable - Length 6 Feet
CB-21148994-002	Hi-Speed V.24/EIA-530 DTE/DCE Emulation Cable - Length 6 Feet Long Y Split 24 Inch Long Legs
CB-21144332-001	V.36 DTE/DCE Emulation Ring Indicate Cable - 72 Inches Long Y Split 12 Inches
CB-21144332-002	V.36 DTE/DCE Emulation Ring Indicate Cable - 72 Inches Long Y Split 24 Inches
CB-44347	V.36 Monitor Cable - Length 6 Feet
CB-21149199-001	Hi-Speed X.21 DTE/DCE Emulation Cable - Length 6 Feet Long Y Split 12 Inch Long Legs
CB-44345	X.21 Monitor Cable - 10 Mhz Operation - Length 6 Feet
CB-21148995-002	Hi-Speed V.35 DTE/DCE Emulation Cable - Length 6 Feet Long Y Split 24 Inch Long Legs
CB-44341	V.35 Monitor Cable - Length 6 Feet
CB-DCCLK	DATAKOM PIM Clock Adapter Cable



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