Quad E1 Port Module

gnubi's™ electrical test modules are ideal cost-effective, multi-channel solutions for an equipment manufacturer's production and verification labs in the metro and long haul markets.

Expandable Multiple Rate Testing

Unlike other test equipment, gnubi's test products give you the flexibility to create the test applications that you need now and the expandability to grow with your testing needs in the future. You can mix the Quad E1 Port Module with other test modules in a single chassis for multiple rate testing.

Simultaneous Multi-port Testing

With the Quad E1 Port Module, you can install as many as 17 modules for simultaneous multi-port testing. Using EPXam™ tools such as Group Manager, Test Controls, or Script Runner, control multiple instances of the same test simultaneously. Or conduct different tests at the same time.

EPX210 Quad Port Module

The EPX210 Quad Port Module supports E1 signal generation and monitoring. It is designed for all of gnubi's chassis models. You can configure the module as a four-port transmitter, a four-port receiver, or two transmitter and receiver pairs.

Payload Generation and Monitoring

The EPX210 module provides payload generation and monitoring. Features include alarm and error insertion and monitoring, framing options, and data pattern selection.

Easy to Use

You can start testing quickly and easily with the EPXam graphical user interface. Other ease-of-use features include saving and restoring configurations, connecting remotely with a web browser, scripting, logging, and sharing test resources with others.

Upgradable

As new features are developed for gnubi's test modules, download the upgrades from our website. Visit www.gnubi.com to learn about the latest features and upgrades.

Features

- Transmit and monitor at 2.048 MHz
- Selectable payload mappings
- Payload generation and monitoring
- Test multiple rates and protocols within a single chassis
- Full-featured graphical and command-line user interfaces
- Log alarm and error statistics
- Multi-user, remote access via web browser

Applications

- Production, validation, and metro market applications that test multiple rates and channels
- Add/drop multiplex and demultiplex
- Live traffic monitoring
- Transmit and receive BERT

Specifications
Quad E1 Port Module

Model	EPX210	Quad E1 Port Module
Installation	All gnubi chassis models; uses one slot	
Signal Rates	E1	2.048 MHz
Interface	Line Codes	AMI, HDB3
	Transmit	Selectable LBO
	Receive	Auto equalization, peak level detect, frequency measurement
	Connectors	120 Ohm balanced LEMO SA, 75 Ohm unbalanced coaxial BNC
Timing References	EPX100 Clock Module	External input
	As Received	Recovered clock from receiver port
	Internal	On-board oscillator (+/- 20 ppm)
Payload Mappings		Signalling (ESF Data Link, Inband), loopback codes
Framing	Framed	PCM-30, PCM-31
		With or without CRC G.704/706
	Unframed	
Alarm Insertion		LOS, LOF, AIS, RDI, LSS
Alarm Monitoring		LOS, LOF, AIS, RDI, LSS, Excessive zeroes
Error Insertion	Types	BPV, Frame (FAS), CRC-4, TSE (Pattern Bit)
	Rates	Insert a single error or a burst of errors, or insert errors at 1E-3 to 1E-9 rates
Error Monitoring	Types	BPV, Frame (FAS), CRC-4, TSE (Pattern Bit)
Data Patterns	PRBS	True and inverted: 2^{15}-1, 2^{20}-1, 2^{23}-1
	Other	Fixed 8-bit user word, live traffic (monitor only), Quasi-Random Signal Source, 3 in 24, 1 in 8, 2 in 8, 1 in 16, 55 octect (Daly), All ones (AIS), All zeroes, 1100 pattern, alternating 10 pattern
Performance Data	Alarms and Errors	Alarm history, error counts, and error ratios
		Alarm seconds, error seconds, error-free seconds, severely errored seconds, percent errored seconds
Compliance		ITU-5 G.703, CE Mark
Operating Temperature	0º to 40º Celsius, non-condensing	
Warranty and Service	Standard	1 year parts and labor
	Extended	Service Plan available