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Find the *Exfo / Gnubi EPX300* at our website: *Click HERE*

OC-12/3 STM-4/1 Transmitter
OC-12/3 STM-4/1 Payload Generator

gnubi's™ SONET/SDH transmitters and receivers 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 SONET/SDH 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 OC-12/3 STM-4/1 Transmitter with other test modules in a single chassis for multiple rate testing.

Simultaneous Multi-port Testing

With the OC-12/3 STM-4/1 Transmitter, you can install as many as 17 modules for simultaneous multi-port testing. Use EPXam™ tools such as Group Manager, Test Controls, or Script Runner to control multiple instances of the same test simultaneously. Or conduct different tests at the same time.

EPX600 Transmitter

The EPX600 Transmitter supports signal regeneration and retransmission. Transmit at OC-12, OC-3, STM-4, or STM-1 signal rates with basic SONET/SDH alarm and error insertion. You can easily switch between SONET and SDH protocols without powering down the test system. The EPX600 is designed for all of gnubi's chassis models.

EPX650 Payload Generator

The optional EPX650 Payload Generator mounts directly on the EPX600. It extends the EPX600 module's capabilities with full-featured SONET/SDH payload generation and overhead insertion. Features include selectable payload mappings, expanded alarm and error insertion, trace message insertion, pointer manipulation, K1/K2 byte manipulation, and K1/K2 message encoding.

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 test configurations, connecting remotely with a web browser, scripting, and sharing test resources with others.

With Checkpoint/Resume, recovering from a power failure is easy. Module setup and test data are saved at intervals that you can define. When the system is restarted after a power failure, tests are resumed with minimal data loss.

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 at 622.08 MHz or 155.52 MHz
- Selectable payload mappings (with EPX650)
- SONET/SDH payload generation and overhead insertion (with EPX650)
- Checkpoint/Resume
- Test multiple rates and protocols within a single chassis
- SONET/SDH runtime switching
- Full-featured graphical and command-line user interfaces
- Multi-user remote access via web browser

Applications

- Production, validation, and metro market applications that test multiple rates and channels
- Signal regeneration and retransmission
- WDM traffic loading
- Add/drop multiplex and demultiplex
- Simultaneously transmit up to 17 channels
- Transmit BERT

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Specifications

OC-12/3 STM-4/1 Transmitter and Payload Generator

Model	EPX600	OC-12/3 STM-4/1 Transmitter
	EPX650	OC-12/3 STM-4/1 Payload Generator (optional add-on for EPX600)
Installation	All gnubi chassis models; uses one slot	
Signal Rates	SONET	OC-12 (622.08 MHz), OC-3 (155.52 MHz)
	SDH	STM-4 (622.08 MHz), STM-1 (155.52 MHz)
Optical Interface	Outputs	1310 nm: P_0 = -10 dBm (typical), P_0 = -3 dBm (typical) 1550 nm: P_0 = 0 dBm (typical)
	Connectors	SC, ST, or FC connectors
Timing References	EPX100 Clock Module	BITS input, external input, internal
	As Received	Recovered clock from OC-12/3 STM-4/1 Receiver
Payload Mappings	SONET	EPX650: OC-12: STS-12c, STS-3c, STS-1 OC-3: STS-3c, STS-1
	SDH	EPX650: STM-4: VC-4-4c, VC-4, VC-3 STM-1: VC-4, VC-3
Alarm Insertion	SONET	EPX600: LOS, LOF, SEF
		EPX650: AIS-L, RDI-L, LOP, AIS-P, Path Unequipped, RDI-P, LPS
	SDH	EPX600: LOS, LOF, OOF
		EPX650: MS-AIS, MS-RDI, AU-LOP, AU-AIS, HP Unequipped, HP-RDI, LSS
Error Insertion	SONET	EPX600: Physical (Random), Section (B1), Line (B2)
		EPX650: REI-L, Path (B3), REI-P, Payload Bit Errors
	SDH	EPX600: Physical (Random), Regenerator Section (B1), Multiplex Section (B2)
		EPX650: MS-REI, Path (B3), HP-REI, Test Sequence Errors
Error Rates	Insert a single error or insert errors at 1E-3 to 1E-9 rates	
Data Patterns	PRBS	EPX650: True and inverted: 2^{15}-1, 2^{20}-1, 2^{23}-1
	Other	EPX650: All ones; all zeroes; alternating 10; alternating 01; fixed 8-bit user word
Overhead Insertion	SONET/SDH	EPX650: Transport overhead (except B1, B2, H1, H2, H3), path overhead (except B3)
Trace Messages	SONET	EPX650: 64-byte J0 section and J1 path trace message insertion
	SDH	EPX650: 16-byte J0 trace message insertion EPX650: 64- or 16-byte J1 trace message insertion
Pointer	EPX650: Increment, decrement, move with NDF, move without NDF, and set pointer values	
K1/K2 Values and Messages	EPX650: User-defined K1, K2 byte values EPX650: K1/K2 message encode: K1 Request, K1 Channel, K2 Operation, K2 Architecture, K2 Channel	
Compliance	SONET	GR-253 eye mask, jitter
	SDH	ITU-T G.957 eye mask, jitter
Operating Temperature	0º to 40º Celsius, non-condensing	
Warranty and Service	Standard	1 year parts and labor
	Extended	Service Plan available

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