OC-48/STM-16 Receiver

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-48/STM-16 Receiver with other test modules in a single chassis for multiple rate testing.

Simultaneous Multi-port Testing.

With the OC-48/STM-16 Receiver, 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.

EPX500 Receiver

The EPX500 Receiver monitors OC-48 or STM-16 signals with selectable payload mappings. It is designed for all of gnubi's chassis models. You can easily switch between SONET and SDH protocols without powering down the test system.

Payload Monitoring and Overhead Capture

The EPX500 Receiver provides full-featured SONET/SDH payload monitoring and overhead capture. Monitor alarm history, error counts and ratios, live traffic, SONET performance statistics, trace messages, pointer event counts, and K1/K2 byte values and messages.

Service Disruption Monitoring

Service disruption monitoring can be applied to many different test scenarios and network architectures. For example, measure switch time for network elements or multi-port optical switches.

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, logging, 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

- Monitor at 2.488 GHz
- Selectable payload mappings
- SONET/SDH payload monitoring and overhead capture
- Configurable service disruption monitoring
- Checkpoint/Resume
- Test multiple rates and protocols within a single chassis
- SONET/SDH runtime switching
- Full-featured graphical and command-line user interfaces
- Log alarms, errors, and SONET performance monitoring statistics
- Multi-user remote access via web browser

Applications

- Production, validation, and metro market applications that test multiple rates and channels
- WDM traffic monitoring
- Add/drop multiplex and demultiplex
- Switch time measurement
- Live traffic monitoring
- Simultaneous monitoring of up to 17 channels
- In-line monitoring and loopback testing using an OC-48 Transmitter and Receiver pair installed in adjacent slots
- Receive BERT

Specifications

OC-48/STM-16 Receiver

Model	EPX500	OC-48/STM-16 Receiver
Installation	All gnubi chassis models; uses one slot	
Signal Rates	SONET	OC-48 (2.488 GHz)
	SDH	STM-16 (2.488 GHz)
Optical Interface	Response	1260 to 1360 nm (IR-1); 1430 to 1580 nm (IR-2); 1500 to 1580 nm (LR)
	APD Sensitivity/ Overload	-9/-28 dBm (LR-1/L-16.1, LR-2/L-16.2)
	PIN Sensitivity/ Overload	0/-18 dBm (IR-1/S-16.1, IR-2/S-16.2)
	Connectors	SC, ST, or FC connectors
Payload Mappings	SONET	STS-48c, STS-12c, STS-3c, STS-1
	SDH	VC-4-16c, VC-4-4c, VC-4, VC-3
Alarm Monitoring	SONET	LOS, LOF, SEF, AIS-L, RDI-L, LOP, AIS-P, Path Unequipped, RDI-P, LPS
	SDH	LOS, LOF, OOF, MS-AIS, MS-RDI, AU-LOP, AU-AIS, HP Unequipped, HP-RDI, LSS
Error Monitoring	SONET SDH	Section (B1), Line (B2), REI-L, Path (B3), REI-P, Payload Bit Errors Regenerator Section (B1); Multiplex Section (B2), MS-REI, Path (B3), HP-REI, Test Sequence Errors
Data Patterns	PRBS	True and inverted: 2^{15}-1, 2^{20}-1, and 2^{23}-1
	Other	Fixed 8-bit user word, live traffic
Overhead Capture	SONET/SDH	Full SONET/SDH transport and path overhead capture
Trace Messages	SONET	J0 section and J1 path trace message monitor
	SDH	J0 trace message monitor (actual and expected), RS-TIM alarm monitor J1 trace message monitor (actual and expected), HP-TIM alarm monitor
Performance Data	Alarms and Errors	Alarm history, error counts, and error ratios
	Pointer	Pointer value, counts for increments, decrements, moves with NDF, moves without NDF
	K1/K2 Values and Messages	K1, K2 byte values K1/K2 message decode: K1 Request, K1 Channel, K2 Operation, K2 Architecture, K2 Channel
	SONET Performance Monitoring	ES (Errored Seconds), SES (Severely Errored Seconds), UAS (Unavailable Seconds) for Section, Near-End Line, Far-End Line, Near-End Path, and Far-End Path Layers
	Service Disruption Monitoring	Longest, shortest, most recent service disruption (in milliseconds); In-service status; Configurable SONET/SDH alarm trigger: LOS, LOF, AIS-L/MS-AIS, LOP/AU-LOP, AIS-P/AU-AIS, Path UNEQ/HP-UNEQ, LPS/LSS, B3 (Path CV); +/-1 frame accuracy
Compliance	SONET	GR-253 jitter tolerance
	SDH	ITU-T G.957 jitter tolerance
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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