



## STM-1 CMI 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 STM-1 CMI Receiver with other test modules in a single chassis for multiple rate testing.

### SIMULTANEOUS MULTI-PORT TESTING

With the STM-1 CMI 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.

### EPX710 RECEIVER

The EPX710 Receiver monitors electrical CMI-coded STM-1 signals with selectable Virtual Container (VC) payload mappings. It is designed for all of gnubi's chassis models.

### PAYLOAD MONITORING AND OVERHEAD CAPTURE

The EPX710 Receiver provides full-featured payload monitoring and overhead capture. Monitor alarm history, error counts and ratios, trace messages, pointer event counts, and K1/K2 byte values and messages.

### 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 other users.

### UPGRADABLE

As new features are developed for gnubi's™ test modules, download the upgrades from our website. Visit [www.gnubi.com](http://www.gnubi.com) to learn about the latest features and upgrades.



### Features

- Monitor STM-1 at 155.52 MHz
- CMI encoding
- Selectable payload mappings
- Full payload monitoring and overhead capture
- Test multiple rates and protocols within a single chassis
- Full-featured graphical and command-line user interfaces
- Log alarms and errors
- 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
- Electrical-to-optical signal translation with an STM-1 CMI Receiver and STM-4/1 Transmitter
- Live traffic monitoring
- Receive BERT

# Specifications

## STM-1 CMI Receiver

<b>Model</b>	EPX710	STM-1 CMI Receiver
<b>Installation</b>	All gnubi chassis models; uses one slot	
<b>Signal Rate</b>	STM-1 (155.52 MHz)	
<b>Electrical Interface</b>	Line Coding	CMI encoding
	Connector	BNC (75-Ohm) connector
<b>Payload Mappings</b>	VC-4, bulk fill VC-3, bulk fill	
<b>Alarm Monitoring</b>	LOS, LOF, OOF, MS-AIS, MS-RDI, AU-LOP, AU-AIS, HP UNEQ, HP-RDI, LSS	
<b>Error Monitoring</b>	Regenerator Section (B1), Multiplex Section (B2), MS-REI, Path (B3), HP-REI, Test Sequence Errors (TSE)	
<b>Data Patterns</b>	PRBS	True and inverted: 2 <sup>15</sup> -1, 2 <sup>20</sup> -1, 2 <sup>23</sup> -1
	Other	All ones, all zeroes, alternating 10, alternating 01, fixed 8-bit user word, live traffic
<b>Overhead Capture</b>	Full section and path overhead capture	
<b>Trace Messages</b>	64-byte J0 trace message monitor (actual and expected), RS-TIM alarm monitor 16- or 64-byte J1 trace message monitor (actual and expected), HP-TIM alarm monitor	
<b>Performance Data</b>	Alarms and Errors	Alarm history, error counts, and ratios
	Pointer	Event counts: Increments, decrements, moves with NDF, moves without NDF; pointer values
	K1/K2 Values and Messages	K1/K2 byte values K1/K2 message decode: K1 Request, K1 Channel, K2 Operation, K2 Architecture; K2 Channel
<b>Compliance</b>	Electrical Interface: ITU G.707 (physical layer requirements) ITU-T G.825 jitter tolerance	
<b>Operating Temperature</b>	0° to 40° Celsius, non-condensing	
<b>Warranty and Service</b>	Standard	1 year parts and labor
	Extended	Service Plan available

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