

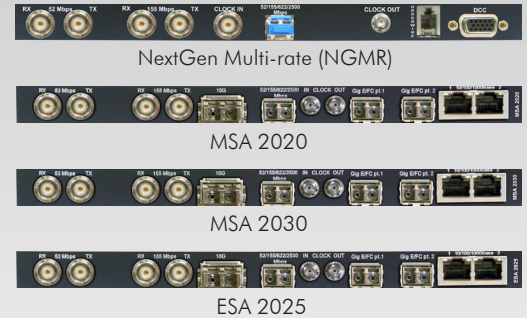


# GFP Test Option Datasheet

## Generic Framing Procedure

### MODULES

### PLATFORMS



### KEY FEATURES

- GFP-F, GFP-T and GFP Bulk
- Supports FULL Ethernet test functionality including...
- 32 independent test streams
- Supports RFC 2544 and RFC 1242 Benchmarking with Throughput, Frame Loss, Back-to-Back Burst testing
- IP reflection mode enables RFC testing through routers
- Rate setting by interpacket gap up to 18 minutes, burst traffic, ramped traffic, through mode, ARP support, runt frame support, frame size to 16,000 bytes in GFP-F and GFP-T
- Mixed interfaced testing. For example, the TX can be TX 10GbE LAN, the RX GFP-T or the TX GFP-F, RX 100BASE-T

The GFP Test Option for NGMR, MSA 2020, MSA 2030 and ESA 2025 Modules enables technicians to thoroughly test and troubleshoot today's NextGeneration networks.

Supporting High-Order and Low-Order GFP-F (framed), GFP-T (transparent) and GFP Bulk, in-depth GFP frame analysis and true Ethernet support, the NIC GFP Test Option provides the needed features that can be enabled with a license key.

A GFP-enabled system is quite complex with Ethernet layer, GFP layer, SONET/SDH layer and often OTN-layer information contained in each signal.

The NIC can simultaneous monitor all layers and enables faster and more complete analysis for faster turn-ups and troubleshooting.

The GFP Test Option uses the NIC Platform's feature-rich Ethernet capabilities in GFP, including the multi-stream support and RFC testing.

Call or email today for an on-line demonstration.

Note: The GFP Test Option supports extensive packet testing support for Ethernet within GFP. For more detailed information on the Ethernet functionality, see Ethernet Features datasheet.

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### SPECIFICATIONS

<b>Standards Compliance</b>	ITU-T G.7042	<b>Alarm Types Displayed</b>	LOCS, LOCCS, LFD (Loss of Frame Delineation)
<b>Generic Framing Procedure Types</b>	GFP Bulk – full payload rate generation and analysis of GFP frames with PRBS payload  Frame-mapped GFP (GFP-F)  Transparent-mapped GFP (GFP-T)	<b>User Programmable Controls</b>	PTI – automatically set based on the type of frame generated,  Client Data or management/alarm  PFI – pFCS enabled or disabled  EXI – Null extension header or linear frame  UPI – automatically based on the GFP mode enabled  CID
<b>Supported Interfaces</b>	SONET/SDH: STM-64, OC-192, STM-16, OC-48, STM-4, OC-12, STM-1, OC-3, STM-0, OC-1  OTN: OTU-1 with ODU-1 Mapping, OTU-2 with ODU-2 or ODTU-12 Add/Drop Mapping	<b>Error Insertion</b>	Single and rates
<b>Supported Mappings for GFP Bulk and GFP-F</b>	AU-4-64c, AU-4-16c, AU-4-4c, AU-4 C-4, AU-3 C-3, STS-192c, STS-48c, STS-12c, STS-3c, STS-1  VC-4-Xv, VC-3-Xv, STS-3c-Xv, STS-1-Xv, VC-2-Xv, VC-12-Xv, VC-11-Xv, VT-6-Xv, VT-2-Xv, VT-1.5-Xv ODU-1, ODU-2	<b>Error Types</b>	Correctable (cHEC)
<b>Supported Mappings for GFP-T</b>	AU-4-16c, STS-48c VC-4-Xv, VC-3-Xv, STS-3c-Xv, STS-1-Xv, ODU-1	<b>Alarm Insertion</b>	LOCS, LOCCS, LFD
<b>Conditions Displayed</b>	Per port Results: TX Packets, Packets/sec, Bytes, Mbit/sc/ %BW, Super Blocks (GFP-T only)  RX Packets, Packets/sec, Bytes, Mbit/sc/ %BW, Super blocks (GFP-T only)	<b>Payload</b>	GFP Bulk: PRBS31, 32-Bit User Pattern GFP-F, GFP-T: 32 independently configured Ethernet test streams – see Ethernet data sheet for more details
<b>Error Types Displayed</b>	(error count, errored seconds, average and current error rate for each type)  Correctable and uncorrectable cHEC (Core header)  Correctable and uncorrectable tHEC (Payload type)  Correctable and uncorrectable eHEC (extended header)	<b>Frame Length (Bytes)</b>	GFP Bulk: 60 – 9000bytes GFP-F, GFP-T: Ethernet frame size can be 64 to 16000bytes

*Note: The NIC GFP Test Option supports the full Ethernet feature set provided in Digital Lightwave Ethernet modules, when using GFP-T or GFP-F, with the following exceptions:  
GFP-T: Ping, ARP requests  
GFP-F: Ping, Service disruption, RFC 2544 Back to Back testing, Latency, ARP requests, RX Packet Size monitoring (64, 65-127, etc) I am not sure what we call this on the data sheets. IP Reflection modes*

*For more detailed information on the Ethernet functionality, see Ethernet Features datasheet.*

### ORDERING INFORMATION

Applicable to MSA 2020™, MSA 2030™, ESA 2025™ or NGMR™ modules

- GFP\_N - Generic Framing Procedure (GFP) Test Option for SONET/SDH
- OTN\_GFP\_N - Generic Framing Procedure (GFP) Test Option for OTN
- GFP-T\_N - Generic Framing Procedure-Transparent (GFP-T) Test Option (Requires either GFP\_N or OTN\_GFP\_N Test Option)

For more information or a sales quote, visit [www.lightwave.com/contact](http://www.lightwave.com/contact) or email [dlsales@lightwave.com](mailto:dlsales@lightwave.com)



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