

8100

NEXT-GENERATION SONET/SDH ANALYZER

FTB-8100

NETWORK TESTING



A Fully Integrated Solution Supporting Advanced DSn/PDH, SONET/SDH and Next-Generation SONET/SDH Test Functions

- Ethernet-over-SONET/SDH (EoS) test capabilities via GFP and VCAT payload mappings
- Embedded Ethernet interface for advanced Ethernet-over-SONET/SDH service generation and analysis
- Full interworking with EXFO's world-class FTB-8510 Packet Blazer™ Ethernet Test Module, allowing for simultaneous Ethernet and SONET/SDH testing
- DS1/E1 to OC-48/STM-16 interfaces in a single module (field-upgradeable to OC-192/STM-64)
- Scalable architecture supporting multiport, multichannel testing
- Intuitive, feature-rich smart user interface (SUI) offering advanced test-setup and scripting capabilities

The Next Step in SONET/SDH Testing

The proliferation of packet-based services at the enterprise level is expanding the possibilities for SONET/SDH networks. With the advent of Next-Generation SONET/SDH technologies, such as generic framing procedure (GFP) and virtual concatenation (VCAT), service providers now have a cost-effective means of introducing new revenue-generating, data-aware transport services on existing SONET/SDH infrastructures. This opportunity in turn creates the need for test solutions that can help ensure proper deployment, operation and maintenance of these new services—and stay within budget.

EXFO's FTB-8100 Next-Generation SONET/SDH Analyzer combines advanced DS_n/PDH, SONET/SDH and Next-Generation SONET/SDH test functions in a single unit, thus eliminating the need for multiple, purpose-built test platforms when commissioning or troubleshooting SONET/SDH services and new data-aware SONET/SDH circuits. Housed in the portable FTB-400 Universal Test System, and fully compatible with the FTB-8510 Packet Blazer™ Ethernet Test Module, the FTB-8100 is ideally suited for lab, central office and field applications.



FTB-81X0 modules are housed in the FTB-400 portable platform's new eight-slot receptacle (GP-408). This configuration supports multiple FTB-81X0 modules, delivering simultaneous multiport testing capabilities.

KEY FEATURES

- Ethernet-over-SONET/SDH (EoS) test capabilities via GFP and VCAT payload mappings
- Embedded Ethernet interface for advanced Ethernet-over-SONET/SDH payload generation, manipulation and monitoring via connection with the FTB-8510 Packet Blazer
- Modular, scalable architecture ensuring that additional interfaces and features can be introduced in the field without retrofits, optimizing cost-effectiveness
- Housed in the scalable FTB-400 platform, which supports multiple modules for simultaneous multiple-port, multiple-channel testing
- Full range of advanced SONET/SDH test functions, including Through mode, service disruption time, error performance monitoring, as well as signal power and frequency measurement
- Intuitive, feature-rich smart user interface (SUI) offering advanced generation and analysis tools for Next-Generation SONET/SDH architectures
- Automated test scripting and advanced reporting capabilities

Multiple-Protocol Platform: First-Class Versatility

The FTB-8100 is housed in the FTB-400 portable platform's new eight-slot module receptacle (GP-408). This high-performance, multiple-protocol configuration provides users with an all-in-one solution capable of supporting a mix of FTB-81X0, FTB-8510/8520 Packet Blazer™ and EXFO optical-layer test modules, making it the industry's first network-testing platform combining Next-Generation SONET/SDH functions with Ethernet, Fibre Channel and optical-layer testing capabilities. The resulting modularity enables users to upgrade their systems in the field according to their testing needs, optimizing capital expenditures.

Scalable, High-Performance SONET/SDH Testing

Next-Generation SONET/SDH Generation and Analysis

The FTB-8100 Next-Generation SONET/SDH Analyzer's service pack includes generic framing procedure (GFP) and virtual concatenation (VCAT) functions such as these:

GFP-F	VCAT
<ul style="list-style-type: none"> Generation and analysis of frame types (client management/client data) 	<ul style="list-style-type: none"> High-order VCAT
<ul style="list-style-type: none"> Frame configuration 	<ul style="list-style-type: none"> Simultaneous manipulation of every member of a VCAT group
<ul style="list-style-type: none"> Error injection and analysis 	<ul style="list-style-type: none"> Alarm generation and monitoring
<ul style="list-style-type: none"> Alarm generation and analysis 	<ul style="list-style-type: none"> Sequence-indicator manipulation and processing
<ul style="list-style-type: none"> Overhead manipulation and monitoring 	<ul style="list-style-type: none"> Group-summary monitoring
<ul style="list-style-type: none"> Transmission and reception statistics monitoring 	<ul style="list-style-type: none"> Differential delay analysis



Enhanced Ethernet Payload Emulation and Analysis

In addition to its internal Ethernet PRBS generator, each FTB-81X0 module includes an embedded 10/100/1000M Ethernet interface that can be used to interconnect with an FTB-8510 Packet Blazer module or an external Ethernet device (e.g., switch or router), delivering the industry's first data-integrated Next-Generation SONET/SDH test solution for advanced Ethernet-over-SONET service emulation and analysis. This flexible configuration is ideal for Ethernet-over-SONET/SDH Through mode and add/drop test applications. What's more, the FTB-8100's compatibility with the FTB-8510 Packet Blazer provides you with the added benefit of simultaneous Ethernet and SONET/SDH testing in a single platform.

Scalable and Upgradable

Thanks to a modular, upgradable architecture, the FTB-8100 can be field-upgraded to support additional interfaces (OC-192/STM-64) and Next-Generation functionalities (including G.709 OTN), maximizing return on investment. In addition, the FTB-400 platform's eight-slot scalable design lets you add FTB-81X0 modules as needed and benefit from simultaneous, multiple-port test capabilities.

Service Assurance and Troubleshooting

In addition to its Next-Generation SONET/SDH features, the FTB-8100 also offers advanced SONET/SDH test functions, including:

- High-order (HO) mappings: STS-1/3c/6c/9c/12c/24c/48c and AU-3/AU-4c/AU-4-2c/3c/4c/8c/16c
- Low-order (LO) mappings: VT1.5/VC-12/2/3
- Section, line, HO and LO path overhead manipulation and monitoring
- Section, line, HO and LO path alarm generation and monitoring
- Section, line, HO and LO path error injection and measurement
- HO pointer processing and generation
- Electrical and optical signal frequency and power measurement
- Error performance monitoring
- Through mode
- Service disruption time
- Simultaneous multiport, multichannel testing

Smart User Interface

EXFO's FTB-8100 comes with a unique smart user interface (SUI), purpose-built to support unparalleled ease-of-use for Next-Generation SONET/SDH testing. The SUI's Test Setup and Test Scripting wizards simplify and accelerate commissioning and maintenance operations. The FTB-8100 can be managed locally via the FTB-400's touchscreen, or via EXFO's Visual Guardian™ remote management software tool.

SPECIFICATIONS

FTB-8100	FTB-8110
Next-Gen SONET/SDH 2.5 Gb/s	Next-Gen SONET/SDH 2.5 Gb/s
Analyzer module with one small form pluggable (SFP) transceiver receptacle supporting up to OC-48/STM-16 optical rates	Analyzer module with one small form pluggable (SFP) transceiver receptacle supporting up to OC-48/STM-16 optical rates, as well as electrical T-Carrier/PDH interfaces
Test Interfaces	
SONET: OC-3, OC-12, OC-48	SONET: OC-3, OC-12, OC-48
SDH: STM-1, STM-4, STM-16	SDH: STM-1, STM-4, STM-16
	T-Carrier: Dual DS-1, Dual DS-3, STS-1e
	PDH: E1, E2, E3, E4, STM-0e, STM-1e

GENERAL SPECIFICATIONS

	FTB-8100	FTB-8110
Weight (without transceiver)	0.9 kg (2.0 lb)	1.4 kg (3.0 lb)
Size (H x W x D)	5.1 cm x 7.6 cm x 25.4 cm (2 in x 3 in x 10 in)	7.6 cm x 7.6 cm x 25.4 cm (3 in x 3 in x 10 in)
Temperature		
operating	0 °C to 40 °C (32 °F to 104 °F)	0 °C to 40 °C (32 °F to 104 °F)
storage	-40 °C to 60 °C (-40 °F to 140 °F)	-40 °C to 60 °C (-40 °F to 140 °F)

ORDERING INFORMATION

FTB-81XX-XX-XX-XX-XX

Model

FTB-8100 = Optical base block:
SONET/SDH 2.5 Gb/s analyzer module with one SFP receptacle supporting OC-3/STM-1, OC-12/STM-4 and OC-48/STM-16 optical rates.
Multirate SFP transceiver must be purchased separately. Optical reach will be determined by SFP.

FTB-8110 = Optical/electrical base block:
SONET/SDH 2.5 Gb/s analyzer module with one SFP receptacle supporting OC-3/STM-1, OC-12/STM-4 and OC-48/STM-16 optical rates.
Also provides capabilities for DS1/E1 to STM-1e/STM-1e and regular DSn/PDH testing.
Multirate SFP transceiver must be purchased separately. Optical reach will be determined by SFP.

Test Options

SONET = SONET-BASE-SW
SDH = SDH-BASE-SW
SONET-SDH = Software option for combined SONET-SDH functionality

Rate Options

155 = 155 Mb/s (OC-3/STM-1)
622 = 622 Mb/s (OC-12/STM-4)
2488 = 2.488 GB/s (OC-48/STM-16)

Software Options

DSn
PDH
G.747*
Through mode
Next-Gen SONET/SDH
EEoS²

Tranceivers:

FTB-8190: Multirate (155/622/2488 Mb/s) optical SFP transceiver module with LC connector; 1310 nm; short reach

FTB-8191: Multirate (155/622/2488 Mb/s) optical SFP transceiver module with LC connector; 1310 nm; intermediate reach

FTB-8192: Multirate (155/622/2488 Mb/s) optical SFP transceiver module with LC connector; 1550 nm; long reach

TK-400-D4-NXX-XX-FTB-81XX-XX-XX-XX-XX

TFT active color touchscreen

Memory

N10 = Standard 256 MB
N12 = Additional 256 MB (Total of 512 MB)

Module Receptacle

MP = Eight-slot protocol module receptacle

See model and software info left

Notes

- Only with DSN and PDH
- Enables Ethernet testing on FTB-81X0 modules

Find out more about EXFO's extensive line of high-performance portable instruments by visiting our website at www.exfo.com.



Rugged Handheld Solutions

- OLTS
- Power meter
- Light source
- Talk set



Optical Fiber

- OTDR
- OLTS
- ORL meter
- Switch

DWDM Test Systems

- OSA
- PMD analyzer
- Chromatic dispersion analyzer
- Multiwavelength meter

Transport/Datacom

- 10/100 and Gigabit Ethernet
- SONET/SDH (DS0 to OC-192c)
- SDH/PDH (64 kb/s to STM-64c)
- SAN

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