SPEC SHEET

FTBx-88810 Series

ONLY PORTABLE 1G–800G TESTER COVERING 800ZR, ETHERNET, OTN AND FIBRE CHANNEL (FC)

- Industry's most complete portable tester offering full-rate coverage from 1G to 800G—with support for Ethernet, OTN, FC and coherent optics (800ZR-ready). Built for the Coherent Future.

COMPATIBLE WITH

KEY FEATURES

Industry's most compact portable tester supporting the complete coherent ecosystem, including pluggables (i.e., QSFP-DD and OSFP) following the next specifications 800ZR, 400ZR, OpenZR+ (400ZR+, 300ZR+, 200ZR+, 100ZR+), and 100GBASE-ZR with QSFP28

Validate 1G to 800G on the same testing unit (breakout configurations: 2×400GE, 4×200GE, 8×100GE, 2×200G and 4×100G)

Dual-port/dual-testing—the only portable 800G tester offering seamless support for both QSFP-DD and OSFP, including 800G and 800ZR. Available on the FTB-4 Pro.

State-of-the-art open transceiver system (OTS) design for full flexibility with current and future transceivers

Supports quick optical transceiver validation and sanity check using iOptics, including coherent optics

Complete 1G to 64G Fibre Channel (FC) test solution suite helps ensure that new switches and transceivers are up and running reliably

Support of OTN BERT capabilities (ODU0, OTU1 to OTU4, 4×OTU4 including overclock rates), multistage mapping and advanced GCC BERT tools

Validation of 800G copper interfaces, auto-negotiation and link training connections and compliance with industry specifications (ETC and IEEE)

RELATED PRODUCTS

Portable platform
FTB-1 Pro HPDC

Portable platform
FTB-4 Pro

Rackmount platform
LTB-8

READY FOR THE COHERENT FUTURE AND THE AI REVOLUTION

800ZR is set to become foundational in next-gen optical transport networks, enabling high-capacity, long-distance interconnections between hyperscale data centers—whether across metro regions or between buildings.

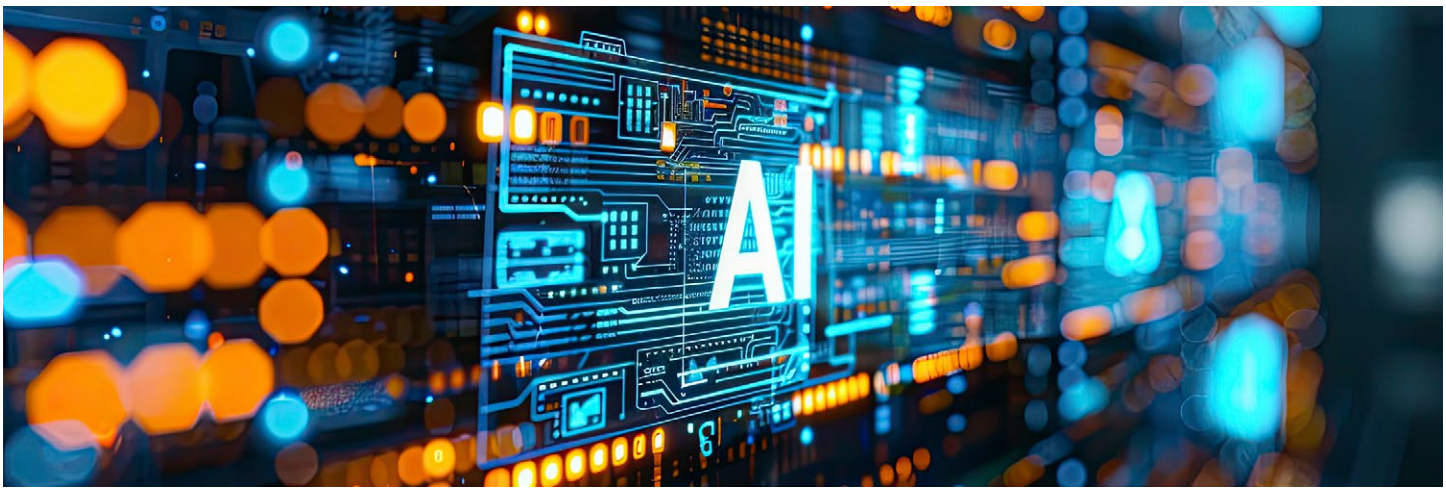
Since its introduction, coherent optical technology has proven to be a game-changer for high-speed interconnects. Originally designed to support 100G, 200G, 300G, and 400G client signals, it has rapidly evolved. Today, it offers even greater performance and flexibility, with support for 800G clients and a variety of breakout configurations—including 2×400G, 4×200G, and 8×100G.

This new level of scalability and versatility makes coherent technology, and 800ZR in particular, an essential building block for future-proofing high-performance AI and cloud infrastructures.

We've entered the era of AI and the race to build the most powerful AI infrastructure is accelerating.
Industry giants like xAI, OpenAI, and others are leading groundbreaking projects that demand unprecedented computing scale. At the heart of this revolution are massive data centers either already running or planning to deploy thousands of 800G Ethernet interconnections to manage the immense data loads driven by AI applications.

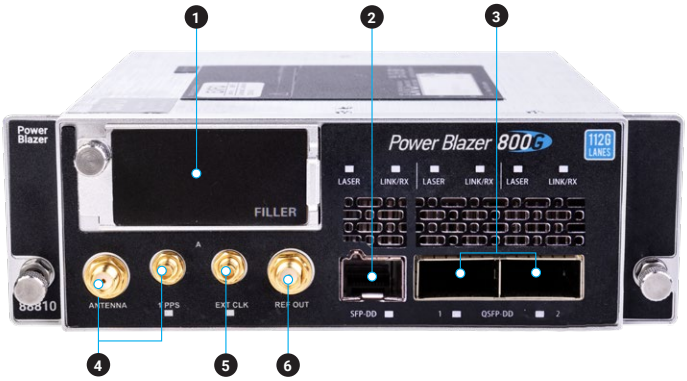
With the next wave of AI buildouts, 800G testing, breakout architectures, and coherent optical technologies are key components of success.

Now, more than ever, organizations need flexible, powerful, and cost-effective 800G solutions to stay competitive in the high-stakes AI infrastructure race.



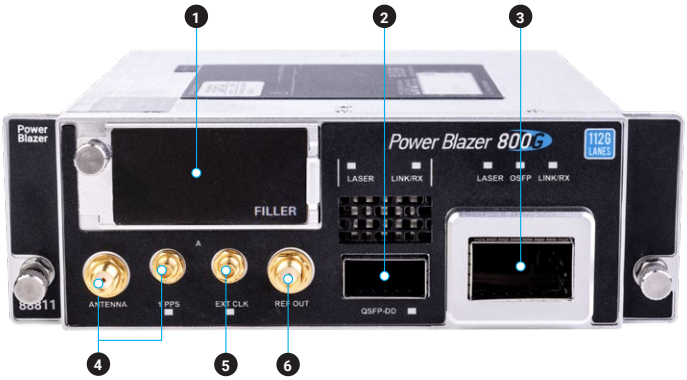
DESIGNED FOR FLEXIBILITY

With one test module supporting various types of transceivers, EXFO's patented Open Transceiver System (OTS) design provides enhanced flexibility and CAPEX protection to the end user. OTS is a flexible and evolutive solution that adapts to the rapid development of transceivers while providing multirate support.



FTBx-88810

1. OTS module interface, supporting SFP, SFP+, SFP28, QSFP+ and QSFP28
2. 1×SFP-DD port supporting SFP56 (64G FC and 100G Ethernet)
3. 2×QSFP-DD ports supporting 800G/400G/200G/100G Ethernet rates, 2×200G, 4×100G, 8×100G, 2×400G and 4×200G breakout cables as well as coherent optics (100ZR/ZR+, 200ZR+, 300ZR+, 400ZR/ZR+)
4. Built-in GNSS/GPS: SMA, SMB (EXT CLK and 1PPS)
5. Synchronization SMB interface (input 1PPS, 10 MHz or 2 MHz)
6. REF CLOCK OUT SMA interface



FTBx-88811

1. OTS module interface, supporting SFP, SFP+, SFP28, QSFP+ and QSFP28
2. 1×QSFP-DD port supporting 800G/400G/200G/100G Ethernet rates, 2×200G, 4×100G, 8×100G, 2×400G and 4×200G breakout cables as well as coherent optics (100ZR/ZR+, 200ZR+, 300ZR+, 400ZR/ZR+, 800ZR)
3. 1×OSFP port supporting 800G and 400G Ethernet rates, 2×200G, 4×100G, 8×100G, 2×400G and 4×200G breakout cables as well as coherent optics (100ZR/ZR+, 200ZR+, 300ZR+, 400ZR/ZR+, 800ZR)
4. Built-in GNSS/GPS: SMA, SMB (EXT CLK and 1PPS)
5. Synchronization SMB interface (input 1PPS, 10 MHz or 2 MHz)
6. REF CLOCK OUT SMA interface

MULTIPORT CAPABILITIES

At EXFO, we deliver flexible solutions tailored to each customer's use case—empowering them to customize their testing experience end to end.

FTB-1 Pro high-power dual-carrier (HPDC). This high-power dual carrier configuration is the latest offering of the FTB-1 Pro platform. It combines the capability to test high speeds (1G to 800G) with a compact portable design that allows portability from lab to field.

FTB-4 Pro portable platform. This two-slot portable platform supports dual-test, dual-port 1G to 800G testing—delivering maximum flexibility in the field.

LTB-8 rackmount platform. This powerful, scalable, eight-slot rackmount platform is designed for advanced lab and manufacturing applications. It can support four 800ZR ports simultaneously and a wide variety of combinations for 1GE up to 800GE.

RAPID EVOLUTION OF TRANSCEIVERS

A shared challenge in the telecom industry today is the wide variety of pluggable transceivers available and the rapid rate at which new types of transceivers are being developed. This growing challenge impacts both equipment manufacturers trying to keep up, and network operators or data centers having to integrate new transceivers into their networks.

FTBx-88810 Series modules feature the innovative OTS design that lets users customize interface types without adapters. This future-proof approach enables seamless support for new transceivers—simply swap the transceiver system instead of replacing the entire test unit.

		SUPPORTED INTERFACES	FEATURES
OTS			
	**SFP28**	SFP, SFP+, tunable SFP+, SFP28 and bidirectional SFP	1G to 25G data rates Dual-port capability
	**QSFP28**	QSFP+, QSFP28	40G/100G data rates Dual-port capability AOC cables
Supported transceivers			
	**QSFP-DD**	QSFP-DD	100G, 200G, 400G and 800G data rates
	**OSFP**	OSFP	400G and 800G data rates
	**SFP-DD**	SFP-DD	100G and 64 FC

iOptics is an intelligent pluggable optics test application and first-alert test that can be used in the field or lab to efficiently evaluate the proper operation of an optical interface, with minimal user configuration required. iOptics performs validation using several subtests, monitors power consumption and temperature and reports an individual verdict for each subtest and monitoring task. iOptics now supports the latest high-speed pluggables from 1G to 800G transceivers, AOC, DAC cables and coherent optics (400ZR and OpenZR+). iOptics now offers loopback settings for internal transceiver fault isolation.

SFP/SFP+/SFP28

QSFP+/QSFP28

QSFP112/QSFP-DD/OSFP

AOC cables

DAC cables

iOptics

BUILT FOR THE COHERENT FUTURE

Coherent technology is rapidly becoming a cornerstone of next-generation optical transport networks. By delivering high-speed data over long distances while supporting multiple data rates, it stands as an essential solution for today's increasingly demanding infrastructure.

From hyperscalers and AI-driven platforms to service providers and carriers, organizations are embracing network architectures that fully leverage the advanced capabilities of coherent transceivers. These transceivers not only extend reach and boost capacity but also provide integrated monitoring features such as OSNR and CD/PMD directly from the module.

By enabling flexible client transport (100G to 800G and beyond), improving visibility, and reducing complexity, coherent optics are redefining what's possible across metro, regional, and long-haul deployments. For any business building tomorrow's high-speed infrastructure, coherent technology isn't just an option—it's a competitive advantage.

To ensure our solutions meet the highest standards of quality, interoperability, and performance, EXFO has partnered with leading industry organizations such as the Optical Internetworking Forum (OIF). Through active participation, we help shape the standards that define the future of coherent optical technology—ensuring consistency across vendors, form factors, and deployment scenarios.

EXFO has made significant investments in developing a robust, flexible, high-performance test platform designed to validate coherent transceivers across all key data rates and configurations.

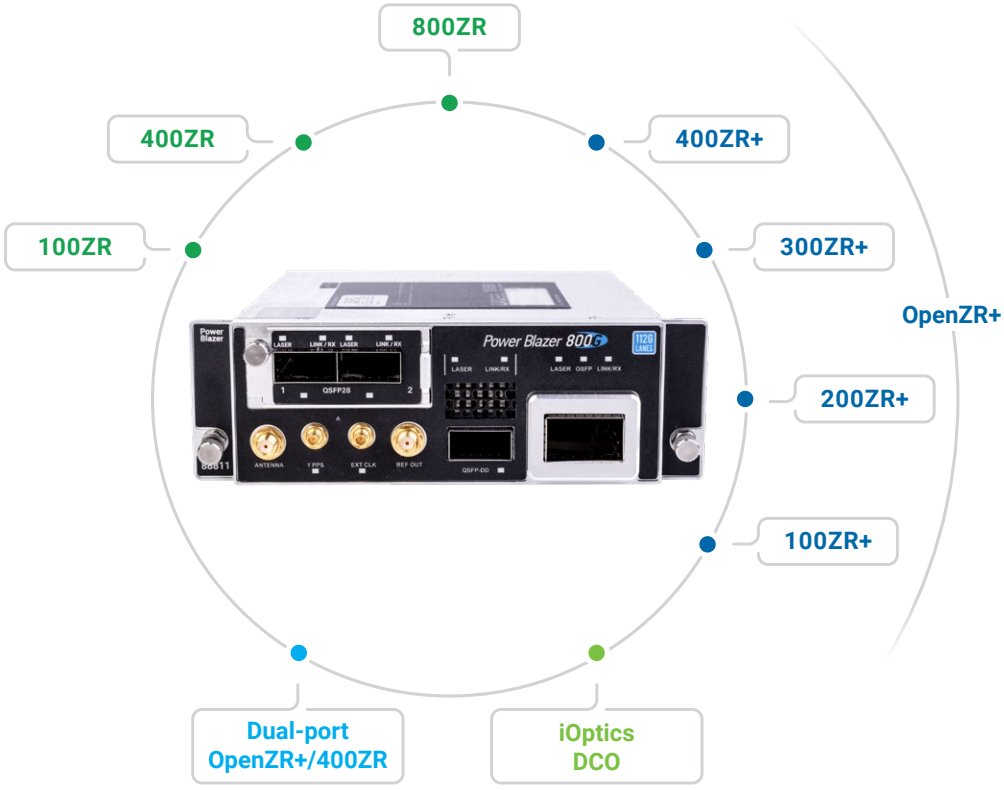
Our testing solutions are built to support a wide range of coherent form factors—including QSFP-DD and OSFP—ensuring you're equipped to qualify the latest technologies with confidence. Whether you're developing, integrating, or deploying coherent optics, our solution provides the tools to ensure performance, compliance, and long-term scalability.

In an industry moving this fast, you need solutions that are built for the Coherent Future.

TEST TWICE AS FAST WITH DUAL-PORT COHERENT TESTING

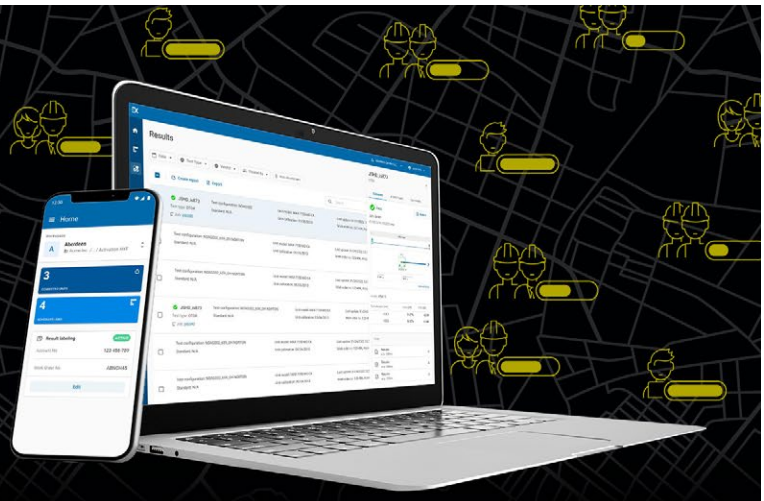
The only portable tester in the industry capable of validating two coherent ports at the same time. The ability to test two 400ZR/Open ZR+/100ZR ports simultaneously means that technicians can do more in a day. With the sheer volume of ports at play, fast and accurate testing is critical. Furthermore, using dual-port testing, technicians can validate main and backup links simultaneously and under consistent conditions—speeding up the process while reducing the potential for network failures.

COMPLETE COHERENT SUITE



EXchange

SHARE TEST RESULTS. BOOST COMPLIANCE. UNLOCK INSIGHTS.



Cloud-hosted solution for sharing test results and ensuring compliance.

Paired with EXFO's leading test instruments, EXFO Exchange drives an entire ecosystem, while integrating seamlessly with existing operation processes.

KEY BENEFITS

- **Automate test results management**
- **Boost compliance and efficiency**
- **Improve collaboration and visibility**
- **Access comprehensive reporting**
- **Unlock insights to see what matters**

SIMPLE SETUP IN THREE STEPS

1

Create your free EXFO Exchange account

Begin your journey by creating an EXFO Exchange account. Setting up your account is quick and easy.

Create an account

2

Install the mobile app

Download the EXFO Exchange app to allow test data from compatible EXFO devices to be uploaded securely to the cloud (free of charge).

GET IT ON Google Play | Download on the App Store

For MaxTester and FTB users, install the native app.

Access the Native app

3

Save time and boost efficiency

Once your account created—and the mobile app installed and paired with compatible EXFO devices—all test results will be sent to the cloud. On the web app, you will see field test results from all invited testers.

Get **started >**

EXFO

SPECIFICATIONS

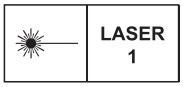
MECHANICAL AND ENVIRONMENTAL SPECIFICATIONS

Module		FTBx-88810	FTBx-88811
Size (H × W × D)		51 mm × 159 mm × 182 mm (2 in × 6 ¼ in × 7 3/16 in)	51 mm × 159 mm × 182 mm (2 in × 6 ¼ in × 7 3/16 in)
Weight		0.85 kg (1.87 lb)	0.88 kg (1.94 lb)
Temperature	Operating	0 °C to 40 °C (32 °F to 104 °F)	
	Storage	−40 °C to 70 °C (−40 °F to 158 °F)	

REF-OUT INTERFACE

Tx pulse amplitude	200 mVpp to 1300 mVpp, depending on frequency
Transmission frequency	155 MHz to 3.50 GHz
Output configuration	AC-coupled
Load impedance	50 Ω
Connector type	SMA
External cable	Maximum 1 meter cable length (RG178 cable with 3.1 dB/m attenuation at 3.5 GHz)

LASER SAFETY



IEC 60825-1:2014-05

SUMMARY OF KEY FEATURES	
Compliance testing	IEEE 802.3ba, IEEE 802.3bs, 802.3ck and 802.3df standards
Multi-interface support	QSFP-DD MSA revision 4.0, OSFP MSA revision 2.0, 4×200G, 2×400G and 8×100G and 1×800G QSFP-DD MSA revision 6.3, 2×200G and 4×100G 800G, 400G AOC and DAC cables support Pluggable MSA-compliant 2×QSFP28 transceivers AOC QSFP28/QSFP-DD cable support Pluggable MSA-compliant 1×OSFP optical transceiver Pluggable MSA-compliant 2×QSFP+ transceivers Pluggable MSA-compliant 2×SFP28 optical transceivers Pluggable MSA-compliant 2×SFP/SFP+ optical transceivers Pluggable MSA-compliant 1×SFP-DD optical transceiver
Line rate	850, 425/212.5/106.25 (single lambda)/103.125/53.125/41.25 Gbit/s, 100G SRBD, 40G, 25G, 1G, OIF DCO Coherent OSFP, QSFP-DD, QSFP28 and OpenZR+
Physical-layer validation	PCS lane mapping and monitoring capability Per-lane skew generation and measurement PCS error generation and monitoring per lane Full MDIO/I2C read/write access
Transceiver and cable validation	SFP, SFP+, SFP28, QSFP+, QSFP28, QSFP56, QSFP-DD, QSFP112 and OSFP. Also, AOC, DAC and breakout cables.
Breakout cable support	Verification of 2×400G, 4×200G, 8×100GE, 4×100GE and 2×200GE breakout cables providing optical Tx/Rx power, L2/L3 traffic and BERT statistics per link.
Power measurement per lane	Optical channel power measurement with color indicators
Frequency measurements	Provides per lane frequency measurement of the received signal (in Hz)
Frequency offset	Offsetting of the transmitted signal's clock on a selected interface, and monitoring
Transceiver non-blocking analysis	Enables a step-by-step monitoring of the transceiver boot-up sequence
BERT	BERT framed and unframed testing using different parameters and different frame sizes, including EMIX. The Ethernet BERT application also allows LLDP neighbor validation which displays the most important information forwarded by the LLDP protocol.
Service disruption time (SDT)	SDT measurements based on no-traffic mode, with statistics including longest disruption time, shortest, last, average, count, total and pass/fail thresholds
Latency measurements in BERT	High-resolution delay measurements integrated in the BER with statistics including current, average, maximum, minimum, count, total and pass/fail thresholds
Error injection mode	Manual, rate and continuous (maximum rate)
Layer 2/3/4 Ethernet testing	• Unframed BERT at 800G • MAC address and Ether type edition available, Q-in-Q capability with the ability to go up to three layers of stacked VLANs • Source and destination IP address configuration available, IP TOS/DSP configuration available, UDP source and destination port configuration available • BERT available at 1G, 10G, 25G, 40G, 100G, 200G and 400G • Dual-port Ethernet testing capabilities for 1G, 10G, 25G, 40G, 100G, 200G and 400G • Discover up to three levels of VLAN tagged traffic (C-/S-/E-VLAN) including their ID and priority, as well as the total VLAN tagged frame count and associated bandwidth • Link layer discovery protocol (LLDP) neighbor information collected at all supported rates: from 1G to 800G • Ping and traceroute functions; user can configure up to 1000 ping messages • Advanced filtering capability for in-depth network troubleshooting
Smart loopback	Return Ethernet traffic to the local unit by swapping packet overhead up to layer 4
Traffic generation and monitoring	Traffic generation and shaping of up to 16 streams of Ethernet and IP traffic, including the simultaneous monitoring of throughput, frame loss, packet jitter, latency and out-of-sequence frames, including MAC flooding for source and destination MAC addresses
RFC 2544	Throughput, back-to-back, frame loss and high-resolution latency measurements according to RFC 2544; frame size: RFC-defined or user-configurable
EtherSAM	Simplified ITU-T Y.1564 test that performs service configuration and service performance tests using remote loopback or dual test set mode for bidirectional results
RFC 6349	RFC 6349 with enhanced algorithm: performs TCP testing with single or multiple TCP connections from 10BASE-T up to 100G; discovers the MTU, RTT, actual and ideal TCP throughput; user can apply suggested window size boost factor to optimize test results or perform multiple client iPerf tests against the RFC 6349 (v2 and v3) iPerf Server mode of operation
Rx frame-size analysis	< 64, 65 - 127, 128 - 255, 256 - 511, 512 - 1023, 1024-1518 and > 1518

SUMMARY OF KEY FEATURES (CONTINUED)	
Rx rate	Line utilization (%), Ethernet bandwidth (Mbit/s), frame rate (frame/s), and frame count
Ethernet alarms	Link down, local fault detected, local fault received, remote fault, LOA
Ethernet errors	FCS, jabber, runt, undersize and oversize
Higher layer error analysis	UDP checksum
PCS lane alarms and errors	LOS, LOC-lane, LOAML, excessive skew, Inv. Marker, Pre-FEC SYMB and Pre-FEC-bit
PCS logical lane mapping	Manual and random
Skew insertion	Per-lane skew generation and measurement range 0 to 10550
Pre-emphasis	Pre-/main-/post-cursor options to improve electrical waveform including gray encoding
FEC	Generation and analysis of FEC correctable and uncorrectable errors, local and remote degraded SER monitoring (error-free and uncorrectable) and percentage
FEC statistics	Number of symbol errors per correctable codeword, number of pre-FEC symbol errors and bit statistics, codeword count
IPv4 and IPv6 testing	Performs the following tests up to 400G over IPV4 and IPv6, RFC 2544, BERT, traffic generation and monitoring, EtherSAM, ping and traceroute
Autonegotiation support	Advertise local interface parameters and identify negotiated capabilities with the remote link partner
Autonegotiation status	Monitors and displays the status of the auto-negotiation process, providing information on its various states
Link training support	Provides the capability to enable or disable the link training process with support for copper cable assemblies as defined by the IEEE 802.3df (Clause 162.8.11) and 800G-ETC-R standards
Link training status	Monitors and displays the status of the link training process, providing information on its various states
Link training debugging	Report local and remote Tx coefficient update and exception counts and support the export of a detailed log of all link training status and control messages to aid in debugging
Remote access	Supported via EXFO Remote ToolBox, Remote Desktop, VNC and EXFO Multilink for multiuser support
Automation	Wide range of commands available per application to allow test automation
Reporting	Test results are included in a report that can be generated in different formats: pdf, html and json

OTN SPECIFICATIONS	
OTN testing	OTU4 (112 Gbit/s), 4×OTU4, OTU3 (43 Gbit/s), OTU3e1 (44.57 Gbit/s), OTU3e2 (44.58 Gbit/s), OTU2 (10.71 Gbit/s), OTU2e (11.10 Gbit/s), OTU2f (11.32 Gbit/s), OTU1 (2.67 Gbit/s), OTU1e (11.05 Gbit/s) and OTU1f (11.27 Gbit/s) unframed and framed BER tests. • FEC testing: error insertion and monitoring • OTL 3.4, OTL 4.4, OTL 4.2 and 4.1 support • Alarms and errors generation and monitoring • OTL lane mapping, skew generation and measurement • OTU, ODU, OPU overhead manipulation and monitoring • OTU, ODU (including ODU TCM), OPU layer alarm/error generation and analysis • OTU, ODU (including ODU TCM) trace messages • Round-trip delay (RTD) measurement • OTN SDT measurement • OTN through and OTN intrusive through mode testing • Multiplexing/demultiplexing of ODU13, ODU23, ODU123, ODU03, ODU013, ODU0123, ODU04, ODU014, ODU134, ODU24, ODU234, ODU34, ODU14, ODU01234, ODU0124, ODU12, ODU024, ODU034, ODU1e4, ODUflex24, ODU2e4 and ODU124, ODU1234 with PRBS pattern and GigE and 10 GigE client mappings into OPU payloads. ODUflex at ODU2, ODU3 and ODU4. rates with full flexibility to configure the required bandwidth based on n×1.25 Gbit/s tributary time slots with a PRBS. pattern into the ODUflex payload; 40 GigE client mapping into ODU3 into ODU4. • Performance monitoring: G.821, M.2100 • Frequency analysis and offset generation including frequency sweep • Power OTN OH analysis for BERT and synchronization testing of multiple fields in the OTN OH, including GCC0/1/2
Ethernet mapping over OTN	• Ethernet mapping over OTN respectively, with GMP support • 40G transcoding capability with alarms, errors and statistics • GMP alarms, errors and statistics • GigE mapping into ODU0 using GFP-T, 10 GigE mapping into ODU2 using GFP-F, direct 10 GigE mappings into ODU1e/2e in different ODU multiplexing structures, and 40 GigE client mapped into ODU3/ODU4 • Flexibility to map up to a 10G Ethernet client signal into ODUflex

COHERENT OPTICS	
Compliance	OIF 800ZR, 400ZR, OpenZR+, 100GBASE-ZR
Tx power	Optical power Tx transceiver configuration
Interface rate	800ZR (2×400GE, 4×200GE, 8×100GE and 800GE), 400ZR DWDM amplified, 400ZR unamplified, 400ZR+, 300ZR+, 200ZR+ (2×100G and 1×200G clients), 100ZR+ and 100GBASE-ZR
Wavelength	Transceiver grid configuration
Optical metrics	Test set displays the following optical metrics CD (ps/nm), CFO (MHz), DGD (ps), OSNR (dB), PDL (dB), SOPCR (Krad/s), SOPMD (ps2)
Client configuration	Ethernet client L2/3 and L4 configuration
Ethernet frame	Client Ethernet frame configuration fixed or EMIX
Ethernet client BERT	Bit error analysis using PRBS31 supporting alarm/error monitoring and injection
FED	User can enable FEC excessive degrade alarm monitoring
FDD	User can enable FEC detected degrade alarm monitoring
FEC alarms	FED and FDD alarms monitoring
FEC error monitoring	FEC-UNCOR-FR and FEC-COR-BITS monitoring
Ethernet alarms	Link down, L Fault Det, L Fault Rcd, Remote fault LOA alarms
Ethernet errors	66B Block, FEC-UNCOR-FR, FEC-COR-BITS, FCS, Jabber, runt and undersize errors
Error and alarm injection	User can inject Interface, Ethernet, PCS and BERT errors and alarms
DCO Tx alarms	Tx LOA, Tx OOA, Tx CMU LOL, Tx RefClk LOL, Tx Deskew LOL, Tx FIFO
DCO Rx alarms	Rx LOF, Rx LOM, Rx Demod LOL, Rx CDC LOL, Rx LOA, Rx OOA, Rx Deskew LOL, Rx FIFO
Dual port testing	Dual-port Ethernet testing capabilities for 400ZR and OpenZR+

FIBRE CHANNEL (FC) SPECIFICATIONS

FC FUNCTIONAL SPECIFICATIONS	
Testing 1X, 2X, 4X, 8X, 10X, 16X, 32X and 64X	
BERT	Framed FC
Patterns (BERT)	PRBS 2E31-1, 2E23-1, 2E20-1, 2E15-1, 2E11-1, 2E9-1, one user-defined pattern and the capability to invert patterns
Error injection	Bit error and FCS
Error measurement	Bit error, 66B block, invalid marker, FCS, oversize error, undersize error, FEC-COR-CW, FEV-UNCOR-CW and Pre-FEC-SYMB
Alarm detection	LOS, frequency, LOC, no traffic, pattern loss, link down, LOCWS, LOAML, link degrade, RD
Buffer-to-buffer credit testing	Buffer-to-buffer credit estimation based on latency
Latency	Round-trip latency
SDT	Measures: last disruption, shortest disruption, longest disruption, average disruption, total disruption, and service disruption count

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