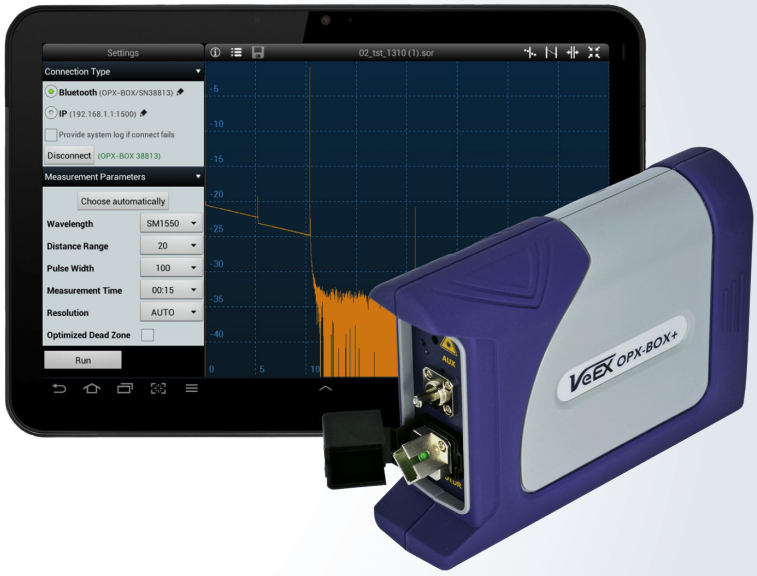


OPX-BOX+

Compact Mini OTDR

Ultra Compact, Highly Versatile OTDR with Bluetooth Wireless and USB Control

The VeEX OPX-BOX+ is an ultra-compact, OTDR designed to operate remotely using Fiberizer software. The unit can be controlled via USB or Bluetooth from Windows, MacOS, Linux or Android devices.

Platform Highlights

- Bluetooth wireless and USB control
- Up to 3 wavelengths for OTDR testing including Live port (1625 nm, 1650 nm)
- Up to 41 dB Dynamic Range and testing 1/4m Dead Zones
- Optional Light Source (via OTDR port)
- Optional Visual Fault Locator (VFL)
- Multimode and Singlemode wavelength test options - 850, 1300, 1310, 1490, 1550, 1625 and 1650 nm
- Software available for Windows, MacOS, Linux and Android operating systems and devices
- Can be operated from Fiberizer Cloud and Fiberizer Desktop systems

Key Features

- Simple operation - VFL and OLS can be activated locally using a single button
- Fixed and inter-changeable optical adaptors (SC/FC/ST/LC)
- Ruggedized case and gap-free design protect the device from harsh and hazardous environments

Software Support

Fiberizer Software Family

OPX-BOX+ OTDR is designed to be used with Fiberizer software. It can be controlled via USB or Bluetooth from selected platforms (Windows, MacOS, Linux, and Android).

Fiberizer Cloud Connectivity

OTDR trace data can be uploaded to the Fiberizer Cloud server directly from the field when the device is connected to a PC or paired with a Tablet or Smartphone.

Mobile Trace Analysis with Desktop Capabilities

Advanced and intuitive software optimized for quick and fail-safe operations, can be used by any technician level. Users can combine mobility and simplicity of a handheld device with the power of professional testing equipment.

Test Applications

Optical time-domain reflectometers (OTDRs) are considered to be the most important instruments for professional installation and monitoring of fiber optic networks. Most Users however are only accustomed to dedicated, bulky devices for this purpose, but now a compact, battery operated and portable OTDR device compatible with Smartphones and Tablets has become a reality.

OPX-BOX+ combines powerful OTDR testing with familiar Smartphone or Tablet ease of use. Connected to your mobile device, technicians can now perform fiber optic tests and be connected to co-workers and managers for work instructions or test data sharing.

Compatibility with selected VeEX testers enables technicians to operate the unit via USB or Bluetooth connection using a virtual OTDR User Interface. Since fibers are now common place in CATV, Telco, and Mobile networks, having a companion OTDR reduces truck rolls as there is less dependence to call on specialized fiber construction crews to verify or troubleshoot problems.

Fiberizer Mobile App and OPX-BOX+ OTDR

Fiberizer Mobile is a Smartphone and Tablet application designed specifically for technicians who are constantly on-the-go or may be tasked to troubleshoot optical fiber problems at a moment's notice irrespective of their work location.

Developed by industry experts with extensive fiber optic test and measurement experience, the application interfaces directly with Fiberizer Cloud for uploading or accessing archived fiber traces. Seamless integration with leading cloud providers such as Google Docs and Drop Box ensures Users are not tied to a single data repository.

Sophisticated trace analysis including fiber attenuation, reflectance and optical return loss measurements using dual markers on a familiar, intuitive user interface increases productivity.

Fiberizer Mobile facilitates Bluetooth connectivity between OPX-BOX+ OTDR and Smartphone/Tablet devices allowing technicians to test easily in either confined environments or those deemed hazardous.

Work from Anywhere, Anytime

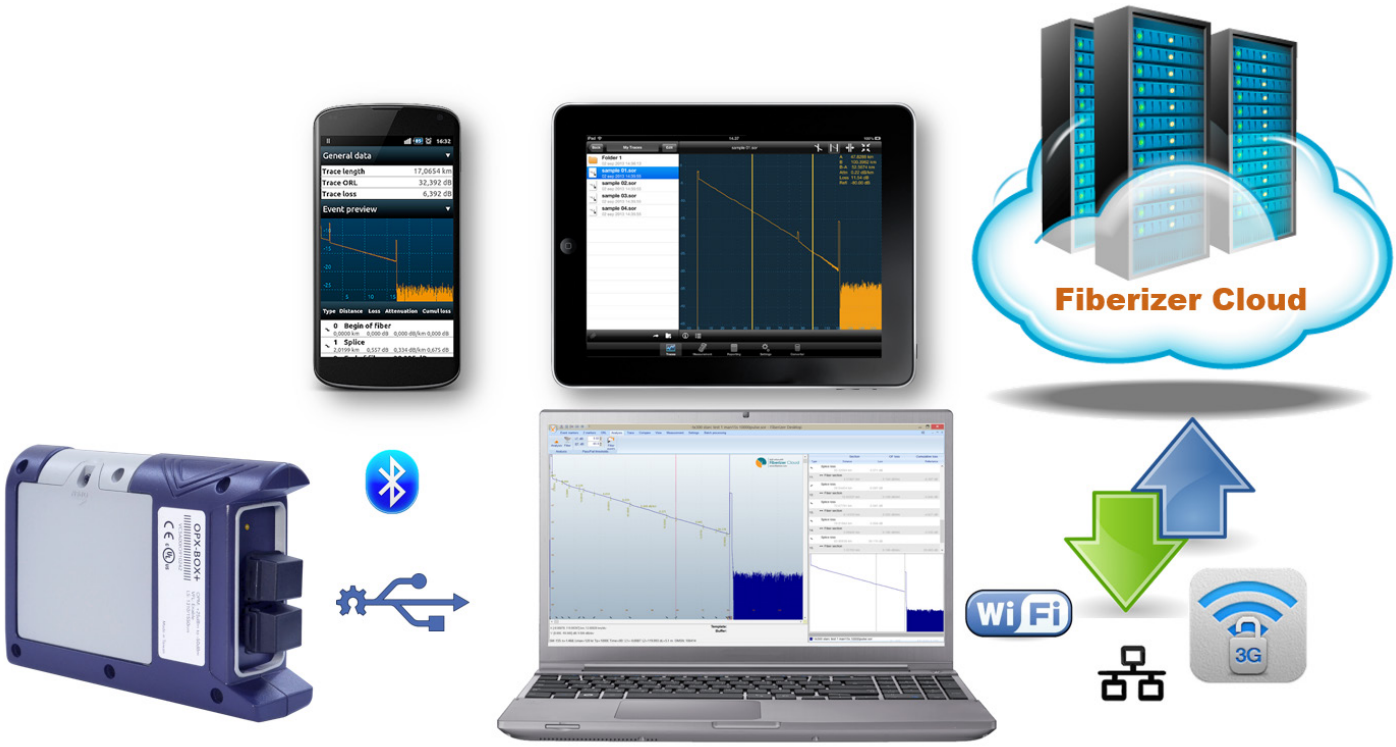
Fiberizer™ Cloud

Fiberizer Cloud not only empowers the OTDR, but also the Workforce. Going way beyond traditional OTDR reporting methods or concepts, this cloud-based solution provides superior centralized test data management capabilities including powerful web based trace analyses. You can work from almost anywhere, at anytime because Fiberizer Cloud is a full online web service.

Streamlining onsite data reporting

Fiber technicians and contractors tasked to validate new fiber installations or restoring cable routes after an outage are generally obliged to submit measured data (.sor files) and related documentation to the network operator as proof of delivery before being paid. Valuable time however is often wasted after the onsite work is completed, because critical test files are usually first stored to some local storage media before being transferred to a colleague via email for verification and further reporting.

Fiberizer Cloud streamlines this information exchange, eliminating costly paper, e-mail or other time consuming communication methods - instead, time wastage can be avoided by transferring traces of jobs completed directly from the OTDR to Fiberizer Cloud. Professional PDF or MS Excel reporting functionality is also available, and users can create their own templates for reports. Bi-directional analysis of OTDR traces, tested from both ends of the optical fiber, can also be performed.



Fiberizer Cloud Connectivity

Pair the OPX-BOX+ via Bluetooth to a Smartphone, Laptop or Tablet PC and efficiently upload test data directly to the Cloud server using any available wireless technology (3G, WiFi).

Total compatibility

Fiberizer Cloud is compatible with both Windows and MacOS browsers, not limiting users to PC platforms only. OTDR trace files in Telcordia (Bellcore) GR-196 & SR-4731 *.sor formats are securely transferred via HTTPS connection, a fast reliable communication protocol commonly used in today's Internet applications. Another outstanding feature is compatibility with other OTDR vendor trace data formats, so users can reference or compare other OTDR traces and vice versa.

Optical Specifications

OTDR Testing	Multimode	Single mode
Wavelengths (± 15 nm)[1, 10]	850, 1300	1310, 1490, 1550, 1625, 1650
Fiber type (µm)	50/125	9/125
Dynamic Range (dB)[2]	Refer to Ordering Guide	Refer to Ordering Guide
Pulse width (ns)	3, 10, 25, 100, 300, 1000, 3000, 10000, 20000	
Event dead zone (m)[3]	Refer to Ordering Guide	Refer to Ordering Guide
Attenuation dead zone (m)[4]	Refer to Ordering Guide	Refer to Ordering Guide
Distance range (km)	0.5 to 80	0.5 to 240
Distance Units[5]	Kilometers, Miles or Feet	
Distance Measurement Accuracy (m)[6]	± (0.5 + resolution + 5 x 10^{-5} x L)	
Sampling resolution (m)	0.16 to 7.6	
Sampling points	Up to 128,000	
Attenuation/Loss Resolution (dB)	0.001	
Group Index Range (IoR)	1,3000 to 1,7000	
Measurement time	Auto or User defined	
Trace Format	Bellcore GR196 and Telcordia SR-4731 sor format	
Remote Control	USB or Bluetooth[9]	
Software Support Required[7]	Fiberizer Desktop (Windows), Fiberizer Mobile (iOS or Android), or VeEX V300 tester	
Fiber analysis	Auto with event table, user defined PASS/FAIL thresholds	
Link Mapping (V-Scout)	Multiple Pulse width, Mulitiple Wavelength acquisitions - Supported on Android & iOS Tablets and via VeEX V300/RXT/MTTplus platforms	
OTDR Laser safety	IEC 60825-1:2007, 21 CFR 1040.10, Class 1M	
Optical Interface[8]	UPC or optional APC	
Optical connectors (OTDR/OLS)	Fixed or optional Universal Interface with FC/SC/ST/LC adaptors	

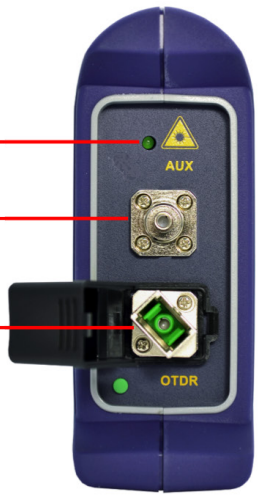
Test Options	Multimode	Single mode
Visual Fault Locator (VFL)	Optional (not available in certain wavelength combinations)	
-Wavelength (nm)	650 ± 10 nm	
-Output (mW)	Max 1 mW	
-Laser Safety	IEC 60825-1, Class II	
-Modes	CW, 2 Hz	
-Optical connector	Universal 2.5 mm sleeve with dust cap	
Light Source (OLS) - (shares OTDR output)	Optional (singlemode only)	
-Wavelengths (nm)	Not Available	Depends on OTDR laser
-Output power (dBm)	N/A	> -4
-Level Instability (dB)	N/A	Better than ± 0.05 (15 min)

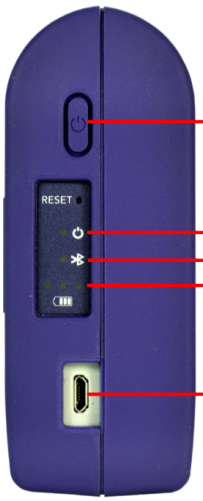
Notes:

1. Typical central/nominal wavelength deviation for 850, 1300, 1310 and 1550 nm. For 1490, 1625, 1650 nm wavelengths, values are typically less
2. Typical dynamic range after three-minute averaging and SNR = 1
3. Typical event dead zone using 3 ns pulse and reflections below -45 dB
4. Typical loss measurement dead zone using 10 ns pulse and reflections below -45 dB
5. Selectable in Fiberizer software (Desktop or Mobile) or via virtual Test Setup menu on VeEX host tester
6. Excludes uncertainty due to fiber refractive index (IoR) setting
7. Software requirement
   - Fiberizer Desktop software included with each OPX-BOX+ – requires Windows
   - Fiberizer Mobile OTDR Viewer App can be downloaded from VeEX Apps page (http://www.veexinc.com/apps.php), Google Play or Apple iTunes store depending on mobile platform. Legacy OPX-BOX+ units may not support iOS Bluetooth remote control
8. APC connectors optimize dead zone and related OTDR performance. APC connectors produce smaller reflections minimizing ghosting and other unwanted trace artifacts thus improving testing efficiency
9. Bluetooth interface and battery pack are optional. Bluetooth connectivity with iOS devices requires special hardware option.
10. OPX-BOX+ can be equipped with maximum 3 wavelengths including live filtered port. For details on available configurations, please refer to the Ordering Guide

Ordering Guide

Optical Specifications				Test Application						
Multimode OTDR										
Part #	Wavelength (nm)	Range (dB)	Dead Zone (m)	LAN	Access	FTTx PON	Live PON	CATV	Metro	Long Haul
Z06-99-087P	850/1300	22/22	2/10	☑	☑					
Z06-99-088P	850/1300	28/30	2/10	☑	☑					
Singlemode OTDR										
Part #	Wavelength (nm)	Range (dB)	Dead Zone (m)	LAN	Access	FTTx PON	Live PON	CATV	Metro	Long Haul
Short Range										
Z06-99-079P	1310/1550	27/25	1/4		☑	☑		☑	☑	
Z06-99-080P	1310/1550	36/34	1/4		☑	☑		☑	☑	
Z06-99-084P	1310/1550//1625	36/34//38	1/4				☑			
Z06-99-082P	1310/1490/1550	36/34/34	1/4		☑	☑		☑	☑	
Medium Range										
Z06-99-081P	1310/1550	39/36	1/4		☑	☑		☑	☑	
Z06-99-083P	1310/1490/1550	39/35/36	1/4			☑				
Z06-99-085P	1310/1550//1625(F)	39/36//39	1/4		☑	☑	☑	☑	☑	
Z06-99-086P	1310/1550//1650(F)	39/36//39	1/4				☑			
Combo Multimode/Singlemode OTDR										
	Wavelength (nm)	Range (dB)	Dead Zone (m)	LAN	Access	FTTx PON	Live PON	CATV	Metro	Long Haul
Z06-99-089P	850//1310/1550	26//38/35	1/4	☑	☑			☑	☑	





Laser LED

Aux Port
Multimode OTDR,
Singlemode OTDR (Filtered),
Visual Fault Locator,
Fixed or Universal connector

OTDR Port
Multimode or Singlemode
Light Source (optional)
Fixed or Universal connector

Power On/Off

Power Status LED

Bluetooth Status LED

Battery Level Status LEDs

Micro USB port
PC Remote Control,
Battery Charger Input

General Specifications

Dimensions	125 x 31 x 85 mm	Operating Temperature	0˚C to 50˚C (32˚F to 122˚F)
Weight	0.4 kg	Storage Temperature	-40˚C to 60˚C (-40˚F to 140˚F)
Battery	LiIon battery	Humidity	0% to 80%, non-condensing
Connectivity	Bluetooth, USB		

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