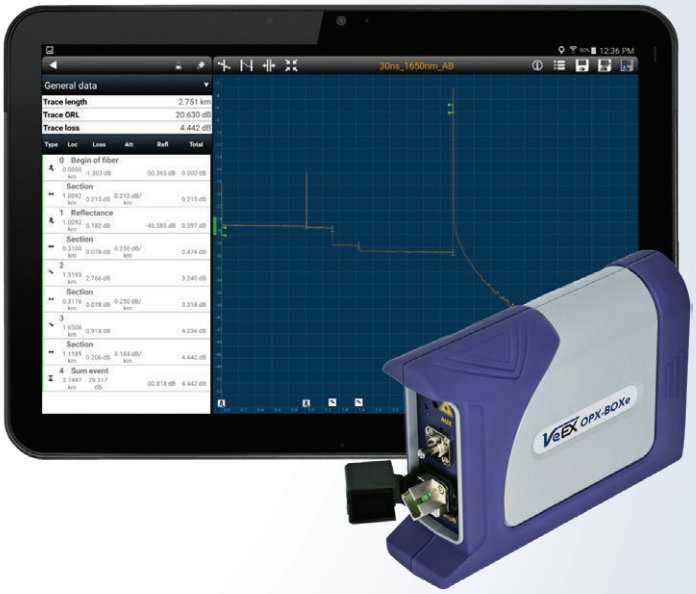


OPX-BOXe

Rugged, Pocket-sized Mini OTDR

Highly Versatile OTDR with Wireless and USB Control

The VeEX OPX-BOXe is an ultra-compact, OTDR designed to be operated remotely via VeEX Linux® platforms, Android™ or iOS® mobile devices.

Product Highlights

- OTDR operation via wired USB remote control
- WiFi and/or Bluetooth wireless remote control options
  - Bluetooth BLE for Android or PAN for iOS devices
  - WiFi operation in Access Point or Client mode
- OPX-BOX tools available to configure OPX-BOXe settings
- Up to 3 wavelengths for OTDR testing including Live port (1625 nm, 1650 nm)
- Dynamic Range up to 43 dB
- Event/Loss Dead Zones < 1/4m
- Visual Fault Locator (VFL) option
  - Built-in on/off Local control
- Optical Light Source option
  - Built-in on/off Local control
- Multimode or Singlemode configurations
  - 850, 1300, 1310, 1490, 1550, 1625 and 1650 nm
- Internal storage of test results supported
- Fixed or inter-changeable optical adaptors (SC/FC/ST/LC)
- Ruggedized case and gap-free design protect the device from harsh and hazardous environments
- Convenient charging via 5 volt micro USB power adaptor or continuous operation via USB cable connected to host device

Remote Control Software Options

Linux® Platforms (OTDR Viewer)

Remote pairing via USB, BT or WiFi depending on available Platform and OPX-BOXe interface options

Fiberizer® Mobile Software

Fiberizer® Mobile Android (FMA) via USB dongle, BT-BLE or WiFI depending on available OPX-BOXe interface options
- OTDR, OLS, VFL, external Linux OPM

Fiberizer Mobile (Full/Tablet or Lite/iPhone) via WiFi or BT-PAN depending on available OPX-BOXe interface options
- OTDR only

Fiberizer Cloud for Storage and Post Processing

OTDR trace and link map data can be uploaded to the Fiberizer Cloud server directly from the host mobile device when connected to the internet.

Web Browser Remote Control

Embedded application supports web browser remote control via Wifi or Ethernet. Ethernet operation supported using Ethernet to micro USB OTG cable or optional AC adapters with built-in RJ45 interface. Intuitive software optimized for quick and fail-safe operations, can be used by any technician skill level.

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-BOXe 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-BOXe 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 WiFi and Bluetooth connectivity between OPX-BOXe OTDR and Smartphone/Tablet devices allowing technicians to test easily in either confined environments or those deemed hazardous.

Work from Anywhere, Anytime

Fiberizer Cloud

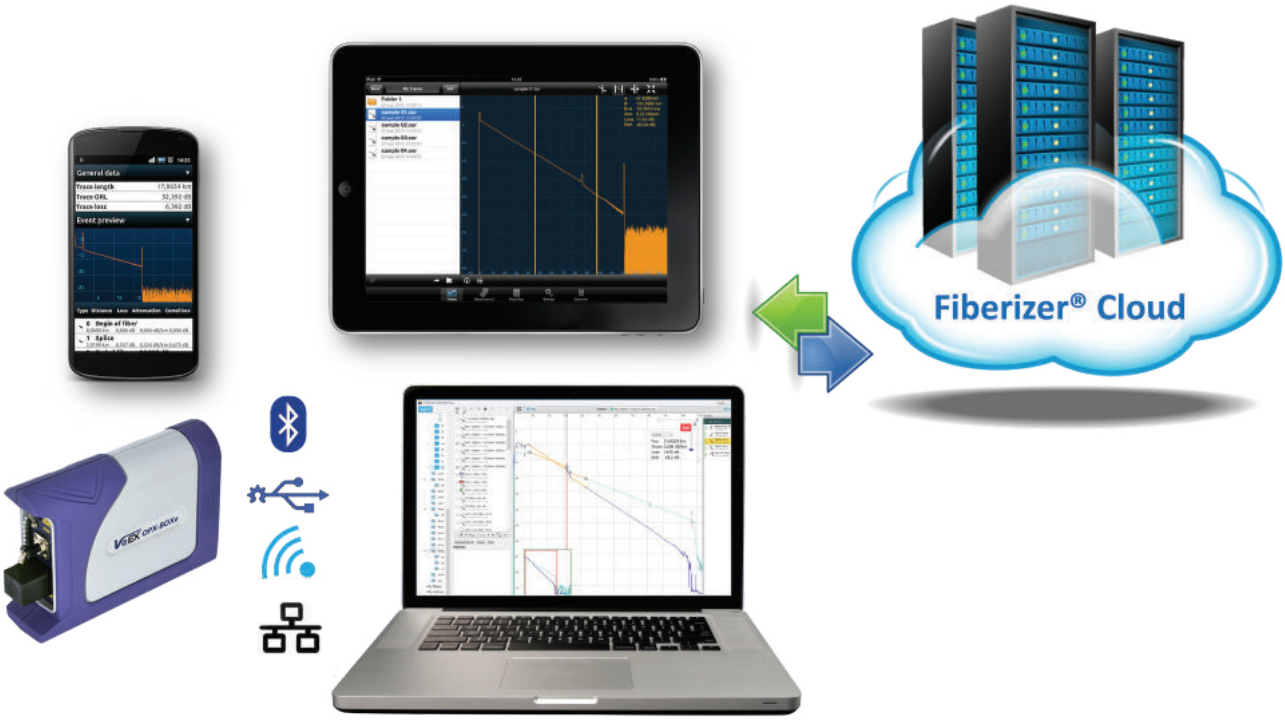
Fiberizer Cloud not only empowers the OTDR, but also the workforce. Going way beyond traditional OTDR reporting methods or concepts, this cloud-based solution provides superior centralized test data management capabilities including powerful web based trace analyses. You can work from almost anywhere,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

Value added data post processing
Fiberizer Cloud
cloud.fiberizer.com

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 a Smartphone or Tablet PC and efficiently upload test data directly to the Cloud server using any available wireless technology (LTE, 3G or 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 (MM)	Single mode (SM)
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, Meters, Kilofeet, Miles, or Feet	
Distance Measurement Accuracy (m)[6]	± (0.5 + resolution + 4 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	WiFi, Bluetooth or USB. Ethernet supported via micro USB OTG to Ethernet converter cable[8]	
Software Support Required[7]	Fiberizer Mobile (iOS or Android), or VeEX Linux platform	
Fiber analysis	Auto with event table, user defined PASS/FAIL thresholds	
V-Scout option	Multiple scriptable acquisitions - Supported on Android & iOS mobile devices and via VeEX Linux platforms	
OTDR Laser safety	IEC 60825-1:2007, 21 CFR 1040.10, Class 1M	
Optical connectors (OTDR)	Fixed or optional Universal Interface with FC/SC/ST/LC adaptors	

Test Options	Singlemode (SM)
Visual Fault Locator (VFL)	Optional (not available in certain wavelength combinations)
-Wavelength (nm)	650 ± 10 nm
-Output (mW)	Max 1 mW
-Modes	CW, 2 kHz
-Laser Safety	IEC 60825-1, Class II
-Optical connector	Universal 2.5 mm sleeve with dust cap

Notes

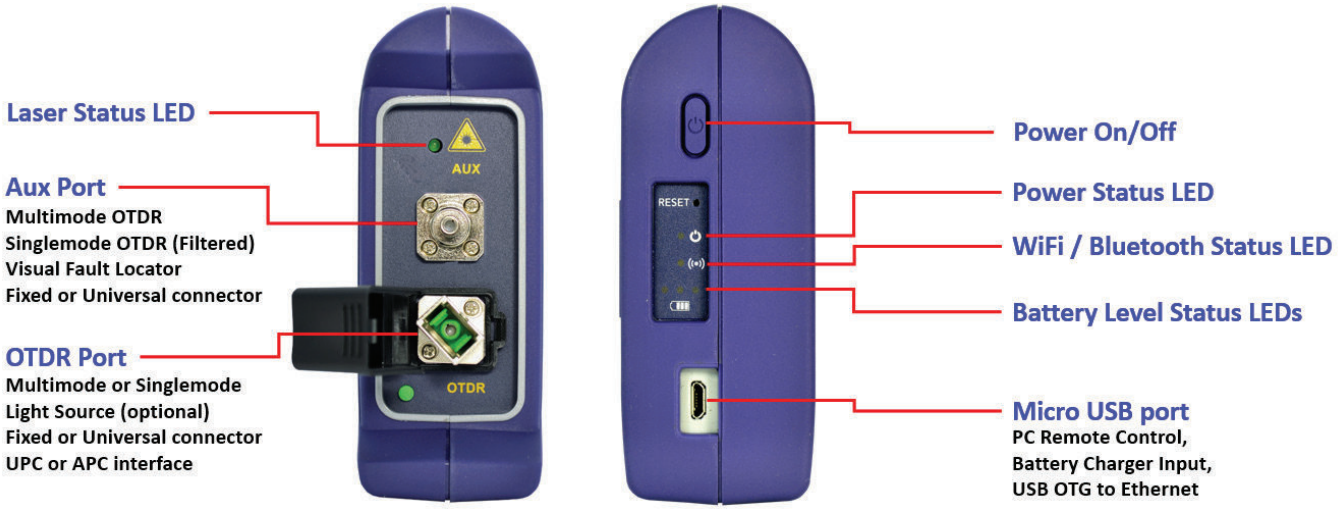
1. Typical central/nominal wavelength deviation for 850, 1300, 1310 and 1550 nm. For 1490, 1625, 1650 nm wavelengths, values are typically less.
2. Typical dynamic range after three-minute averaging and SNR = 1.
3. Typical dead zone using 3 ns pulse and reflections below = -45 dB.
4. Typical loss measurement dead zone using 10 ns pulse and reflections below =-55 dB.
5. Selectable in Fiberizer software or via virtual test setup menu on VeEX host tester.
6. Excludes uncertainty due to fiber refractive index (IoR) setting.
7. Software requirement
   -Fiberizer Mobile app can be downloaded from VeEX Apps page (http://www.veexinc.com/apps.php).
   -Embedded web browser application.
8. Maximum 3 wavelengths including live filtered port. For available configurations, please refer to the Ordering Guide.

Ordering Guide[1]

Optical Specifications			Test Application			
Multimode OTDR						
Wavelength (nm)	Range (dB)	Dead Zone (m)	LAN	Access	CATV	Metro
850/1300	22	≤1.5/≤5	☑	☑		
Singlemode OTDR						
Wavelength (nm)	Range (dB)	Dead Zone (m)	LAN	Access	CATV	Metro
Short Range						
1310/1550	36/34	1/4		☑	☑	☑
1310/1490/1550	36/34/34	1/4		☑	☑	☑
1310/1490/1550	39/35/36	1/4		☑	☑	☑
1310/1550/1625	30/28/28	1/4	☑	☑	☑	☑
1310/1550/1625[2]	39/36/39	1/4		☑	☑	☑
1310/1490//1625 (F)[2]	39/37//38	1/4		☑	☑	☑
1310/1550//1625 (F)	30/28//28	1/4	☑	☑		
1310/1550//1625 (F)	36/34//38	1/4			☑	☑
1310/1550//1625 (F)[2]	39/36//39	1/4			☑	☑
1310/1550//1650 (F)[2]	39/36//39	1/4			☑	☑
1550	27	1/4	☑	☑		
1550	36	1/4		☑	☑	☑
Medium Range						
1650 (F)	32	1/4		☑	☑	☑
1310/1550[2]	39/36	1/4		☑	☑	☑
1625 (F)[2]	39	1/4		☑	☑	☑
1650 (F)[2]	41	1/5		☑	☑	☑
1310/1550[2]	43/43	1/5		☑	☑	☑

Notes

1. Contact your sales representative for additional configurations.
2. Can be used for PON drop fiber testing or single 16 or 32 splitter test depending on dynamic range.



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	Lithium Polymer	Humidity	0% to 80%, non-condensing
Connectivity	WiFi and Bluetooth (optional), USB, Ethernet		

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