

OTDR Komshine QX43 modèle S1

- ✓ Code pour commander : **OTDRQX43S1**
- ✓ Désignation : **OTDR Komshine QX43 modèle S1**
- ✓ Domaine : **Télécom**
- ✓ Branche : **Réseau FTTH**
- ✓ Catégorie : **Appareillage**



➤ Le Komshine QX43-S1 est un réflectomètre optique compact et portable (FTTx-OTDR) de nouvelle génération, spécialement optimisé pour le test, le déploiement et la maintenance des réseaux de fibre optique monomodes (SM). Intégrant plusieurs outils de test essentiels dans un seul châssis léger, il est conçu pour offrir aux techniciens de terrain une solution d'analyse de liaisons à la fois performante, intuitive et robuste.

✓ Utilisation :

Le modèle QX43-S1 est principalement utilisé pour :

- La recette et la validation des liaisons de réseaux d'accès FTTx, LAN et boucles locales.
- La localisation précise de défauts (coupures, contraintes, macrocourbures) sur les fibres optiques.
- La mesure de la longueur totale de la liaison, de l'atténuation globale et des pertes individuelles au niveau des connecteurs et des soudures de fusion.
- La vérification de la continuité et la mesure de puissance optique lors des installations et des opérations de dépannage en temps réel.

✓ Avantages :

- **Solution Tout-en-Un (5-en-1) :** Combine un OTDR, un wattmètre optique (OPM), une source laser stabilisée (SLS), un localisateur visuel de défauts (VFL) et un testeur de câble réseau RJ45.
- **Ergonomie moderne :** Équipé d'un écran tactile capacitif couleur de 4,3 pouces qui prend en charge le zoom intuitif à deux doigts sur les courbes de mesure.
- **Zones mortes ultra-faibles :** Permet une détection extrêmement précise des événements proches grâce à une zone morte d'événement inférieure ou égale à 1,5 m.
- **Autonomie prolongée :** Batterie de grande capacité (6 000 mAh) offrant une longue autonomie sur le terrain, rechargeable via une interface moderne USB Type-C.

✓ Points particuliers :

- **Schéma de liaison intelligent (Smart Link Diagram) :** Convertit les courbes OTDR complexes en icônes graphiques simples et explicites pour une interprétation immédiate des événements (connecteurs, épissures, défauts) par tous les niveaux de techniciens.
- **Garantie constructeur étendue :** Appareil couvert par une garantie constructeur de 3 ans, gage de sa fiabilité industrielle.
- **Conception de terrain robuste :** Doté d'une lampe torche LED intégrée à forte intensité lumineuse pour faciliter le travail dans les environnements sombres (chambres de tirage, sous-sols).

✓ Spécifications techniques :

- **Type de fibre compatible :** Monomode (SM - Single Mode)
- **Longueurs d'onde de test :** 1310 nm / 1550 nm
- **Plages de distance configurables :** De 500 m à 150 km
- **Zone morte d'événement (EDZ) :** < 1,5 m
- **Zone morte d'atténuation (ADZ) :** < 5 m
- **Plage de mesure du wattmètre (OPM) :** -70 dBm à +6 dBm
- **Puissance de sortie du VFL (Laser rouge) :** 10 mW (portée d'environ 10 km)



✓ Caractéristiques techniques :

- **Type d'écran :** Écran LCD couleur tactile capacitif de 4,3 pouces (résolution 800 x 480 pixels)
- **Type de connecteur optique :** FC/UPC fixe (SC/UPC disponible en option)
- **Interfaces matérielles :** 1x Port USB 2.0 (sauvegarde de données/mises à jour), 1x Port USB Type-C (alimentation/recharge), 1x Port RJ45
- **Alimentation / Batterie :** Batterie Li-ion intégrée de 3,7 V / 6 000 mAh
- **Autonomie en fonctionnement :** Jusqu'à 5 heures d'utilisation continue
- **Stockage interne :** Capacité d'enregistrement > 1000 courbes de test (format standard .SOR)
- **Dimensions :** 179 mm (L) x 112 mm (H) x 48 mm (P)
- **Poids :** Environ 600 g (batterie incluse)

➤ **Pour plus de détails se référer à la fiche ci-jointe.**



FTTx-OTDR



Optical time domain reflectometer

- Smart link diagram
- 6000mAh large capacity battery
- Maximum dynamic range: 31dB
- $\leq 1.5\text{m}$ event blind zone, $\leq 5\text{m}$ attenuation blind zone
- Measures continuous events on 8x3m optical fiber jumpers in fully automatic mode (industry benchmark).

Optical Time Domain Reflectometer

FTTx-OTDR

OTDR focuses on FTTx network installation, troubleshooting, access testing, and passive optical network testing. Available in single, dual, and three-wavelength models, with single-wavelength supporting online testing. Meets diverse user needs. Its compact design and multi-wavelength configuration make it highly adaptable for FTTx network deployment and maintenance.

Full range selection

- 31~29dB ultra-wide dynamic range
- Up to 9 OTDR models available

Operability

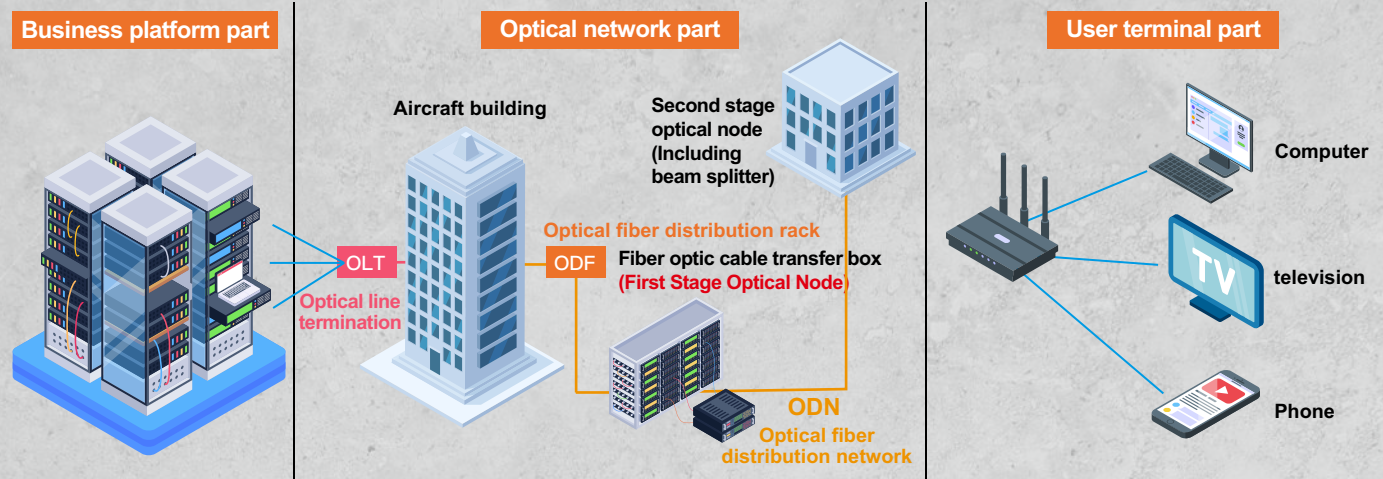
- 4.3 inch color LCD touch screen
- Built-in link diagram, simplifying the interpretation of OTDR curves
- 3 years warranty

Far more than just OTDR

- OPM (optical power meter module)
- SLS (Stable Light Source Module)
- VFL (Visible light fault locator)
- RJ45 (Network Test Module)



FTTx Installation and Maintenance Network Diagram



Schematic diagram of the FTTx installation and maintenance network:
It consists of three parts - service platform, optical network, and user terminal.

1. Optical Line Terminal (OLT): Aggregates services and sends them to the upper-layer network.
2. Optical Distribution Network (ODN): Extends cables to users via passive components like backbone cables, distribution cables, fibers, junction boxes, and splitting boxes.
3. Optical Network Unit (ONU): Handles voice, broadband, and iTV services.

Application scenarios



Communication construction



Weak current



Installation and maintenance works



Broadband construction in residential area



Monitoring construction



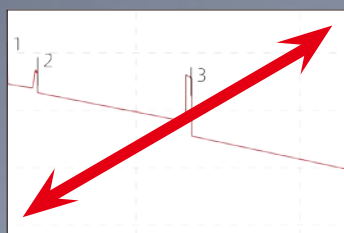
Troubleshooting

OTDR is widely used for FTTx network installation and troubleshooting, access network testing (P2P), passive optical LAN (POL), cable TV (CATV) and hybrid fiber coaxial (HFC) network testing, as well as FTTA and Distributed Antenna System (DAS) installation.

Operability

4.3-inch capacitive touch screen

The OTDR curve supports zoom in/out, with clear screen colors and a concise interface.



Narrowing
Amplification curve



Drag
Move the
cursor

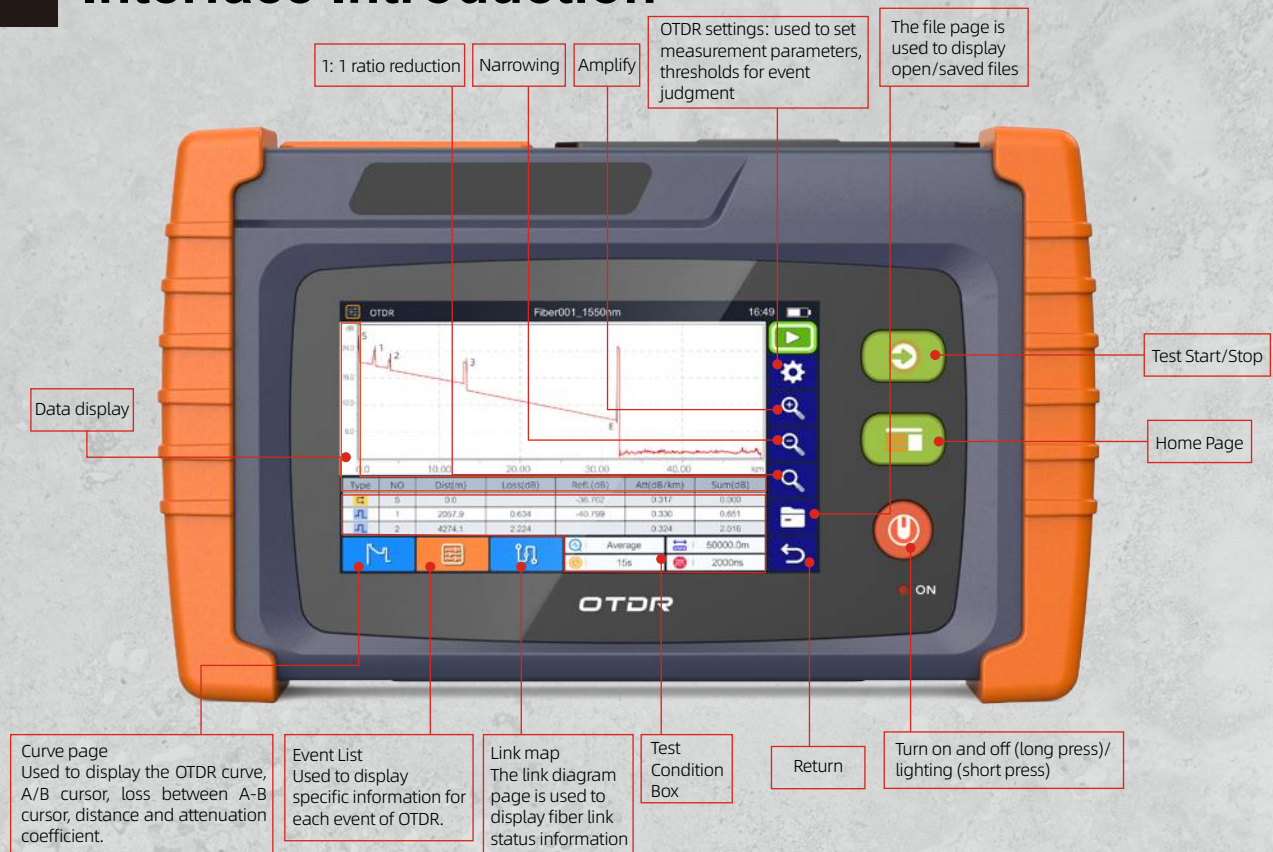


Can save SOR format and support host computer viewin

Built-in post-processing software saves OTDR measurement results as SOR files, storing over 1,000 files.



Interface Introduction



Essential features with advanced OTDR

One-click measurement makes testing simple

Eliminates unnecessary complexity, allowing any technician to perform tests easily without navigating through layers of menu options.



Automatic mode: no tedious operations



OTDR SET 16:49

Wavelength (nm): 1310, 1550, 1625

Mode: Real time, Average

Pulse width (s): Auto, 5, 10, 20, 50, 100

Time (s): Auto, 15, 30, 60, 90, 120

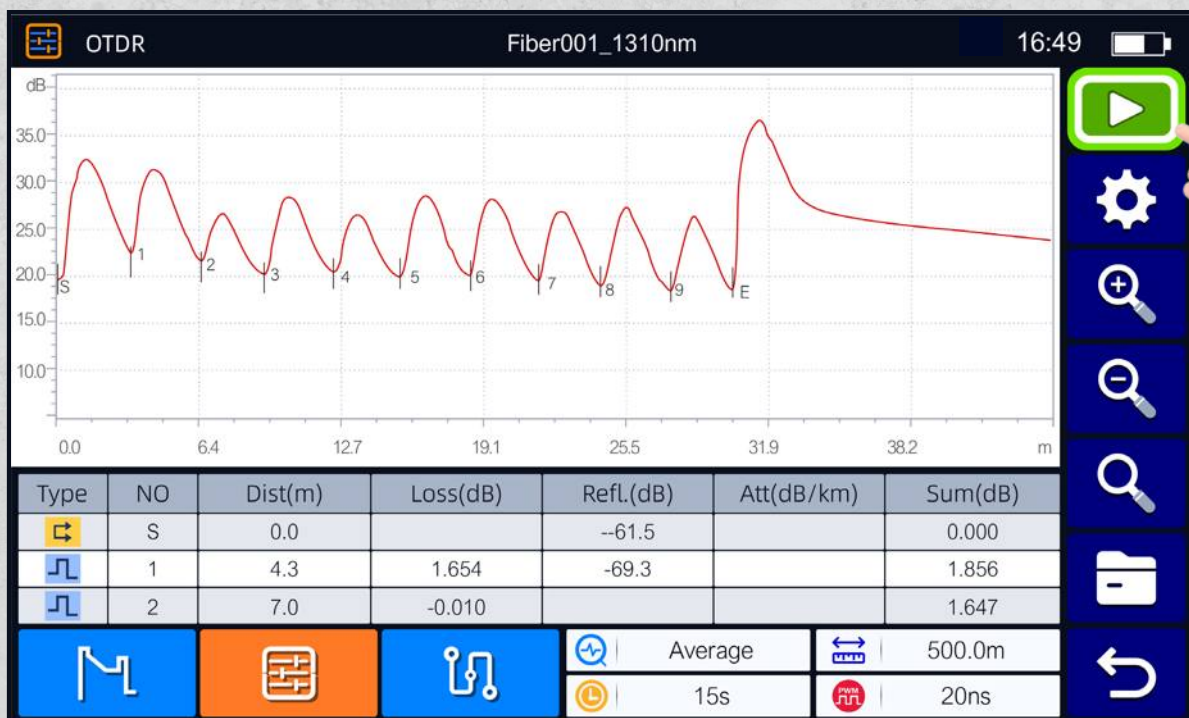
Range (m): Auto, 500, 1000, 2000, 5000, 10000

Measure Analysis Threshold

Acquisition parameters, such as range or duration, can be set manually or automatically. One-click testing is available for fiber cabling length and total loss, eliminating tedious operations.

Measures continuous events on 8x3m optical fiber jumpers in fully automatic mode (industry benchmark).

Short-distance test: Accurately measures fiber events and losses.



Real-time mode: Continuous testing and refreshing



Continuous monitoring

Real-time mode enables continuous fiber observation and instant detection of changes or faults, aiding maintenance and troubleshooting.

Dynamic event capture

It captures dynamic events like fiber bending, fusion splicing, and connector changes, allowing real-time observation of their impact on the signal without interrupting measurement.

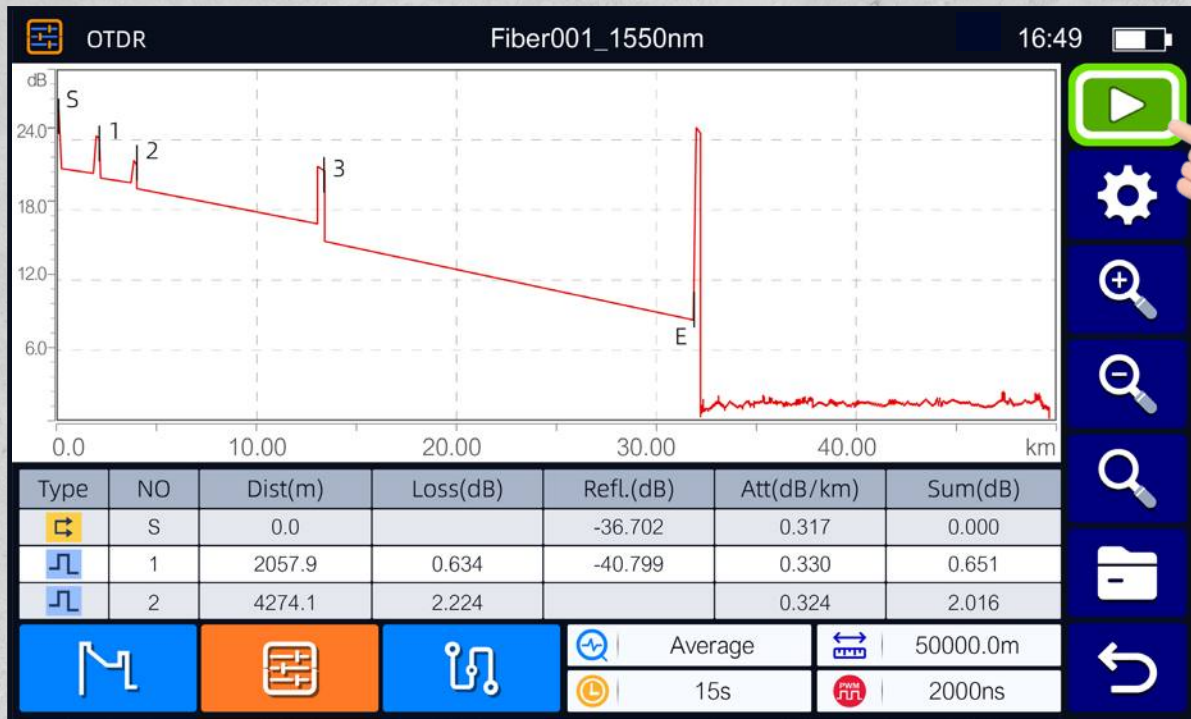
Quickly identify problems

For longer fiber segments, real-time mode updates curves for quick problem identification. If an abnormality is detected, the test can be stopped immediately.

Real-time feedback

During installation or repair, real-time mode offers instant feedback for on-site parameter adjustments.

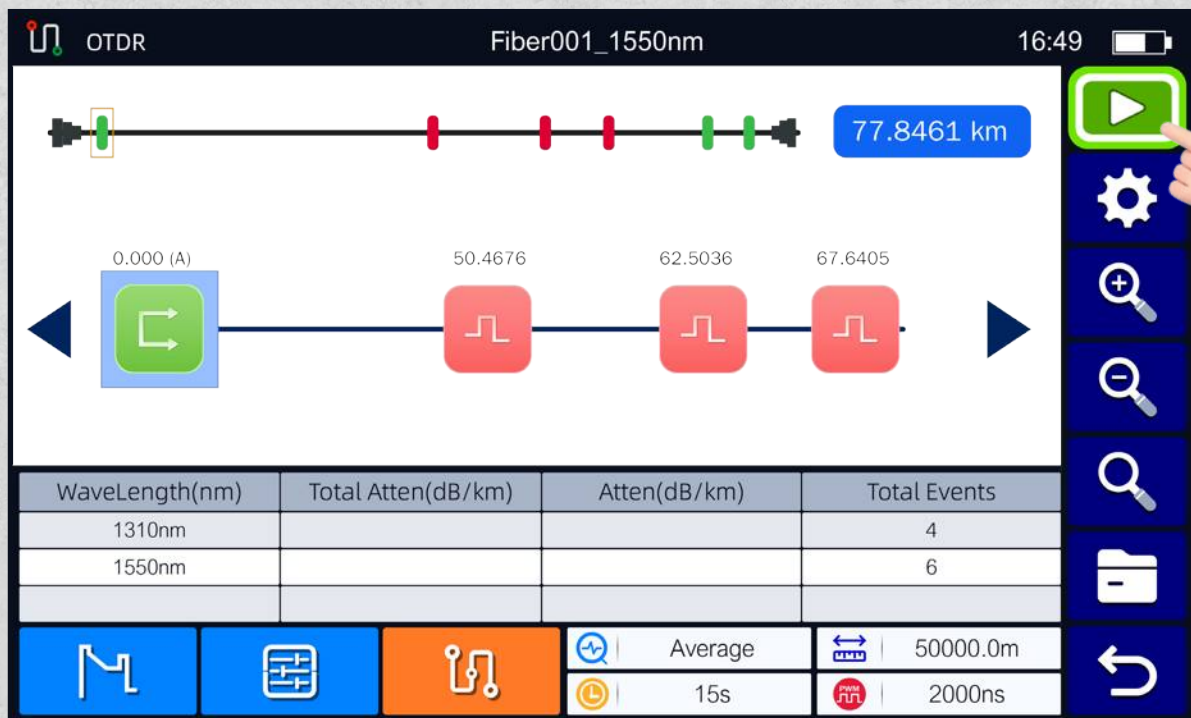
Intelligent curve analysis records all events.



Accurate trajectory line display, don't miss any event, and understand the losses of optical cable breaks, lengths, bends, fusion points, connectors, etc. through curves.

Smart Map Graphical Links

Smart Map makes OTDR test results graphical, intuitively displaying fiber loss, break-points, and fault locations. Clearly view test results at a glance, improving detection efficiency and speeding up accurate maintenance.



Replaceable universal interface supports SC/FC/ST adapters.

It supports independent connector replacement, reducing return-to-factory costs and downtime while maintaining long-term optimal performance.



FC(standard)

ST(optional)

SC(optional)



Stable support for desktop operation, meeting diverse scenario needs.

The bracket can support the product on the platform, reduce the measurement error caused by equipment shaking during optical fiber measurement, and improve the measurement accuracy.



Type-C charging is multi-purpose

Compatible with 99% of mainstream devices, replaces outdated charging solutions.



6000mAh large capacity battery

Ultra-long battery life for worry-free enjoyment and easy handling of high-intensity use throughout the day.



Lighting lamps make work easier

High-brightness lighting design for convenient line inspection in dim environments.



Anti-seismic rubber coating design

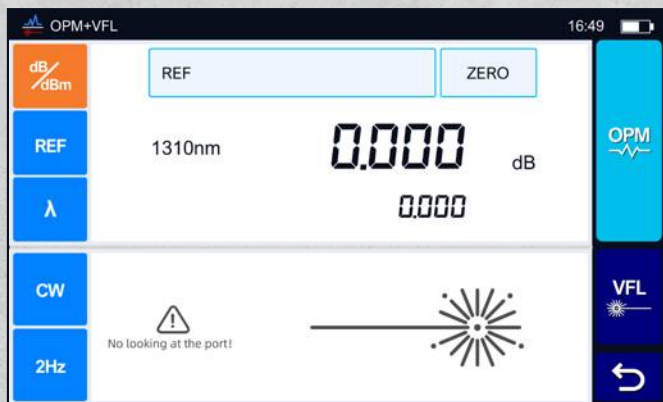
Rubber protection design for effective shock absorption, anti-fall, and anti-bump to protect the machine.



Far more than just OTDR

Optical power meter module (built-in function)

Measures absolute optical power or relative power loss through a fiber optic cable.



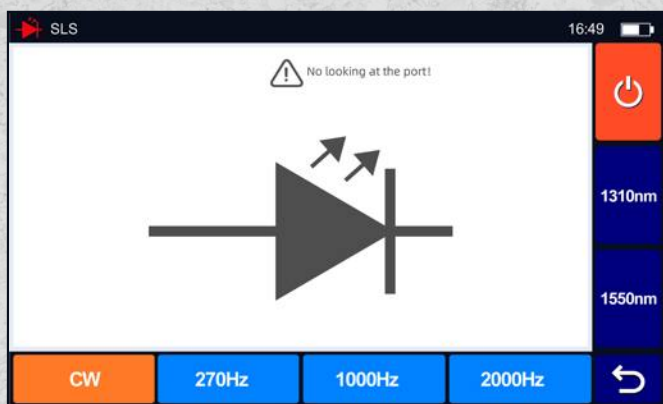
Red light source module (built-in function)

A visual light source for fault location and fiber identification in single-mode or multi-mode fibers.



Stable Light Source Module (Built-in Function)

Provides stable continuous light to the optical system for use with an optical power meter to measure fiber optic loss.



Network test module (built-in function)

Network sequencing + network line hunting (handle option): Ideal for LAN fault detection, maintenance, and wiring construction.



Product Configuration

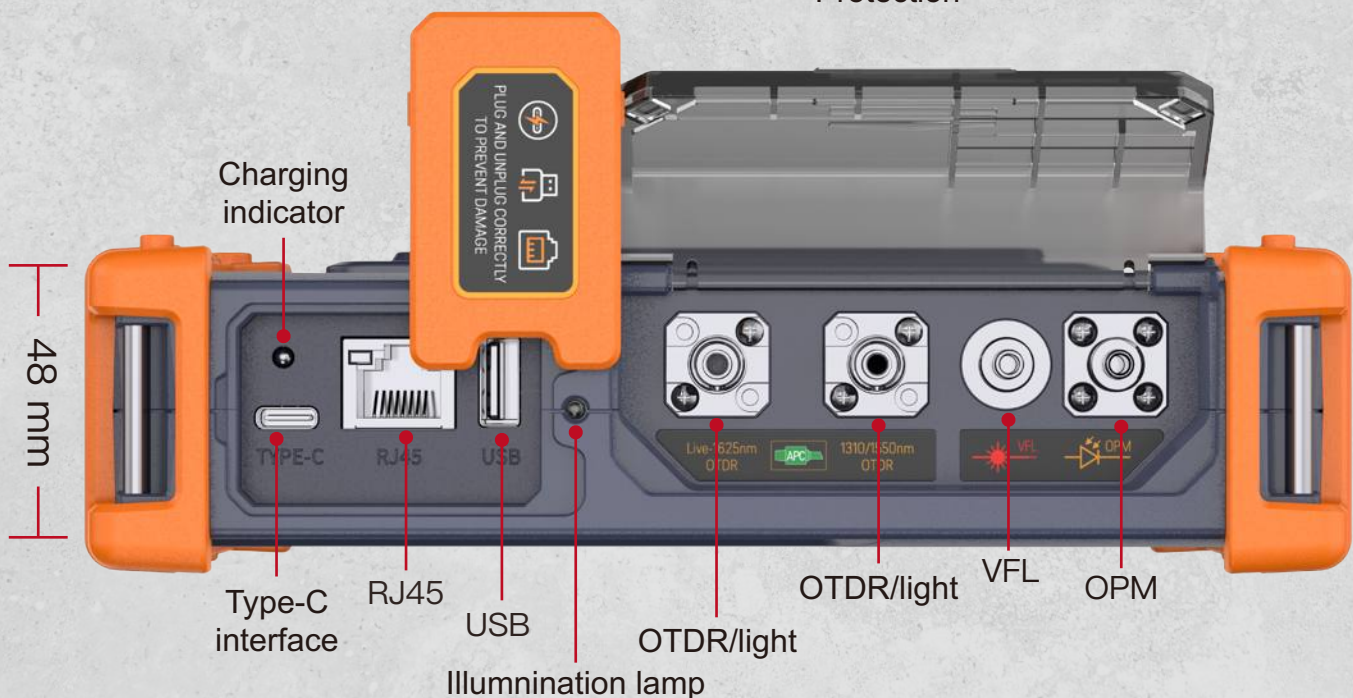
- ① Carrying bag x1
- ② OTDR (default SC interface)
- ③ Power cord x1
- ④ FC optical port converter x1, screw x2
- ⑤ Screwdriver x1
- ⑥ Quick guide x1
- Calibration certificate x1
- Test report x1
- ⑦ RJ45 module x1
- ⑧ Sterile cotton swabs x1
- ⑨ Shoulder strap x1



Product Showcase

Front

Back



Product specifications

OTDR module

Model	S1	S2	P1	P2	D1	D2	D3	D4	D5
Wavelength (nm)	1310/1550 ±20	1310/1550 ±20	1310/1550/1625±20	1310/1550/1650±20	1550	1610	1577	1625	1650
Dynamic range (dB)	26/24	31/29	26/24/24	26/24/24	24				
Event blind spot(m)★①	≤1.5								
Attenuation blind zone(m)★②	≤5								
Number of fiber interfaces	1 FC/UPC		2 FC/UPC		1 FC/UPC				
Applicable optical fiber	SM		SM-Live		SM				
Range(Km)	0.5, 1, 2, 5, 10, 20, 35, 50, 75, 100, 150								
Distance accuracy(m)	± (1m + measurement distance × 2 × 10 ⁻⁵ + collection point resolution)								
Number of sampling points	5,10, 20, 50,100, 200, 500,1000, 2000,10000, 20000								
Pulse width(ns)	≥15000								
Sampling resolution(m)	0.04m								
Loss accuracy	±0.03 dB/dB								
Reflection accuracy	±2dB								

Optical power meter module (built-in function)		√
OPM	Measurement wavelength range	800~1650nm
	Correction wavelength(nm)	850,1300,1310,1490,1550,1625,1650
	Measurement power range	-70~6dBm
	Measurement accuracy	<(±0.2dB or ±5%)
	Display resolution	0.01dB
	Power meter interface	FC/UPC + 2.5 mm Universal Connector

Stable Light Source Module (Built-in Function)		√
Wavelength (nm)	1310/1550	1550 1610 1577 1625 1650
SLS	Output power	≥-10dBm
	Modulation frequency	CW, 270Hz, 1kHz, 2kHz
	Laser safety rating	Class 1M or Class 1
	Built-in optical fiber interface	OTDR optical port

Product specifications

Red light source module (built-in function)		√
VFL	Wavelength (nm)	650
	Output power	10mW
	Modulation mode	CW, CHOP (2 Hz)
	Laser safety rating	Class 3R
	Optical fiber interface	2.5 mm universal connector for FC, SC, ST

Network test module (built-in function)		√
RJ45	Applicable network cable	CAT5, CAT6
	Alignment length	300m
	Maximum audio transmission distance	300m

General parameters	
Link diagram	√
Pass/Fail display	x
Distance unit	km
PC side analysis software	√
Language	English, Chinese, Spanish, French, Portuguese, Russian, Thai, Korean
Optical fiber interface	FC/UPC (SC/UPC optional)
Display screen	4.3-inch color LCD screen (resolution: 800x480)
Interface	Type-c charging interface x1, USB 2.0 x1, RJ45 x1
Operating temperature	-10-50 °C (0-40 °C connected to power supply, 0 to 35 °C battery charge)
Storage temperature	-20 to 60°C
Elevation	4000 m
humidity	0 to 90% RH (at: 20%-90% 739874 AC adapter, no frost)100-240V AC, 50/60 Hz (AC adapter)
Power supply mode	100-240V AC, 50/60 Hz (AC adapter)
Battery	3.7V, 6000mAh, >22Wh
Illumination lamp	Light intensity ≥ 15000 mcd
Working hours*3	5 hours
Data Storage	Memory: ≥ 1000 test curve; External storage: USB
Dimensions	179 mm (W)x112 mm (H)x 48 mm (D)
Weight	0.6 kg (mainframe only with battery)

Notes:

- ★① Minimum pulse width, return loss: ≥ 55 dB (≥ 40 dB at 850/1300 nm), group refractive index: 1.5, 1.5 dB lower than the unsaturated peak level.
- ★② Minimum pulse width, group refractive index: 1.5, backscattering level within ± 0.5 dB of the conventional value.
For SMF, 1310 nm wavelength, return loss: ≥ 55 dB. For MMF, 850 nm wavelength, return loss: ≥ 40 dB.
- ★③ Based on a brand new battery.

All data above are based on measurements at 23 °C ± 2 °C (73.4 ° F ± 3.6 ° F).