JILONG
Since 1993

KL-6300

FiberMASTER
OTDR

KL-6300

- Maximum dynamic range up to 45dB

- 0.8 m event dead zone, 2.5 m attenuation dead zone

- Intelligent link diagram, support Pass & Fail judgment

- iOLA, one-click Intelligent testing of passive PON networks

FiberMASTER OTDR

The KL-6300 offers superior performance thanks to a completely new algorithm, a large capacity battery and a 7in user-friendly screen. Ensure measurement quality and improve work efficiency, benefits include:

Full range selection

- Wide dynamic range 30-45dB
- Up to 9 OTDR models for selection
- Five optional modules to be customized

Operability

- 7-inch color LCD touch screen
- Generate PDF reports quickly
- F/P analytical judgment function
- Smart map to analyze links graphically

Advanced trace analysis

- Multi-trace analysis
- Bidirectional testing
- 4-points test

Strong reliability

- Up to 12h battery life
- Minimum sampling resolution 0.04m
- Maximum sampling points 250,000

Not just OTDR

- VNC/GPS/WIFI
- OPM (Optical power meter module)
- SLS (Stabilized light source module)
- VFL (Visual fault locator module)
- RJ45 (Network Test module)
- FIP (Fiber connector end-face inspection module + analysis function)

*FIP module can first perform connector end-face detection and then OTDR link testing

◼ Full range selection

JILONG KL-6300 comes with an iLOA test function that enables complex front-line test work with less-experience, to support a variety of applications, including installation and maintenance (I&M) of mainline fiber (core network, metropolitan area network, mobile forward, mobile backhaul) and troubleshooting of access networks and FTTx. And combines industry-leading OTDR technology with OPM, VFL, SLS, network testing and fiber end inspection capabilities in one powerful handheld device.

JILONG KL-6300 OTDR Models

| Fiber type	Link type		Test application					
	Area	PON	Installation (measurement of live fibers and dark fibers)					
			Model/Description	Wavelength(nm) Dynamic range(dB)				
SM	Access network	1x32	KL-6300-S1 (Entry-level model)	1310 / 32	1550 / 30			
	Acces network / Metropolitan area network	1x64	KL-6300-S2 (basic model)	1310 / 35	1550 / 33			
			KL-6300-P1 (3 wavelengths + live model)	1310 / 32	1550 / 30	1625 / 28		
			KL-6300-P2 (High dynamic range wavelengths + live model)	1310 / 38	1550 / 36	1625 / 34		
	Metropolitan network / Core network	1x128	KL-6300-S3 (Standard model)	1310 / 40	1550 / 38			
			KL-6300-S4 (High dynamic model)	1310 / 42	1550 / 40			
			KL-6300-S5 (Super-high dynamic model)	1310 / 45	1550 / 43			
MM	LAN		KL-6300-M (MM model)	850 / 20	1300 / 22			
			KL-6300-MS (SM&MM model)	850 / 20	1300 / 22	+	1310 / 32	1550 / 30

KL-6300-S1/S2/S3/S4/S5

Dual wavelength module 1310/1550nm, used in fiber installations

1μ s Pulse width trace

KL-6300-M/MS

MM model

MM fiber trace

KL-6300-P1/P2

Maintenance models for real-time communication lines

| Real-time communication line trace | A trace with a macro bend |

OTDR with cut-off filter
Measurement error (level difference)
OTDR without cut-off filter
Measurement error (linearity failure)

1310nm
1550nm
Splice
1625nm
Macro bending
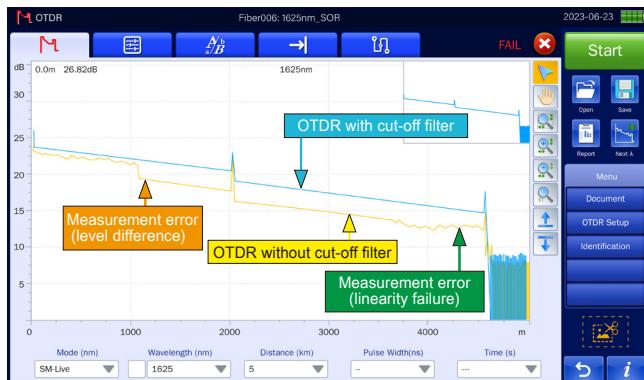
Real-time communication line trace
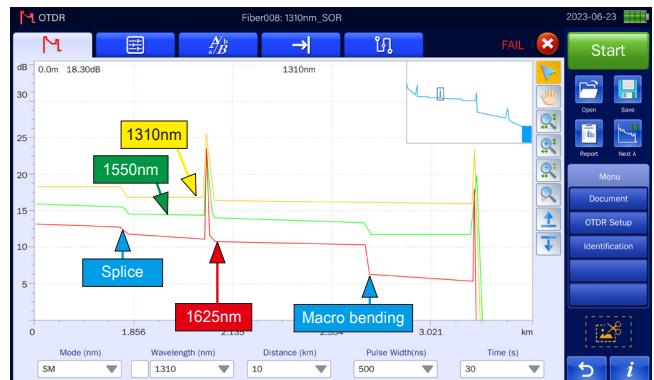
A trace with a macro bend

iOLA (Hawkeye)

OTDR faces a series of challenges:

Trace is wrong

Need to analyze several traces

The same work needs to be done twice
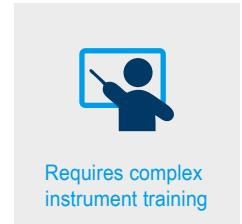
Requires complex instrument training

To address these challenges, JILONG has developed a better way to test fiber links: iOLA (Hawkeye) is an OTDR-based application designed to simplify the OTDR testing process by eliminating the need to configure parameters, analyze and interpret multiple complex OTDR curves. It adopts advanced algorithm, can dynamically define the test parameters, and according to the measured network to determine the appropriate curve acquisition times; Multiple pulse widths at multiple wavelengths can also be correlated to locate and identify faults with very high resolution - all at the touch of a button.

Working principle

Measure the network from the site to an antenna

Inside the building: Short distance, many connections

Outside the building: Long distance, few connections

Splice point

Suitable short pulse width

Suitable long pulse width
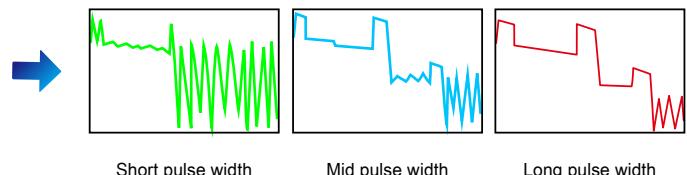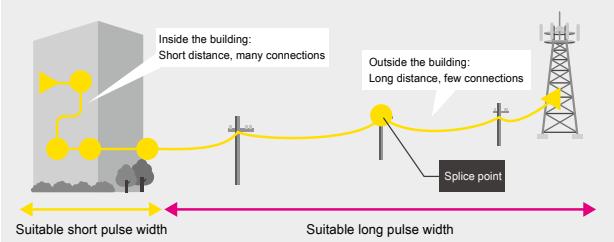
Short pulse width

Mid pulse width

Long pulse width
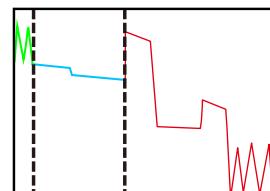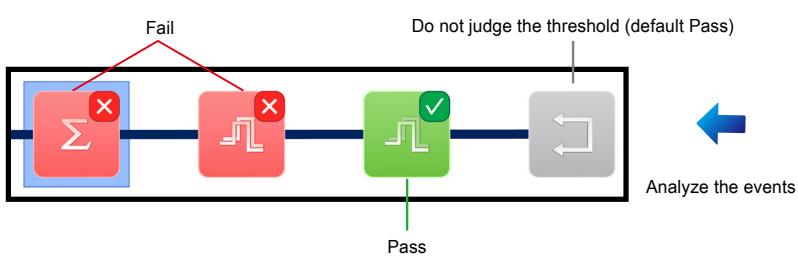
Analysis of some events of the measured trace, link the trace together

Analyze the events

Fail

Do not judge the threshold (default Pass)

Pass

■ Operability

7.0 inch multi-touch capacitive touch screen

It supports new gestures to amplification. The screen capture color is clear. The interface design is simple and clear.


Fragment selection
Amplify the trace

Drag
Move the cursor
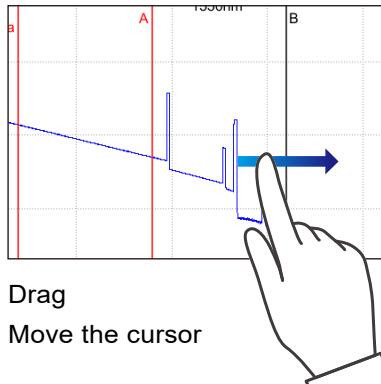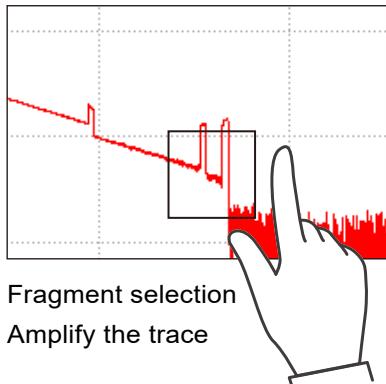
Expand the trace display area

By tapping the icon ⬆ ⬇ , you can enlarge the trace display area to view more detail.

Quickly generate the PDF report

Built -in post -processing software to generate reports of PDF format.
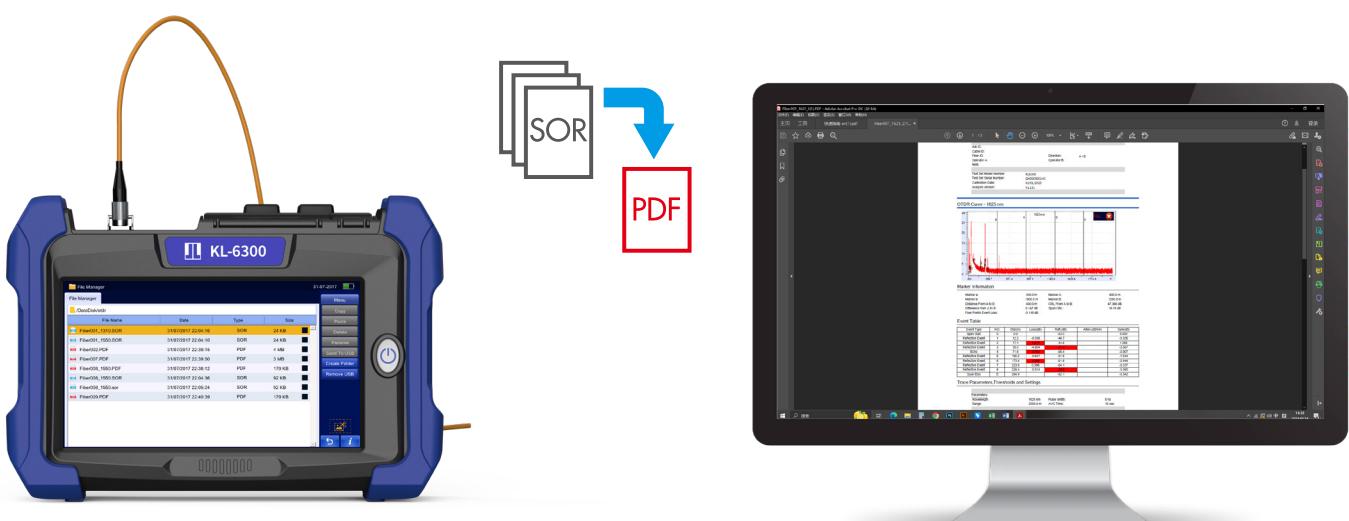
Pass & Fail analysis function

Automatically perform Pass/Fail judgments for each event based on pre-specified thresholds. The measurement results can be viewed through the result display items (As shown in the red box on the following side).
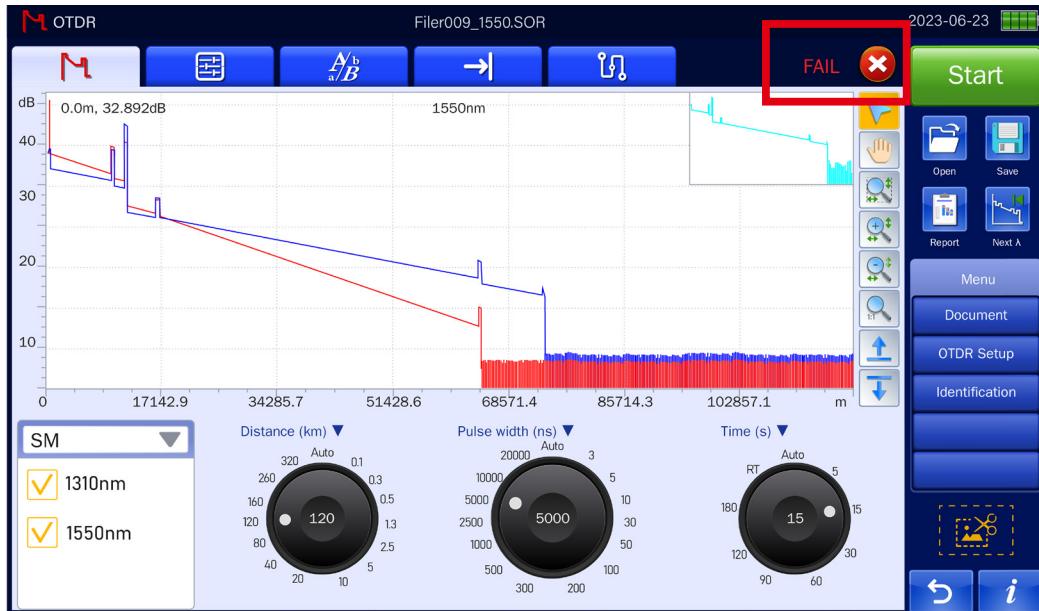
Smart map analyze links graphically

With Smart Map, users only need to press one button to execute measurement, detect network events and execute Pass&Fail judgment. It includes a simple icon view that facilitates the location and type of the event, and automatically executes the Pass&Fail judgment of each event based on the pre -specified threshold.
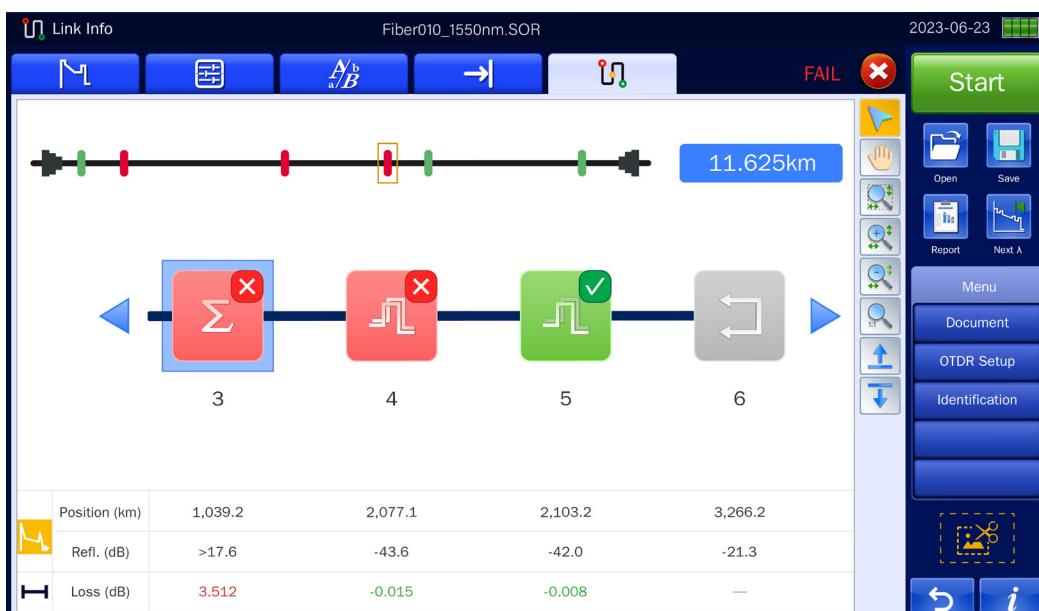
Advanced trace analysis

The OTDR master module is capable of performing advanced analysis of measured data

Multi-trace analysis

View multi -trace, can view up to 4 traces at the same time, comprehensive analysis, and the results are more accurate.
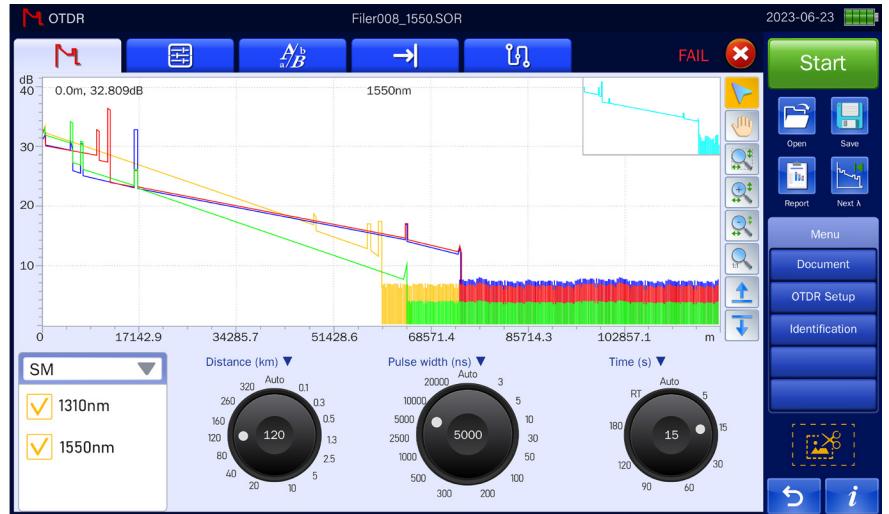
Bidirectional testing

Averaging values obtained from opposite directions provides a more accurate quantification of losses. Bidirectional testing is a great way to improve test integrity in long-distance applications.
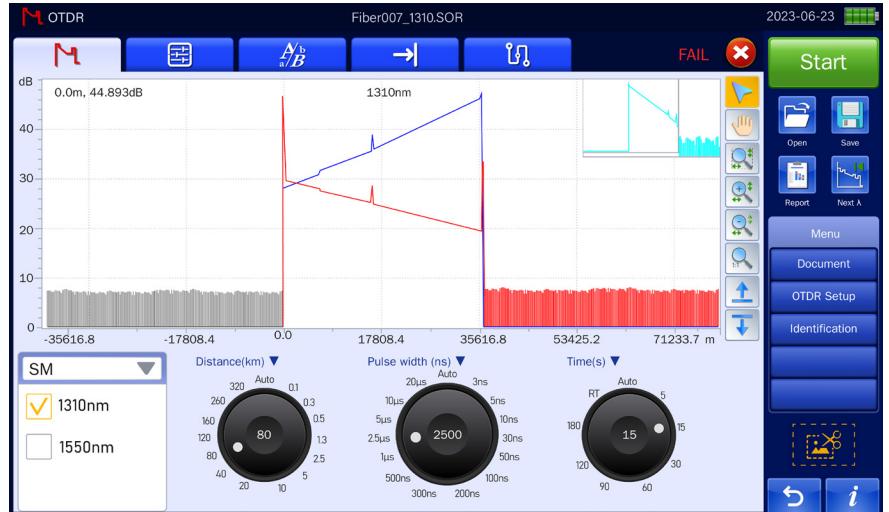

4-points testing

Real-time monitoring of splicing and insertion loss, less noise impact, more accurate test results.

Strong reliability

Minimum sampling resolution 0.04m

0.04m
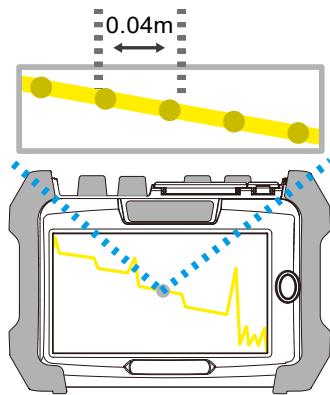
Maximum sampling points: 250,000

25,0000
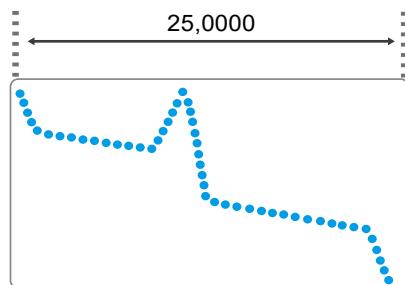
Battery working time: 12 hours

Lithium-ion Battery Pack
Model: BTR-105R
Voltage: 7.2V
Capacity: 10Ah
Power: 72Wh

10500mAh

Rubber sheath design: effective shock absorption, anti-fall and anti-bump

KL-6300

Not just OTDR

OPM module (built-in)

Used to measure absolute optical power or the relative loss of optical power through a section of fiber link


SLS module (built-in)

Output stable continuous signal, used in combination with an OPM to measure optical loss in fiber optic systems
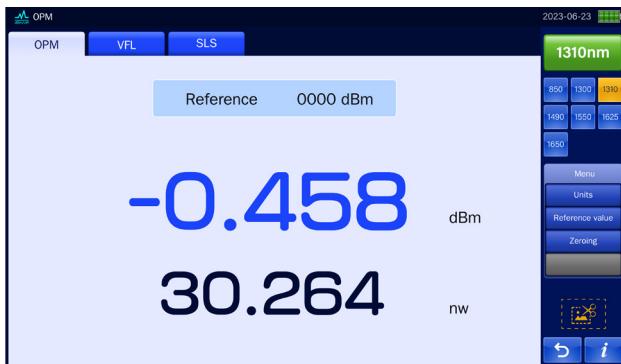

VFL module (built-in)

Luminous stability, strong light source, strong penetration; Two light source modes - steady on, flashing
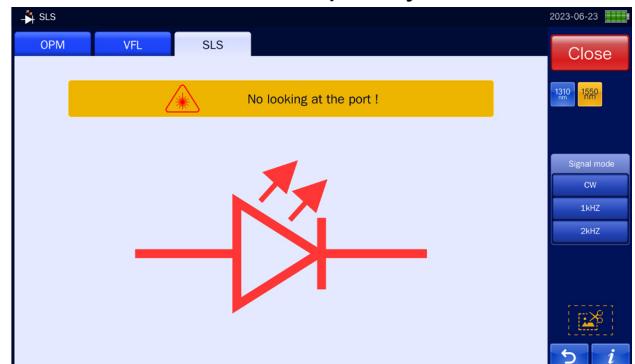
Network test module (built-in)

Network sequencing + Network ranging + Network hunting (optional)

Fiber connector inspection module (built-in)

The fiber connector end-face inspection module can visualize the surface of the connector, and combine with handle probe(optional) can automatically analyze the scratches and dust on the fiber connector, save the surface image and judge the result. And offer a PDF report

FIP ➡ PDF

*FIP module can first perform connector end-face detection and then OTDR link testing

Fiber connector detection result

GPS (module optional)

Real-time positioning OTDR position and running track

CJ780-92767
2024-06-17 11:51:12
Mileage:105.01km
Lat:31.965156,Lon:118.798050
Position Type:GPS
Direction:North,Speed:5.56km/h
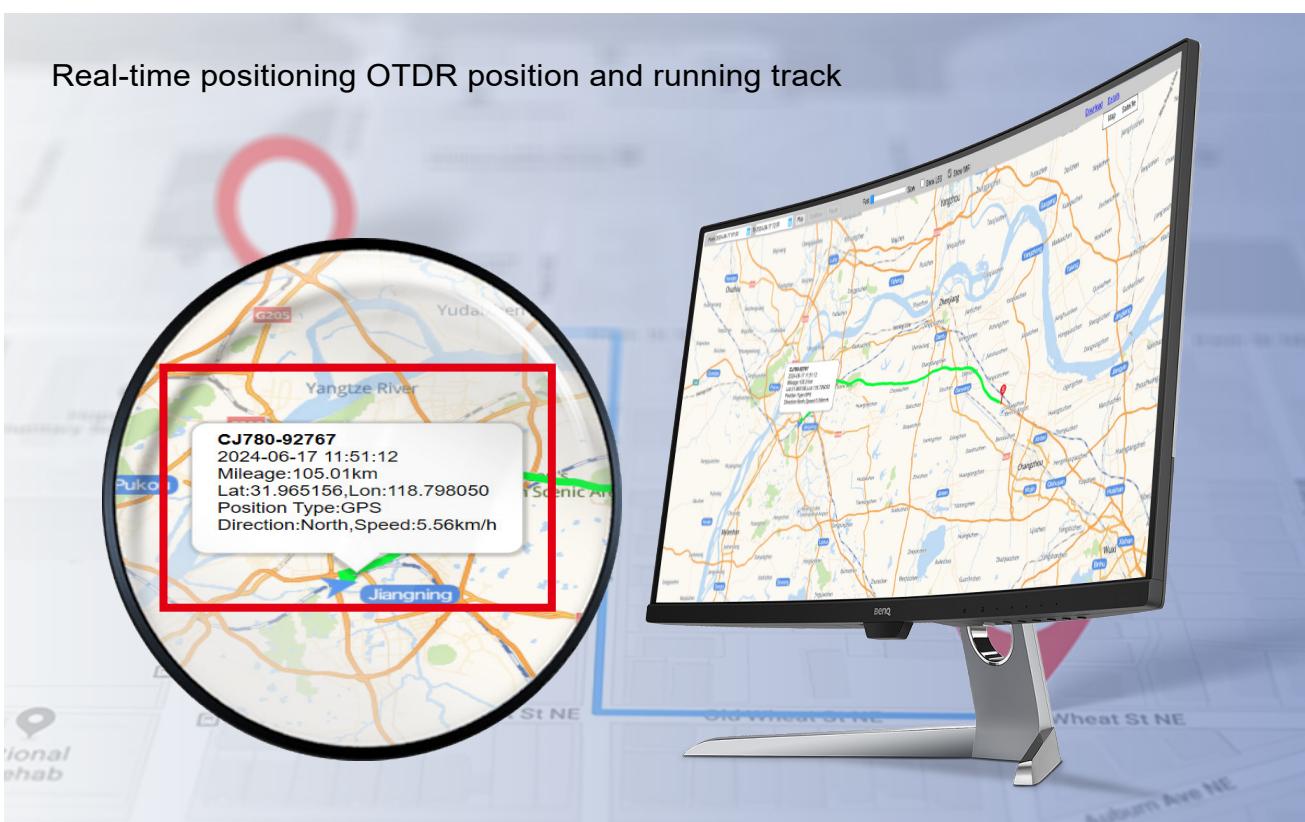
WIFI remote control (built-in)

VNC remote control function, using mobile phones or computers online remote operation OTDR easily solve the remote work, can simultaneously take into account multiple room testing, greatly improve efficiency.

Office

Server Room
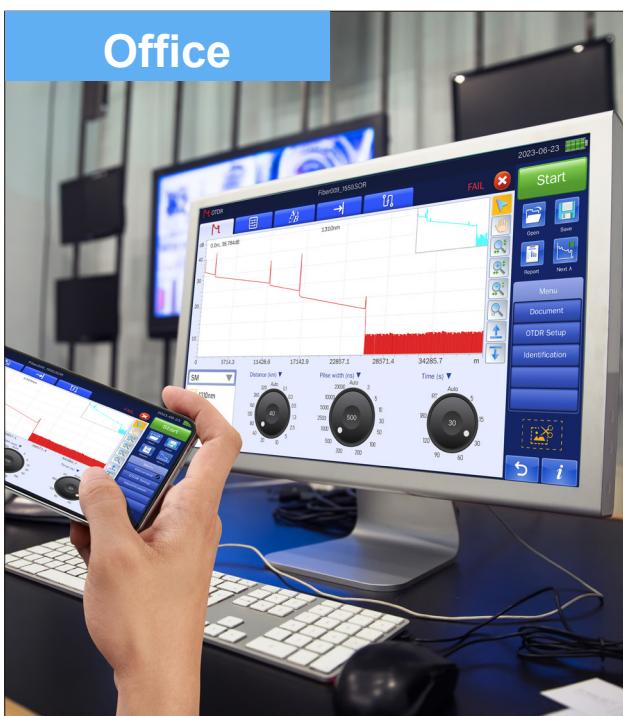
PON optimization

Quickly, easily and correctly measure networks with large losses, such as PON links. In PON mode, simply select the route configuration to be measured on the screen, and OTDR will automatically determine the appropriate measurement conditions and set the optimal value, even after the optical splitter caused large losses, the KL-6300 OTDR can ensure high trace quality.

Measuring a residential PON network with two-level splitters

Splitter
As the number of branches increases, the loss will increase

16   8

OFTEL

Residence

PON links
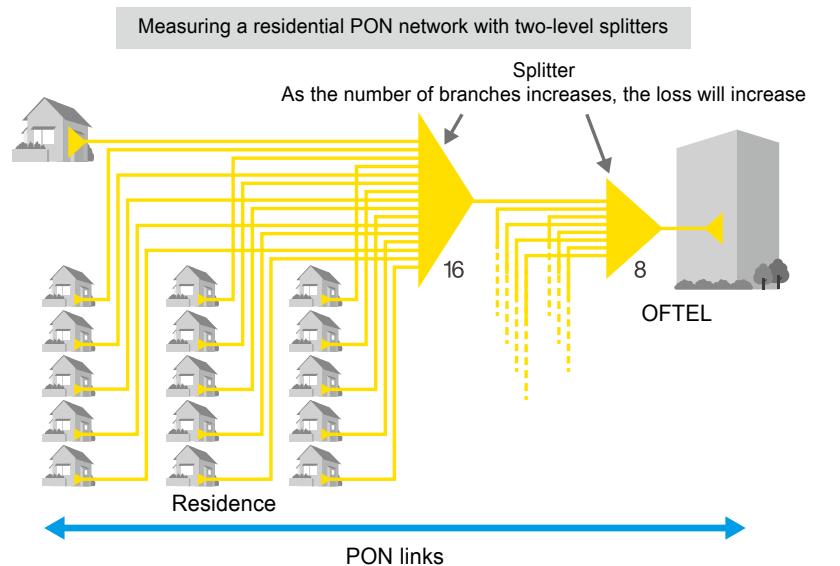
Set the parameters of the splitter to be measured in PON mode
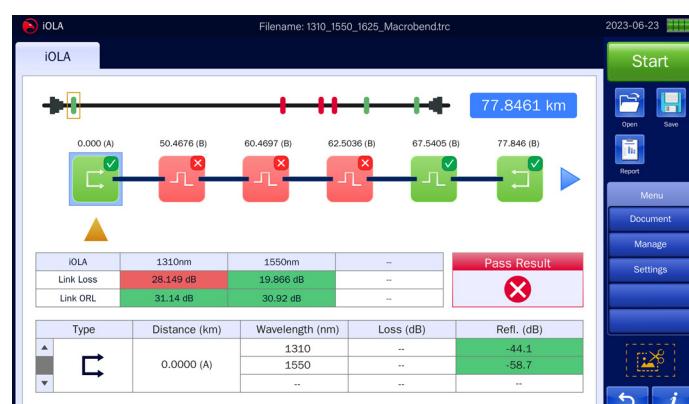
Ultra-high signal-to-noise ratio measurement

Measuring total 1:128 splitter
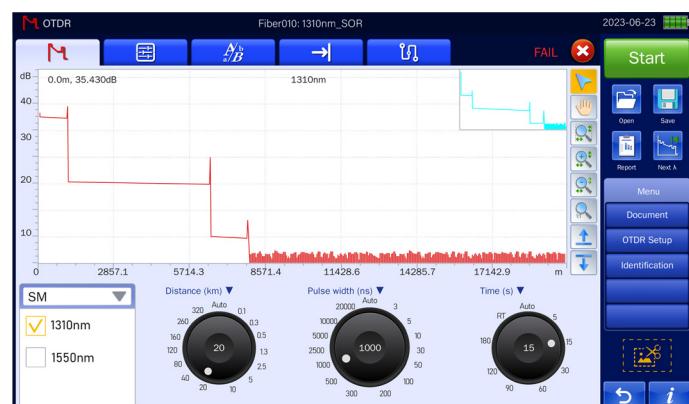
■ Additional function

Self calibration

Shorten maintenance time and reduce maintenance costs
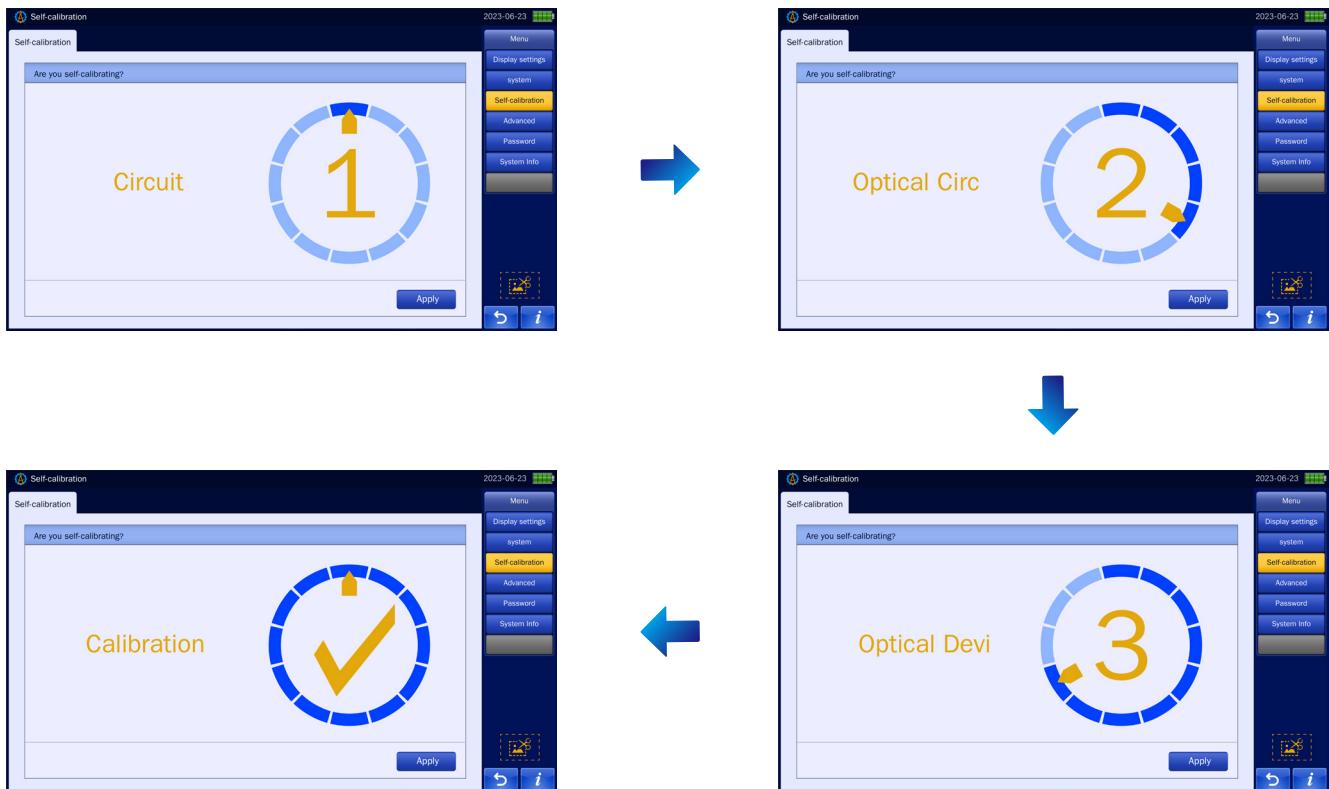
Power-on password

Acquire and use OTDR by means of leasing, paying in installments according to the agreed time and amount

Appearance

Charging port | TYPE-C port | USB port | RJ45 port | RJ45 port

Indicator | LED light

OPM port | VFL port | OTDR/SLS port | OTDR/SLS port

KL-6300

Wrist strap | Multi-touch capacitive screen | Power/LED key

Rubber sheath | Battery | Support
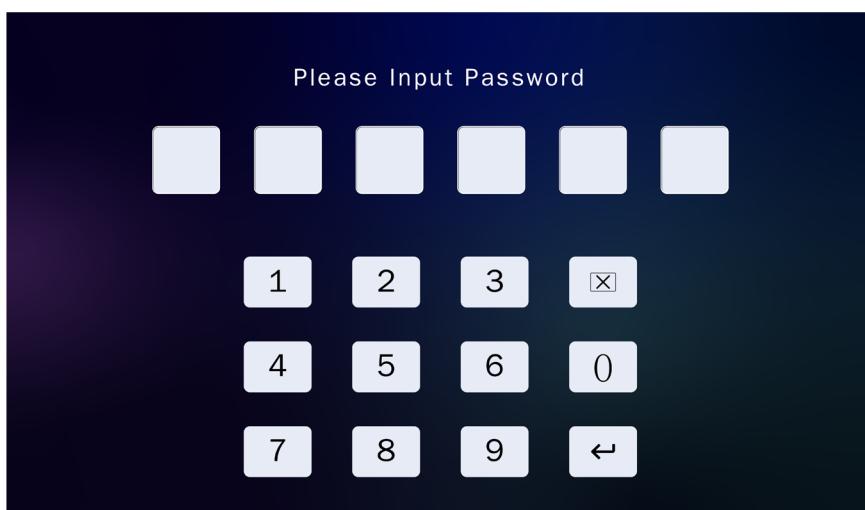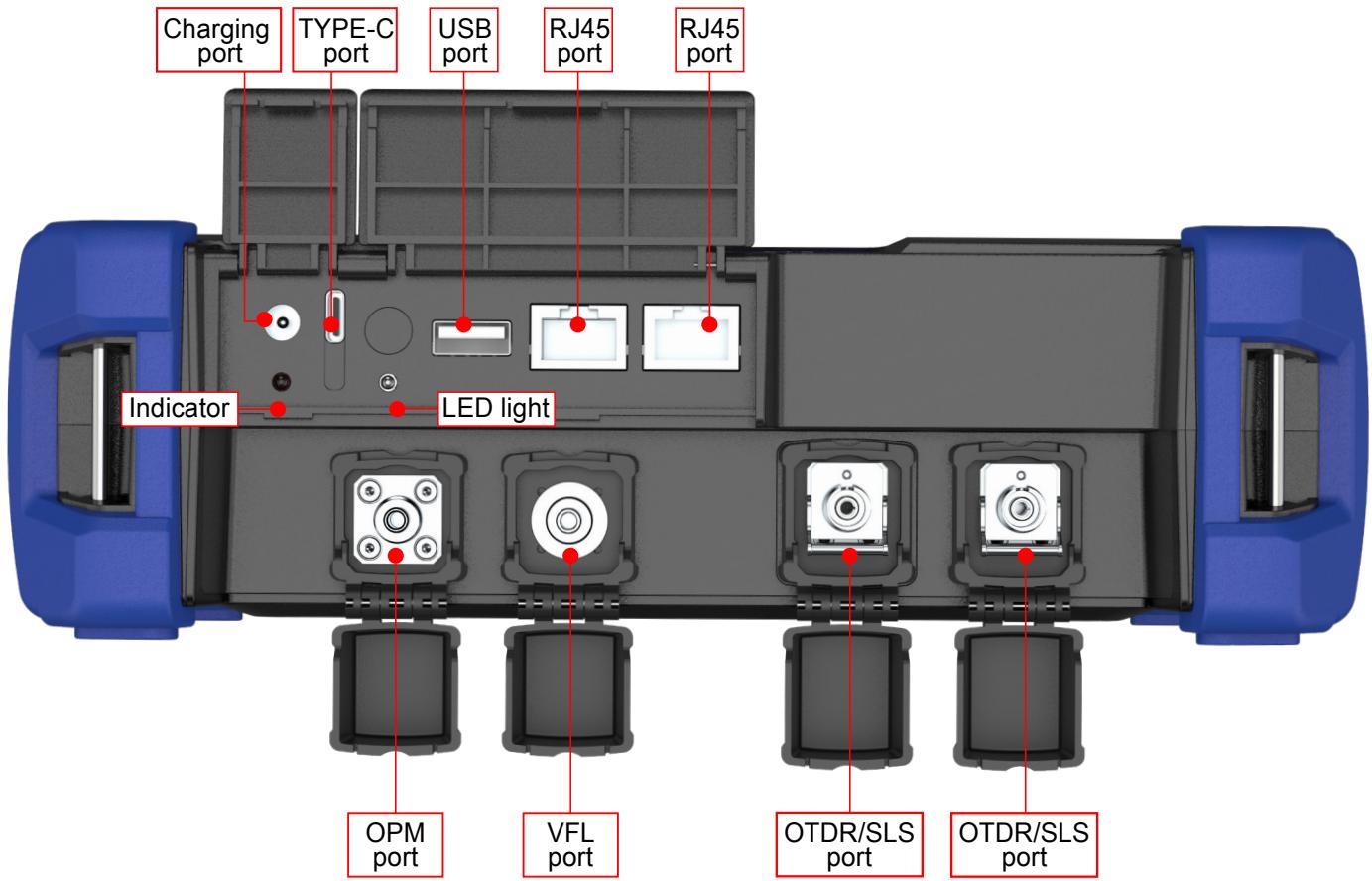
OTDR Specifications

OTDR module

| Model	KL-6300-S1	KL-6300-S2	KL-6300-S3	KL-6300-S4	KL-6300-S5	KL-6300-P1	KL-6300-P2	KL-6300-M	KL-6300-MS
Wavelength (nm)	1310/1550	1310/1550	1310/1550	1310/1550	1310/1550	PON 1310/1550/1625 (built-in filter)		850/1300	850/1300+1310/1550
Dynamic range (dB)	32/30	35/33	40/38	42/40	45/43	32/30/28	38/36/34	20/22	20/22 32/30
Number of optical port	1	1	1	1	1	2	2	1	2
Event dead zone ★① (m)	0.8	0.8	0.8	0.8	0.8	1	1	1.5	SM≤1；MM≤1.5
Attenuation dead zone ★② (m)	3	3	2.5	2.5	2.5	3	3	5	SM≤3.5；MM≤5
Multi-fiber Measurement	√							√	√
Multi-pulse Measurement	√							×	√
Spliters Measurement	Max 1:32	Max 1:64	Max 1:128			Max 1:32	Max 1:64	×	Max 1:32
Applicable fiber	SM (ITU-T G.652)								
Distance range (km)	0.1, 0.3, 0.5, 1.3, 2.5 , 5, 10 , 20 , 40 , 80 , 120 ,160 , 260, 320								
Pulse width (ns)	3 , 5 , 10 , 30 , 50 , 100 , 200 , 300 , 500, 1000 , 2500 , 5000, 10000 , 20000								
Number of sampling points	Max 250000								
Sampling resolution	Min 0.04m								
Distance measurement accuracy	$\pm(0.75 \text{ m} + \text{Measurement distance} \times 2 \times 10^{-5} + \text{Sampling resolution})$								
Loss measurement accuracy	±0.03 dB/dB								
Return loss measurement accuracy	±2 dB								

Optical Power Meter Module (Built-in)   √

OPM	Wavelength	800 ~ 1650nm
	Measure range	-70 ~ +6dBm
	Measure accuracy	＜（±0.2dB or ±5%)
	Display resolution	0.01dB
	Optical input port	2.5mm Universal ferrule for FC,SC,ST/UPC

Stabilized Light Source Module (Built-in)   √

SLS	Wavelength (nm)	1310/1550	1310/1550/1625	850/1300	850/1300+1310/1550
	Output power	≥-10dBm			
	Modulation mode	CW, 270 Hz, 1 kHz, 2 kHz			
	Laser class	Class 1M or Class 1			
	Optical input port	OTDR port			

Visual Fault Locator Module (Built-in)   √

VFL	Wavelength (nm)	650±10nm
	Output power	10mW
	Modulation mode	CW, CHOP (2 Hz)
	Laser class	Class 3R
	Optical input port	2.5 mm Universal ferrule type for FC,SC,ST

Fiber Inspection Probe (Built-in)   Optional

FIP	Pass / Fail	√
	Magnification	400X
	Resolution(um)	≥1.0
	Electrical interface	USB2.0
	Optical Connector	FC/UPC,SC/UPC,ST/UPC
	CMOS size	1/3 inch

RJ45 Networks Test (Built-in)   √

RJ45	Applicable cable	CAT5, CAT6
	Distance of Cable Collationl	300m
	Distance of emitting signal	300m

GPS Module (Built-in)   Optional

GPS	Location accuracy	< 50m
	Real-time Monitoring	support

WIFI Module (Built-in)   √

WIFI	Data transmission	√
	Remote Control	√

OTDR Specifications

General Specifications	
Link Map	√
Pass/Fail judgment	√
Distance unit	m, km, mile, kf
PC Analysis Software	√
Languages	English, Español, Chinese, Português, Français, Русский, ภาษาไทย, 한국어
Optical connector	FC/UPC (SC/UPC/APC、LC/UPC/APC 、FC/APC Optional)
Display	7-inch touch screen (Resolution: 1024 × 600)
Port	Charge port × 2, 12V - 2.5A & Type C
Operating temperature	'-10 ~ 50˚C (0 ~ 40°C when AC adapter is being used. 0 to 35˚C when battery is be charged)
Storage temperature	-20 to 60˚C
Altitude	4000 m
Humidity	0 to 90% RH (20 to 90% with 739874 AC adapter, non-condensing)
Power requirements	100 - 240V AC, 50/60Hz (AC adapter)
Battery	7.4V,10500mAh,≥77Wh
LED Light illumination	>15000mcd
Operating time★③	12 hours
Data storage	Internal storage: ≥10000 traces, External storage: USB memory
Dimensions	232 mm (W) × 161 mm (H) × 70 mm (D)
Weight	1.6 kg (including internal battery and protectors, excluding OTDR unit and options)

Notes:

★①. Minimum pulse width, return loss: ≥55 dB (≥40 dB for 850/1300 nm), group refractive index: 1.5, the unsaturated peak level ＜1.5dB.

★②. Minimum pulse width, group refractive index: 1.5, the backscatter level is >0.5dB of the normal level. For SMF, at 1310nm, return loss: ≥55dB. For MMF, at 850nm, return loss: ≥40dB.

★③. New Battery

All specifications valid at 23°C ± 2°C (73.4°F ± 3.6°F) unless otherwise specified.