K-800PON PON OTDR

A PON network comprehensive tester for live FTTx work: a 1625 nm in-service OTDR with 44 dB of dynamic range that shoots through a 1×128 splitter, one-click Smart Link maps, and a power meter, light source, VFL and fiber inspection in the same rugged handheld.

A PON is not a point-to-point link: one feeder fiber fans out through splitters to dozens of homes, and each splitter stage costs 10 to 20 dB of loss before the drop fiber even starts. The K-800PON pairs 44 dB of dynamic range with a 0.8 m event dead zone at 1625 nm — the filtered maintenance wavelength — so it measures a working PON in service and keeps individual branch events visible after one or two splitter stages.



K-800PON PON OTDR handheld tester

Key Features

- Live-fiber OTDR at 1625 nm: the filtered in-service wavelength tests a working PON without taking subscribers down, and 44 dB of dynamic range reaches the far end of long, heavily split networks
- Through a 1×128 splitter: enough range and resolution to verify the whole branch — feeder, splitter and drops — from one end, so acceptance testing does not need an access visit at every home
- Smart Link one-click analysis: no pulse-width or range setup — press test and the link comes back as a map, events in order with the splitters identified in FTTx mode, each event with its location and loss
- 1310/1550 nm testing as well: standard OTDR wavelengths for offline plant, plus a built-in 1310/1550 nm power meter for in-service troubleshooting on single-mode fiber
- Four more tools on board: a 1310/1550 nm light source (CW / 270 Hz / 1 kHz / 2 kHz), a 650 nm visual fault locator good for 3 km, storage for more than 10,000 traces on SD card, and an optional 400× fiber inspection probe for connector end faces
- Built for the field: dual-color molded housing with armored corners shrugs off cabinet and pole work, and the lithium battery runs at least 8 hours of continuous testing

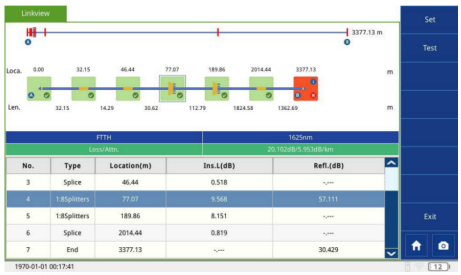
Specifications

Test wavelengths	1310/1550 nm and 1625 nm (±20 nm)
Dynamic range	34/32 dB (1310/1550 nm); 44 dB (1625 nm)
Event dead zone	1.2 m (1310/1550 nm); 0.8 m (1625 nm)
Attenuation dead zone	6 m (1310/1550 nm); 3.5 m (1625 nm)
Measurement range	0.3–200 km
Linearity	±0.05 dB/dB
Loss threshold / resolution	0.05 dB / 0.001 dB
Sampling resolution	0.125–8 m
Ranging accuracy	±(0.75 m + 2.5×10^{-5} × distance + sampling interval)
Real-time refresh	1 s (typical)

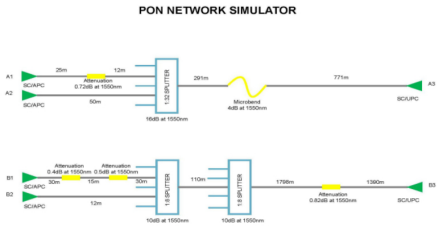
Data storage	SD card (≥8 GB), more than 10,000 traces
Light source	1310/1550 nm, CW / 270 Hz / 1 kHz / 2 kHz modulation
Power meter	1310/1550 nm calibrated, −40 to 0 dBm, ±0.02 dBm accuracy
Visual fault locator	650 nm, up to 3 km
Fiber inspection (optional probe)	400× magnification, 0.5 µm resolution, 0.3×0.28 mm viewable area, PAL/NTSC output, USB input
Battery	Lithium, ≥8 hours continuous work
Operating temperature	−10 °C to +50 °C
Storage temperature	−40 °C to +70 °C
Relative humidity	0% to 95% (non-condensing)
Dimensions	263 × 75 × 203 mm
Weight	1.784 kg

Link Analysis in Detail

Smart Link draws the measured link as a map: splitters, splices and the end of the fiber in order, each event with its location, insertion loss and reflectance, so a fault reads as the one red event on the line. The analysis is built around the standard PON test scenarios — single and cascaded splitters with known attenuation and bend events along the branch.



Smart Link map: splitters and events in order



PON test scenarios the link analysis is built around

Measurement Notes

Specifications describe the guaranteed performance of the instrument with typical PC-type connectors; uncertainties due to the refractive index of the fiber are not considered. Dynamic range is measured at maximum pulse width with 3-minute averaging (200 km / 20480 ns / 3 min). Dead-zone figures are measured on reflection events within 10 km with 45 dB return loss at the minimum pulse width.

OEM & Private Label

The K-800PON is supplied in neutral, unbranded stock as standard. Private labeling is made to your requirements — labels with your logo, part numbers and barcodes on the tools, the inner boxes and the outer cartons, so the goods arrive ready for your warehouse. Custom barcode & contract labeling is applied to every inner box and outer carton to your receiving specification.