



FIBER NETWORK ANALYSIS



DESCRIPTION

Fiber Network Analysis enables higher educational institutions to perform fiber analysis for all type of fiber optic network in the Telco deployment. This covers the latest fiber optic network analysis, characterization and troubleshooting such as Passive Optical Network (PON) design.

FEATURES

The EXPERIMENTS for fiber network and component analysis are listed below. Each experiment shall includes the objectives, experimental methods and list of equipment needed. To achieve better understanding on the analysis of the traces, post processing OTDR simulation software for report generation and analysis is included.

- Evaluate performance and specification of OTDR (event dead zone, attenuation dead zone, dynamic range, pulse width etc.)
- Fiber network and passive optical network (PON) characterization (splice, connector, adapter, PLC splitter, bending etc.)
- Fiber insertion loss and components characterization at 1310nm and 1550nm
- Fault analysis (splice, bending, location, connector, etc.)
- Optical Return Loss (ORL) characterization
- End to end loss measurement (required OPM and OLS option)
- Insertion Loss (IL) testing OTDR vs OPM with OLS (required OPM and OLS option)
- Post processing OTDR simulation and analysis software

SPECIFICATIONS

Descriptions	PON-KIT1	PON-KIT2	PON-KIT3
Kit Configuration	3dB Attenuator & 1:4 PLC	1:4 & 1:8 PLC	2:4 & 1:8 PLC
Home Pass Test Scenario	4	8	8
Network Diagram Display	Laser mark fiber network diagram on aluminum plate		
OTDR Wavelength (nm)	1310/1550 or 1310/1550/1625f		
Dynamic Range (dB)	≥34		
Event Dead Zone (m)	0.6		
Attention Dead Zone (m)	≤4		
Standard Accessories	Patch Cord 3m x 2, SC Adapter x 10, Connector cleaner x 1, Instructor Manual x 1, Student Manual x 1, Fiber Launcher 1km x 1, OTDR Post Processing Software and Manual in CDROM		
OPTIONAL			
Light Source/ Power Meter IL Testing (LSPM) *1	1310/1550nm or 1310/1490/1550nm		
Optical Loss Test Set IL & ORL Testing (OLTS) *2	1310/1550nm or 1310/1490/1550nm		
Connector End Face Inspection Probe	Visual Detection Capability < 1um, SC bulk head adaptor, 2.5mm universal ferrule adaptor		
Mechanical Installation Kit	FASC Termination		
Fusion Installation Kit	Splice on Connector and Pigtail Termination		

Remark :

*1 : Bundle together with 1 unit laser source & 1 unit Optical Power Meter

*2 : Bundle together with 1 pair of Optical Loss Test Set

CASE SPECIFICATIONS

Descriptions	MODEL 1	MODEL 2 & 3
Exterior Dimensions (mm)	L318 x W257 x H152	L429 mm W328 x H236
Interior Dimensions (mm)	L239 x W188 x H140	L378 x W249 x H218
Weight (Empty) (kg)	6.2 lbs 1.5 kg	6.4 lbs 2.9 kg
Lid Depth	1.4" 36mm	2.1" 53mm
Base Depth	4.1" 104mm	6.5" 165mm
Material	Lightweight NK-7™ resin	Lightweight NK-7™ resin
Max Buoyancy	17 lbs 7.7 kg	40 lbs 18.1 kg
Temperature Range	Min -20°F (-29°C) Max 140°F (60°C)	Min -20°F (-29°C) Max 140°F (60°C)
Airline Carry-on	Yes	Yes
Watertight	Yes	Yes
Warranty	Conditional Lifetime Guarantee	Conditional Lifetime Guarantee

STANDARD ACCESSORIES

- Connector cleaner (400 wipes capacity, for 2.5 mm connectors)
- Test Cables (SC/UPC, 3 meters length)
- Fiber Launcher 1km x 1
- User's manual (CR-ROM)
- Operation guide/Laboratory work sheet
- Understanding of OTDR specifications (dead zone, pulse width, dynamic range, resolution, etc) - *Applicable for all Kits*
- Understanding of typical testing troubleshooting of fiber network (connectors, splice, bending fiber loss, splitter), Insertion loss (IL) and optical return loss (ORL) - *Applicable for all Kits*

OBJECTIVES

Understanding the FTTH Network –

FTTH is a practical and affordable broadband telecommunications solution that uses fiber optic cables and associated optical electronics to deliver multiple advanced broadband services.

It offers extremely rapid transmission of voluminous data to both homes and offices, enabling service providers to provide IP-based services, such as IPTV and High Speed Broadband (HSBB).

PURPOSES

- Students will have the chances to appreciate the real and most updated optical network being deployed in the field/industrial currently.
- To demonstrate the working principles of a FTTH network.
- To share the experience gained with students from the FTTH deployment by Telcos and professional technical know-how by certified **Trainer** in:-
 - Installation/Construction
 - Activation
 - Maintenance and Trouble-shooting

ORDERING INFORMATION

EXAMPLE : PON-11IL1SCA

