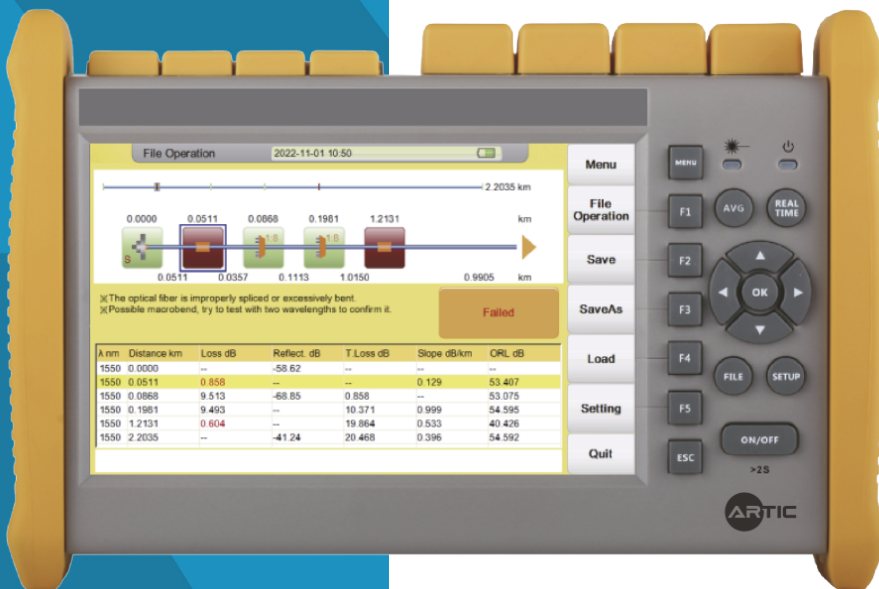
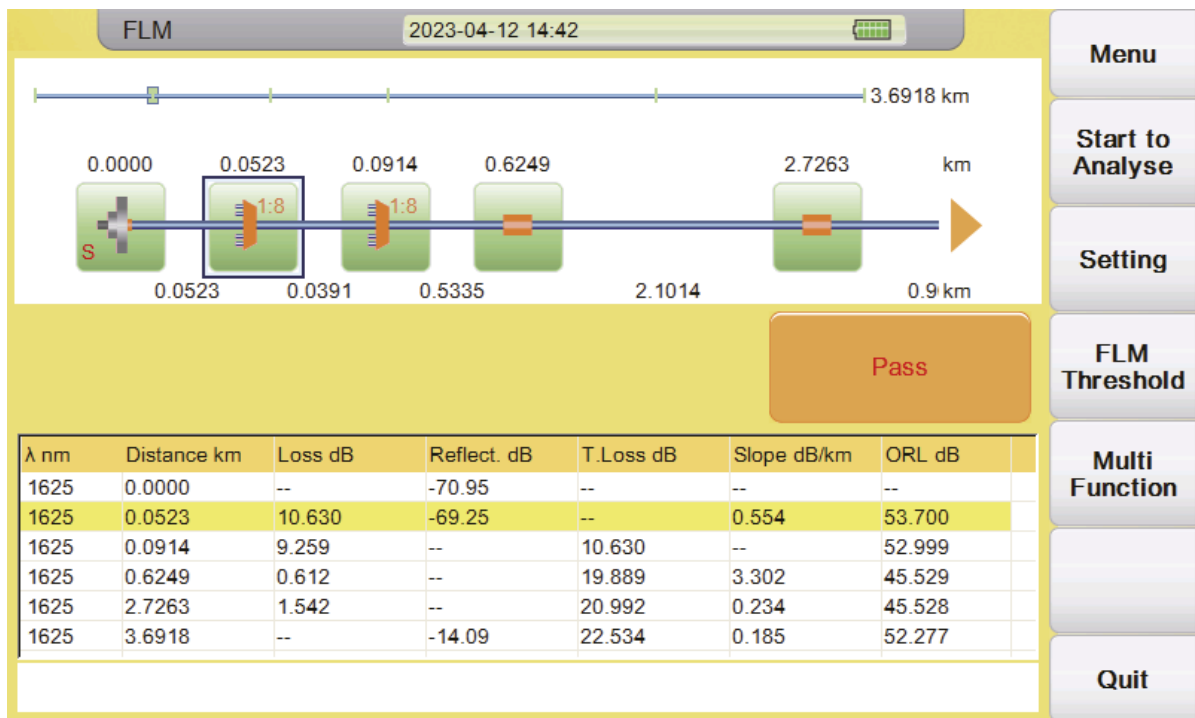




SMART FIBER LINK MAP - FLM



Based on OTDR principle, automatic pulse width configuration, more accurate fiber link testing



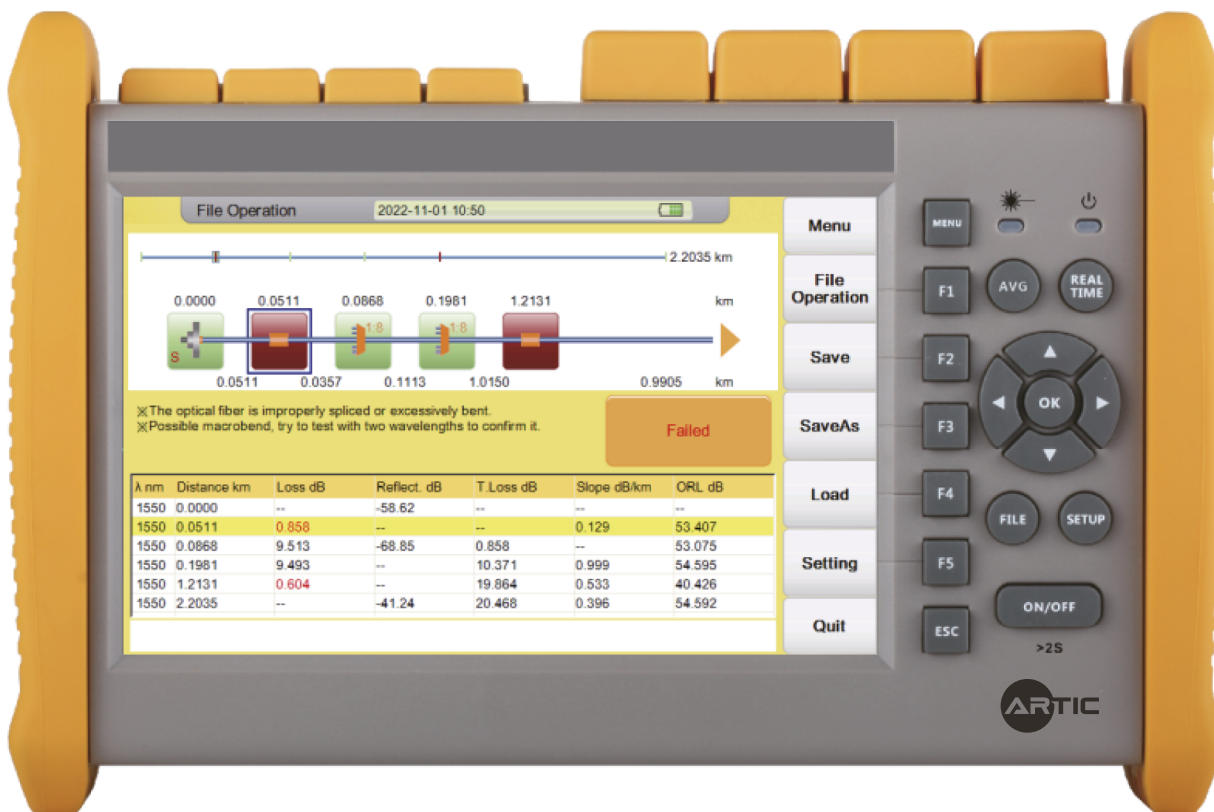
FLM is a more advanced and intelligent OTDR test, combined with new hardware and advanced algorithms. With just one button, it can automatically perform multiple pulse width tests and merge analysis, Complete the detection of fiber optic links with higher dynamics and resolution.

Main Features

- Adaptively adjust multiple pulse width tests based on link, merge and analyze.
- No complex settings, testing can be completed with just one button.
- No need to analyze curves, test results are displayed through icons, simple and clear.
- Comprehensive fiber optic fault diagnosis and analysis.
- User-defined Pass/fail function and automatic FLM reports generation
- Suitable for PON network analysis, can pass through up to 1x128 splitters.
- Splitter identification, shortest distance between splitters is as short as 30m.

FLM - Beyond OTDR Testing

- Complex OTDR curve testing setup
- Error Analysis of OTDR Curve
- Inaccurate single pulse width test of OTDR
- Unable to directly generate test report



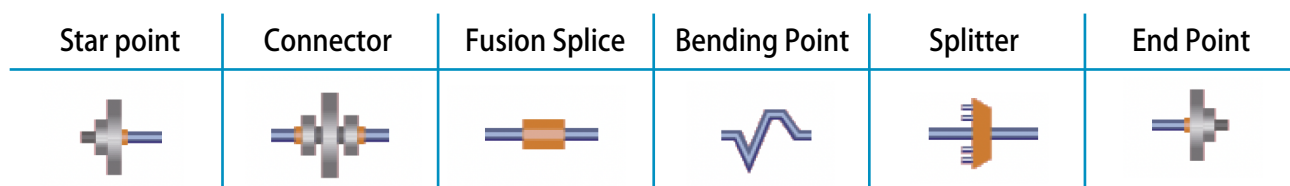
FLM - Farewell to traditional OTDR methods

Automatically adjust multi test pulse width based on the optical fiber link

Using FLM advanced algorithms to merge and analyze multiple test results

Display test results via symbols and display Pass/Fail analysis and diagnosis

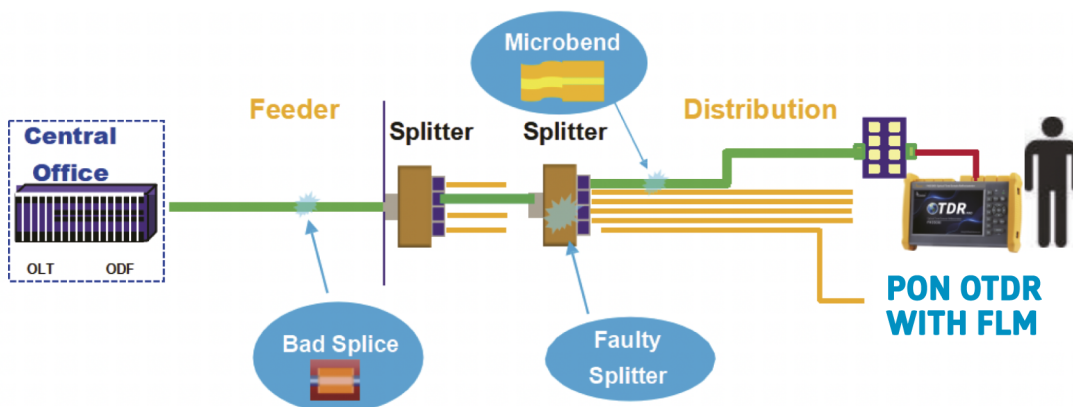
Simplify the overall testing workflow and directly generate FLM reports via one button



PON TESTING SOLUTION - FLM IS READY

Q: How to simplify PON fiber link testing and troubleshooting, validate network performance quicker and improve workflow efficiency?

A: FLM(Fiber link Map) give you the answer. Solve all the challenges in PON Testing!



Challenges

- High dynamic range to pass through splitter to test from ONT to the Central Office (OLT)
- Filtered online service signal if live network
- Splitter identification, eg. 1x8 PLC + 1X8 PLC
- Short deadzones to detect the small events in PON
- Accurate ODN distance and loss measurement

FLM IS READY

FLM
2023-04-10 16:26

⊗The optical fiber is improperly spliced or excessively bent.
 ⊗Possible macrobend, try to test with two wavelengths to confirm it.

Failed

λ nm	Distance km	Loss dB	Reflect. dB	T.Loss dB	Slope dB/km	ORL dB
1625	0.0000	--	--	--	--	--
1625	0.0523	10.565	-69.86	--	0.199	53.770
1625	0.0545	--	-69.45	10.565	--	53.699
1625	0.0842	9.239	--	10.565	--	53.060
1625	0.6290	0.642	--	19.804	3.677	45.655
1625	2.6875	1.743	--	20.903	0.222	45.654

Menu
Start to Analyse
Setting
FLM Threshold
Multi Function
Quit

FLM Report

Fail

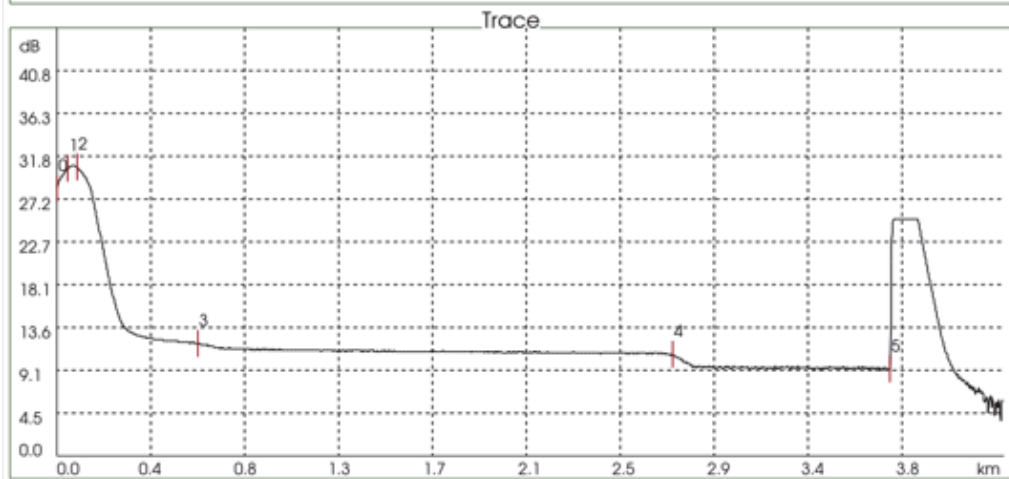
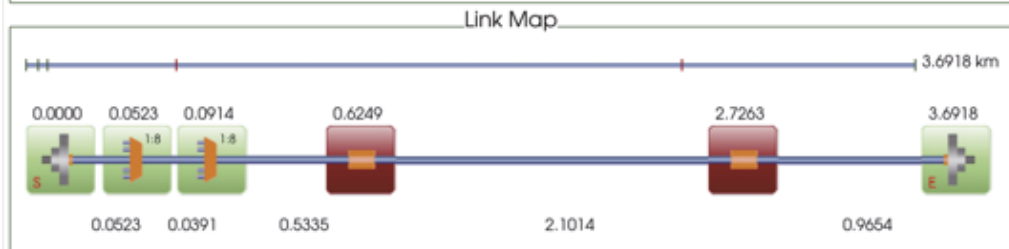
Task	
JobID :	File Name: FLM_1625_144352.pdf
Contractor:	Test Date : 2023-04-12 14:43:52
Customer :	Operator :

Machine Information	
Module : FHO5000-T43FPRO	Supplier :
Serial No.: E5FHA20039	Cal. date:

Overview	
Total Length(km) : 3.692	1625nm
Data Acquisition Status: Completed	Cumulation Loss(db): 22.534
	ORL(db) : 52.277

Configuration		
Test Wave(nm) : 1625	Start Location	End Location
First splitter : 1:8	Location:	Location:
Second splitter : 1:8	Cable ID:	Cable ID:
Refraction : 1.46800	Fiber ID :	Fiber ID :
Scattering Coefficient(db): -81.0	Color :	Color :

Note



Threshold				
Splice loss	Connector loss	Reflection	Slope dB/km	Span loss
1625	0.300	0.700	-40.0	0.400
				10.000

Prepared By: _____ Verified By: _____ Approved By: _____

Fail

Splitter Threshold		
Type	1625Max Loss dB	1625Max Reflection dB
First splitter 1:8	12.000	-40.0
Second splitter 1:8	12.000	-40.0

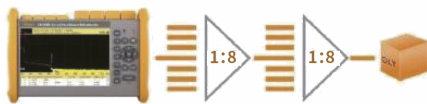
Event							
No.	»	Distance km	Loss dB	Reflect. dB	T.Loss dB	Slope dB/km	ORL dB
0	1625	0.000	--	-70.95	--	--	--
1	1625	0.052	10.630	-69.25	--	0.554	53.700
2	1625	0.091	9.259	--	10.630	--	52.999
3	1625	0.625	0.612	--	19.889	3.302	45.529

FLM Test Report

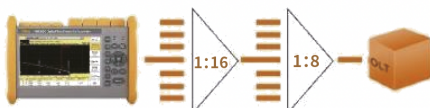
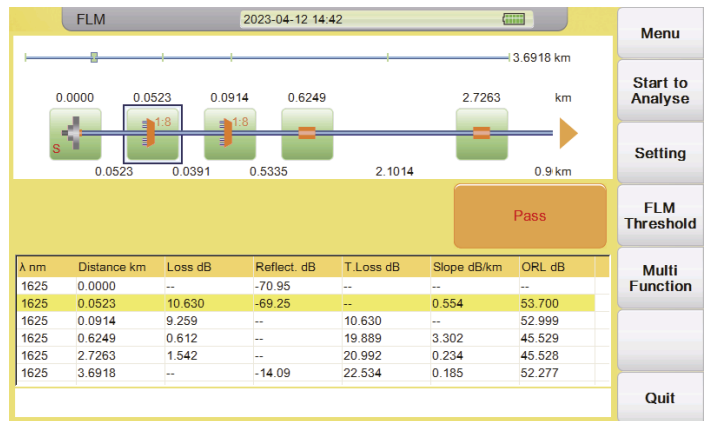
Optimized PON test capability through FLM

Smart Fiber Link Map with FLM function, adopt multi pulse width test mode, users can automatically test without complicated settings to obtain the most accurate and intuitively test results. In a typical scenario of two 1x8 splitters, the shortest distance between splitters can be as short as 30m. (Link condition : No reflection FUT, No reflection splitter.)

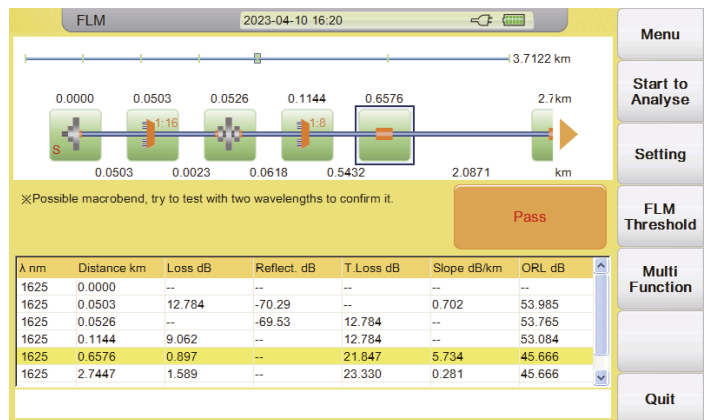
Two Level Splitter Testing Scenario



1x8+1x8 Splitter identification
(30m between two splitters)

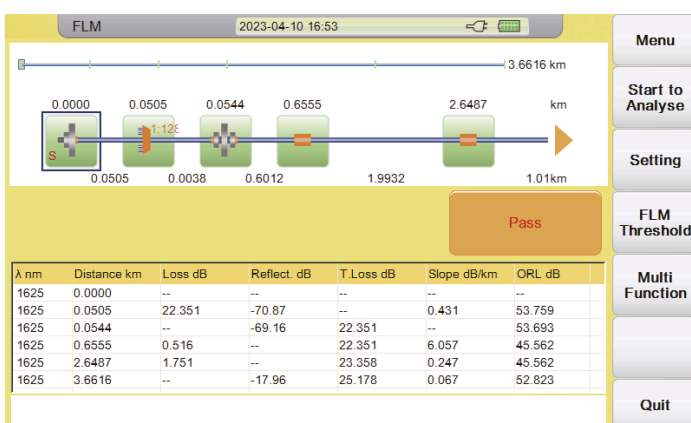
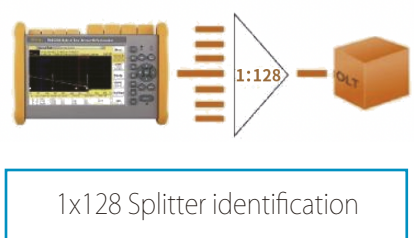
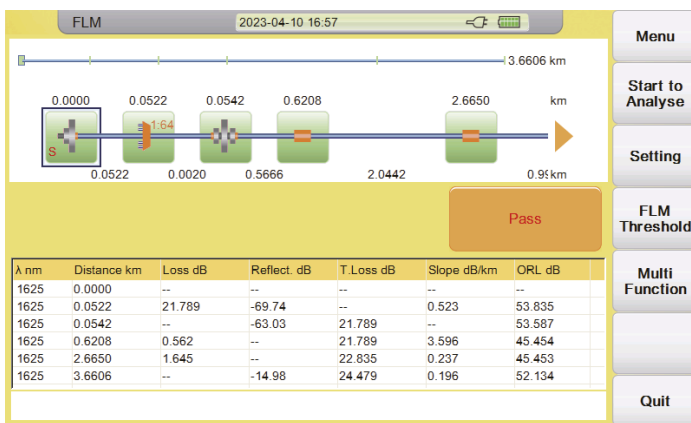
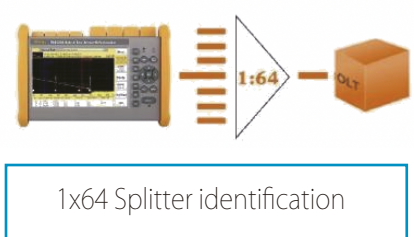


1x16+1x8 Splitter identification
(60m between two splitters)



One Level Splitter Testing Scenario

OTDR-T Series with FLM function can pass through 1x64, even 1x128 splitter. With enough dynamics range and small PON deadzone to accurately describe the overall structure of PON network.



Specification

FLM	Suitable for AR-OTDR-T400-FLM AR-OTDR-T430-FLM AR-OTDR-T450-FLM
PON deadzone	30m*1
Splitter identification	1x2, 1x4, 1x8m, 1x16, 1x32, 1x64, 1x128
Maximum splitter ratio	1x128
FLM Report	Supports direct PDF report generation
Intelligent Algorithms	Multiple pulse widths, merge and analyze

*1 PON deadzone definition: No reflection FUT, no reflection splitter, 10dB loss, 50ns pulse, typical value.