

AE3100CP/DP/G Series 3 & 4 Wavelength Handheld OTDR

Key Features

- High performance OTDR for FTtx and RFoG networks
- 7", 800x480 LCD touchscreen places power and convenience at your fingertips
- Excellent short-distance performance with 0.8m event dead zone and 4m attenuation dead zone
- Triple and quadruple wavelength testing at good dynamic range (35 - 40 dB)
- Minimum 5cm resolution
- Intelligent event analysis
- Excellent stability and repeatability
- "FiberPath" fiber link mapping mode
- Multiple options for your measurement needs, including: VFL, power meter, light source, and optical fiber microscope
- Complete user data ports: supports LAN, USB, SD, & more



Applications

Construction, deployment, maintenance, and authentication of the following networks:

- FTtx
- Long Haul Networks
- Passive Optical Networks (PON)
- Local Area Networks (LAN)
- Metropolitan Area Networks (MAN)

Overview

From Deviser Instruments' 4th generation of OTDR, the field-portable AE3100 marks a giant leap forward in fiber-optic measurement performance and utility. CP and DP models support three wavelengths, with dynamic range up to 40dB; AE3100G tests four wavelengths, customizable to your needs.

Featuring intuitive touchscreen controls and real-time data analysis, the AE3100 is the ideal test instrument for constructing, deploying, maintaining, and authenticating FTtx networks - as well as verifying access networks. Multiple models and configuration options ensure your unique measurement needs are covered.

Also see AE3100 models A-F for dual-wavelength measurements with dynamic range up to 45dB, and models M, CM, DM, and EM for multi-mode testing.

Model Guide

Model	Wavelengths (nm)	Dynamic Range (dB)	Event Deadzone (m)	Attenuation Deadzone (m)
CP-1	1310 / 1550 / 1625	37 / 35 / 35	≤ 0.8m	≤ 3.0m
CP-2	1310 / 1550 / 1650			
CP-3	1310 / 1550 / 1490			
DP-1	1310 / 1550 / 1625	40 / 38 / 38		
DP-2	1310 / 1550 / 1650			
DP-3	1310 / 1550 / 1490			
G	1310 / 1490 / 1550 / select either 1625 or 1650	37 / 35 / 35 / 35		

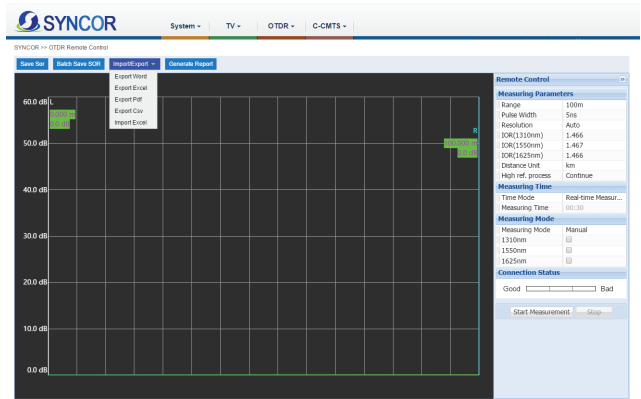
FiberPath™

FiberPath simplifies the interpretation of OTDR traces by identifying link elements and displaying the link map in an easy-to-understand format. Experienced and inexperienced technicians alike will appreciate the simplified display.



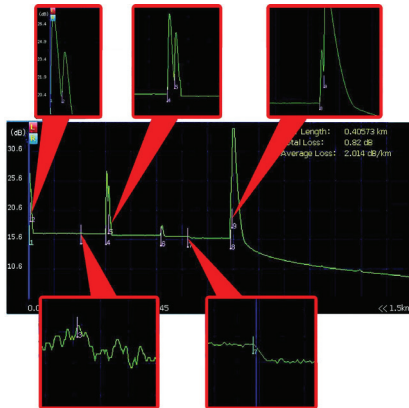
Remote Control

In conjunction with the SYNCOR PC-based asset and test data management system, users can issue test orders and collect measurement data remotely from AE3100 units deployed to the field.



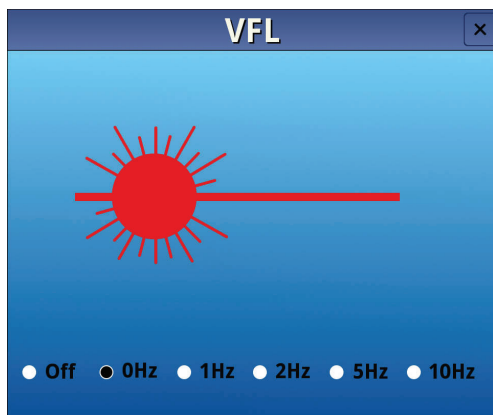
OTDR

The AE3100's high-performing OTDR supports up to 4 wavelengths and is the ideal solution for testing the fiber in RFOG and FTTX applications. The OTDR can identify and locate link impairments and measure the insertion loss by LSA, 2Pt and 4Pt methods. The unit also measures optical return loss (ORL).



Optical Measurements

The AE3100 includes a suite of optical measurement tools, including a power meter, laser source, and visual fault locator (shown below). The unit is available in numerous wavelength configurations for ensuring proper levels in networks such as RFOG and FTTX.



Pictured: Visual Fault Locator (VFL) beam illuminates bends, splices, and faults in optical fibers, with an effective range of up to 10km.

Specifications

AE3100 Model	CP-1	CP-2	CP-3	DP-1	DP-2	DP-3	G
General							
Wavelength Accuracy	± 20nm						
Event Dead Zone	≤ 0.8m						
Attenuation Dead Zone	≤ 3m						
Distance Range	100m, 400m, 1.5km, 3km, 6km, 12km, 25km, 50km, 100km, 200km, 400km						
Sampling Resolution	0.05 ~ 12.8m						
Sampling Points	256,000 max						
Distance Accuracy (m)	± (0.75m + 0.001% x Distance + Sampling Resolution)						
Group Refractive Index	1.00000 ~ 2.00000						
Linearity	0.03 dB/dB						
Loss threshold	0.01 dB						
Loss resolution	0.001 dB						
Reflectance Accuracy	± 2dB						
Pulse Width	3ns, 5ns, 10 ns, 30 ns, 50 ns, 100 ns, 200 ns, 500 ns, 1µs, 2µs, 5µs, 10µs, 20µs						
Measurement Time Range	5s ~ 5min, real time						
Data Storage	>10,000 OTDR traces, exportable to USB or Computer						
Functions & Accessories							
Test Modes	Manual; Auto			File Formats	Compatible with Bellcore GR 196 v1.1 (*.SOR)		
Limit Settings	Manual; Auto			Loss Test Type	LSA, 2pt, 4pt		
Limit Profiles	8 customizable profiles			UI Style	4 styles available		
Distance Shift	Yes; display negative events			FiberPath Linear View	✓		
Real-Time Testing	✓			Touchscreen Keyboard	✓		
Self-Correcting	✓			Web Browser	✓		
Online Help	✓			Auto Shutdown/Sleep	✓		
Factory Reset	✓			Macrobending Test	✓		
Multi-Lingual File Naming	✓			Dual Wavelength Test	✓		
Screenshots	✓			Multi-Trace Comparison	✓		

Specifications (cont'd)

AE3100 Model		CP-1	CP-2	CP-3	DP-1	DP-2	DP-3	G
Functions & Accessories (cont'd)								
Optical Power Meter	Calibration λ	1310 / 1550nm						
	Operating λ	850 / 980 / 1300 / 1310 / 1490 / 1550 / 1610nm						
	Range	Select from [-70 ~ +10dBm] or [-50 ~ +26dBm]						
	Resolution	± 0.17 dB						
Laser	Wavelength	1310 / 1550 / 1625nm	1310 / 1550 / 1650nm	1310 / 1550 / 1490nm	1310 / 1550 / 1625nm	1310 / 1550 / 1650nm	1310 / 1550 / 1490nm	1310 / 1550 / 1490 / 1625 or 1650nm
	Output Power	> -4dBm						
	Modes	CW / 1kHz / 2kHz / 1kHz + Flash / 2kHz + Flash						
VFL	Wavelength	650 \pm 10nm						
	Power	10mW						
	Compliance	Laser Safety Class II						
USB FiberSpot Mode		Available by option only						
FiberPath		Available by option only						
Fiber Cleaning Pen		Up to 200 uses						
Remote Testing		Requires SYNCOR software configuration						
Cloud Asset Management		Requires SYNCOR software configuration						
Optical Port Type		PC (default); APC (optional)						
Optical Adapter Type		FC (default); SC, ST, LC, SC/APC (optional)						
LighTel Fiber Inspection Probe (SKU# DI-1000)								
Field of View	~ 425 x 320 μ m			Pass/Fail Auto Test	✓			
Resolution	0.5 μ m			Magnification	400x			
Focus	Manual adjustment, 2mm max travel			Interface	USB 2.0			
Dimensions (LxD)	175mm x 35mm (without tip)			Operating Temperature	0 ~ 50°C			
Light Source	Blue LED			Storage Temperature	-20 ~ +70°C			
General Specifications								
Refresh Rate	4 fields/second							
Power Consumption	< 3.5W							
Display	7" 800x480 dot matrix TFT LCD touchscreen							
Ports	2x USB 2.0; 1x RJ45; 1x SD card slot (64GB max)							
Battery Life	~ 8 hrs on full charge							
Languages	Chinese, English, Spanish, Portuguese, French, Russian, Italian (German, Korean, Arabic optional)							
Dimensions (LxWxH)	8.1" x 6.7" x 3.0" (206mm x 171mm x 75mm)							
Weight	< 4.4 lbs (< 2kg)							

Ordering Information

Included with all AE3100 Handheld OTDR Models:

- Visual Fault Locator, 650nm (10mW)
- FC/PC or APC Connectors
- Li-Ion Battery & AC/DC Adapter
- Carrying Case & Stylus
- Calibration & Quality Certificates
- Quick Reference Guide
- PC Management Software
- CD with Instruction Manual
- Cleaning Swab

SKU No.	Wavelengths	Dynamic Range	Event Deadzone	Attenuation Deadzone
AE3100CP-1	1310 / 1550 / 1625nm	37 / 35 / 35dB	< 0.8m	< 3.0m
AE3100CP-2	1310 / 1550 / 1650nm	37 / 35 / 35dB	< 0.8m	< 3.0m
AE3100CP-3	1310 / 1550 / 1490nm	37 / 35 / 35dB	< 0.8m	< 3.0m
AE3100DP-1	1310 / 1550 / 1625nm	40 / 38 / 38dB	< 0.8m	< 3.0m
AE3100DP-2	1310 / 1550 / 1650nm	40 / 38 / 38dB	< 0.8m	< 3.0m
AE3100DP-3	1310 / 1550 / 1490nm	40 / 38 / 38dB	< 0.8m	< 3.0m
AE3100G-1625	1310 / 1490 / 1550 / 1625nm	37 / 35 / 35 / 35dB	< 0.8m	< 3.0m
AE3100G-1650	1310 / 1490 / 1550 / 1650nm	37 / 35 / 35 / 35dB	< 0.8m	< 3.0m
FC/PC	FC Connector and PC Physical Type			
SC/APC	SC Connector and APC Physical Type			
AE3100-701	Optical Power Meter; select either [-70 ~ +10dBm] or [-50 ~ +26dBm]			
AE3100-702	Light Source Module			
AE3100-700	Visual Fault Locator, 650nm, 10mW			
DI-1000	DI-1000 Lightel Optical Fiber Scope & FiberPath™ Inspection Software			
AE4000-801	FiberPath™ Link Mapper			
AE4000-802	FiberTune Multi-Scan	AE4000-737P	Fiber Cleaning Pen	
AE4000-750	FC Connector	DS2400-703	2-Prong Power Cord plus Ground (Europe except UK)	
AE4000-753	SC Connector	308-0022-01	3-Prong Power Cord plus Ground (US)	
AE4000-751	LC Connector	DS2400-704	3-Prong Power Cord plus Ground (Australia)	
AE4000-752	ST Connector	DS2400-705	3-Prong Power Cord plus Ground (UK)	
FC-FC-S0.9-L2	Physical Connector (PC) Type (included)	UE24WCP	AC/DC Adapter 12V/2A	
FC/APC	Angle Physical Connector (APC) Type	AE4000-002	Carrying Case	
AE3100-010	English Instruction Manual (hard copy)	AE4000-737	Optical Fiber Cleaner Kit	
AE3100-003	Quick Reference Guide	AE3100-001	CD with Instruction Manual and PC Management Software	

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