

# AE3100CP/DP/EP/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 3m attenuation dead zone
- Triple and quadruple wavelength testing at good dynamic range (35 - 43 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
- Single Mode live filtered port



## Overview

From Deviser Instruments' 4th generation of OTDR, the AE3100 marks a giant leap forward in fiber-optic test performance and utility. CP, DP, and EP models support three wavelengths, with dynamic range up to 43dB; AE3100G tests four wavelengths, customizable to your needs. Input signals that contain both 1310nm & 1550nm wavelengths are automatically filtered.

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.

## Applications

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

- FTTx
- Long Haul Networks
- Passive Optical Networks (xPON)
- Local Area Networks (LAN)
- Metropolitan Area Networks (MAN)

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	≤ 0.8	≤ 3.0
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			
EP-1	1310 / 1550 / 1625	43 / 41 / 41		
EP-2	1310 / 1550 / 1650			
EP-3	1310 / 1550 / 1490			
G	1310 / 1490 / 1550 / select either 1625 or 1650	37 / 35 / 35 / 35		

\* At 25°C ± 5°C; 5ns pulse width; non-saturated reflective event; 5cm distance resolution.

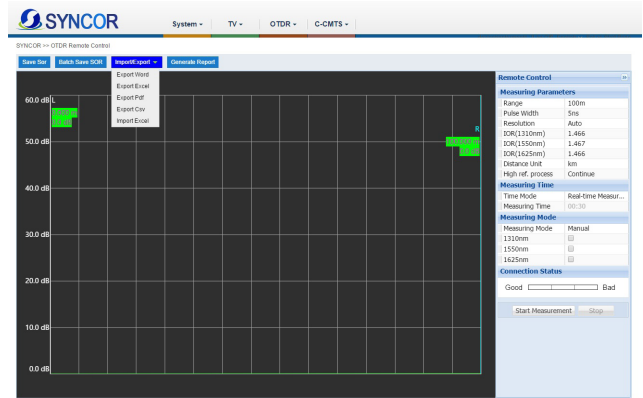
### FiberPath™

FiberPath simplifies OTDR trace interpretation by IDing reflective events and mapping them in an easy-to-understand format. Experienced and inexperienced technicians alike will appreciate the simplified display. FiberPath's Auto Test automatically runs many tests at different wavelengths and pulse widths.



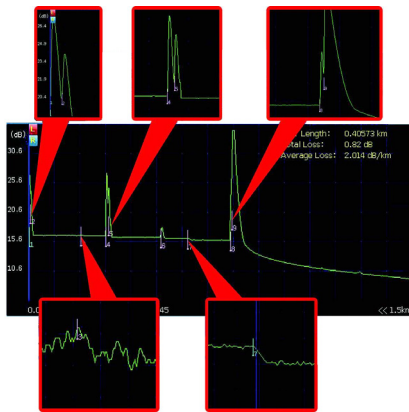
### Remote Control

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.



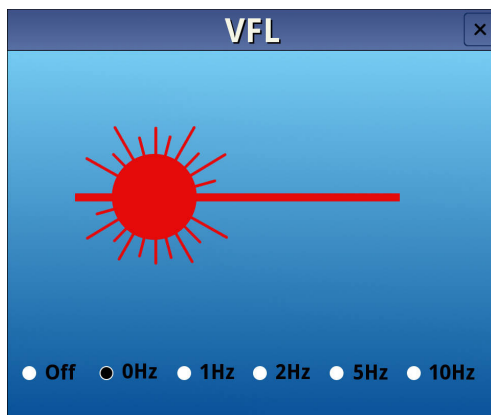
### OTDR

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

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	5cm ~ 12.8m		
Sampling Points	256,000 max		
Distance Accuracy (m)	± (0.75m + 0.001% x Distance + Sampling Resolution)		
Group Refractive Index	1.30000 ~ 1.70000		
Linearity	0.03 dB/dB		
Loss Threshold	0.001dB		
Loss Resolution	0.001 dB		
Refresh Rate	4 fields/second		
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	>80,000 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)

Functions & Accessories (cont'd)				
Optical Power Meter	Calibration $\lambda$	1310 / 1550nm		
	Operating $\lambda$	850 / 980 / 1300 / 1310 / 1490 / 1550 / 1610nm Customized range up to 1700nm available (1625nm & 1650nm)		
	Range	Select from [-70 ~ +10dBm] or [-50 ~ +26dBm]		
	Resolution	$\pm 0.17$ dB		
Laser	Wavelength	1310 / 1550 / 1625nm (CP-1, DP-1, & EP-1 models)	1310 / 1550 / 1650nm (CP-2, DP-2, & EP-2 models)	1310 / 1550 / 1490nm (CP-3, DP-3, & EP-3 models)
	Output Power	> -4dBm		
	Modes	CW / 1kHz / 2kHz / 1kHz + Flash / 2kHz + Flash		
VFL	Wavelength	650 $\pm$ 10nm		
	Power	1mW		
	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)		
AFEI400 Auto Fiber Endface Inspector				
Field of View	425 x 360 $\mu$ m	Compatibility	Use with AE3100, AE1000, or Windows PC	
Resolution	< 1.5 $\mu$ m	Magnification	400x	
Fault Size Detection	0.75 $\mu$ m	Camera	1.3 million megapixel, 1/2" CMOS	
Focus Range	$\pm$ 1mm (max $\pm$ 3mm), auto-focus	Live Image	800 x 800, JPG	
Light Source	Blue LED	Storage Temp.	-20 ~ +70°C	
Power Source	USB 2.0 port	Measure speed	< 1s	
Dimensions (HxWxL)	1.9" x 1.0" x 7.1" (47mm x 24.5mm x 181mm)	Weight	5.4oz (152g)	
General Specifications				
Display	7" 800x480 dot matrix TFT LCD touchscreen			
Interface	2x USB 2.0; 1x RJ45 LAN (10M/100M); 1x SD card slot (64GB max)			
Power	Supply	100 ~ 240V, 1.5A, 50~60Hz (AC); max 12V / 2Ah (DC); total max power 24 W		
	Consumption	< 3.5W		
Battery	7.4V / 5300mAh Li-ion battery, 39.22 Wh			
Operating Time	~ 11 hrs on full charge			
Languages	Chinese, English, Spanish, Portuguese, French, Russian, Italian (German, Korean, Arabic optional)			
Temperature	Operation	-10°C ~ +50°C		
	Storage	-40°C ~ +70°C		
Relative Humidity	0 ~ 95%, non-condensing			
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 (1mW)
- Optical Light Source
- Li-Ion Battery & AC/DC Adapter
- Carrying Case & Stylus
- Optical Power Meter (select either [-70 ~ +10dBm] or [-50 ~ +26dBm])
- Calibration & Quality Certificates
- Quick Reference Guide
- Cleaning Swab
- CD with Instruction Manual
- Cleaning Swab
- FC/PC or APC Connectors

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
AE3100EP-1	1310 / 1550 / 1625nm	43 / 41 / 41dB	< 0.8m	< 3.0m
AE3100EP-2	1310 / 1550 / 1650nm	43 / 41 / 41dB	< 0.8m	< 3.0m
AE3100EP-3	1310 / 1550 / 1490nm	43 / 41 / 41dB	< 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, 1mW			
AFEI400	Auto Fiber Endface Inspector			
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	Instruction Guide & PC Management Software on CD

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