

# AE3100DP-1

## 3 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 wavelength testing at good dynamic range
- 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. DP1 support three wavelengths, with dynamic range up to 43dB;

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)

|                                  |                    |
|----------------------------------|--------------------|
| <b>Wavelengths (nm)</b>          | 1310 / 1550 / 1625 |
| <b>Dynamic Range (dB)</b>        | 40 / 38 / 38       |
| <b>Event Deadzone* (m)</b>       | ≤ 0.8              |
| <b>Attenuation Deadzone* (m)</b> | ≤ 3.0              |

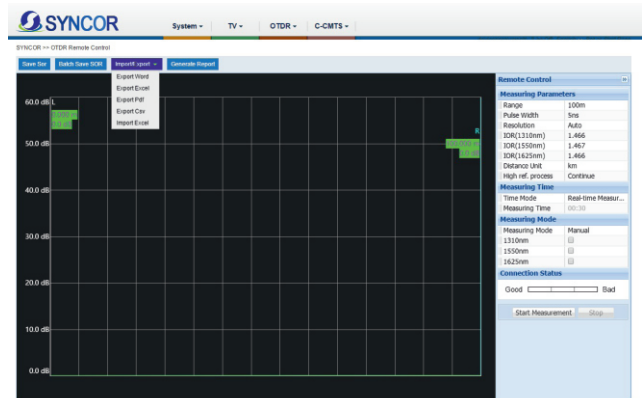
## FiberPath™

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.



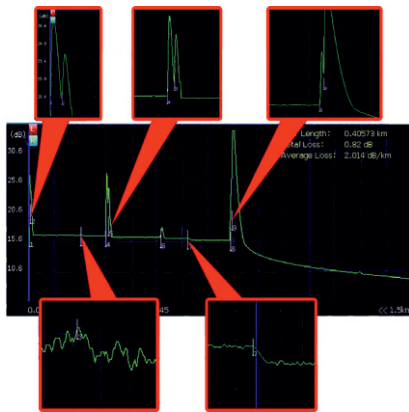
## Remote Control

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.



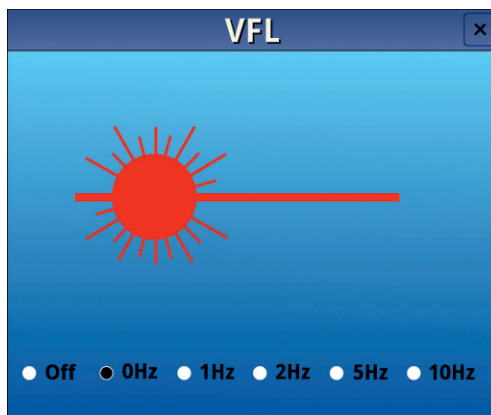
## OTDR

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<br>Customized range up to 1700nm available (1625nm & 1650nm) |                                                         |
|                                      | Range                 | Select from [-70 ~ +10dBm] or [-50 ~ +26dBm]                                                                |                                                         |
|                                      | Resolution            | $\pm$ 0.17dB                                                                                                |                                                         |
| Laser                                | Wavelength            | 1310 / 1550 / 1625nm                                                                                        |                                                         |
|                                      | 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<br>Use with AE3100, AE1000, or Windows PC |
| Resolution                           |                       | < 1.5 $\mu$ m                                                                                               | Magnification<br>400x                                   |
| Fault Size Detection                 |                       | 0.75 $\mu$ m                                                                                                | Camera<br>1.3 million megapixel, 1/2" CMOS              |
| Focus Range                          |                       | $\pm$ 1mm (max $\pm$ 3mm), auto-focus                                                                       | Live Image<br>800 x 800, JPG                            |
| Light Source                         |                       | Blue LED                                                                                                    | Storage Temp.<br>-20 ~ +70°C                            |
| Power Source                         |                       | USB 2.0 port                                                                                                | Measure speed<br>< 1s                                   |
| Dimensions (HxWxL)                   |                       | 1.9" $\times$ 1.0" $\times$ 7.1" (47mm $\times$ 24.5mm $\times$ 181mm)                                      | Weight<br>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)                                                                                           |                                                         |