

Description

We are pleased to introduce the DR-500 series handheld full color display Optical Time Domain Reflectometer from Advanced Fiber Solutions.

The unit is one of the most compact OTDR’s on the market today, ideal for handheld use and pocket transportation. The unit is light weight, weighing less than 1.6 lbs. It is extremely rugged with a thick protective rubber boot surrounding the outer case. It also offers a long battery life enabling the technician to continuously test up to ten hours.

It is a full featured OTDR offering five different models to choice from, with a dynamic range starting at 26dB going up to 42dB. The DR500 series supports a wide range of cable plant applications ranging from local area networks to long haul applications.

Along with industry leading dynamic range and dead zones, the unit offers a number of wavelength options for both single mode and multimode applications with dual, tri and quad models available. Wavelength options include 850nm, 1300nm, 1310nm, 1490nm, 1550nm and 1625nm.

The unit is simple to operate and is the perfect installation, maintenance and link troubleshooting tool. It is the ideal OTDR for either the inexperienced or the experienced technician. The unit supports both a manual mode for the expert user which enables parameter setup and an automatic mode for the less experienced user which allows one touch auto run testing. The unit utilizes active sync for seamless USB connectivity with desktop software for advanced data analysis and storage capabilities.

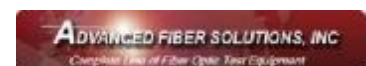
It is fully compliant and compatible with the .sor (Standard OTDR Record) file format outlined in the Belcore GR-196/SR-4731 OTDR data standardization document. Additional save options includes a .pdf save function which enables the technician to quickly save and transfer documentation to their customers if required. Other optional features offered by this industry leading OTDR include a built in Power Meter, Light Source and latest addition the USB Fiber Scope.

Each unit comes with a DR-500 series product manual, USB data transfer cable, the DR-500 series PC software, report certificate and a soft carrying case.



Product Highlights and Key Features

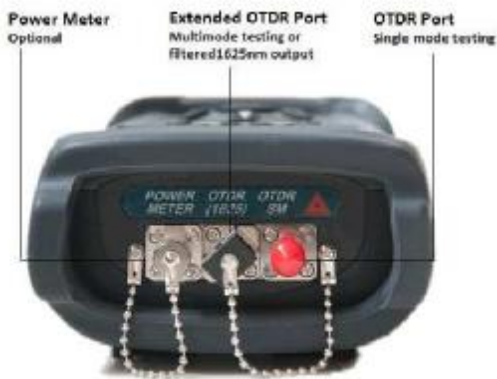
| | |
|---|---|
| ◦ Compact and rugged case | ◦ Bellcore .sor format compatible |
| ◦ Dual, tri and quad models available | ◦ .pdf save function for expediting data transfer to customer |
| ◦ Events table and auto test function | ◦ USB jump drive compatible for extra storage |
| ◦ Up to 43dB Dynamic Range | ◦ 10 hours of operation, fast charging Li-Ion battery |
| ◦ Weight less than 1.6 lbs | ◦ High contrast full color display |
| ◦ 5 model options to select from | ◦ User friendly and easy too operate |
| ◦ Distance measurement option: Feet or Meters | ◦ Industry leading dead zones |
| ◦ Optional features: Power Meter & Light Source | ◦ Accessories: USB Fiber Scope |



| All Units | |
|----------------------------------|---|
| Distance Range | 2,5,10,20,40,80,120,160,240 Km |
| Data Points | Up to 64,000 |
| Loss Resolution | 0.001dB |
| Distance Accuracy | $\pm(0.5+5 \cdot 10^{-5} L+(\delta n/n) \cdot L)$ |
| Refractive Index Range | 1.0000.....2.0000 |
| Language | English |
| OTDR Modes | Full Auto, Expert and Real Time |
| Attenuation Measurement Accuracy | 0.05dB |
| Sampling Resolution | 0.16m.....7.6m |
| Storage Capability | ~ 1000 traces |
| Unit Measurement | Feet or Meters |

| Temperature Specifications | |
|----------------------------|--------------------------|
| Operation Temperature | 0°.. +40°C |
| Relative Humidity | 95% Without Condensation |

| Unit Specifications | |
|---------------------------|---|
| Display | 3.5" TFT 16 bit full color |
| Connection with PC | USB and ActiveSync |
| Power Supply | Li-Ion battery (10 hours) / External supply 12V @ 1.5amps |
| Optical Connector Style | ST, FC & SC |
| Dimensions (without boot) | 6.5 inches X 3.65 inches X 2 inches |
| Weight | 1.6 lbs |



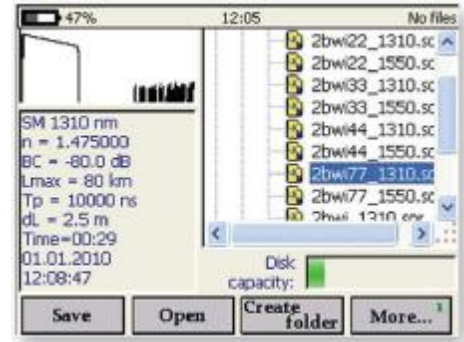
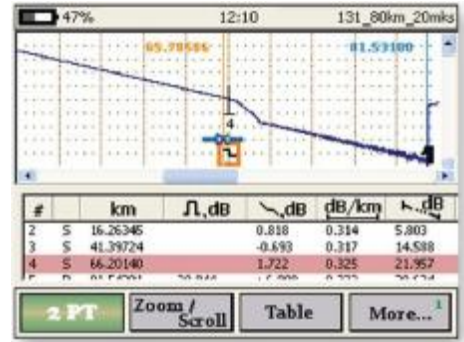
Firmware Software

Reliable and powerful firmware offers a host of features such as **Auto Trace Analysis**, **Batch Processing** and **Macrobend Detection**.

Once a measurement is complete the software will perform auto trace analysis of the line (if the option is selected by the technician). The software will create a table of events enabling the end user to auto-zoom in on highlighted events for further analysis.

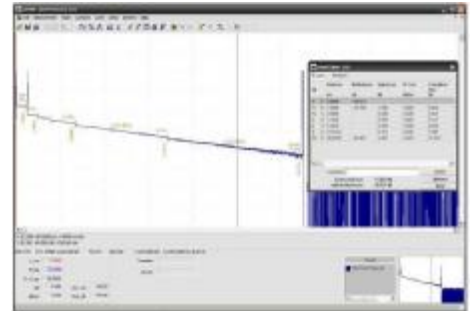
Other features include a **Live Mode** where the trace is continuously being updated and adjusted according to the feedback from the back reflection of the inserted optical pulse, simultaneous **Multi-Wavelength** measurement, **Auto File Naming**, and a **Power Management** feature designed to extend the life of the battery.

An intuitive GUI makes running, saving and opening traces a breeze. There is also an option of an extended external storage capability by simply adding a standard USB jump drive to the side of the unit. The unit has internal storage capability to store up to 1000 traces.



Desktop Software

It utilizes the same powerful OTDR PC software package developed for the uOR series USB powered OTDR. The technician can transfer the .sor file from the handheld unit to the PC software for advanced data analysis and review enabling the end user to determine all the necessary characteristics of the optical fiber. The PC software is capable of displaying, storing, reading, printing and analyzing several traces simultaneously.



Ordering Information

(Multimode 850/1300nm)

| Model Number | Dynamic Range & Dead Zones | Connector Style | | | No Port | No Connector |
|---|--|---|---------------------|---------------------|----------------------|--------------------------------|
| <u>AF-DRXXX</u> | <u>X</u> | <u>XX</u> 3 Available Types (UPC, ST, FC or SC) | | | <u>Extended Port</u> | <u>Extended Port Connector</u> |
| 515 □ = 850/1300nm App: Multimode | C DR = 26/28dB EDZ = 1.5m ADZ = 9m | U1 UPC-ST | U2 UPC-FC | U3 UPC-SC | ---- | ---- |
| <i>Part Number Example DR515-C-U2 (MM unit with UPC-FC connector)</i> | | | | | | |

(Single Mode 1310/1550nm)

| Model Number | Dynamic Range & Dead Zones | Connector Style | | | | Connector Style |
|---|--|---|---------------------|---------------------|----------------------|--------------------------------|
| <u>AF-DRXXX</u> | <u>X</u> | <u>XX</u> 3 Available Types (UPC, ST, FC or SC) | | | <u>Extended Port</u> | <u>Extended Port Connector</u> |
| 525 □ = 1310/1550nm App: Single Mode | A DR = 27/25dB EDZ = 2m ADZ = 10m | U1 UPC-ST | U2 UPC-FC | U3 UPC-SC | ---- | ----- |
| | C DR = 37/34dB EDZ = 1m ADZ = 5m | U1 UPC-ST | U2 UPC-FC | U3 UPC-SC | ---- | ---- |
| | D DR = 42/41dB EDZ = 1.5m ADZ = 9m | U1 UPC-ST | U2 UPC-FC | U3 UPC-SC | ---- | ---- |
| <i>Part Number Example DR525-A-U2 (class A with UPC-FC connector)</i> | | | | | | |



(Single Mode 1310/1490/1550nm)

| Model Number | Performance Class | Connector Style | | | | Connector Style |
|--|---|---|---------------------|---------------------|----------------------|--------------------------------|
| <u>AF-DRXXX</u> | <u>X</u> | <u>XX</u> 3 Available Types (UPC, ST, FC or SC) | | | <u>Extended Port</u> | <u>Extended Port Connector</u> |
| 527 □ = 1310/1490nm 1550nm App: Single Mode (FTTx) | C DR = 37/36/34dB EDZ = 1m ADZ = 5m | U1 UPC-ST | U2 UPC-FC | U3 UPC-SC | ---- | ---- |
| <i>Part Number Example DR527-C-U3 (class C with UPC-SC connector)</i> | | | | | | |

(Single Mode 1310/1550/1625nm)

| Model Number | Dynamic Range & Dead Zones | Connector Style | | | 1625nm | Extended Port Connector Style | | |
|--|---|---|---------------------|---------------------|----------------------------------|---|---------------------|---------------------|
| <u>AF-DRXXX</u> | <u>X</u> | <u>XX</u> 3 Available Types (UPC, ST, FC or SC) | | | <u>X</u> <u>Extended Port</u> | <u>XX</u> 3 Available Types (UPC, ST, FC or SC) | | |
| 529 □ = 1310/1550nm 1625nm App: Single Mode (PON) | C DR = 37/35/34dB EDZ = 1m ADZ = 5m | U1 UPC-ST | U2 UPC-FC | U3 UPC-SC | E | Y1 UPC-ST | Y2 UPC-FC | Y3 UPC-SC |
| | D DR = 42/41/40dB EDZ = 1.5m ADZ = 9m | U1 UPC-ST | U2 UPC-FC | U3 UPC-SC | E | Y1 UPC-ST | Y2 UPC-FC | Y3 UPC-SC |
| <i>Part Number Example DR529-C-U3-E-Y3 (class C with 1310/1550 UPC-SC connector & 1625 UPC-SC)</i> | | | | | | | | |

Ordering Information Continued

(Single Mode 1310/1550nm & Multimode 850/1300nm)

| Model Number | Dynamic Range & Dead Zones | Connector Style For SM Port | | | MM Port | Connector Style For MM Port | | |
|--|--|--|---------------------|---------------------|-------------------------|--------------------------------|---------------------|---------------------|
| AF-DRXXX | X | XX 6 Available Types (UPC □ ST, FC or SC) (APC □ ST, FC or SC) | | | Extended Port MM | Extended Port Connector | | |
| 535 □ = 1310/1550nm 850/1300nm App: Single Mode & Multimode | C SM DR = 35/32dB MM DR = 26/28dB EDZ = 1.0m ADZ = 5m | U1 UPC-ST | U2 UPC-FC | U3 UPC-SC | M | X1 UPC-ST | X2 UPC-FC | X3 UPC-SC |
| | | T1 APC-ST | T2 APC-FC | T3 APC-SC | | | | |
| <i>Part Number Example DR535-C-U3-M-X1 (class C with 1310/1550 UPC-SC connector & 850/1300 UPC-ST)</i> | | | | | | | | |

Definitions:

DR = Dynamic Range

EDZ = Event Dead Zone

ADZ = Attenuation Dead Zone

PL = General Purpose Power Meter / PH = High Power Power Meter

| Power Meter | | |
|---------------------------------------|-----------------------|-------------------------------|
| Parameters | Single Mode | Multimode |
| Calibrated Wavelengths- PH/PL | 1310/1490/1550/1625nm | 650/850nm |
| Power Range in dBm- PL | +7... -65dBm | +3...-30dBm / +3.....-60dBm |
| Power Range in dBm- PH | +27... -45dBm | +23...-10dBm / +23.....-40dBm |
| Measurement Accuracy/dB- PH/PL | +/- 5% | +/-12% / +/- 8% |
| Linearity/dB- PH/PL | +/- 2.5% | +/-6% / +/-4% |
| Resolution/dB- PH/PL | 0.01 | 0.01 |

| Light Source (only available with Power Meter on SM models) | | |
|---|---------------------------|-----------|
| Parameters | Single Mode | Multimode |
| Wavelength | 1310/1550nm | N/A |
| Output Power in dBm | > -4 | N/A |
| Power Level Instability in dB | +/- 0.05dB (after 15 min) | N/A |
| Operating Mode | CW&2KHz | N/A |
| Optical Connector | Shared with OTDR port | N/A |

Note:

1. Power Meter comes with interchangeable connector.
2. VFL is an available option for quantity orders

Ordering Information for Optional Features

| Add to end of standard Part Number | | | |
|------------------------------------|------------------------|---|--|
| General Purpose Power Meter | High Power Power Meter | General Purpose Power Meter with Laser Source | High Power Power Meter with laser Source |
| -PL | -PH | -PLS | -PHS |

Our latest introduction to the DR500 series line is the ferrule end fiber scope which enables the technician to view the end surface of the ferrule with an enhanced image of the fiber core and cladding.

With AF-DI-1000* scope attached to the DR500 series OTDR via the side USB port the technician is able to determine the quality of the surface of the ferrule. The fiber scope enables the technician to see scratches, scrapes, dirt or any residual that might be on the ferrules surface area. If desired the fiber end image can be saved and downloaded to the PC for further analysis.

The DI-1000 scope includes a range of connectors and tips for a wide range of applications. Please see the ordering information grid below for the complete list of accessories included with the AF-DI-1000 kit. Other connectors and tips that are not included in the standard package are also available. Please contact Advanced Fiber Solutions or your local distributor for more information.



**Not included in DR500 series kit and should be ordered separately*

Ordering Information for Fiber Scope

| Fiber Optic Scope | |
|--------------------------|---|
| DR500 Series Fiber Scope | Kit Includes |
| DI-1000 | DI-1000 Standard Package: 1. DI-1000 USB 2.0 Digital Inspection probe 2. Tip for SC and FC PC type female connectors 3. Tip for LC PC type female connectors 4. Universal tip for 2.5mm PC male connectors 5. Universal tip for 1.25mm PC male connectors 6. Carrying case 7. CD with Connector View (standard) software, driver, and User's manual |