# AXS-110 All-Fiber OTDR

FTTx PON AND LAN/WAN INSTALLATION AND TROUBLESHOOTING UNIT



A powerful handheld OTDR unit designed for splitter characterization in FTTx networks; can be configured as a quad unit with both singlemode and multimode wavelengths.

# **KEY FEATURES**

Event dead zone: 0.8 m

Wavelengths: 850/1300/1310/1490/1550/1625 nm

Dynamic range: up to 37 dB

Battery autonomy: 8 hours

## APPLICATIONS

FTTx/MDU PON network testing

LAN/WAN testing

Private network testing

# COMPLEMENTARY PRODUCTS AND OPTIONS



Fiber Inspector Probe



Data Post-Processing Software FastReporter Soft Pulse Suppressor Bag



Assessing Next-Gen Networks



- 9 USB A | Data transfer using memory stick.
- 10 Fiber Inspection Probe Port

TECHNICAL SPECIFICATIONS®				
Wavelengths (nm)	850/1300/1310/1490/1550/1625			
Dynamic range <sup>b</sup> (dB)	24/25/37/33/35/37			
Pulse width (ns)	Multimode: 5, 10, 30, 100, 275, 1000 Singlemode: 5, 10, 30, 100, 275, 1000, 2500, 10 000			
Event dead zone $^{\rm c}$ (m)	0.8			
Attenuation dead zone $^{\rm c}$ (m)	3.5/4.5/4/4.5/4.5/4.5			
Linearity (dB/dB)	±0.03			
Loss threshold (dB)	0.01			
Loss resolution (dB)	0.01			
Sampling resolution (m)	Multimode: 0.08 to 2.5; singlemode: 0.08 to 5.0			
Sampling points	Up to 64 000			
Distance uncertainty <sup>d</sup> (m)	$\pm$ (0.75 + 0.0025 % x distance + sampling resolution)			
Distance range (km)	Multimode: 0.1 to 40; singlemode: 0.65 to 260			
Typical real-time refresh (Hz)	4			
Memory capacity	500 traces			
Measurement time	User-defined			
Stable source output power $^{\rm e}$ (dBm)	Multimode: -1.5; singlemode: -7.5			
Visual fault locator (optional)	Laser, 650 nm $\pm$ 10 nm CW typical P <sub>out</sub> of 1.4 mW open beam			

### OPTIONAL POWER METER<sup>f</sup>

Calibrated wavelengths (nm)	850, 1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610, 1625
Power range (dBm)	26 to -64 (GeX 2 mm)
Uncertainty	$\pm 5$ % $\pm$ 0.4 nW (up to 5 dBm)
Display resolution (dB)	0.01 (-54 dBm to P <sub>max</sub> ) 0.1 (-54 dBm to -64 dBm) 1 (-64 dBm to min)
Automatic offset nulling range <sup>g</sup>	Maximum power to -38 dBm
Tone detection (Hz)	270/1000/2000

GENERAL SPEC	IFICATIONS	
Size (H x W x D)		250 mm x 125 mm x 75 mm (9 <sup>7</sup> /8 in x 4 <sup>15</sup> /16 in x 3 in)
Weight		1 kg (2.2 lb)
Temperature	operating	-18 °C to 50 °C (14 °F to 122 °F)
	storage	-40 °C to 70 °C (-40 °F to 158 °F)
Relative humidity		0 % to 95 % non-condensing
Power		Li-ion batteries; 8 hours of continuous operation as per Bellcore TR-NWT-001138
Warranty (years)		1

## LASER SAFETY



21 CFR 1040.10 AND IEC 60825-1:2007 CLASS 1M WITHOUT VFL OPTION CLASS 3R WITH VFL OPTION

#### **Notes** a All b. Typ

- a All specifications valid at 23 °C ± 2 °C (73.4 °F ± 3.6 °F) with an FC/PC connector, unless otherwise specified.
  - Typical dynamic range with longest pulse and three-minute averaging at SNR = 1. Multimode dynamic range is specified for 62.5  $\mu$ m fiber, a 3 dB reduction is seen when testing 50  $\mu$ m fiber. AXS-11-12CD-23B is 24/25/32/30.
- c. Typical dead zone for multimode reflectance below -35 dB and singlemode reflectance below -45 dB, using shortest pulse.
  d. Does not include uncertainty due to fiber index.
- e. Typical output power is given at 1300 nm for multimode output and 1550 nm for singlemode output.
- f. At 23 °C  $\pm$  1 °C, 1550 nm and with FC connector. With OTDR in idle mode, battery operated.
- g. For ±0.05 dB, from 18 °C to 28 °C.





#### **ORDERING INFORMATION**



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