Key Benefits

- Future-proof, all-in-one solution includes optical, cable TV analysis, and metallic testing for verifying the installation of FTTx, RFoG, and RF PON networks

- Lightweight and compact design for easy mobility throughout the network

- Long battery life enables the user to test all day without stopping to charge the test equipment

- Easy learning curve with simple GUI

- FiberPath™ and Auto Test features simplify testing, reducing the need for OTDR trace interpretation

- Validate proper levels for both optical and cable TV installation, minimizing repair truck rolls and increasing customer satisfaction

Overview

As the demand for bandwidth continues to soar, with higher-than-ever smartphone and streaming video usage, cable operators must face the challenge of deploying fiber deeper into the network. And because efficiency, speed, accuracy, and reliability metrics are key for increasing workforce productivity, the natural conclusion is simple: communications service providers (CSP) require a high-performance, efficient, yet affordable test instrument for installing future networks such as FTTx, RFoG, and RF PON.

Brought to you by Deviser Instruments Inc, the AE2200 integrates cable TV analysis, metallic TDR testing and optical testing, including a fiberscope, OTDR, OPM, VFL and LS, future-proofing the investment in test equipment. The AE2200 enables faster, more efficient installations with only a single instrument, producing substantial savings to the CSP.

Key Benefits

- OTDR performance specifications with up to 2 wavelengths, perfect for FTTx, RFoG, and RF PON installation

- FiberPath™ and Autotest. FiberPath™ analyzes OTDR traces to display a map of the fiber link while identifying possible faults, reducing the need for OTDR trace interpretation

- Digital QAM and analog measurements (plus constellation display) for Cable TV installation verification

- Combines optical and metallic tests: OTDR, VFL, OPM, LS, Cable TV (RF) Test, TDR, and Fiberscope

- Fiberscope integration with FiberSpot software for identifying contaminated connector endfaces
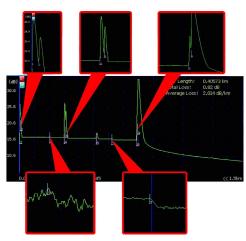
- Easy web-based back office integration

FiberPath™ (by option)

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 streamlined display.
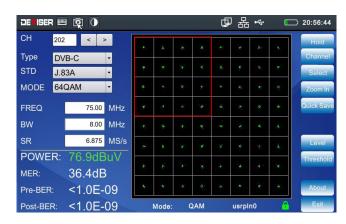

Fiber Inspection Probe (by option)

The majority of performance faults in fiber-optics are caused by contaminated connectors. Keep fiber endfaces and bulkheads free of dirt with the AE2200's built-in fiberscope application and automatic Pass/Fail analysis.

OTDR

The AE2200's high-performing OTDR is the ideal solution for testing the fiber in RFoG and FTTx applications. The OTDR can identify and locate link impairments, measure the insertion loss by LSA, 2Pt and 4Pt methods, and test optical return loss (ORL). Multi-wavelength input signals are automatically filtered.

Cable TV (RF) Measurements

The cable TV measurements included in the AE2200 include MER and Pre & Post BER testing for verifying proper installation of cable TV services.

TDR Measurements

The TDR can easily identify and locate possible impairments, helping to gauge the quality of coaxial cable used in a Cable TV network.

Optical Measurements

The AE2200 includes a suite of optical measurement tools, including a power meter (OPM), laser light source (OLS), and visual fault locator (VFL). The unit is available in numerous wavelength configurations for ensuring proper levels in networks such as RFoG and FTTx.

Specifications

AE2200 Model		A	B	C	S-1625	S-1650	S-1490
OTDR - Key Parameters							
Dynamic Range* (typical)	1310nm ±20nm	≥ 29dB	≥ 33dB	≥ 36dB			
	1550nm ±20nm	≥ 27dB	≥ 31dB	≥ 34dB			
	1625nm ±20nm				≥ 35dB		
	1650nm ±20nm					≥ 35dB	
	1490nm ±20nm						≥ 35dB
Deadzone**	Event	≤ 2m	≤ 1.5m	≤ 0.8m			
	Attenuation	≤ 7m	≤ 6m	≤ 4m			
OTDR - Other Parameters							
Pulse Width		3ns, 5ns, 10ns, 30ns, 50ns, 100ns, 200ns, 500ns, 1μs, 2μs, 5μs, 10μs, 20μs					
Measurement Time		5 secs. to 5 mins., real-time					
Refresh Rate		4 times/sec					
Distance							
Range		100m, 400m, 1.5km, 3km, 6km, 12km, 25km, 50km, 100km, 200km					
Sampling Resolution		5cm ~ 12.8m					
Max Sampling Points		256,000					
Group Reflection Rate		1.00000 ~ 2.00000					
Uncertainty (except fiber group reflection)		± (0.75m + 0.005% × Fiber Length + Sampling Resolution)		± (0.75m + 0.001% × Fiber Length + Sampling Resolution)			
Attenuation							
Linearity		0.05 dB/dB		0.03 dB/dB			
Threshold		0.01 dB					
Resolution		0.001 dB					
Reflection Accuracy		±2 dB					

Performance (1)		Performance (2)		Performance (3)	
Measurement mode	Manual; Auto	SOR file format	Bellcore GR 192 v1.1	Dual-Wavelength test	✓
Threshold settings	Manual; Auto	Loss measurement	LSA, 2pt, 4pt	Trace comparison	✓
Custom limit profiles	8	Screenshot	✓	Macro Bend test	✓
Distance offset	✓	Touchscreen keyboard	✓	Real time measurements	✓
Automatic correction	✓	Web browser	✓	FiberPath™ Link Mapper	✓
Online help	✓	Auto-shutdown / sleep	✓	Language support	English, Chinese, Spanish, Portuguese, French, Russian, Italian, German, Korean, Arabic

* Conditions: 25℃ ±5℃, 20μs pulse width, avg. time: 3min, SNR = 1.　　　　　** Conditions: 25℃ ±5℃, 5ns pulse width, non-saturated Event, distance resolution 5cm.

Options

Optical Power Meter (OPM)			
Measurement Range	**-70 ~ +10dBm**	**-50 ~ +27dBm**	**-60 ~ +3dBm**
Accuracy	± 0.17dB	± 0.23dB	
Calibrated Wavelength	1310 / 1490 / 1550 / 1610nm		850 / 1300nm
Working Wavelength	850 ~ 1700nm		

Optical Laser Source (OLS)				
AE2200 Model	**A, B, C**	**S-1625**	**S-1650**	**S-1490**
Wavelength (nm)	1310 / 1550	1625	1650	1490
Output Power	> -11dBm	> -4dBm		
Output Frequency	CW / 1kHz / 2kHz / 1kHz + Flash / 2kHz + Flash			

AFEI400 Auto Fiber Endface Inspector	
Field of View	425 x 360 µm
Magnification	400x
Resolution	< 1.5 µm
Fault Size Detection	0.75 µm
Focus Range	±1mm (max ±3mm), auto-focus
Interface	USB 2.0; use with AE2200, AE3100, or Windows PC
Camera	1.3 million megapixel, 1/2" CMOS
Measurement Speed	< 1s
Light Source	Blue LED
Dimensions (HxWxL)	1.9" × 1.0" × 7.1" (47mm × 24.5mm × 181mm)
Weight	5.4oz (152g)

TDR Module	
Interface	50Ω or 75Ω coaxial
Range	5m ~ 1600m
Accuracy	±1% of distance
Resolution	< 1% of distance

Digital Cable TV Module		
Frequency	Range	5 ~ 1050 MHz
	Accuracy	± 50×10-6 (20°C ±5°C)
	Bandwidth	280 kHz
Analog TV	Power Level	30 ~ 120dBµV
	Accuracy	±1.5dB
	Chan. Scan	Up to 150 channels
Digital TV	Power Level	30 ~ 110dBµV
	Accuracy	± 2dB
	Symbol Rate	4 ~ 7 MS/s
	MER	39 ± 2dB (typical)
	BER	1E-3 ~ 1E-9 pre/post

Visual Fault Locator (VFL)	
Wavelength	650 ± 10nm
Output Power	1mW
Distance	> 10km
Safety Standard	IEC 60825-1: 2007

General Specifications		
Display	5", 800x480 TFT LCD touchscreen	
Interface	1x USB 2.0 port; 1GB internal hard drive; 8GB SD card	
Battery	7.4V/5Ah battery, 37 Wh; ~10 hrs on full charge	
Power Consumption	< 2.0 W	
Power Supply	AC	100 ~ 240V, 0.5A, 50 ~ 60Hz
	DC	12V / 2A max
	Total Power	24W max
Operating Temperature	-10°C ~ +50°C	
Storage Temperature	-40°C ~ +70°C	
Relative Humidity	0 ~ 95%, non-condensing	
Dimensions (LxWxH)	7.0" x 5.7" x 2.1" (179mm x 145mm x 54mm)	
Weight	< 2.2lbs (1kg)	

Ordering Information

Included with all AE2200 FTTx Multi-Function Meter 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
- PC Management Software
- FC/PC or APC Connectors

SKU No.	Wavelengths	Dynamic Range	Event Deadzone	Attenuation Deadzone
AE2200A	1310 / 1550nm	29 / 27dB	≤ 2.0m	≤ 7.0m
AE2200B	1310 / 1550nm	33 / 31dB	≤ 1.5m	≤ 6.0m
AE2200C	1310 / 1550nm	36 / 34dB	≤ 0.8m	≤ 4.0m
AE2200S-1625	1625nm	35dB	≤ 0.8m	≤ 4.0m
AE2200S-1650	1650nm	35dB	≤ 0.8m	≤ 4.0m
AE2200S-1490	1490nm	35dB	≤ 0.8m	≤ 4.0m
FC/PC	FC Connector and PC Physical Type			
SC/APC	SC Connector and APC Physical Type			
AFEI400	Auto Fiber Endface Inspector & FiberSpot™ Inspection Software			
AE2200-802	FiberPath™ Link Mapper			
AE2200-204	TDR Module			
AE2200-205	Digital Cable TV Module			
AE2200-009	150 Mbps USB Wi-fi Dongle		AE4000-737P	Fiber Cleaning Pen
AE2200-820	Remote Measurement		DS2400-703	2-Prong Power Cord plus Ground (Europe except UK)
AE4000-750	FC Connector		308-0022-01	3-Prong Power Cord plus Ground (US)
AE4000-753	SC Connector		DS2400-704	3-Prong Power Cord plus Ground (Australia)
AE4000-751	LC Connector		DS2400-705	3-Prong Power Cord plus Ground (UK)
AE4000-752	ST Connector			