

CMA5000a – OTDR

Anritsu

Discover What's Possible™

CMA5000a – OTDR Product Introduction



Anritsu Corporation

CMA5000a-E-L-2

Slide 1

CMA 5000 OTDR

Available Modules

Model Number	Wavelengths	Dynamic Range	Model Number	Wavelengths	Dynamic Range
5225	1310/1550nm	37/36dB	5261	QUAD SM/MM: 850/1300nm (62.5um) /1310/1550nm	24/26dB
5235	1310/1550nm	40/40dB			35/35dB
5236	1310/1550/1625nm	40/40/40dB	5262	QUAD SM/MM: 850/1300nm (62.5um) /1310/1550nm	24/26dB
5245	1310/1550nm	43/45dB			40/40dB
5246	1310/1550/1625nm	43/45/43dB	5266	850/1300nm – 62.5um	24/26dB
5254	1550nm	50dB	5269	850/1300nm – 50um	24/26dB
5260	QUAD SM/MM: 850/1300nm (50um) /1310/1550nm	24/26dB	5283	1310/1383/1550/1625nm	35dB
		35/35dB	5491	1310/1490/1550nm	40/40/40dB
			5493	1310/1490/1550/1625nm	37dB

CMA Series OTDRs

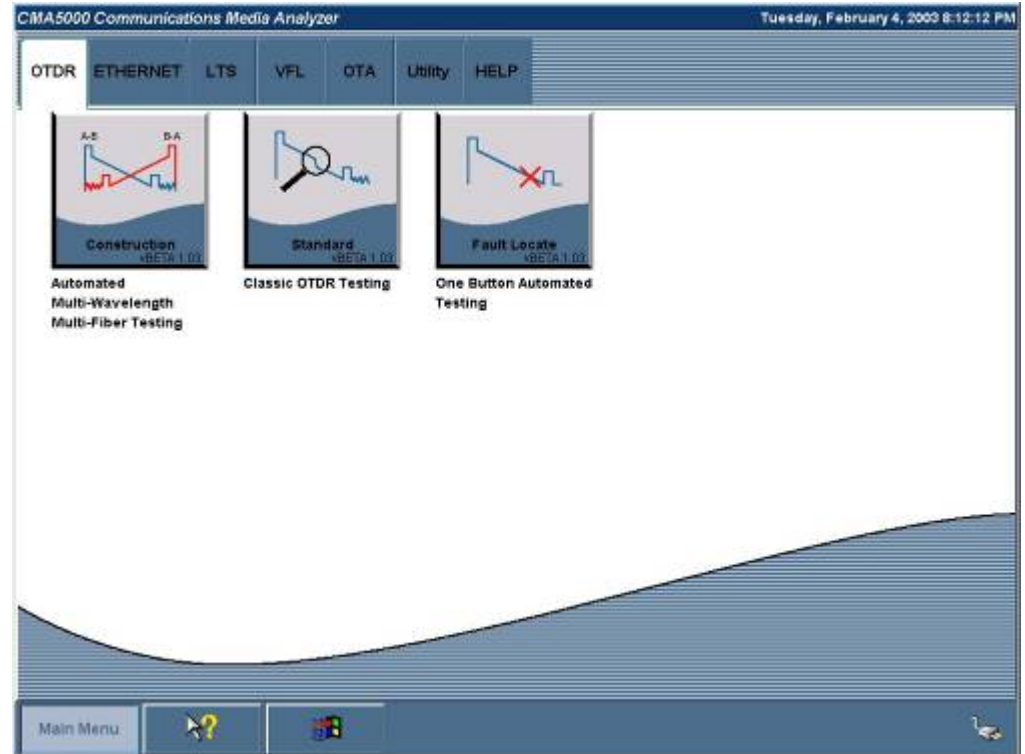
Key Features and Benefits

- **Unparalleled data sampling - Up to 256,000 data points**
 - » Twice as many as the nearest competitor!
 - » Unparalleled waveform creation
- **Ultra-fast real time screen update - 0.1 sec**
 - » Great for optimizing splices/connectors
 - » Gives perception of fast testing
- **Fully configurable to your customer's needs**
 - » Over 20 different optics choices – single mode or multimode, 25 to 50dB, dual, tri- or quad wavelengths
- **State of the art platform**
 - » Powerful PC, all common I/O
 - » Active product – continued development
- **Designed for simplicity and ease of use**
 - » Dedicated testing modes – no macros
 - » One button testing (AUTO-TEST)
 - » Minimal set-up time, maximum testing time
 - » A strength for all skill levels
- **Superior trace linearity – 0.04 dB/dB**
 - » Provides greater measurement accuracy and consistency
- **Overlay up to 8 traces simultaneous**
 - » Compare between wavelengths to see stresses effecting the cable
 - » Compare between fibers in a cable to see inconsistencies

Dedicated, Easy to Use Software

Testing Modes

- **Fault Locate**
 - » One Button Automated Testing
- **Standard**
 - » Traditional OTDR Testing
- **Construction**
 - » Automated Multi-Wavelength Multi-Fiber Testing
- **Loss Test Set**
 - » Integrated Power Meter and Light Source
- **Visual Fault Locator**
 - » Visible Red Light
- **Video Inspection Probe**
 - » Connector inspection microscope



Fault Locate Mode

One Button Automated Testing

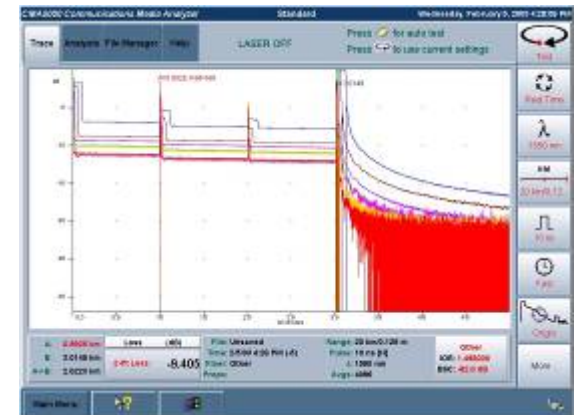
- **One-button break/end locator**
- **Quick test for cable damage**
- **Ideal testing mode for inexperienced users**
 - » Launch condition verified
 - » Test parameters automatically selected
 - » Data averaged just long enough to produce valid results
 - » Easy to read results for even the most inexperienced user
 - » Includes break/end location, span loss and distance past prior event



Standard OTDR Mode

Traditional OTDR Testing

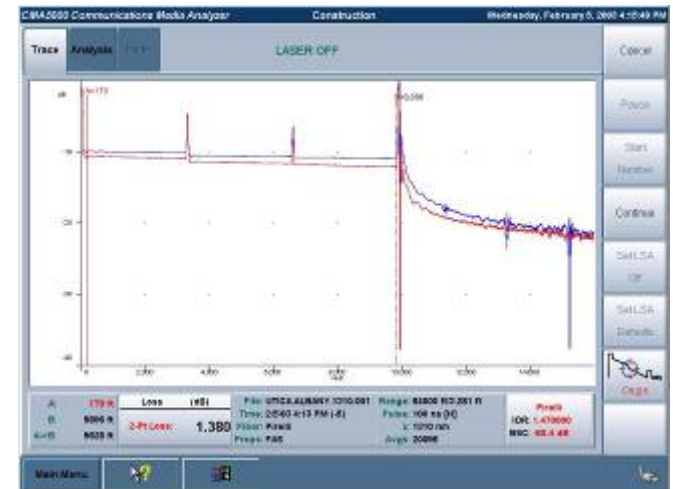
- **Full functionality OTDR testing**
 - » Multiple trace comparison
 - » Automated or manual parameter selection – your choice
 - » Selectable display modes - from A, B, Origin or Anywhere (zoom box)
- **Customize the unit**
 - » Units of measure
 - » File save format
 - » File save location
 - » Reflectance calculation
- **Complete event table control**
 - » Break/end threshold
 - » Loss specification
 - » Reflectance specification
 - » End to end loss



Construct OTDR Mode

Automated Multi-Wavelength Testing

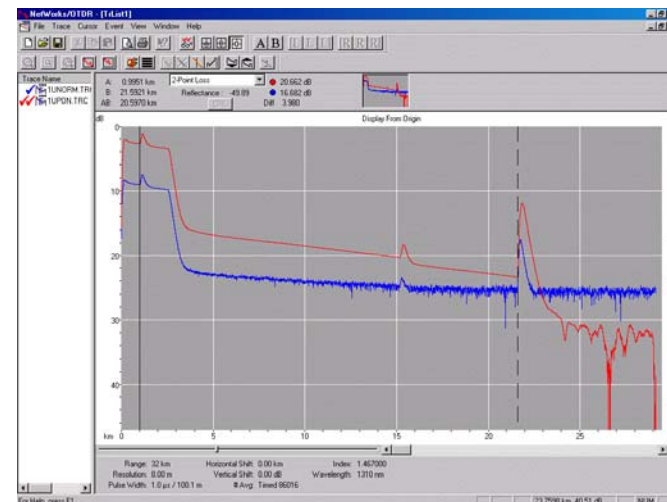
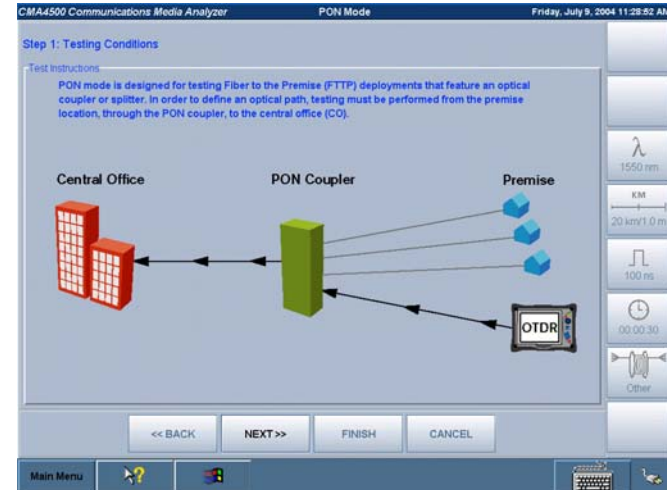
- Automated testing of multiple fiber cables
- Test multiple fibers at multiple wavelength quickly and easily
- Enter the information once and test/save each fiber with a single key press
- Ensures consistency in filename and parameters
- Combines the best of CMA 4000 Construction and Multiple Wavelength modes



PON Mode

Dedicated FTTx testing

- Designed GUI for testing networks featuring optical splitters
- Parameters optimized for testing the high losses associated with optical splitters
- Accurate end to end loss and splitter classification



Blue: Normal OTDR
Red: PON Mode

Loss Test Set Mode

Optional Power Meter and Light Source

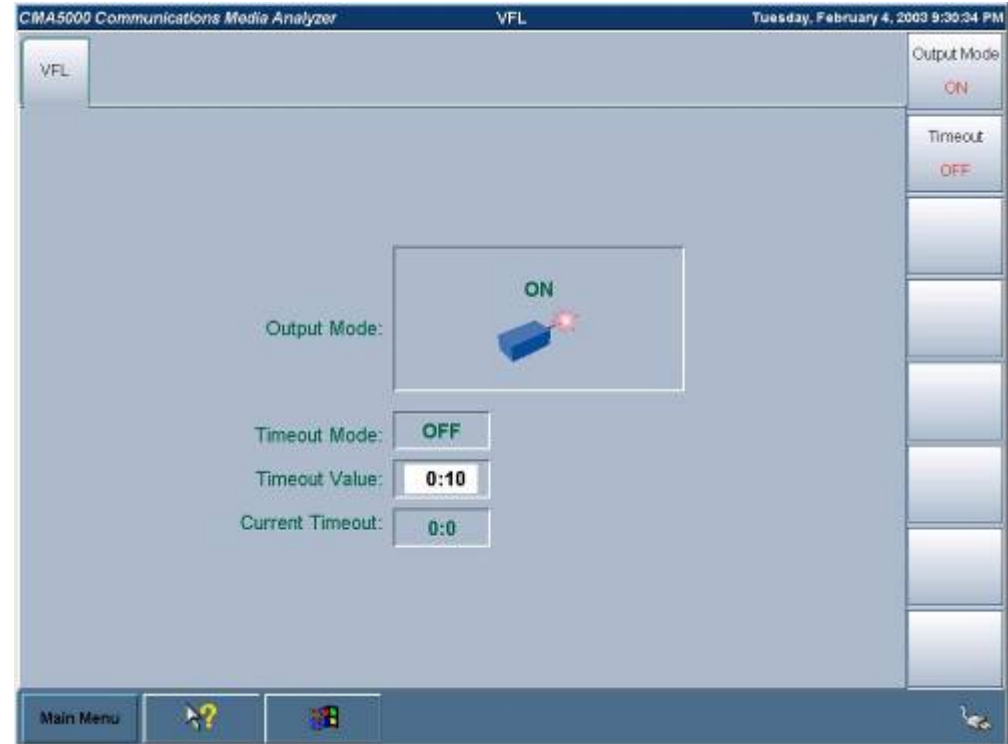
- Adds a stabilized mode to the OTDR laser for point to point testing
 - » More cost effective than buying stand-alone handheld sources
- CW, 1kHz or 2kHz output modes
- Universal connector easily adapts to all connector styles
 - » Uses the same UC-130-XX adapters as the OTDR
- High (-8 dBm) output provides exceptional dynamic range for testing even the longest fibers
 - » (-8 dBm output) – (-65 dB sensitivity)
= 57 dB of range
- High power CATV range
 - » +20 to -55 dBm
- Data table for easy storage of results



Visual Fault Locator Mode

Optional “Red Light” Test

- Visible **red** light for troubleshooting within the OTDR dead zone
- Provides easy identification of a particular fiber
- Select output mode: **CW** or **2 KHz** modulated
- Universal **2.5 mm** connector fits all standard size connectors
- **0dBm (1mW)** max output
 - » ~5km (3 mile) range



Test Fiber Modules

- The additional bay in the CMA5000 can be used to house a test fiber module or as they are commonly referred to launch boxes.
- Configuration: Single mode models are 1.1 km of SMF-28 with choice of FC, ST or SC connectors
- Allows initial connector characteristics such as loss and reflectance to be measured
- Integrated design means there is one less piece of test equipment to carry



CMA 5000

ORL Testing Solution

- **Same Accuracy as an ORL meter**

- » $\pm 1\text{dB}$ at 1310 and 1550nm, $\pm 2\text{dB}$ at 1625nm

- **Easy to Use**

- » 1 Button Test
- » Reference values stored within the module eliminate the need for referencing and mandrel wrapping

- **Less Expensive**

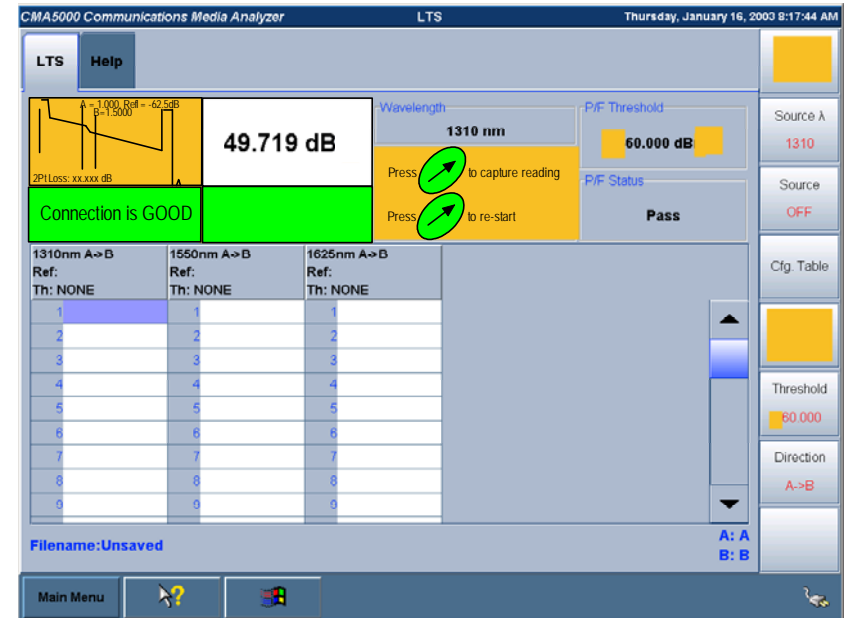
- » Half the price of a typical ORL meter

- **Increased Flexibility**

- » Test at 1310, 1550, or 1625nm

- **Exclusive Troubleshooting Mode**

- » Provides table of reflective events and their contribution to the overall ORL value



ORL Testing Solution

GUI Features

- Application tab on the main testing mode screen
- Built in connection check
 - » Verify test fiber box to FUT connection
- Pass/Fail threshold
- Results table for readings

The screenshot displays the CMA5000 Communications Media Analyzer interface. The main display area shows a graph with a peak at 49.719 dB. Below the graph, a green bar indicates "Connection is GOOD". To the right, the Wavelength is set to 1310 nm and the P/F Threshold is 60.000 dB. The P/F Status is "Pass". A table below shows test results for three wavelengths: 1310nm A->B, 1550nm A->B, and 1625nm A->B. The table has 9 rows, with the first row highlighted. The bottom of the screen shows a "Main Menu" button and a status bar with "A: A" and "B: B".

1310nm A->B	1550nm A->B	1625nm A->B
Ref: NONE	Ref: NONE	Ref: NONE
Th: NONE	Th: NONE	Th: NONE
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

NetWorks Data Processing Utility

The ultimate data processing tool

Software utility for viewing, printing and analyzing OTDR and Loss Test Set data.

• Complete report generating tool “on the box”

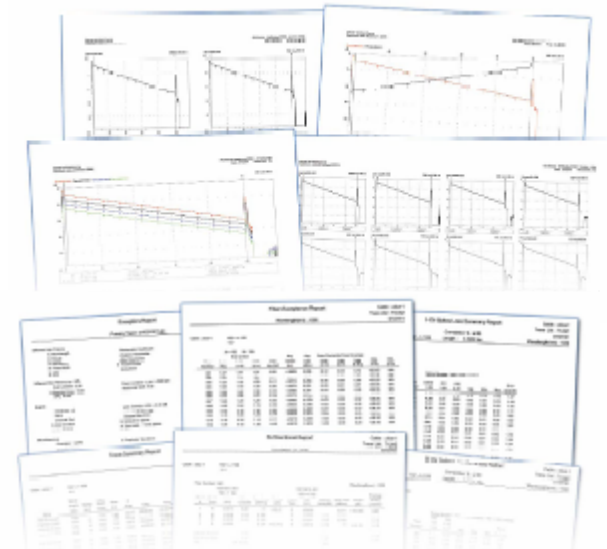
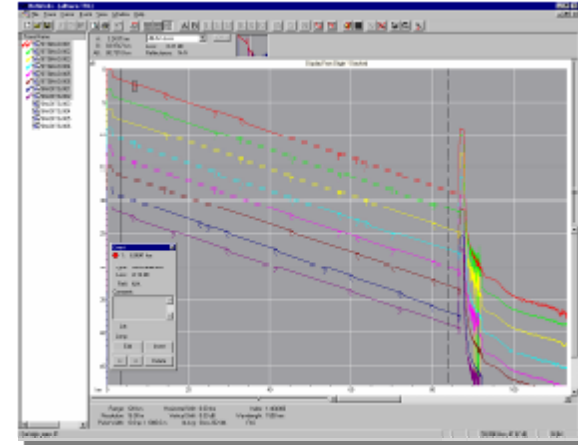
- » Uni- and Bi-directional splice loss
- » Exception
- » Fiber Acceptance
- » Trace Summary

• Batch processing for high count fiber cables

• Full analysis and Bellcore/Telcordia file format processing

• Pre-installed on all CMA 4500 & 5000 units

– no additional charges



Summary

Selling Tips and Tools

- **Know the product**
 - » A sales person who knows the product well will make it seem very easy to use
 - » It can also go wrong - *fumbling through menus can make the product look complicated and hard to use*
 - » Know what is standard and what options are available – *a customer appreciates someone who can answer their questions immediately*
- **Be prepared**
 - » Configure equipment before visiting the customer
 - » Bring all necessary adapters and test fibers – *do not rely on the customer*
 - » Show the VIP as an additional tool
 - » Show NetWorks as a powerful but easy to use utility
 - » Make sure your equipment is up to date so it performs at its best

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