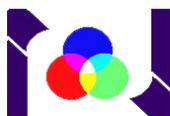


CA9809 1625 nm Bluetooth/USB Control OTDR

Technical Specification V1.01

Nov., 2014



 UC INSTRUMENTS CORP.

www.ucinstruments.com

CA9809 1625 nm Bluetooth/USB Control OTDR

The UC INSTRUEMNTS CA9809 is an ultra-compact, OTDR designed to operate remotely using software. The unit can be controlled via USB or Bluetooth from Windows, MacOS, Linux or Android devices. 1625 nm wavelength light source is special design for RFoG system application.

Features

- Bluetooth wireless and USB control
- 1625 nm wavelength light source is special selected for RFoG OTDR testing
- Up to 39 dB Dynamic Range and testing 1/4m Dead Zones
- Optional Light Source (via OTDR port)
- Optional Visual Fault Locator (VFL)
- Multimode and Singlemode wavelength test options
- Software available for Windows, MacOS, Linux and Android operating systems and devices
- Can be operated from Cloud and Desktop systems

Applications

Optical time-domain reflectometers (OTDRs) are considered to be the most important instruments for professional installation and monitoring of fiber optic networks. Most Users however are only accustomed to dedicated, bulky devices for this purpose, but now a compact, battery operated and portable OTDR device compatible with Smart phones and Tablets has become a reality.

CA9809 combines powerful OTDR testing with familiar Smartphone or Tablet ease of use. Connected to your mobile device, technicians can now perform fiber optic tests and be connected to co-workers and managers for work instructions or test data sharing.

Compatibility with selected UC INSTRUMENTS testers enables technicians to operate the unit via USB or Bluetooth connection using a virtual OTDR User Interface. Since fibers are now common place in CATV, Telco, and Mobile networks, having a companion OTDR reduces truck rolls as there is less dependence to call on specialized fiber construction crews to verify or troubleshoot problems.



Mobile App and CA9809 OTDR

Mobile app is a Smartphone and Tablet application designed specifically for technicians who are constantly on-the-go or may be tasked to troubleshoot optical fiber problems at a moment's notice irrespective of their work location.

Developed by industry experts with extensive fiber optic test and measurement experience, the application interfaces directly with Cloud for uploading or accessing archived fiber traces. Seamless integration with leading cloud providers such as Google Docs and Drop Box ensures Users are not tied to a single data repository.

Sophisticated trace analysis including fiber attenuation, reflectance and optical return loss measurements using dual markers on a familiar, intuitive user interface increases productivity.

Mobile facilitates Bluetooth connectivity between CA9809 OTDR and Smartphone/Tablet devices allowing technicians to test easily in either confined environments or those deemed hazardous.



Optical Specification

OTDR Testing	Single mode
Wavelengths (± 15 nm) ^{1,10}	1625,
Fiber type (μ m)	9/125
Dynamic Range (dB) ²	39
Pulse width (ns)	3, 10, 25, 100, 300, 1000, 3000, 10000, 20000
Event dead zone (m) ³	1/4
Attenuation dead zone (m) ⁴	Typical loss measurement dead zone using 10 ns pulse and reflections below -45 dB
Distance range (km)	0.5 to 240
Distance Units ⁵	Kilometers, Miles or Feet
Distance Measurement Accuracy (m) ⁶	$\pm (0.5 + \text{resolution} + 5 \times 10^{-5} \times L)$
Sampling resolution (m)	0.16 to 7.6
Sampling points	Up to 128,000
Attenuation/Loss Resolution (dB)	0.001
Group Index Range (IoR)	1,3000 to 1,7000
Measurement time	Auto or User defined
Trace Format	Bellcore GR196 and Telcordia SR-4731 sor format
Remote Control	USB or Bluetooth ⁹
Software Support Required ⁷	Desktop (Windows), Mobile (iOS or Android),
Fiber analysis	Auto with event table, user defined PASS/FAIL thresholds
OTDR Laser safety	IEC 60825-1:2007, 21 CFR 1040.10, Class 1M
Optical Interface ⁸	UPC or optional APC
Optical connectors (OTDR/OLS)	Fixed or optional Universal Interface with FC/SC/ST/LC adaptors

Test Options	Multimode	Single mode
Visual Fault Locator (VFL)	Optional (not available in certain wavelength combinations)	
-Wavelength (nm)	650 \pm 10 nm	
-Output (mW)	Max 1 mW	
-Laser Safety	IEC 60825-1, Class II	
-Modes	CW, 2 Hz	
-Optical connector	Universal 2.5 mm sleeve with dust cap	
Light Source (OLS) - (shares OTDR output)	Optional (singlemode only)	
-Wavelengths (nm)	Not Available	Depends on OTDR laser
-Output power (dBm)	N/A	> -4
-Level Instability (dB)	N/A	Better than ± 0.05 (15 min)

Notes:

1. Typical central/nominal wavelength deviation for 1625nm wavelengths, values are typically less. Wavelength 850, 1300, 1310 and 1550 nm. For 1490, 1650 nm version also available for customer select.
2. Typical dynamic range after three-minute averaging and SNR = 1
3. Typical event dead zone using 3 ns pulse and reflections below -45 dB
4. Typical loss measurement dead zone using 10 ns pulse and reflections below -45 dB
5. Selectable in Fiberizer software (Desktop or Mobile) or via virtual Test Setup menu
6. Excludes uncertainty due to fiber refractive index (IoR) setting
7. Software requirement
 - Fiberizer Desktop software included with each CA9809 – requires Windows
 - Fiberizer Mobile OTDR Viewer App can be downloaded from Google Play or Apple iTunes store depending on

- mobile platform. Legacy CA9809 units may not support iOS Bluetooth remote control
- APC connectors optimize dead zone and related OTDR performance. APC connectors produce smaller reflections minimizing ghosting and other unwanted trace artifacts thus improving testing efficiency
 - Bluetooth interface and battery pack are optional. Bluetooth connectivity with iOS devices requires special hardware option.
 - CA9809 can be equipped with maximum 3 wavelengths including live filtered port. For details on available configurations, please refer to the Ordering Guide

Communication Port



Contact Information

United States:

UC INSTRUMENTS CORP.

3652 Edison Way

Fremont, CA 94538 USA

Tel: 1-510-366-7353 Fax: 1-510-795-1795

www.ucinstruments.com

Product specifications and descriptions in this documentation subject to change without notice.

Copyright © 2008 UC INSTRUMENTS CORP.

Nov., 2013

72000017 V1.03