UC9110/UC9115 DCA-M 10 GHz/14 GHz Optical & Electrical Sampling Oscilloscope

Technical Specification V1.00

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UC INSTRUMENTS CORP.

www.ucinstruments.com

UC9110/UC9115 DCA-M 10 GHz/14 GHz Optical & Electrical Sampling Oscilloscope

The UC INSTRUEMNTS UC9110/UC9115 DCA-M 10 GHz/14 GHz Optical & Electrical Sampling Oscilloscope is a high speed, performance, flexible one channel optical/electrical that can operate from 1.0 to 14.0 Gb/s (consult factory for higher or lower operation speeds). It is also a stand alone Eye-diagram analyzer test.

Specifically designed for high-performance communications applications, the UC9110/UC9115 10 Gb/s - 14 Gb/s Optical/Electrical Eye-diagram analyzer (Communications Signal Analyzer) is the ideal tool for design evaluation and manufacturing test of data-com and telecom components, transceiver subassemblies and transmission systems.

The UC9110/UC9115 generates measurement results, not just raw data, with time and amplitude histograms, mask testing and statistical measurements. It provides a communications-tailored measurement set that includes jitter, noise, duty cycle, overshoot, undershoot, extinction ratio, Q-factor, mean optical power and amplitude measurements.

In addition, mask testing of SDH/SONET, Gigabit Ethernet and other standards simplifies compliance testing.

A large, full color display helps you to discriminate waveform details. Color-grading of waveform data adds a third dimension - sample density - to your signal acquisitions and analysis.

Features

- Automatic Communication Measurements

- Extinction Ratio

- Optical Power

- Signal-to-noise Ratio

- Jitter

- Wide Bandwidth (1GHz to 14 GHz with 155～750MHz Trigger)

- Automatic ITU/ANSI Mask Testing

- Normal, Infinite, Variable Persistence and Color Graded Display Modes

- Intuitive User-Interface

- MS Windows Operating System

- Modular Architecture

- Fast Acquisition Rate

- Excellent Signal Fidelity (Jitter < 0.3 ps RMS - Typical)

Applications

- Testing of optical transceiver modules (SFP+, XFP, X2, Xenpak, XPAK), transponders, linecards, and subsystems
- Testing of opto-electronic components and devices (TOSA, ROSA, lasers, etc…)
- Testing of Gb/s ICs, PCBs, electronic modules, subsystems, and systems
- Serial bus and high-speed backplane design
- Installation testing and troubleshooting in optical transport networks
- can be used forcompliance testing of Ethernet, Fiber Channel, Infiniband, PCIE, SONET and proprietary link standards

Specification

Signal Acquisition

Acquisition Modes: Sample (Normal), Envelope, and Average

Number of Sampling channel: One channel 30 Gb/s optical and One channel 30 Gb/s electrical.

(Can be extent to two Channels 30 Gb/s optical and two channels 30 Gb/s Electrical , or 4 channels 30

Gb/s Optical configuration per customers request.)

Vertical Systems: Rise Time /Bandwidth: Determined by the sampling channels used

Vertical Resolution: 14 bits

Horizontal System: Main and Magnification View Time Bases, Horizontal Scale: 0.5 ps/div to 40 ps/div

Time Interval Accuracy: 0.5ps

Trigger System

Trigger Sources: Trigger Direct Input (side panel)

Trigger Sensitivity: 100mV, 155～750MHz

Trigger Level Range: ±1.0 V

Trigger Input Range: ±1.5 V

Trigger Holdoff: Adjustable 5 ms to 100 ms

Display Features: PC Video Resolution: 1024 horizontal by 768 vertical displayed pixels

Math/Measurement System

the CA86100 supports one channel measurements, updated 3 times per second with optional display.

Mask Testing:

For many applications, standard masks are available as predefined, built-in masks. Many of the most commonly used standard masks are listed below.

```
9.953 Gb/s SONET/SDH/Ethernet WAN
10.312 Gb/s Ethernet LAN
10.519 Gb/s 10G Fiber Channel

10.664 Gb/s OC192 + G.975 FEC

10.709 Gb/s SONET/SDH/Ethernet WAN with ITU-T G.709 FEC

11.095 Gb/s Ethernet LAN with ITU-T G.709 FEC

11.3170 Gb/s FC11317
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14.025 Gb/s

14.0625 Gb/s

25.0 Gb/s

25.78125 Gb/s 100GBase-LR4 , 100GBase-ER4

27.739 Gb/s 100GBase-LR4 + FEC, 100GBase-ER4 + FEC

Input/Output Ports: LAN Port: One RJ-45 connector, supports 10BASE-T, 100BASE-T, for remote

operations, network management and monitoring.

Power :   Line Voltage and Frequency: 90 to 240 V, 50 Hz

DC out: 5 V, 4 A (Imax)

Power Consumption: 6 W, maximum

Environmental Work Condition:

Temperature: Operating +10 to +40 °C

Storage –22 to +60 °C

Relative Humidity: Operating 20% to 80%
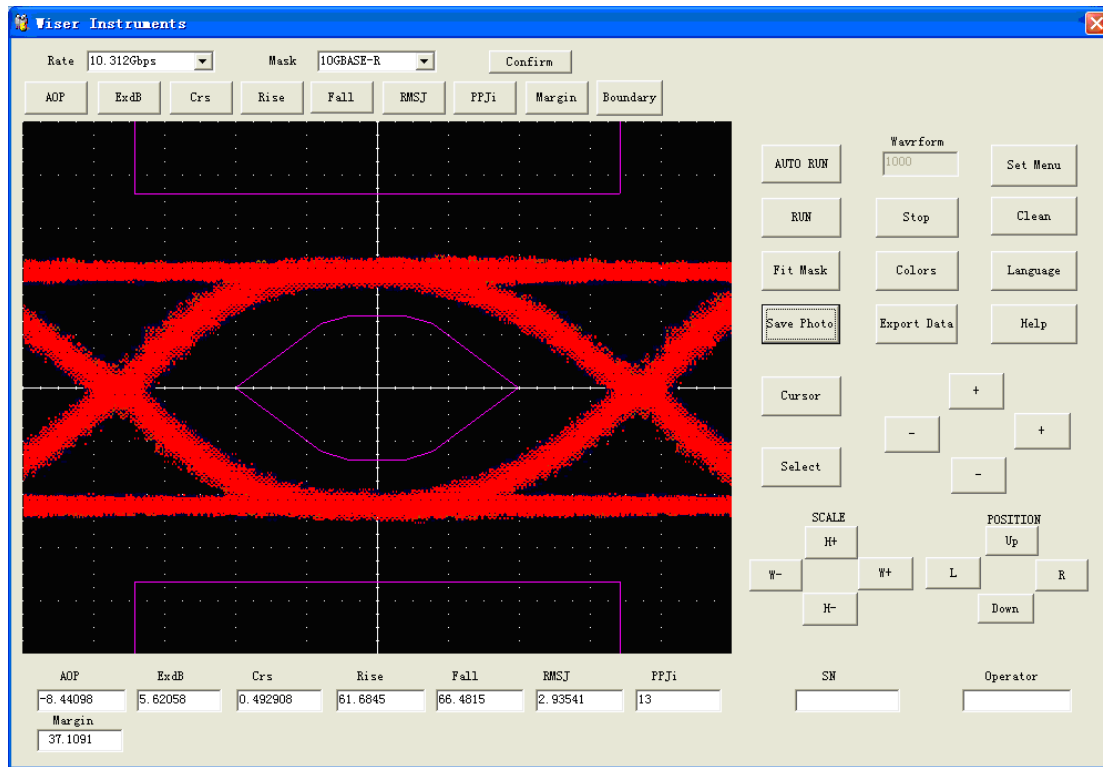
Storage 5% to 90%

Physical Characteristics

Dimensions (mm)

Width: 258 X Height: 190 X Depth: 52

Weight (kg)<   4.0 kg

Typical Optical Eye Diagram

10 Gb/s Eye-diagram

Contact Information

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