TEKTRONIX

CSA8000B

The Tektronix CSA8000B is a high-performance Communications Signal Analyzer, designed for equivalent-time sampling, signal integrity analysis, and optical/electrical transmitter compliance testing. It features a modular architecture that accepts up to four acquisition modules, providing up to eight channels, making it a standard platform for high-speed network and telecom testing.

SPECIFICATIONS

General

Interfaces	LAN (10/100 Base-T), GPIB (IEEE-488.2), 2x USB Host, RS-232-C Serial (DB-9), Centronics Parallel (DB-25), VGA Video Out, PS/2 Keyboard, PS/2 Mouse, PCMCIA Type II Slot
Display	10.4-inch (264 mm) color active-matrix TFT LCD, 640 x 480 resolution, with resistive touchscreen

Physical

Operating Temperature	10 to 40 °C °C
Dimensions (W×H×D)	457 mm × 343 mm × 419 mm mm
Weight	21 kg (without modules) kg

Vertical System (Module Dependent)

Module Slots	4 slots for acquisition modules (optical or electrical)
Maximum Acquisition Channels	8 channels (using dual-channel electrical modules)
Vertical Resolution	14 bits

Horizontal System (Timebase)

Timebase Range	2 ps/div to 5 ms/div
Timebase Resolution	10 fs
Record Lengths	50, 100, 250, 500, 1000, 2000, 4000 samples
Maximum Sample Rate	200 kS/s
Timebase Jitter (Typical)	< 1.2 ps RMS (standard timebase)
Timebase Jitter (with Phase Reference Module)	< 200 fs RMS (using 82A04 module)
Sweep Modes	Continuous, Single Sequence

Trigger System

Trigger Sources	External Direct, External Prescaled, Internal Clock
External Direct Trigger Frequency Range	DC to 3.0 GHz
External Prescaled Trigger Frequency Range	2.0 GHz to 12.5 GHz
Trigger Direct Input Impedance	50 ohms
Trigger Direct Connector Type	SMA Female
Trigger Direct Input Range	-1.0 V to +1.0 V
Trigger Direct Damage Level	±2.0 V
Trigger Direct Sensitivity (DC to 3 GHz)	100 mV p-p
Trigger Prescaler Sensitivity (2 to 12.5 GHz)	200 mV p-p to 800 mV p-p
Trigger Jitter (Direct, Typical)	< 1.3 ps RMS
Trigger Jitter (Prescaled, Typical)	< 2.0 ps RMS
Direct Trigger Level Range	-1.0 V to +1.0 V
Gated Trigger Input Level	Disable: TTL high (2.0 to 5.0 V); Enable: TTL low (0.0 to 0.8 V)
Gated Trigger Connector Type	BNC female
Gated Trigger Input Impedance	50 Ω
Trigger Prescaler Connector Type	SMA female

Reference Inputs and Outputs

Internal Reference Clock Output	10 MHz
Internal Reference Clock Output Amplitude	1 V p-p into 50 ohms
External Reference Clock Input	10 MHz
External Reference Input Amplitude Range	100 mV p-p to 5 V p-p
External Reference Input Impedance	50 ohms

System Architecture

Operating System	Microsoft Windows 2000 Professional
Processor Class	Intel Pentium IV
Removable Media	3.5-inch 1.44 MB Floppy Drive

Measurement & Analysis Capabilities

Optical Standards Supported	OC-3/STM-1, OC-12/STM-4, OC-48/STM-16, OC-192/STM-64, 10G Base-W/R, Fibre Channel, InfiniBand
Mask Testing	Standard ITU-T, ANSI T1.102, IEEE 802.3, Fibre Channel, InfiniBand masks with margin testing
Vertical Histograms	Yes (with database depth > 2^31 samples)
Horizontal Histograms	Yes (with database depth > 2^31 samples)
Automatic Parametric Measurements	28 standard measurements including Jitter, Noise, Rise/Fall Time, Amplitude, Period, RMS
Math Functions	Addition, Subtraction, Multiplication, Division, FFT, User-defined equations

Physical & Environmental

Operating Humidity Range	20% to 80% RH (non-condensing)
Storage Temperature Range	-20 to +60 °C
Operating Altitude	3,000 m (9,843 ft)
Non-operating Altitude	12,000 m (39,370 ft)

Standards & Compliance

Safety Standards	UL 3111-1, CSA C22.2 No. 1010.1, EN 61010-1
EMC Compliance	89/336/EEC, FCC Part 15 Class A, EN 61326-1

System Compatibility

Compatible Modules	Tektronix 80C00 Series Optical, 80E00 Series Electrical, and 80A00 Series Application modules

Acquisition System

Acquisition Modes	Sample, Average, Envelope
Waveform Database Depth	32-bit (up to 4 Gsamples)

Environmental

Random Vibration (Operating)	0.22 G RMS, 5 to 500 Hz
Random Vibration (Non-Operating)	2.28 G RMS, 5 to 500 Hz
Mechanical Shock (Non-Operating)	30 G, half-sine, 11 ms duration

Interfaces

External Display Port	DB-15 (VGA)
Parallel Port	DB-25 (Centronics)
Serial Ports	One DB-9 (RS-232-C)
Keyboard and Mouse Ports	Two PS/2 (6-pin mini-DIN)
Audio Ports	Line-in, Line-out, and Mic-in (3.5 mm jacks)

TECHNOLOGY

Digital Sampling Oscilloscope / Communications Signal Analyzer

APPLICATIONS

High-Speed Optical and Electrical Serial Compliance Testing, Signal Integrity, Jitter and Noise Analysis

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