

The MiNT Systems' **Synasys™** MS8321 Mixed-signal Waveform Analyzer is a full-featured multi-channel digital storage oscilloscope, which can capture up to six (6) 300MHz analog and/or up to forty-eight (48) logic timing waveforms simultaneously. For optimum visual efficiency, the MS8321 offers millions of waveform color possibilities through its color LCD display. Additionally, the front panel knobs of the MS8321 provide users with a real time analog feel for the waveform controls.

The extensive trigger capability and flexible time base zooming feature eases complex waveform capture and analysis. The total waveform synchronization between analog and digital logic signals eliminates the need for two separate instruments – namely the DSO and logic analyzer – and the inconvenience of cross-synchronization. The FFT function transforms the time domain waveforms to the frequency domain spectrum display. The built-in frequency counter and large array of measurement functions further make the **Synasys™** Mixed-signal Waveform Analyzer the universal instrument for R&D and production professionals.

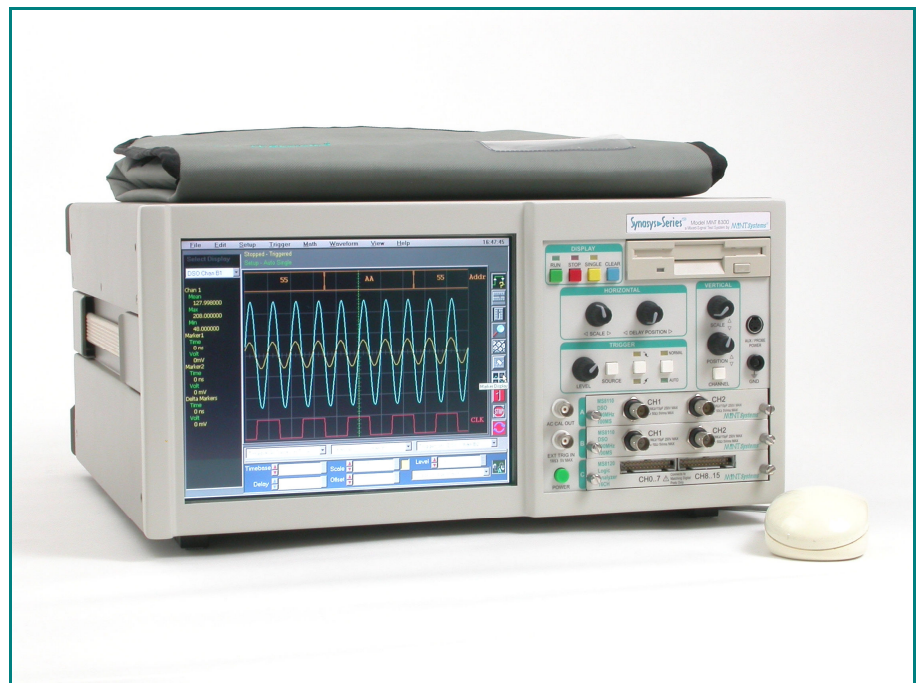
The Mixed-signal Waveform Analyzer (MS8321) is based on the MiNT Systems **Synasys™** Model MiNT8300, a flexible test and measurement platform featuring multiple modular plug-ins that facilitate signal measurement, analysis, and test functions. The modular architecture of the MiNT Systems Model MiNT8300 allows users to optimize the mixed signal instrumentation and application needs for each test requirement, from the DSO and the logic analyzer to the full R&D and production test system. Further enhancing functionality, MiNT is continuously adding new modules to the MiNT8300 family to provide more test functions with wider bandwidth, higher resolution, sampling rates, and channel density.

Features:

- Up to 6 independent 300MHz analog channels
- Up to 48 independent logic timing channels
- User programmable color trace display
- 10GS equivalent time sampling
- 100ps timing resolution
- Preset TTL, ECL, CMOS, and LV logic levels
- Glitch capture
- Glitch trigger
- FFT Spectrum Analyzer
- Trace Memories
- Time base zooming
- PC Based Windows controls
- Plug and Play instrument modules for analysis & waveform display
- Auxiliary power supports external sensors or probes

Supported Functions:

- ◆ Mixed-signal (analog and digital) waveform acquisition
- ◆ Module synchronization
- ◆ Application specific testing
- ◆ Customized test functions
- ◆ Instrument interface expansion for more analog or digital logic channels
- ◆ Combination trigger
- ◆ Trigger output
- ◆ Mixed-signal (analog and digital) waveform generation



Synasys™ MS8321 Mixed-signal Waveform Analyzer, with its flexible multi-channel analog and digital waveform capture, simplifies engineering tasks ranging from R&D and production to field service.

Specifications¹:

Synasys™
MS8321

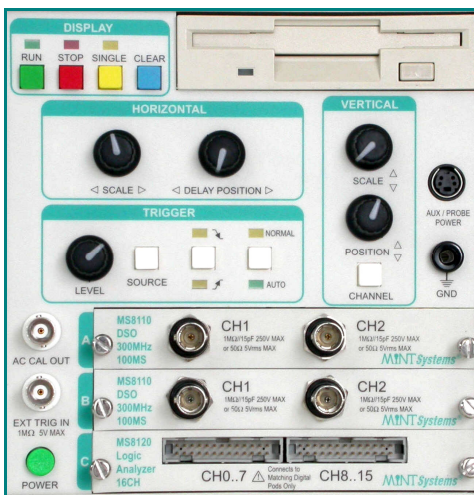
Mixed-signal Waveform Analyzer

General

System Configuration:	2 MS8110 DSO modules and 1 MS8120 LA module
Instrument Module Slots:	3
Power Requirement:	115/230V, ±15%, 50Hz/60Hz, 600 VA
Dimensions:	16.7"(425mm)W x 8"(203mm)H x 16"(406mm)D
Weight:	26lb (12kg)
Humidity:	20% to 80% RH, non-condensing
Operating Temperature:	10°C to 27°C

Time Base System

Time Division:	10
Time Base:	2ns/div to 5s/div
Time Base Accuracy:	± 0.01%
Time Base Resolution:	100ps
Δt Cursors:	2
Cursor Accuracy:	± 200ps ± 0.2% of full scale
Skew Adjustment:	100ps



The **Synasys™ MS8321's** versatility is characterized by its mixed signal capabilities, analog feel control, and future expandability.

DSO Acquisition System

Inputs Channels:	up to 6 analog channels (3 DSO modules)
Analog Bandwidth:	DC to 300MHz, 10Hz to 300MHz for AC
Analog Sensitivity:	2mV/div to 5V/div
Resolution:	8 Bits
Coupling:	DC, AC, Ground, 50Ω
Input R & C	1MΩ // 15pF, 50Ω
Maximum Input:	250V (DC + peak AC), 5V for 50Ω
Bandwidth Limit:	20MHz
Vertical Cursor:	2
System Sync Clock:	100MHz
Sampling Rate:	100MS/s
Equivalent Time Sampling:	10GS/s
Trigger Sources:	2 per Module
Trigger Mode Support:	Auto, Normal, Single, TV, Edge Pattern, State
Sample Size:	125 to 32K programmable
Pre-trigger:	32K Samples
Post-trigger:	4,000,000 Samples
Memories:	Setups, Waveforms, Screens,
Measurement Support:	Amplitude, P-P, High, Low, Min, Max, Inversion, Mean, RMS, Frequency, Period, Pulse Width, Rise/Fall Time, Duty Cycle, Overshoot
Math Function Support:	FFT, Addition, Subtraction, Multiplication, Division, XY, Integration, derivative, ΔV, Δt

LA Acquisition System

Inputs:	Up to 48 channels + 6 state clocks (3 LA modules)
Input Voltage Range:	±10V
Input R & C	100kΩ // 15pF
Minimum Voltage Swing:	500mV
Threshold Range:	±6.0V
Threshold Resolution:	50mV
Threshold Preset:	TTL, ECL, CMOS, LV Logic Families
Max State Speed:	100MHz

Options

DSO Module:	MS8110 , dual channel 300MHz, 100MS/s: MS8130 , single channel 350MHz, 1GS/s
LA (Logic Analyzer) Module:	MS8120 , 16 channels + 2 state clocks
Passive Scope Probe:	MS8111 , 350MHz, 600V, X10, 10MΩ //13.5pF Probe
Active Scope Probe:	MS8112 , 700MHz 30V, X10, 1pF FET Probe
Logic Analyzer Pod:	MS8122 , 8-Channel 100kΩ //15pF Logic Waveform Probe Pod
Logic Analyzer Probe:	MS8123 , Logic Probe Set, 10 micro probes

Ordering Information

MS8321-01	2 DSO channels
MS8321-02	2 DSO channels + 16 LA channels
MS8321-03	2 DSO channels + 32 LA channels
MS8321-04	4 DSO channels
MS8321-05	4 DSO channels + 16 LA channels
MS8321-06	6 DSO channels
MS8321-07	48 LA channels

Representative:

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¹ Preliminary specifications subject to change.