

DS1000 Series

Digital Oscilloscopes



Product Dimensions: Weight: 2.3 kg
Width×Height×Depth = 303mm×154mm×133mm

Application

1. Design and Debug
2. Education & Training
3. Manufacturing
4. Service & Repair

Model	1022C/1022CD	1042C/1042CD	1062C/1062CD	1102C/1102CD
Bandwidth	25 MHz	40 MHz	60 MHz	100 MHz
Real-time Sample Rate	400 MSa/s, 200 MSa/s (Logic Analyzer)			
Equivalent Sample Rate	25 GSa/s			
Memory Depth	1M points (Single Channel), 512K points (Dual Channels), 512K points (Logic Analyzer)			

Advanced Features

1. A true Mixed Signal Oscilloscope with 2 analog and 16 digital channels
2. Ultra compact design, small dimensions, to save your desktop space
3. 5.7" 64K TFT color LCD, bright and vivid waveform display
4. Memory depth: 1M points (Single Channel), 512K points (Dual Channels), 512K points (Logic Analyzer)
5. Versatile trigger modes: Edge, Video, Pulse Width, Slope, Alternative, Pattern and Duration
6. Adjustable trigger sensitivity: Filters noise from the trigger signal to avoid false triggers
7. 400 MSa/s maximum real-time sample rate and 25 GSa/s maximum equivalent time sample rate
8. 20 automatic measurements
9. Cursor measurements: Manual, Track and Auto Measure Modes
10. 10 waveforms, 10 setups, BMP and CSV storage
11. Math functions: Add, Subtract, Multiply, FFT, Invert
12. Automatic self calibration
13. Special digital filter and waveform recorder
14. Built-in hardware frequency counter
15. Dual channels plus external trigger Bandwidth including 25 MHz, 40 MHz, 60 MHz, 100 MHz
16. Standard interface: USB Device, RS-232; USB Host, to support USB flash memory and USB printer
17. Standard Configuration includes Pass/Fail testing
18. Multi-language user interface, built-in help system

Standard Accessories



Power Cord

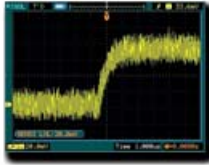


Probe × 2



User Manual

Versatile Trigger Modes



Adjustable Trigger Sensitivity

The ability to filter noise from the signal avoids false triggers



Alternative Trigger

Provides a true dual time base display that was common in analog oscilloscopes



Slope Trigger

Triggers on the signals rise time or fall time that is user defined



Rise Edge and Fall Edge Trigger

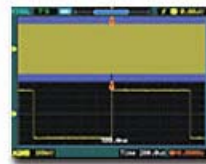
Mainly used to view eye-diagrams formally only available in more advanced DSO's

Easy to Use Features



Waveform Intensity

Adjustable waveform intensity provides a personalized waveform display



Ultrazoom

Survey macroscopically, observe microscopically



File System

Easy-to-use file system allows for both USB disk and local file storage



Built-in Help System

Press current key for 3 seconds to enter help system

Logic Analyzer Module

Mixed Signal Oscilloscope (MSO) with 16 channels Logic Analyzer (LA). LA is divided into two groups: D7-D0, D15-D8. Each works separately.



Logic Analyzer Module



Pattern Trigger

The trigger condition is a combination of the level of the signal and the edge



Duration Trigger

A combination of Pattern Trigger and Pulse Width Trigger capabilities make isolation of events easy.

Performance Characteristics

Model	DS1022C	DS1042C	DS1062C	DS1102C
Bandwidth	25 MHz	40 MHz	60 MHz	100 MHz
Memory Depth	1M points (Single Channel), 512K points (Dual Channels)			
Channels	Dual Channels + External Trigger			
Real-time Sample Rate	400 MSa/s			
Equivalent Sample Rate	25 GSa/s			
Rise Time	14 ns	8,7 ns	5.8 ns	3.5 ns
Time Base Range	20 ns/div to 50 s/div	10 ns/div to 50 s/div	5 ns/div to 50 s/div	
X-Y Operation	Bandwidth	25 MHz	40 MHz	60 MHz
	Phase Difference	± 3°		
Trigger Modes	Edge, Video, Pulse Width, Slope, Alternative			
Trigger Sources	CH1, CH2, Ext, Ext/5, AC Line			

Model	DS1022CD	DS1042CD	DS1062CD	DS1102CD
Bandwidth	25 MHz	40 MHz	60 MHz	100 MHz
Memory Depth	1M points (Single Channel), 512K points (Dual Channels), 512K points (Logic Analyzer)			
Channels	Dual Channels + External Trigger + Logic Analyzer			
Real-time Sample Rate	400 MSa/s, 200 MSa/s (Logic Analyzer)			
Equivalent Sample Rate	25 GSa/s			
Rise Time	14 ns	8.7 ns	5.8 ns	3.5 ns
Time Base Range	20 ns/div to 50 s/div	10 ns/div to 50 s/div	5 ns/div to 50 s/div	
Voltage Level Standards (Logic Analyzer)	TTL = 1.4 V, CMOS = 2.5 V, ECL = - 1.3 V, USER = - 8.0 V to + 8.0 V			
X-Y Operation	Bandwidth	25 MHz	40 MHz	60 MHz
	Phase Difference	± 3°		
Trigger Modes	Edge, Video, Pulse Width, Slope, Alternative, Pattern and Duration			
Trigger Sources	CH1, CH2, Ext, Ext/5, AC Line, D0 to D15			

Common Parameters	
Input Impedance	1 MΩ±2% 15 pF±3pF
Time Base Precision	±50ppm
Vertical Sensitivity	2 mV/div to 5 V/div
Vertical Resolution	8 bits
Input Coupling	DC, AC, Ground
Maximum Input Voltage	400 V (DC + AC peak)
Roll Range	500 ms/div to 50 s/div
Automatic Measurements	Vpp, Vamp, Vmax, Vmin, Vtop, Vbase, Vavg, Vrms, Preshoot, Overshoot, Frequency, Period, Rise Time, Fall time, Positive Width, Negative Width, Positive Duty Cycle, Negative Duty Cycle, Delay 1→2 ↗, Delay 1→2 ↘
Cursor Measurements	Manual, Track and Auto Measure modes
Math	Add, Subtract, Multiply, FFT, Invert
Storage	Internal: 10 Waveforms and 10 Setups
	USB: BMP, CSV, Waveforms and Setups
I/O	USB Device, USB Host, RS-232, P/F Out (Isolated)
Display	TFT (64K, Color LCD), 320 x 234
Power	Worldwide Use, 100 - 240 V / 50 VA Max
Weight	2.3 kg

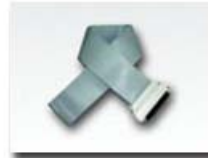
Standard Accessories **(VS5000D Series Only)**



Logic Analyzer Module



Logic Analyzer Clips



Data Connection Cable

Optional Accessories



RS-232 cable



Instrument Bag