# DS1000E·DS1000D Series Digital Oscilloscope



16 channel Logic Analyzer
1 GSa/s maximum Real-time Sample Rate
and 1 Mpts Memory Depth

- 64k Color TFT LCD
- USB Host
- Backlight Keys
- Advanced trigger modes
- 16-channel Logic Analyzer

Product Dimensions: Width×Height×Depth＝303mm×154mm×133mm  Weight: 2.4 kg

| Memory Depth | Channel Mode | Sample Rate | Normal Memory | Long Memory |
|---|---|---|---|---|
| | Single Channel | 1GSa/s | 16 kpts | N.A. |
| | Single Channel | 500MSa/s or lower | 16 kpts | 1Mpts |
| | Dual Channels | 500MSa/s or lower | 8 kpts | 512 kpts |
| Timebase Range | 2 ns/div ~ 50s/div | | 5 ns/div ~ 50s/div | |
| Trigger Modes | Edge, Video, Pulse Width, Slope, Alternate | | | |
| Vertical Resolution | 8 bits | | | |
| Vertical Sensitivity | 2 mV/div ~ 10V/div | | | |
| Maximum Input Voltage | All inputs 1MΩ II 15pF 300V RMS CAT I | | | |
| Input Coupling | DC, AC, GND | | | |
| Roll Range | 500ms/div ~ 50s/div | | | |
| Cursor Measurements | Manual, Track and Auto Measure modes | | | |
| Math | +, −, ×, FFT | | | |
| Internal Stroge | 10 Waveforms and 10 Setups | | | |
| USB Storage | BMP, CSV, Waveforms and Setups | | | |
| Connectivity | USB Device, USB Host, RS-232, P/F Out | | | |
| Display | 5.6″ TFT (64 k, Color LCD ), 320×234 resolution | | | |
| Power Supply | AC: 100 ~ 240 VACRMS, 45 ~ 440 Hz, CAT II, 50 VA Max | | | |
| MSO  Logic Analyzer | DS1102D | | DS1052D | |
| Channels | 16 logic Channels | | | |
| Sample Rate | 200MSa/s (each channel) | | | |
| Record Length | 512 kpts (each channel) | | | |
| Trigger Modes | Pattern, Duration | | | |
| Threshold Selections | TTL=1.4V, CMOS=2.5V, ECL=-1.3V, USER=-8V to + 8V | | | |

## ▶ Application Areas

- ·Design and debug
- ·Manufacturing
- ·Education and Training
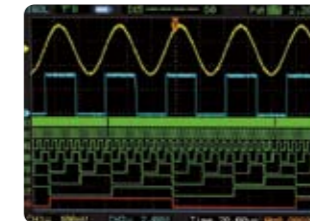- ·Service and Repair

## ▶ Features and Benefits

1. A true mixed signal oscilloscope with a 16 channel Logic Analyzer (DS1000D)
2. 1 GSa/s maximum Real-time Sample Rate and 1 Mpts Memory Depth
3. Bandwidth options: 50MHz and 100MHz
4. Extensive set of trigger modes including: Edge, Video, Pulse Width, Slope, Alternate
5. 64 k TFT Color LCD, bright and vivid waveform display
6. Direct print to PictBridge compatible printers via USB Device interface
7. Compact design to save your desktop space

| Model | DS1102E | DS1052E | DS1102D | DS1052D |
|---|---|---|---|---|
| Bandwidth | 100 MHz | 50 MHz | 100 MHz | 50 MHz |
| Logic Analyzer | × | | √ | |

## ▶ Specifications

| Model | DS1102E DS1102D | DS1052E DS1052D |
|---|---|---|
| Bandwidth | 100 MHz | 50 MHz |
| Channels | 2 Channels + External Trigger | |
| Real-time Sample Rate | 1 GSa/s (Single Channel), 500 MSa/s (Dual Channels) | |
| Equivalent-time Sample Rate | 25 GSa/s | 10 GSa/s |
| Rise Time | 3.5 ns | 7 ns |

## ▶ DS1000D 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.



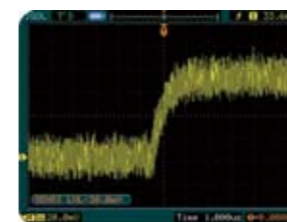Logic Analyzer Module



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



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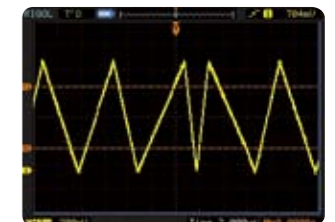A combination of Pattern Trigger and Pulse Width Trigger capabilities make isolation of events easy

## ▶ Advanced trigger modes



Adjustable Trigger Sensitivity
The ability to filter noise from the signal avoids false triggers



Alternate Trigger
Provides a true dual timebase display



Slope Trigger
Triggers on the signals rise time or fall time is user defined