

Debug in High Definition

200 MHz – 1 GHz



Key Specifications

Bandwidth	200 MHz, 350 MHz, 500 MHz, 1 GHz
Resolution	12-bit ADC resolution, up to 15-bit with enhanced resolution
Channels	2 or 4
Memory	Up to 25 Mpts/Ch, 50 Mpts Interleaved
Sample Rate	2.5 GS/s
Digital Channels	16
Digital Sample Rate	1.25 GS/s
Minimum Pulse Width	2 ns
Display	12.1" Wide TFT-LCD Touch Screen
Connectivity	USB Host, USB Device, LAN, GPIB

Tools for Improved Debugging

- **HD4096 Technology** - HD4096 high definition technology enables capture and display of signals up to 1 GHz with high sample rate and 16 times more resolution.
- **Mixed Signal** – Debug complex embedded designs with integrated 16 channel mixed signal capability
- **WaveScan** – quickly search waveforms for runts, glitches or other anomalies
- **Touch Screen** – easily configure channels, timebase, trigger and all functions with the intuitive, efficient touch screen interface
- **LabNotebook** – save all results and data with a single button press and create custom reports with LabNotebook
- **Software Options** - available software option packages for advanced analysis
 - Spectrum Analysis
 - Power Analysis
 - Serial Bus Trigger and Decode

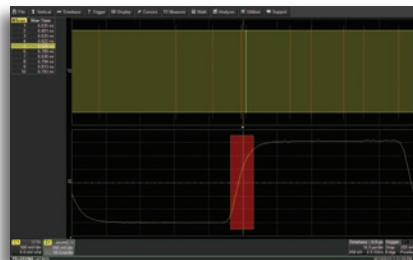
For more information, please contact:



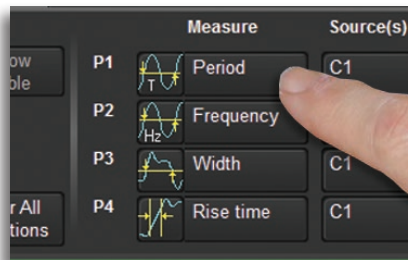
HDO4000 Oscilloscopes Fact Sheet



Use History Mode to scroll back in time to isolate anomalies and quickly find the source of the problem.



Quickly locate analog or digital waveforms for runts, glitches or other anomalies with WaveScan.



Easily control channels, trigger, math and measurements with the large multi-touch display and intuitive interface.



Ordering Information

Model	Bandwidth	Channel	Memory (per Ch / interleaved)	Sample Rate (per Ch / interleaved)
HDO4022 / HDO4022-MS	200 MHz	2 / 2+16	12.5 Mpts / 25 Mpts	2.5 GS/s / 2.5 GS/s
HDO4024 / HDO4024-MS	200 MHz	4 / 4+16	12.5 Mpts / 25 Mpts	2.5 GS/s / 2.5 GS/s
HDO4032 / HDO4032-MS	350 MHz	2 / 2+16	12.5 Mpts / 25 Mpts	2.5 GS/s / 2.5 GS/s
HDO4034 / HDO4034-MS	350 MHz	4 / 4+16	12.5 Mpts / 25 Mpts	2.5 GS/s / 2.5 GS/s
HDO4054 / HDO4054-MS	500 MHz	4 / 4+16	12.5 Mpts / 25 Mpts	2.5 GS/s / 2.5 GS/s
HDO4104 / HDO4104-MS	1 GHz	4 / 4+16	12.5 Mpts / 25 Mpts	2.5 GS/s / 2.5 GS/s

Available Probes

Single-Ended

ZS1500	1.5 GHz, 0.9 pF, 1 MΩ High Impedance Active Probe
ZS1000	1 GHz, 0.9 pF, 1 MΩ High Impedance Active Probe

Differential

ADP300	1,400 V, 20 MHz High-Voltage Differential Probe
ADP305	1,400 V, 100 MHz High-Voltage Differential Probe
AP031	700 V, 15 MHz High-Voltage Differential Probe
ZD200	200 MHz Active Differential Probe
ZD500	500 MHz Active Differential Probe
ZD1000	1 GHz Active Differential Probe
ZD1500	1.5 GHz Active Differential Probe

Differential Amplifiers

DA1855A	1 Ch, 100 MHz Differential Amplifier
DXC100A	100:1 or 10:1 Selectable, 250 MHz Passive Differential Probe Pair

High-Voltage

PPE1.2KV	10:1/100:1 200/300 MHz 50 MΩ High-Voltage Probe 600V/1.2kV Max. Volt. DC
PPE2KV	100:1 400 MHz 50 MΩ 2 kV High-Voltage Probe
PPE4KV	100:1 400 MHz 50 MΩ 4kV High-Voltage Probe
PPE5KV	1000:1 400 MHz 50 MΩ 5 kV High-Voltage Probe
PPE6KV	1000:1 400 MHz 50 MΩ 6 kV High-Voltage Probe

Current

AP015	30 A; 50 MHz Current Probe – AC/DC; 30 A _{rms} ; 50 A _{peak} Pulse
CP030	30 A; 50 MHz Current Probe – AC/DC; 30 A _{rms} ; 50 A _{peak} Pulse
CP031	30 A; 100 MHz Current Probe – AC/DC; 30 A _{rms} ; 50 A _{peak} Pulse
CP150	150 A; 10 MHz Current Probe – AC/DC; 150 A _{rms} ; 50 A _{peak} Pulse
CP500	500 A; 2 MHz Current Probe – AC/DC; 500 A _{rms} ; 700 A _{peak} Pulse

Excellent Performance

- 200 MHz, 350 MHz, 500 MHz, 1 GHz
- 12-bit ADC resolution, 15-bit with ERES
- 2.5 GS/s maximum sample rate
- Up to 25 Mpts / 50 Mpts (interleaved)
- 16 Channel Mixed Signal Capability

Rich Feature Set

- WaveScan™ search and find
- History Mode waveform playback
- LabNotebook™ report generator

Wide Range of Serial Data Tools

- I²C, SPI, UART
- CAN, LIN, FlexRay™, SENT
- Ethernet 10/100BaseT, USB 1.0/1.1/2.0, USB 2.0 HSIC
- Audio (I²S, LJ, RJ, TDM)
- MIL-STD-1553, ARINC 429
- MIPI D-PHY, DigRF 3G, DigRF v4
- Manchester, NRZ