HDO4000A Oscilloscopes Fact Sheet

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	4
Memory	Up to 50 Mpts/Ch
Sample Rate	Up to 10 GS/s with Enhanced Sample Rate
Digital Channels	16 (with -MS models)
Digital Sample Rate	1.25 GS/s
User Interface	MAUI with OneTouch
Display	12.1" Wide TFT-LCD Multi-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
- **MAUI with OneTouch** — Dramatically reduce setup time with drag, drop, and flick to instinctively interact with the oscilloscope.
- **Spectrum Analyzer (Optional)**— View signal details in the frequency domain with a spectrum analyzer style user interface
- **WaveScan** — Quickly search waveforms for runts, glitches or other anomalies
- **Long Memory** — Up to 50 Mpts/ch captures and support for 5 MS/s Roll mode.
- **LabNotebook** — Save all results and data with a single button press and create custom reports with LabNotebook
- **Software Options** - 23 different serial trigger/decode options, plus many others

For more information, please contact:

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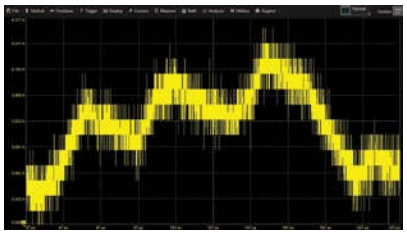
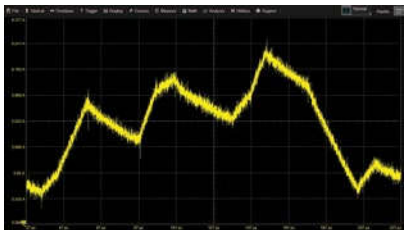
8 bit

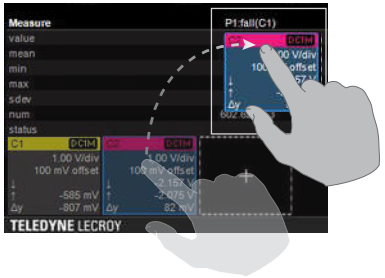


12 bit



Comparison of 20-to-1 vertical zoom of a measured current signal from a pulse-width modulated inverter/drive output.

Waveforms displayed by the HDO8000A are cleaner and crisper. More signal details can be seen and measured; these measurements are made with unmatched precision resulting in better test results and shorter debug time.



MAUI with OneTouch optimizes convenience and efficiency. All common operations can be performed with a single touch.



Ordering Information

Model	Bandwidth	Channels	Memory (per Ch / interleaved)	Sample Rate
HDO4024A / HDO4024A-MS	200 MHz	4 / 4+16	12.5 Mpts / 25 Mpts	10 GS/s
HDO4034A / HDO4034A-MS	350 MHz	4 / 4+16	12.5 Mpts / 25 Mpts	10 GS/s
HDO4054A / HDO4054A-MS	500 MHz	4 / 4+16	12.5 Mpts / 25 Mpts	10 GS/s
HDO4104A / HDO4104A-MS	1 GHz	4 / 4+16	12.5 Mpts / 25 Mpts	10 GS/s

Available Probes

High Voltage Fiber Optically-isolated Probes

HVFO103	High Voltage Fiber Optic Probe, 60 MHz Bandwidth.

Differential

HVD3102	1kV, 25 MHz High Voltage Differential Probe
HVD3106	1kV, 120 MHz High Voltage Differential Probe
HVD3206	2kV, 120 MHz High Voltage Differential Probe
HVD3605	6kV, 100 MHz High Voltage Differential Probe
AP033	500 MHz Active 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

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

High Voltage

HVP120	400 MHz, 1kV V_{rms} High-Voltage Passive 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

CP030	30A; 50 MHz Current Probe – AC/DC; 30 A_{rms}; 50 A_{peak} Pulse
CP030A	30A, 50 MHz High Sensitivity Current Probe - AC/DC, 30 A_{rms}, 50 A_{peak} Pulse,
CP031	30A; 100 MHz Current Probe – AC/DC; 30 A_{rms}; 50 A_{peak} Pulse
CP031A	30A, 100 MHz High Sensitivity Current Probe - AC/DC, 30 A_{rms}, 50 A_{peak} Pulse,
CP150	150A; 10 MHz Current Probe – AC/DC; 150 A_{rms}; 50 A_{peak} Pulse
CP500	500A; 2 MHz Current Probe – AC/DC; 500 A_{rms}; 700 A_{peak} Pulse

Active Voltage Rail Probe

RP4030	Power/Voltage Rail Probe. 4 GHz, ±30V offset, ±800mV

Probe Adapters

TPA10	TekProbe to ProBus Probe Adapter
CA10	Programmable ProBus Current Adapter

Excellent Performance

- 200 MHz, 350 MHz, 500 MHz, 1 GHz
- 12-bit ADC resolution, 15-bit with ERES
- Up to 10 GS/s 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

Exceptional Serial Data Tools

- I^2C, SPI, UART
- CAN, CAN FD, LIN, FlexRay™, SENT
- Ethernet 10/100BaseT, USB 1.0/1.1/2.0, USB 2.0 HSIC
- Audio (I^2S, LJ, RJ, TDM)
- MIL-STD-1553, ARINC 429
- MIPI D-PHY, DigRF 3G, DigRF v4
- Manchester, NRZ, MDIO, SpaceWire, SPMI