

# HDO4000A Oscilloscopes Fact Sheet

## **Debug in High Definition**

200 MHz – 1 GHz

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LECROY
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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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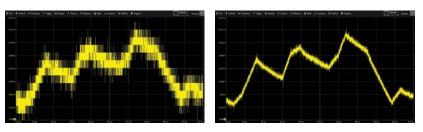
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8 bit

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.

### **Ordering Information**

Model	Bandwidth	Channels	Memory (per Ch / interleaved)	Sample Rate
HD04024A / HD04024A-MS	200 MHz	4 / 4+16	12.5 Mpts / 25 Mpts	10 GS/s
HD04034A / HD04034A-MS	350 MHz	4 / 4+16	12.5 Mpts / 25 Mpts	10 GS/s
HD04054A / HD04054A-MS	500 MHz	4 / 4+16	12.5 Mpts / 25 Mpts	10 GS/s
HD04104A / HD04104A-MS	1 GHz	4 / 4+16	12.5 Mpts / 25 Mpts	10 GS/s

#### Available Probes High Voltage Fiber Optically-isolated Probes HVE0103 High Voltage Fiber Optic Probe 60 MHz Bandwidth

HVFU103	High voltage Fibel Optic Probe, 60 MHZ bahuwidth
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

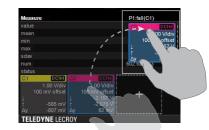
TPA10

**CA10** 

HVP120	400 MHz, 1kV V <sub>rms</sub> 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 <sub>rms</sub> ; 50 A <sub>peak</sub> Pulse			
CP030A	30A, 50 MHz High Sensitivity Current Probe - AC/DC, 30 Arms, 50 Apeak Pulse,			
CP031	30A; 100 MHz Current Probe – AC/DC; 30 A <sub>rms</sub> ; 50 A <sub>peak</sub> Pulse			
CP031A	30A, 100 MHz High Sensitivity Current Probe - AC/DC, 30 Arms, 50 Apeak Pulse,			
CP150	150A; 10 MHz Current Probe – AC/DC; 150 Arms; 50 Apeak Pulse			
CP500	500A; 2 MHz Current Probe – AC/DC; 500 A <sub>rms</sub> ; 700 A <sub>peak</sub> Pulse			
Active Voltage Rail Probe RP4030 Power/Voltage Rail Probe. 4 GHz, ±30V offset, ±800mV				
Probe Ada	oters			

TekProbe to ProBus Probe Adapter

Programmable ProBus Current Adapter



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



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