

## Debug in High Definition

200 MHz – 1 GHz



### Key Specifications

<b>Bandwidth</b>	200 MHz, 350 MHz, 500 MHz, 1 GHz
<b>Resolution</b>	12-bit ADC resolution, up to 15-bit with enhanced resolution
<b>Channels</b>	4
<b>Memory</b>	Up to 50 Mpts/Ch
<b>Sample Rate</b>	Up to 10 GS/s with Enhanced Sample Rate
<b>Digital Channels</b>	16 (with -MS models)
<b>Digital Sample Rate</b>	1.25 GS/s
<b>User Interface</b>	MAUI with OneTouch
<b>Display</b>	12.1" Wide TFT-LCD Multi-Touch Screen
<b>Connectivity</b>	USB Host, USB Device, LAN, GPIB

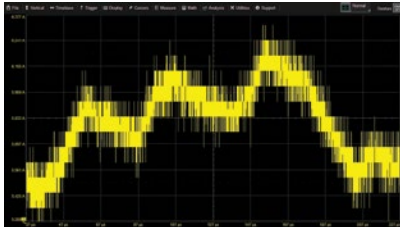
### Tools for Improved Debugging

- **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 runs, 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

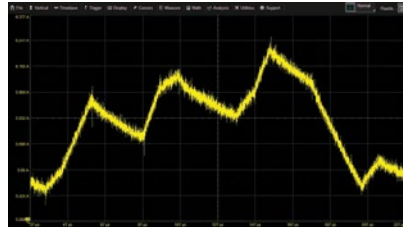
For more information, please contact:



8 bit

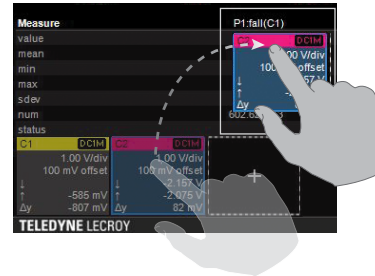


12 bit



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		High Voltage	
<b>HVF0103</b>	High Voltage Fiber Optic Probe, 60 MHz Bandwidth.	<b>HVP120</b>	400 MHz, 1kV V <sub>rms</sub> High-Voltage Passive Probe
<b>Differential</b>		<b>PPE4KV</b>	100:1 400 MHz 50 MΩ 4kV High-Voltage Probe
<b>HVD3102</b>	1kV, 25 MHz High Voltage Differential Probe	<b>PPE5KV</b>	1000:1 400 MHz 50 MΩ 5 kV High-Voltage Probe
<b>HVD3106</b>	1kV, 120 MHz High Voltage Differential Probe	<b>PPE6KV</b>	1000:1 400 MHz 50 MΩ 6 kV High-Voltage Probe
<b>HVD3206</b>	2kV, 120 MHz High Voltage Differential Probe	<b>Current</b>	
<b>HVD3605</b>	6kV, 100 MHz High Voltage Differential Probe	<b>CP030</b>	30A; 50 MHz Current Probe – AC/DC; 30 A <sub>rms</sub> ; 50 A <sub>peak</sub> Pulse
<b>AP033</b>	500 MHz Active Differential Probe	<b>CP030A</b>	30A, 50 MHz High Sensitivity Current Probe - AC/DC, 30 A <sub>rms</sub> , 50 A <sub>peak</sub> Pulse,
<b>ZD200</b>	200 MHz Active Differential Probe	<b>CP031</b>	30A; 100 MHz Current Probe – AC/DC; 30 A <sub>rms</sub> ; 50 A <sub>peak</sub> Pulse
<b>ZD500</b>	500 MHz Active Differential Probe	<b>CP031A</b>	30A, 100 MHz High Sensitivity Current Probe - AC/DC, 30 A <sub>rms</sub> , 50 A <sub>peak</sub> Pulse,
<b>ZD1000</b>	1 GHz Active Differential Probe	<b>CP150</b>	150A; 10 MHz Current Probe – AC/DC; 150 A <sub>rms</sub> ; 50 A <sub>peak</sub> Pulse
<b>ZD1500</b>	1.5 GHz Active Differential Probe	<b>CP500</b>	500A; 2 MHz Current Probe – AC/DC; 500 A <sub>rms</sub> ; 700 A <sub>peak</sub> Pulse
<b>Differential Amplifiers</b>		<b>Active Voltage Rail Probe</b>	
<b>DA1855A</b>	1 Ch, 100 MHz Differential Amplifier	<b>RP4030</b>	Power/Voltage Rail Probe. 4 GHz, ±30V offset, ±800mV
<b>Single-Ended</b>		<b>Probe Adapters</b>	
<b>ZS1500</b>	1.5 GHz, 0.9 pF, 1 MΩ High Impedance Active Probe	<b>TPA10</b>	TekProbe to ProBus Probe Adapter
<b>ZS1000</b>	1 GHz, 0.9 pF, 1 MΩ High Impedance Active Probe	<b>CA10</b>	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<sup>2</sup>C, SPI, UART
- CAN, CAN FD, LIN, FlexRay™, 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