

HRDO4000 Series digital Oscilloscope



- 12bit vertical resolution, up to 10GSa/s sampling rate, maximum 3GHz bandwidth;
- Set 8 independent instruments in one, including: 4-Channel oscilloscope/16-channel logic analyzer/spectrum analyzer/2-Channel arbitrary wave generator/digital voltmeter / 5-bit frequency meter and accumulator/protocol analyzer/protocol generator;
- Built-in dual channel 200MHz signal source, $\pm 7V$ voltage output, 1GSa/s sampling rate;
- 10.1 inch multi-touch capacitive screen, 256 level waveform gray scale and color temperature display;
- Rich serial protocol triggering and decoding functions;
- Waveform capture rate is higher than 1.1 million waveforms per second;
- Up to 51 kinds of waveform parameters are automatically measured, and full memory hardware measurement function is also provided;
- Multiple data analysis and processing functions: independent search, navigation keys and event list, histogram, baud chart, power analysis, counter.

Model	Channel	Bandwidth	Vertical Resolution	Highest real-time Sampling Rate	Maximun Memory Depth	Maximum Waveform Capture Rate	Logical Analyzer	Waveform Generator
HRDO4304E	4CH	3GHz	12-bit	10GSa/s	2Gpts	1,100,000 wfms/s	16CH	200MHz,2CH
HRDO4254E	4CH	2.5GHz	12-bit	10GSa/s	2Gpts	1,100,000 wfms/s	16CH	200MHz,2CH
HRDO4204E	4CH	2GHz	12-bit	10GSa/s	2Gpts	1,100,000 wfms/s	16CH	200MHz,2CH

HRDO4104E	4CH	1GHz	12-bit	10GSa/s	2Gpts	1,100,000 wfms/s	16CH	200MHz,2CH
HRDO4084E	4CH	800MHz	12-bit	10GSa/s	2Gpts	1,100,000 wfms/s	16CH	200MHz,2CH
HRDO4054E	4CH	500MHz	12-bit	10GSa/s	2Gpts	1,100,000 wfms/s	16CH	200MHz,2CH

Model	Channel	Bandwidth	Vertical Resolution	Highest real-time Sampling Rate	Maximun Memory Depth	Maximum Waveform Capture Rate	Logical Analyzer	Waveform Generator
HRDO4304C	4CH	3GHz	12-bit	10GSa/s	2Gpts	1,100,000 wfms/s	--	--
HRDO4254C	4CH	2.5GHz	12-bit	10GSa/s	2Gpts	1,100,000 wfms/s	--	--
HRDO4204C	4CH	2GHz	12-bit	10GSa/s	2Gpts	1,100,000 wfms/s	--	--
HRDO4104C	4CH	1GHz	12-bit	10GSa/s	2Gpts	1,100,000 wfms/s	--	--
HRDO4084C	4CH	800MHz	12-bit	10GSa/s	2Gpts	1,100,000 wfms/s	--	--
HRDO4054C	4CH	500MHz	12-bit	10GSa/s	2Gpts	1,100,000 wfms/s	--	--

Model	Channel	Bandwidth	Vertical Resolution	Highest real-time Sampling Rate	Maximun Memory Depth	Maximum Waveform Capture Rate	Logical Analyzer	Waveform Generator
HRDO4304D	4CH	3GHz	12-bit	10GSa/s	2Gpts	1,100,000 wfms/s	--	200MHz,2CH
HRDO4254D	4CH	2.5GHz	12-bit	10GSa/s	2Gpts	1,100,000 wfms/s	--	200MHz,2CH
HRDO4204D	4CH	2GHz	12-bit	10GSa/s	2Gpts	1,100,000 wfms/s	--	200MHz,2CH
HRDO4104D	4CH	1GHz	12-bit	10GSa/s	2Gpts	1,100,000 wfms/s	--	200MHz,2CH
HRDO4084D	4CH	800MHz	12-bit	10GSa/s	2Gpts	1,100,000 wfms/s	--	200MHz,2CH
HRDO4054D	4CH	500MHz	12-bit	10GSa/s	2Gpts	1,100,000 wfms/s	--	200MHz,2CH

Model	HRDO4304E	HRDO4254E	HRDO4204E	HRDO4104E	HRDO4084E	HRDO4054E
Channel	4-Channel Oscilloscope+2-Channel Waveform Generator +16-Channel Logic Analyzer					
Bandwidth	3GHz	2.5GHz	2GHz	1GHz	800MHz	500MHz
Real-time Sampling Rate	10GSa/s single channel, 10GSa/s half channel, 5GSa/s all channel					
Memory Depth	1Gpts (single channel), 500Mpts(dual channel), 250Mpts (three-four channels)					
Waveform Capture Rate	1,100,000 wfms/s					
Vertical Resolution	12-bit					
Vertical Sensitivity	1 MΩ : 500μV/div ~ 10 V/div ; 50 Ω : 1mV/div ~ 1 V/div					1 MΩ : 500μV/div ~ 10 V/div ; 50 Ω

						: 500μV/div ~ 1 V/div
Time Base Range	100ps/div~1ks/div	100ps/div~1ks/div	100ps/div~1ks/div	200ps/div~1ks/div	500ps/div~1ks/div	500ps/div~1ks/div
Time Base Accuracy	±1 ppm ± 1 ppm/year					
Bandwidth limitation	20 MHz, 200MHz; Independent optional for each channel					
Trigger Type	Edge, Pulse, Video, Slope, Overtime, Window, Logic, Overamp, Runt, Pattern, Delay, Setup/Hold, Nth Edge, UART, LIN, CAN, SPI, I2C					
Bus and Decoding	UART, I2C, SPI, LIN, CAN					
Mathematical Operation	A+B, A-B, A*B, A/B, FFT, A&&B, A B, A^B, !A, Intg, Diff, Sqrt, Lg, Ln, Exp, Abs, LowPass, HighPass, BandPass, BandStop, AX+B, Expression					
Automatic Measurement	51 kinds of parameter measurement, supporting statistics and analysis					
Analysis Function	Frequency meter, DVM, Power Analyzer, Histogram, Search, Navigate, Record, Bode Set					
Hardware Recording and Playback	More than 2 million frames (single channel)					
Input Coupling	DC, AC or GND					
Input Impedance and Capacitance	1 MΩ ± 1%, 50 Ω ± 1% ; 20 pF ± 3 pF					1 MΩ ± 1%, 50 Ω ± 1% ; 18 pF ± 3 pF
Arbitrary Waveform Generator	2-channel signal source, 16-bit vertical resolution, maximum output frequency 50 MHz, Sine, Square, Pulse, Ramp, Noise, DC, Sinc, Exp.rise, Exp.fall, Lorentz, Gauss, ECG, Haversine and other 13 standard waveforms					
Digital Channel	16CH, 1GSa/s sampling rate					
Interface	USB HOST, USB DEVICE, LAN ; option: HDMI, serial port					
Screen	10.1 inch multi-touch capacitive screen, 256 level waveform grayscale display, with color afterglow					