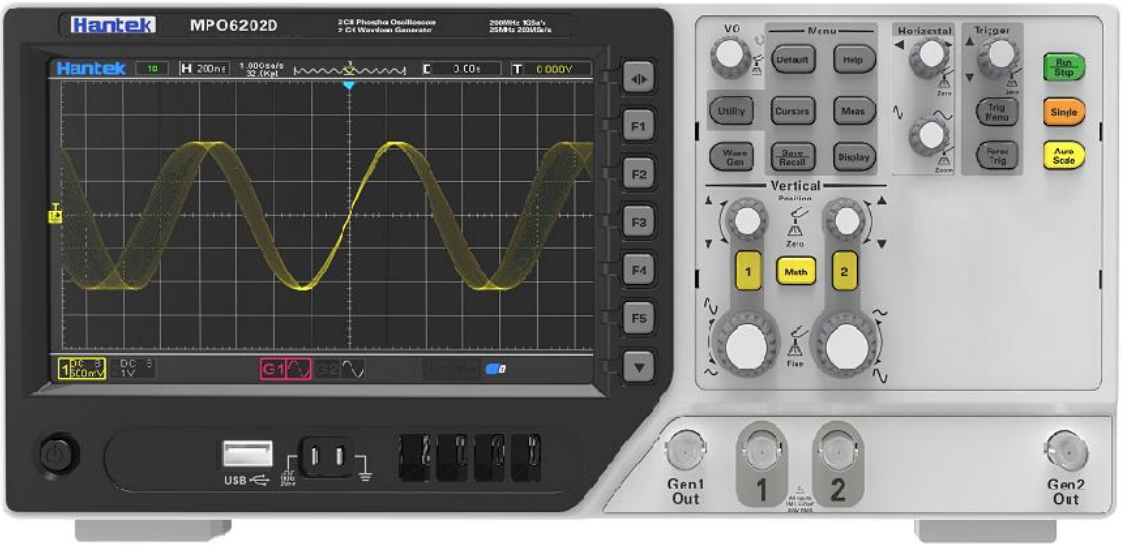
DPO6002B(C)/MPO6002D Digital 2 channel oscilloscopes



The waveform capture rate of DPO6000/MPO6000 Fluorescent oscilloscope is up to 400,000 FPS.It has 256 grade color and color temperature display.Standard equipped with up to 16 kinds of trigger functions, 5 kinds of serial decoding functions.It supplies 200 MHz, 100 MHz and 80 MHz bandwidth, its memory depth is up to 128M,16 channels logic analyzer plug and use, all standard equipped with 2 channels waveform generator, standard equipped with touch screen. it is a useful commissioning instrument for various fields such as communication, aerospace, defense, embedded systems, computers, research and education.

Six in one oscilloscope:2 channels oscilloscope+16 channels logic analyzer+2 channels waveform generator+digital voltmeter+serial protocol analyzer+FFT spectral analysis.

★60 000 wfms/s (dots display)/400,000 wfms/s (dots display quick acquisition mode) waveform capture rate.

★Segmented acquisition function,support to capture up to 80,000 sections. 256 grade color display.

★Up to 16 kinds of trigger functions, including 5 kinds of protocol triggers.Supply 5 serial decoding option.

★1 GSa/s real-time sample rate of the analog channels; 64 Mpts standardmemory depth.

★2-channe signal source,13 kinds of waveforms inside,4 sets of arbitrary waveforms,200M sample rate,8Kpts waveform length.

★1 GSa/s real-time sample rate of the digital channels.

★200 MHz, 100 MHz and 80 MHz analog channel bandwidth.

★Low base noise, 500uV/div to 10 V/div ultra-wide vertical dynamic range.

★7 inch WVGA capacitive touch screen,(800*480) TFT , with ultra-wide screen, vivid picture, lowpower consumption and long service life.

★Auto measurement of 42 kinds of waveform parameters (with statistics).

★5 bits digital voltage meter and 6 bits hardware frequency indicator function.

★Bode diagram function(the oscilloscopes with signal source function can use).

★Multiple waveform math operation functions【MATH】.Event search function.

★Standard interfaces: USB Device, USB Host, LAN,Optional interfaces: HDMI， UART

★Conform to LXI CORE 2011 DEVICE class instrument standards; enable quick, economic and efficient creation and reconfiguration of test system.Supports remote command control.

Parameters

Oscilloscope function		
Acquisition	Real-time sample rate	1 GSa/s（single channel） 500 MSa/s（two channels）
		Note：digital channel 12， 34 open at the same time,it is considered as one channel
	Peak detection	Analog channel 4ns
		Note：digital channels don’t support
	Average mode	Analog channel
		All channels reach N time samples at the same time， N can be selected from 2、4、8、16、32、 64、128、256、512 and 1024.
		Note：digital channels don’t support
	High resolution	Up to 12bit
		Note：digital channels don’t support
	Minimum test pulse width	8ns
	Memory depth	Single channel 64M
		Two channels 32M
Input	Channel quantity	4 analog channels
		Note：data channels can’t be opened
		3 analog channels
		Note：digital channel LA1/LA2/LA3/LA4/LA1LA2/LA3LA4
		2 analog channels
		Note：digital channels infinitize
		1 analog channel
		Note：digital channels infinitize
		0 analog channel
		Note：digital channels infinitize
	Input coupling	DC、AC or GND
		Note：digital channels don’t support
	Input impedance，DC coupling	Analog channel
		25pF±3 pF，1MΩ±2%
		Digital channel
		(300KΩ±2%)，(8 pF±3 pF)
	Supported probe attenuation factor	Analog channel 1X、10X、100X、1000X
	Voltage classes	300V CAT II
	Maximum input voltage	Analog channel 300VRMS (10X)
		Digital channel -25V~25V
Horizontal	Waveform interpolation	(sin x)/x
	Maximum record length	Single channel maximum 64M
		Two channels maximum32M
		three/four channels maximum 16M
	Horizontal scale range	DSO6084 DSO6104
		2ns/div~100s/div 1， 2， 5 step by step
	Time base mode	Y-T、X-Y、Roll

	X-Y number		Channel 1,2 1 XY channel、channel3 4 1 XY channel		
	Zero offset		±0.5 div× minimum time base gear		
	Sample Rate and		±25ppm		
	Delay Time Accuracy				
	Clock drifting		≤±5 ppm/year		
	Delta Time Measurement		single，“acquisition”mode		
	Accuracy				
	(Full Bandwidth)		±（1 sample interval+100ppm×reading+0.6ns）		
			＞16 times averages		
			±（1 sample interval+100ppm×reading+0.4ns）		
			Sample interval=sec/div÷200		
Vertical	Bandwidth（-3db）		DPO6082	DPO6102	DPO6202
			80MHz	100MHz	200MHz
	Vertical resolution		Analog channel 8bit		
			Digital channel 1bit		
	Vertical scale range		nput BNC position is 500μV/div~10V/div		
	Position range		500μV/div to 120mV/div，±1V		
			122mV/div to 1.2V/div，±10V		
			1.22V/div to 10V/div，±50V		
	Optional analog bandwidth limitation		Typical 20MHz		
	Bass response（-3db）		In BNC position is≤10Hz		
	Rising time in BNC position, typical		DPO6082	DPO6102	DPO6202
			≤4.4ns	≤3.5ns	≤1.8ns
	Vertical gain accuracy		In “normal” or “average” acquisition mode，the accuracy of 10V/div to 10mV/div is ±3%		
			In “normal” or “average” acquisition mode，the accuracy of 5mV/div to 500uV/div is ±4%.		
	DC offset accuracy		±0.1 div±2 mV±1% offset value		
	The isolation of channels		DC maximum bandwidth：>40 dB		
Note: Bandwidth reduced to 6MHz when using a 1X probe					
Trigger	Trigger level range		±5 divisions from the center of the screen		
	Trigger mode		auto、general、single		
	Level		CH1~CH2	±4 divisions from the center of the screen	
	Holdoff range		8ns~10s		
	Trigger level accuracy		CH1~CH2	0.2 div×volts/div within ±4 divisions from the center of the screen	
	Edge trigger	Slope	Rising edge，falling edge，rising or falling edge		
		Signal source	CH1~CH2,		
			D1.0~D1.3,		
			D2.0~D2.3,		
			D3.0~D3.3,		
			D4.0~D4.3		
	Pulse width trigger	Polarity	Positive polarity，negative polarity		
		Condition(When)	<，>，!=，=		
		Signal source	CH1~CH2,		
			D1.0~D1.3,		
			D2.0~D2.3,		
			D3.0~D3.3,		

			D4.0~D4.3
		Pulse width range	8ns ~ 10s
	Video trigger	Signal standard	NTSC， PAL
		Signal source	CH1~CH2
		Synchronization	Scanning line、line number、odd field、even field、all field
	Slope trigger	Slope	rise，fal
		condition(When)	<，>，!=，=
		Signal source	CH1 ~ CH2
		Time range	8ns ~ 10s
	Overtime trigger	Signal source	CH1~CH2,
			D1.0~D1.3,
			D2.0~D2.3,
			D3.0~D3.3,
			D4.0~D4.3
		Polarity	Positive polarity，negative polarity
		Time range	8ns ~ 10s
	Window trigger	Signal source	CH1~CH2LA1~LA4
	Pattern trigger	Pattern	0:low level；1:high level；X:ignore；
		Level（signal source）	CH1~CH2
	Interval trigger	Slope	rise，fall
		condition(When)	<，>，!=，=
		Signal source	CH1~CH2,
			D1.0~D1.3,
			D2.0~D2.3,
			D3.0~D3.3,
			D4.0~D4.3
		Time rangeTime range	8ns ~ 10s
	Delay trigger	Edge type	Rising edge，falling edge
		Signal source	CH1~CH2
		condition(When)	<，>，!=，=
		Time range	8ns ~ 10s
	Set up hold trigger	Edge type	Rising edge，falling edge
		Signal source	CH1~CH2
		condition(When)	<，>，!=，=
		Time range	8ns ~ 10s
	Runt trigger	Polarity	Positive polarity，negative polarity
		Condition(When)	<，>，!=，=
		Signal source	CH1~CH2

		Time range	8ns ~ 10s
	UART trigger	condition(When)	start、stop、data、odd-even check、reception error
		Signal source(RX/TX)	CH1~CH2,
			D1.0~D1.3,
			D2.0~D2.3,
			D3.0~D3.3,
			D4.0~D4.3
		Data format	Hex（hexadecimal）
		Data length	1 byte
		Data bit width	5 bit, 6 bit, 7 bit, 8 bit
		Odd-even check	none、odd、even
		Free level	high、low
		Baud rate (optional)	110/300/600/1200/2400/4800/9600/14400/19200/38400/57600/11520 0/230400/380400/460400 bit/s
		Baud rate(user-defined)	300bit/s~334000bit/s
	LIN trigger	condition(When)	Interval field、synchronization field、ID field、synchronization error、identifier、IDand data
		Signal source	CH1~CH2,
			D1.0~D1.3,
			D2.0~D2.3,
			D3.0~D3.3,
			D4.0~D4.3
		Data format	Hex（hexadecimal）
		Baud rate(optional)	110/300/600/1200/2400/4800/9600/14400/19200/38400/57600/11520 0/230400/380400/460400 bit/s
		Baud rate(user-defined)	300bit/s~334000bit/s
	CAN trigger	condition(When)	Start bit、remote frame ID、data frame ID、frame ID、remote frame data、data frame data、wrong frame、all errors、answer error、overload frame
		Signal source	CH1~CH2
		Data format	Hex（hexadecimal）
		Baud rate(optional)	10000, 20000, 33300, 500000, 62500, 83300, 100000, 125000 , 250000, 500000, 800000, 1000000
		Baud rate(user-defined)	5kbit/s~1Mbit/s
	SPI trigger	Signal source	CH1~CH2,
			D1.0~D1.3,
			D2.0~D2.3,
			D3.0~D3.3,
			D4.0~D4.3
		Data format	Hex（hexadecimal）

		Data bit width	4, 8, 16, 24, 32	
	IIC trigger	Signal source (SDA/SCL)	CH1~CH2,	
			D1.0~D1.3,	
			D2.0~D2.3,	
			D3.0~D3.3,	
			D4.0~D4.3	
		Data format	Hex（hexadecimal）	
		Data index	0~7	
		opportunity(condition)	Start bit、stop bit、no response、address、data、restart	
Measurement	cursor		Voltage difference between cursors △V	
			Time difference between cursors △T	
			Reciprocal of △T, in Hertz（1/△T）	
	Auto measurement		frequency、period、mean、peak-to-peak、RMS、minimum、mixmum、rising time、falling time、+ width、- width、base、top、middle、amplitude、overshoot、preshoot、rising edge phase difference、falling edge phase difference、+ duty、- duty、period mean、PRMS、FOVshoot、ROVshoot、BWIDTH、FRF、FFR、LRR、LRF、LFR、LFF	
	DVM		Data source	CH1, CH2
			Measurement type	DC effective value
				AC effective value
				DC
			Frequency meter	hardware 6 bits frequency meter
Arbitrary waveform generator				
Arbitrary waveform generator(for oscilloscopes with signal source channels)	Channel number		2 channels	
	Sample rate		200MSa/s	
	Vertical resolution		12 bits	
	Maximum frequency		25 MHz	
	Standard waveforms		sin、square、pulse、triangular, noise、DC	
			Sinc、index、semi-distortion、lorentz, dual tone multiple frequency, gauss, ECG	
	Arbitrary waveform		Arb1, Arb2, Arb3, Arb4	
	Sin		Frequency range	0.1Hz~25MHz
	square/pulse		Frequency range	0.1Hz~10MHz
	triangular wave		Frequency range	0.1Hz~1MHz
	Sampling wave		Frequency range	0.1Hz~1MHz
	Index		Frequency range	0.1Hz~5MHz
	Semi-distortion		Frequency range	0.1Hz~1MHz
	lorentz		Frequency range	0.1Hz~1MHz
	Dual tone multiple frequency		Frequency range	0.1Hz~1MHz
	Gauss		Frequency range	0.1Hz~1MHz
	ECG		Frequency range	0.1Hz~1MHz
	Arbitrary wave		Frequency range	0.1 Hz to 10 MHz
	Waveform length		8KSa	
	Frequency		accuracy	100 ppm（<10 kHz） 50 ppm（>10 kHz）
			resolution	0.1 Hz or 4 bits, take the greater one
	Amplitude		Output range	10mV~7Vp-p(high impedance)
				5mV~3.5Vp-p(50Ω)
	DC offset		range	±3.5 V, high impedance

			±1.75 V，50 Ω
		resolution	100 μV or 3 bits，take the greater one
		accuracy	2%（1 kHz）
	Output impedance	50 Ω	
Logic analyzer			
Logic analyzer	Input impedance,DC coupling	Digital channel	
		(300KΩ±2%)，(8 pF±3 pF)	
	Threshold value	4 channels in 1 group adjustable threshold value	
	Threshold option	TTL（1.4 V）	
		5.0 V CMOS（+2.5 V）	
		3.3 V CMOS（+1.65 V）	
		2.5 V CMOS（+1.25 V）	
		1.8 V CMOS（+0.9 V）	
		ECL（-1.3 V）	
		PECL（+3.7 V）	
		LVDS（+1.2 V）	
		0V	
		User-defined	
	Threshold range	±7.0V，10mV step by step	
	Threshold accuracy	±(100mV+3% threshold setting)	
	Dynamic range	±5.0V+ threshold	
	Minimum voltage swing	500 mVpp	
	Vertical resolution	1 bit	
General specifications			
Display	Display type	7"TFT diagonal liquid crystal	
	Display resolution	800（horizontal）*480（vertical）pixels	
	Display colour	16 million colours（24 bits true colour）	
	Persistence time	minimum、1 s、5 s、10 s、30S、infinite	
	Display type	dot、vector	
	Display mode	Color temperature，gray scale	
	Display brightness	adjustable	
	Grid type	adjustable	
	Grid brightness	adjustable	
Interface	Standard interface	USB Host，USB Device，LAN， EDU signal WIFI	
		Aux（trigger output/PassFail ）--only EDU with this interface	
	Optional interface	PassFail	
		UART	
		HDMI	
General specifications	Probe compensator output		
	Output voltage， typical	about 2Vpp input≥1MΩ load	
	frequency、typical	1kHz	
	Power supply	100-120VACRMS(±10%)，45Hz to 440Hz，CAT Ⅱ	
		120-240VACRMS(±10%)，45Hz to 66Hz，CAT Ⅱ	
	Power consumption	<30W	
	Fuse	T，3.15A，250V，5x20mm	
	Operating temperature	0~50 °C (32~122 °F)	
	Storage temperature	-40~+71 °C (-40~159.8 °F)	
	Humidity	≤+104℉(≤+40°C): ≤90% relative humidity	

		106°F~122°F (+41°C ~50°C): ≤60% relative humidity		
	Cooling method	convection		
	Altitude	Operating and nonoperating	3，000m（10，000 feet）	
	Mechanical shock	Random vibration	0.31 g_{RMS} from 50Hz to 500Hz,	
			10 minutes on each axis	
		Nonoperating	2.46g_{RMS} from 5Hz to 500Hz,	
			10 minutes on each axis	
		Operating	50g，11ms，half-sine wave	
	Mechanical	Size	318 x 140 x 150mm(length x width x height)	
		Weight	2900g