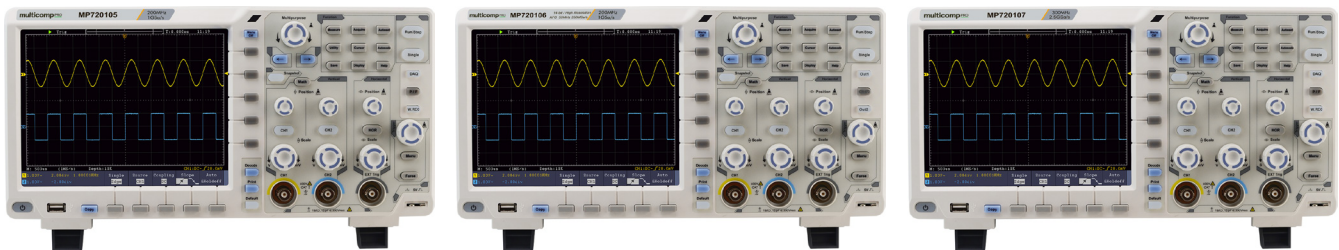


# 2 Channel Digital Storage Oscilloscope

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## Performance Specifications

Characteristics	MP720105	MP720106	MP720107
Bandwidth	200MHz	200MHz	300MHz
Sample Rate	1GS/s	1GS/s (8 bits) 500MS/s (12 bits) 100MS/s (14 bits)	2.5GS/s
Vertical Resolution (A/D)	8 bits	14 bits	8 bits
Record Length	40M		
Waveform Refresh Rate	75,000 wfms/s		
Horizontal Scale (s/div)	1ns/div - 1000	1ns/div - 1000	1ns/div - 1000
	Step by 1 - 2 - 5		
Rise Time (at Input, Typical)	≤1.7ns		≤1.17ns
Channel	2 + 1 (external)		
Display	8" Colour LCD, 800 × 600 pixels (optional 1024 × 768 pixels IPS display)		
Input Impedance	1MΩ ± 2%, in parallel with 15pF ±5pF	50Ω ±2%, in parallel with 15pF ±5pF	
Channel Isolation	50Hz : 100 : 1, 10MHz : 40 : 1		
Max. Input Voltage	1MΩ ≤ 300Vrms; 50Ω ≤ 5Vrms		
DC Gain Accuracy	±3%	±1.5%	±3%
DC Accuracy	Average≥16: ±(3% reading + 0.05 div) for ΔV		
Probe Attenuation Factor	0.001X - 1000X, Step by 1 - 2 - 5		
LF Respond (AC, -3dB)	≥10Hz (at input, AC coupling, -3dB)		
Sample Rate / Relay Time Accuracy	±1ppm		
Interpolation	sin(x) / x		
Interval (ΔT) Accuracy (full bandwidth)	Single: ±(1 interval time + 1ppm x reading + 0.6ns); Average > 16: ±(1 interval time + 1ppm x reading + 0.4ns)		
Input Coupling	DC, AC, and GND		
Vertical Sensitivity	1mV/div to 10V/div (at input)		
Trigger Type	Edge, Video, Pulse, Slope, Runt, Windows, Time Out, Nth Edge, Logic, I2C, SPI, RS232, and CAN (optional)		
Bus Decoding	I2C, SPI, RS232, and CAN (optional)		
Trigger Mode	Auto, Normal, and Single		
Vertical Range	±2V ( 1mV/div - 50mV/div), ±20V ( 100mV/div - 1V/div), ±200V (2V/div - 10V/div)		

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Line / Field Frequency (video)	NTSC, PAL and SECAM Standard	
Cursor Measurement	$\Delta V$ , and $\Delta T$ between cursors, $\Delta V$ and $\Delta T$ between cursors, and auto-cursors	
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Peak RMS, Cursor RMS, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Phase, Preshoot, Rise Time, Fall Time, +Width, -Width, +Duty, -Duty, Duty Cycle, Delay A→B ↑, Delay A→B ↓, +Pulse Count, -Pulse Count, Rise Edge Count, Fall Edge Count	
Waveform Math	+, -, ×, ÷, FFT, FFTrms, Intg, Diff, Sqrt, User Defined Function, digital filter (low pass, high pass, band pass, band reject)	
Waveform Storage	100 waveforms	
Lissajou's Figure	Bandwidth	Full Bandwidth
	Phase Difference	±3 degrees
Communication Interface	USB host, USB device, USB port for PictBridge, Trig Out (P/F), LAN, and VGA (optional)	
Frequency Counter	Available	
Power Consumption	<15W	
Fuse	2A, T class, 250V	
Battery (optional)	3.7V, 13200mAh	
Power Supply	100V AC to 240V AC, 50/60Hz, CAT II	
Dimension (W × H × D)	340mm × 177mm × 90mm	
Weight	2.6kg ±200g	

## Multimeter (optional) Specifications

Full Scale Reading	3-3/4 digits (max 4000 count)
Input Impedance	10M $\Omega$
Capacitance	51.2nF - 100 $\mu$ F: $\pm(3\% \pm 3 \text{ digits})$
Voltage	V DC: 400mV, 4V, 400V: $\pm(1 \pm 1 \text{ digit})$ ; Max. input: DC 1000V V AC: 4V, 40V, 400V: $\pm(1 \pm 3 \text{ digits})$ ; frequency: 40Hz - 400Hz; Max input: AC 400V (virtual value)
Current	DC: 40mA, 400mA: $\pm(1.5\% \pm 1 \text{ digit})$ ; 10A: $\pm(3\% \pm 3 \text{ digits})$ AC: 40mA: $\pm(1.5\% \pm 3 \text{ digits})$ , 400mA: $\pm(2\% \pm 1 \text{ digit})$ , 10A: $\pm(3\% \pm 3 \text{ digits})$
Impedance	400 $\Omega$ : $\pm(1\% \pm 3 \text{ digits})$ , 4K $\Omega$ - 40M $\Omega$ : $\pm(1\% \pm 1 \text{ digit})$
Diode	<50 ( $\pm 30$ ) beeping
Continuity Test	0V to 1V

## Arb Waveform Generator (optional) Specifications

Max. Frequency Output	25MHz
Sample Rate	125MS/s
Channel	Available in 1-ch, or 2-ch
Vertical Resolution	14 bits
Amplitude Range	2mVpp - 6Vpp
Waveform Length	8K
Standard Waveform	Sine, Square, Pulse, Ramp

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# 2 Channel Digital Storage Oscilloscope

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## Module / Function

VGA	VGA+AV (MP720106 and MP720107)
TOU	Touch screen (capacitor-type) (MP720106 and MP720107)
WIF	WiFi (MP720106)
AWG	ARB waveform generator (MP720106)
DMM	Digital Multimeter (MP720106)

## Decoding Kit Included

MP720105, MP720106 and MP720107

RS232	RS232
SPI	SPI
I2C	I <sup>2</sup> C
CAN	CAN trigger / decoding

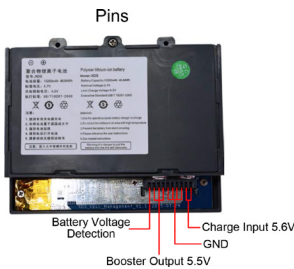
Accessories Included : Power Cord, USB cable, Probes, Probe Adjust Tool, CD-Rom and Manual  
Power Cord Plug Type : UK/EU  
Standard Warranty : 12 Months

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# 2 Channel Digital Storage Oscilloscope

## Polymer Lithium-ion Battery

**Battery Specification Table**



Characteristics	Item	Values
Li Battery	Capacity	13200mAh 48.84Wh
	Nominal Voltage	3.7V
	Limited Charge Voltage	4.2V
Protective Circuit	Charge Voltage	≤4.2V
	Charge Current	≤3A
	Discharge Voltage	2.8V ≤ Voltage ≤ 4.2V
	Discharge Current	≤7A
Charging Management	Charge Voltage Input Range	4.2V to 10V
	Rated Charge Voltage	5.6V
Battery Booster	Rated Output Voltage	5.5V ± 2%
	Output Voltage Ripple (20MHz)	≤100mVpp
	Output Current	≤4A
System	Charging Time	8 hours approximately
	Discharging Time	3.5 hours approximately
Operating Temperature	Charging Temperature	0°C to +45°C
	Discharging Temperature	-20°C to +60°C
	Storage Temperature	-10°C to +45°C
Dimension	119.2mm × 97.2mm × 25.7mm (L × W × T)	
Weight	371.9g	

**Part Number Table**

Description	Part Number
Dual Channel Digital Storage Oscilloscope, 200MHz, 8-bits	MP720105
Dual Channel Digital Storage Oscilloscope, 200MHz, 14-bits	MP720106
Dual Channel Digital Storage Oscilloscope, 300MHz, 8-bits	MP720106
Polymer Lithium-ion Battery for Oscilloscopes (MP720105, MP720106 & MP720106)	MP720417

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