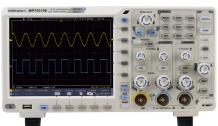
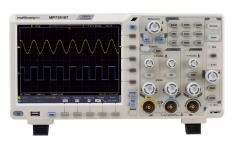
### 2 Channel Digital Storage Oscilloscopes









### **Performance Specifications**

Characteristics	MP720105 / MP720105 US	MP720106 / MP720106 US	MP720107 / MP720107 US
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
Horizoniai Scale (S/GIV)		Step by 1 - 2 - 5	
Rise Time (at Input, Typical)	≤1.7	7ns	≤1.17ns
Channel	2 + 1 (external)		
Display	8" Colour LCD, 800 × 600 pixels		
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 (∆T) 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		
Bus Decoding	I <sup>2</sup> C, SPI, RS232, and CAN		
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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# 2 Channel Digital Storage Oscilloscopes



Line / Field Frequency (video)         NTSC, PAL and SECAM Standard           Cursor Measurement         ΔV, and ΔT between cursors, ΔV and ΔT between cursors, and auto- cursors           Automatic Measurement         Vypp, Vavg, Vrms, Freq, Period, Week 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         Bandwidth         +, -, ×, +, FFT, FFTrms, Intg, Diff, Sqrt, User Defined Function, digital filter (low pass, high pass, band pass, band reject)           Waveform Storage         Bandwidth         Full Bandwidth           Figure         Storage         USB host, USB device, USB port for PictBridge, Trig Out (P/F), LAN, and VGA (MP720106 and MP720107l)           Frequency         Counter         Available           Power Consumption         Fuse         2A, T class, 250V           Battery (optional)         3.7V, 13200mAh           Power Supply         100V AC to 240V AC, 50/60Hz, CAT II				
Automatic Measurement  Vpp, Vavg, Vrms, Freq, Period, Week 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  Lissajou's Figure  Bandwidth  Full Bandwidth  Full Bandwidth  Full Bandwidth  Frequency Counter  Waveforms  USB host, USB device, USB port for PictBridge, Trig Out (P/F), LAN, and VGA (MP720106 and MP720107I)  Frequency Counter  Available  Power Consumption  Fuse  2A, T class, 250V  Battery (optional)  Power Supply  100V AC to 240V AC, 50/60Hz, CAT II  Dimension (W × H × D)  340mm × 177mm × 90mm	Line / Field	Line / Field Frequency (video) NTSC, PAL and SECAM Standard		
Automatic Measurement       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)         Lissajou's Figure       Bandwidth       Full Bandwidth         Figure       Bandwidth       Full Bandwidth         Figure       USB host, USB device, USB port for PictBridge, Trig Out (P/F), LAN, and VGA (MP720106 and MP720107l)         Frequency Counter       Available         Power Consumption       < 15W	Cursor Measurement		$\Delta$ V, and $\Delta$ T between cursors, $\Delta$ V and $\Delta$ T between cursors, and auto- cursors	
Waveform Math       (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 (MP720106 and MP720107I)         Frequency Counter       Available         Power Consumption       < 15W	Automatic Measurement		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,	
Lissajou's Figure  Bandwidth Phase Difference  Communication Interface  Communication Interface  Consumption  Frequency Counter  Power Consumption  Fuse  2A, T class, 250V  Battery (optional)  Power Supply  Dimension (W × H × D)  Pase Difference  ### USB host, USB device, USB port for PictBridge, Trig Out (P/F), LAN, and VGA (MP720106 and MP720107I)  *### Available  **Consumption **C15W**  Available  2A, T class, 250V  3.7V, 13200mAh  100V AC to 240V AC, 50/60Hz, CAT II  340mm × 177mm × 90mm	Waveform Math		I	
Figure Phase Difference ±3 degrees  Communication Interface USB host, USB device, USB port for PictBridge, Trig Out (P/F), LAN, and VGA (MP720106 and MP720107I)  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	Wave	form Storage	100 waveforms	
Communication Interface  USB host, USB device, USB port for PictBridge, Trig Out (P/F), LAN, and VGA (MP720106 and MP720107I)  Frequency Counter  Available  Power Consumption  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	Lissajou's	Bandwidth	Full Bandwidth	
Communication Interface         VGA (MP720106 and MP720107I)           Frequency Counter         Available           Power Consumption         <15W	Figure	Phase Difference	±3 degrees	
Power Consumption         <15W	Commun	ication Interface		
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	Frequ	ency Counter	Available	
Battery (optional)         3.7V, 13200mAh           Power Supply         100V AC to 240V AC, 50/60Hz, CAT II           Dimension (W × H × D)         340mm × 177mm × 90mm	Power	Consumption	<15W	
Power Supply 100V AC to 240V AC, 50/60Hz, CAT II  Dimension (W × H × D) 340mm × 177mm × 90mm		Fuse	2A, T class, 250V	
Dimension (W × H × D) 340mm × 177mm × 90mm	Battery (optional)		3.7V, 13200mAh	
	Power Supply		100V AC to 240V AC, 50/60Hz, CAT II	
Weight 2.6kg ±200g	Dimension (W × H × D)		340mm × 177mm × 90mm	
	Weight		2.6kg ±200g	

### Multimeter (MP720106 only) Specifications

Full Scale Reading	3-3/4 digits (max 4000 count)	
Input Impedance	10ΜΩ	
Capacitance	51.2nF - 100μF: ±(3% ± 3 digits)	
Voltage	V DC: 400mV, 4V, 400V: ±(1 ± 1 digit); Max. input: DC 1000V V AC: 4V, 40V, 400V: ±(1 ± 3 digits); frequency: 40Hz - 400Hz; Max input: AC 400V (virtual value)	
Current	DC: 40mA, 400mA: ±(1.5% ± 1 digit); 10A: ±(3% ± 3 digits) AC: 40mA: ±(1.5% ± 3 digits), 400mA: ±(2% ± 1 digit), 10A: ±(3% ± 3 digits)	
Impedance	400Ω: ±(1% ± 3 digits),4KΩ - 40MΩ: ±(1% ± 1 digit)	
Diode	<50 (±30) beeping	
Continuity Test	0V to 1V	

#### Arb Waveform Generator Specifications (MP720106 only)

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 Oscilloscopes



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	l <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, US Standard Warranty : 03 years

# 2 Channel Digital Storage Oscilloscopes



#### **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
	Charge Voltage	≤4.2V
Protective Circuit	Charge Current	≤3A
Protective Circuit	Discharge Voltage	2.8V ≤ Voltage ≤ 4.2V
	Discharge Current	≤7A
Charging	Charge Voltage Input Range	4.2V to 10V
Management	Rated Charge Voltage	5.6V
	Rated Output Voltage	5.5V ± 2%
Battery Booster	Output Voltage Ripple (20MHz)	≤100mVpp
	Output Current	≤4A
System	Charging Time	8 hours approximately
System	Discharging Time	3.5 hours approximately
	Charging Temperature	0°C to +45°C
Operating Temperature	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	MP720107
Polymer Lithium-ion Battery for Oscilloscopes (MP720105, MP720106 & MP720107)	MP720417
Dual Channel Digital Storage Oscilloscope, 200MHz, 8-bits	MP720105 US
Dual Channel Digital Storage Oscilloscope, 200MHz, 14-bits	MP720106 US
Dual Channel Digital Storage Oscilloscope, 300MHz, 8-bits	MP720107 US
Polymer Lithium-ion Battery for Oscilloscopes (MP720105, MP720106 & MP720107)	MP720417 US

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