GDS-900 Series

100 MHz Digital Storage Oscilloscope









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Front Panel
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Rear Panel

Balanced pricing and specifications, lightweight form with advanced features - featherweight in size, heavyweight in performance.

Before 2000, digital storage oscilloscope technology was dominated by European, American, and Japanese manufacturers. In 2000, GW Instek took the lead by launching the GDS-830, the first 100 MHz digital storage oscilloscope (DSO) independently developed in the Chinesespeaking world. After 25 years of development, 100 MHz entry-level digital storage oscilloscopes have become a stronghold of Chinese brands. The newly released GDS-912/912G digital storage oscilloscopes by GW Instek feature a 7-inch widescreen display with 15 horizontal divisions, offering 50 % more signal display area. The series provides a maximum sampling rate of 1 GSa/s and a memory depth of 20 Mpts per channel, enabling the capture of long-duration transients and maintaining its sampling rate at middle and low speed time bases through long memory settings. With 30 automatic measurement parameters, the oscilloscope allows users to quickly and easily analyze various signal conditions. The Area parameter supports waveform integration - an example application being the integration calculation of energy (in joules) from a power waveform (watts * seconds). The +PulseCount feature enables fast data acquisition in applications such as stepper motor control (number of pulses per unit time) or industrial sewing machines (number of stitches per unit time). Other counting parameters include - PulseCount, RiseEdgeCnt, and FallEdgeCnt. The Cursor RMS function allows users to measure the RMS value within a specified interval using cursors - ideal for measuring the transient RMS of inrush currents. The built-in FFT function offers six window types: Hamming, Rectangular, Blackman, Hanning, Kaiser, and Bartlett. It supports simultaneous display of time and frequency domains, helping users understand the signal's frequency content. To prevent measurement errors, a passive probe compensation test is included. If the test result indicates under- or over-compensation, users can adjust the variable capacitor on the passive probe and re-test after proper compensation is achieved. The series also features automatic signal type detection and a second-level auto setup menu to speed up and improve measurement accuracy. The series' multi-language interface supports 10 languages - Traditional Chinese, Simplified Chinese, English, Russian, German, Spanish, French, Italian, Japanese, and Korean - helping reduce the learning curve for users worldwide. These specifications and features match or exceed those offered by others in the same category, all weighted in a lightweight of 1.1 kg, which reflects the product's design philosophy: "balanced pricing and specifications, lightweight form with advanced features - featherweight in size, heavyweight in performance."



- * 100 MHz Bandwidth, 2 Input Channels
- * 1 GS/s Real-time Sampling Rate Maximum
- * Standard 25 MHz Arbitrary Function Generator for GDS-912G
- * 20 Mpts Memory Depth per Channel
- * Support 30 Automatic Waveform Measurements
- * 6 digit High-precision Frequency Counter
- * 2048 pts FFT Frequency Domain Signal Display
- * 7" 800 x 480 TFT LCD Display

APPLICATIONS

- Educational Market General Purpose Instruction
- Industrial Sector Fundamental R&D Measurement Applications



Model	GDS-912	GDS-912G
Bandwidth Channel	100 MHz 2	100 MHz 2
Bandwidth Limit	20 MHz	20 MHz
Calculated Rise Time Vertical Sensitivity	3.5 ns (calculated)	3.5 ns (calculated)
Resolution	8 bits: 2 mV/div to 10 V/div AC. DC. GND	
Input Impedance	1 M Ω +2 % · in parallel with 12 pF±5 pF	
DC Gain Accuracy Polarity	±3 % Normal & Invert	
Maximum Input Voltage	300 Vrms +1 V (2 mV/div to 100 mV/div) ++60 V (200 mV/div to 10 V/div)	
Waveform Signal Process	+, -, x, ÷, FFT	
Trigger Source	CH1 ,CH2	
Trigger Mode	Auto · Normal · Single	
Holdoff Range	100 ns to 10 s	
Coupling Sensitivity	AC, DC 1 div	
Horizontal	2 no /div to 1000 o/div (1.2.5 incremente)	
Pre-trigger	Max. Record Length	
Post-trigger Time Base Accuracy	Record Length / 2 ±100 ppm	
Real Time Sample Rate	1 GS/s(per-channel)* 20 Mptr / CH	
Acquisition Mode	Normal, Peak detect, Average, Single	
Peak Detection Average	2.5 ns 4, 16, 64, 128 selectable	
X-Y Mode	СН1	
Y-Axis Input	CH2	
Phase Shift Cursors and Measurement	±3 degrees	
Cursors Automatic Measurement	△V and △T between cursors, auto cursor Period, Frequency, Mean, PK-PK, RMS, May, Min, Top, Base, Amplitude, Quere	noot, Preshoot, Rise Time, Fall Time, +PulseWidth, -PulseWidth, +Duty Cycle
. automane measurement	-Duty Cycle, Delay A→B (Rising), Delay A→B (Falling), Cycle RMS, Cursor RM	S, Screen Duty, Phase, +PulseCount, -PulseCount, RiseEdgeCnt, FallEdgeCnt,
Control Panel Function	Area, and Cycle Area.	
Auto Counter	Available Single button, automotic cotup of all channels for unstable button at the statement of the stateme	ir sustame With "Cancel Autocat"
Save Setup	Single button, automatic setup of all channels for vertical, nonzontal and trigger systems. With "Cancel Autoset" 8 set	
Save Waveform Display	16 waveforms	
TFT LCD Type	7 inch LCD	
Interpolation	sin (x)/x	
Waveform Display Display Graticule	Dots, vectors, variable persistence (1 s × 2 s × 5 s), infinite persistence 8 x 15 divisions	
Display Mode	Y-T and X-Y	
USB	USB 2.0 Host/Device (Only one type is supported at a time can't use both at the	e same time.),Host mode: Supporting Mass
AFG Specifications (GDS-912G	Storage Class (FAT16 / 32) Device mode: Supporting USBTMC Class Only)	
Channel Samula Bata		
Sample Rate Vertical Resolution		125 MSa/s 14 bit
Max. Frequency Standard Waveform		25 MHz Sine wave, square wave, ramp wave, pulse wave, arbitrary wave
Built-in ARB Waveform	_	Sinc, exponential rise, exponential decline, Gaussian more than 16 kinds
Output Range Output Resolution		U.US V _{peak} to <i>j</i> v _{peak} to <i>j</i> α (50 Ω) 1 mV
Output Accuracy Offset Range		± (1% of setting + 1 mVpp) typical value; 1 kHz sine 0 V offset + (3 V - amplitude Vpp / 2)
Offset Resolution		$\pm (1\% \text{ of setting } + 1 \text{ mV} + \text{amplitude Vpp } * 0.5\%)$
Frequency Range		0.1 Hz to 25 MHz
Flatness Harmonic Distortion		Relative to 100 kHz Sine wave, 1 Vpp \star 50 Ω -35 dBc
Stray (Non-harmonic)	-	-40 dBc
S/N Ratio		0.8 % 50 dB
Square/Pulse Frequency Range		0.1 Hz to 5 MHz
Rise/Fall Time		Square <30 ns:Pulse > 12 ns
Duty Cycle	-	ر Square: 50 % ; Pulse: 0.4 % to 99.6 %
Min. Pulse Width Jitter		100 ns ±100 ppm
Ramp Frequency Range		0 1 Hz to 1 MHz
Linearity	-	<2 % of peak output (typical 1 kHz,1 Vpp, symmetry 50 %)
Symmetry Miscellaneous		0 % to 100 %
Multi-language Menu Operation Environment	Available Temperature: 0 °C to 40 °C : Relative Humidity < 90 %	
Power Consumption	16 Watts approx.	
NOTE: 1. The specifications apply	y when the GDS-900 Series is powered on for at least 30 minutes under +20 °C t	o +30 °C . Specifications subject to change without notice. DS-900ID1DH
2. (*) At 1000-point record	d length	
ORDERING INFORMATION OPTIONAL ASSESSORIES GAK-003 50 Ω Impedance Adapter GCP-206P Power supply for current probe/2 input channel.		
GDS-912 100 MHz, 2 channels, Digital Storage Oscilloscope GTL-246 USB Cable, USB 2.0, A B Time 1200 multiplication of the storage of the sto		
A-D type, 1200 mm GDP-025 25 MHz High voltage differential probe GCP-300 300 kHz/200 A Current probe GDP-050 50 MHz High voltage differential probe		
Power cord x 1, BNC Cable x 1 (only for GDS-912G), USB Cable x 1, GCP-500 500 HHz/150 A Current probe		
100 MHz(10:1/1:1)Switchable passive probe for GDS-900 Series x 2 GCP-1030 100 MHz/30 A Current probe GCP-0275 2 MHz//50 A Current probe GCP-0275 2 MHz//50 A Current probe		
FREE DOWNLOAD	GTP-033A	Oscilloscope Probe, 35 MHz I Procive Probe, 35 MHz GTP-100R-4 100 MHz/1011/11/11/11/11/11/11/11/11/11/11/11/1
Software Open wave software Driver USB Driver ; LaDVIew Driver		
No.7-1, Jhongsing Road, Tucł T +886-2-2268-0389 F +8	neng Dist., New Taipei City 236, Taiwan 56-2-2268-0639	
-mail: marketing@goodv	vill.com.tw	Excepted Linked In
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