GDS-1000 Series

100MHz/60MHz/40MHz/25MHz Digital Storage Oscilloscope

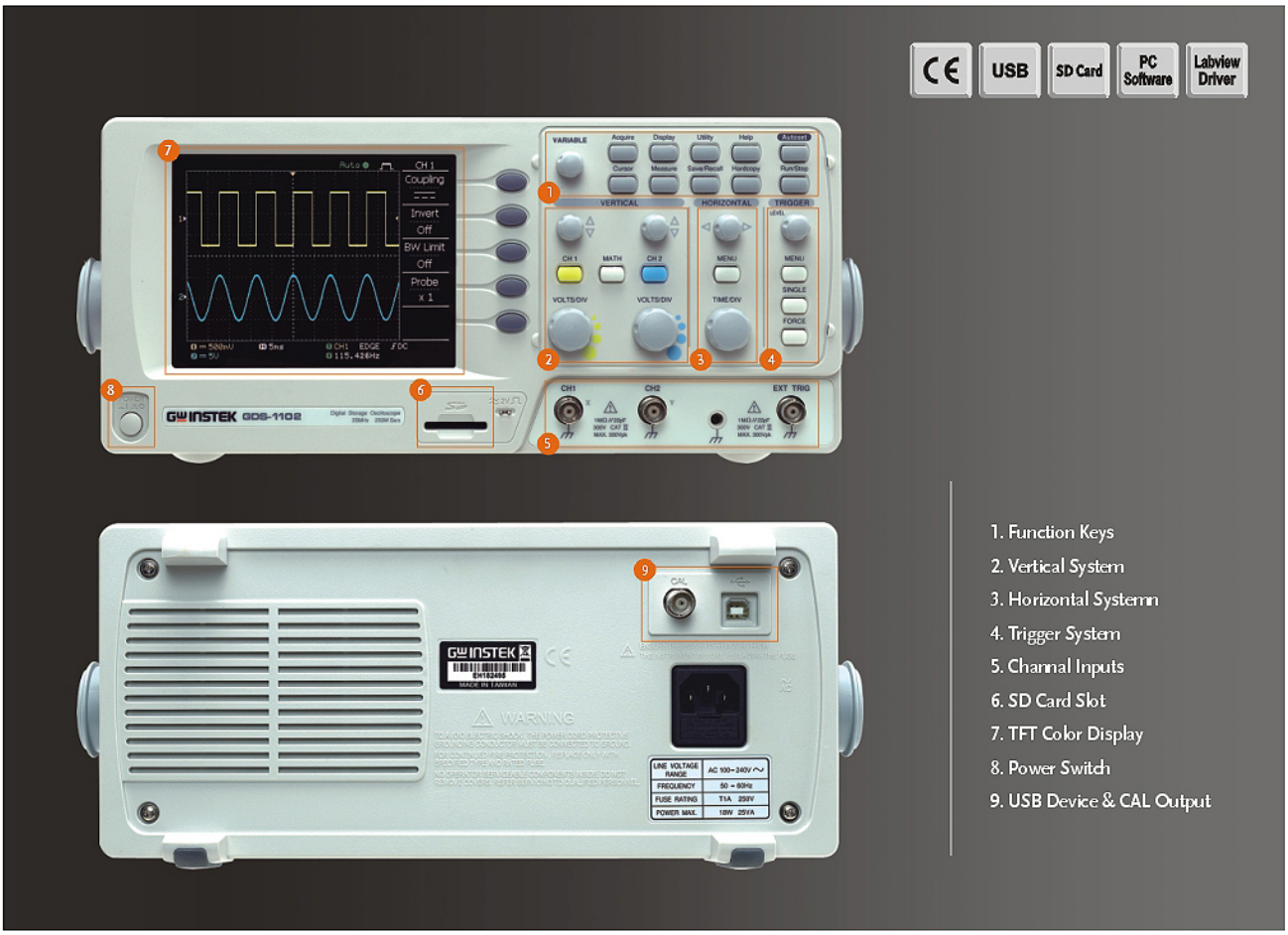
FEATURES

- 100/60/40/25MHz Bandwidth; 2 Input Channels
- 250MSa/s Real-Time and 25GSa/s Equivalent-Time Sampling Rate
- 4k Memory Length Per Channel; Peak Detect as Fast as 10ns
- Save/Recall of 15 Front Panel Settings & Waveforms
- Interfaces : USB Device Connector and SD Card Slot

GW INSTEK

Made to Measure

PANEL INTRODUCTION

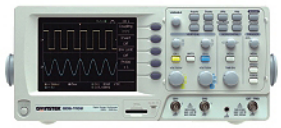


FEATURES

* 2 Channels, Full Bandwidth From 25MHz ~ 100MHz
* 250MSa/s Real-time Sampling Rate, 25GSa/s ET Sampling Rate
* 4k Memory Length Per Channel
* Peak Detect as Fast as 10ns
* Save/Recall of 15 Front Panel Settings & Waveforms
* 5.6" TFT Color Display for all Models
* 19 Auto Measurements
* Timebase Range : 1nS ~ 10S/div
* Vertical Sensitivity : 2mV ~ 5V/div
* USB Port for PC Connection
* Arithmetic Operators – Add, Subtract, FFT
* 6-Digit Realtime Frequency Counter
* Multi-Language Operation Menu (Note 1)

Note 1 : For more languages, GW Instek will be continuously devoted to more language version which will be released and update via webpage.

100 MHz



GDS-1102

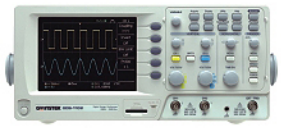
60 MHz

GDS-1062

40 MHz

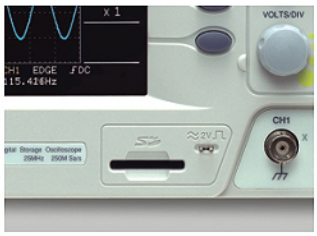
GDS-1042

25 MHz



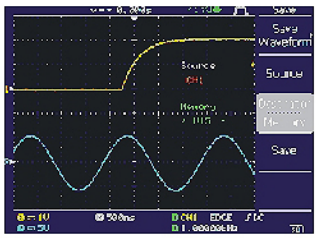
GDS-1022

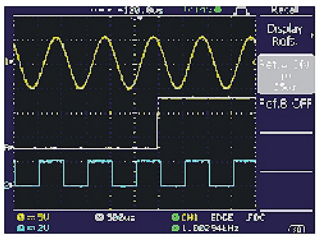
A. USB & SD INTERFACE

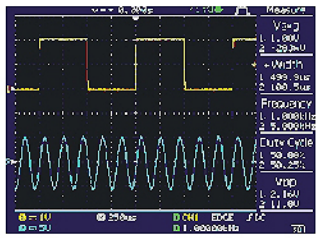


SD Card slot on the front, significantly enhance the data storage capability of the product. The large amount of data, including screenshot, waveform and panel setup could be easily stored into a popular SD memory card. A USB device port on the rear of the product transfers the screen image and waveform raw data to PC and also allows PC to remote control GDS-1000 Series.

B. WAVEFORM SAVING AND AUTOMATIC MEASUREMENT

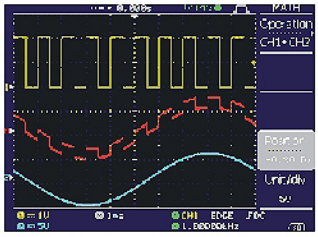


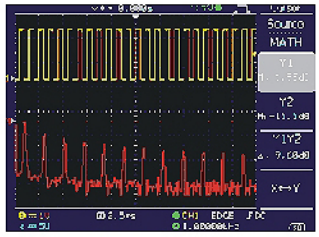




A total of 15 waveforms could be saved into memory for later recall and display, and 2 saved reference waveforms together with 2 live waveforms could be shown on the screen at the same time for comparison. A snapshot of all time & voltage related Auto Measurement readings of an input signal could be shown on the screen simultaneously.

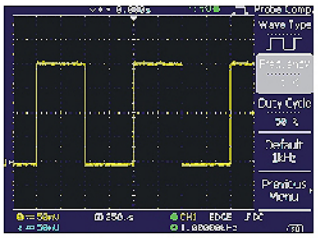
C. SOPHISTICATED MEASUREMENT FUNCTIONS

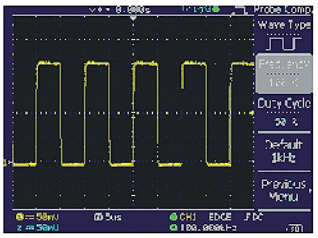


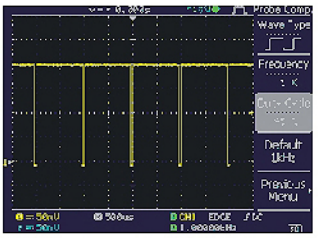


Several acquisition mode and 19 auto measurement functions help user to measure the accurate property of waveforms. The advanced auto-set function makes GDS-1000 Series catch waveform automatically and display waveform quickly. With arithmetic functions, FFT function keeps user being aware of the results by updating value immediately. Without almost extra-calculation GDS-1000 Series can provide sufficient information of testing.

D. ENHANCED CAL SIGNAL OUTPUT





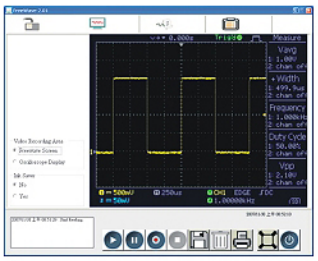


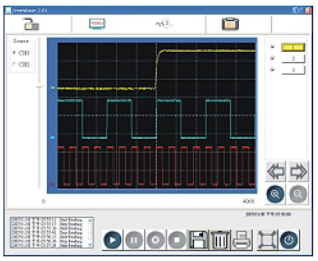
GDS-1000 Series has an enhanced 1kHz calibration signal. Its output frequency is adjustable from 1 kHz to 100 kHz as well as the duty cycle adjustable by 5%~95%.

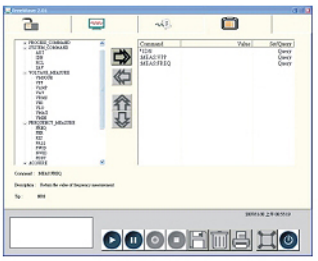
E. AUTOSET DISABLE FUNCTION

For the educational purpose, instructors might not want to use Autoset function on the DSO when they are teaching how to use oscilloscope for the measurement. The GDS-1000 Series can disable the Autoset function, enabling students to manually operate oscilloscope functions to further enrich their learning experience.

F. FREEWAVE PC SOFTWARE







A PC Software, Freewave, supporting GDS-1000 Series is available to all customers for free, downloadable from GW Instek Website. This software enables the full screen image transfer from GDS-1000 Series to PC via USB port in a fast-updating manner, so the user is able to see a nearly-real-time display on the PC screen.

The screen image (.bmp or.jpg) and waveform raw data (.csv) could be saved into PC for further applications. The continuous waveform images (.avi) in a time period could be recorded for later playback. This video recorder function facilitates the repetitive observation of a saved waveform with continuous variation in a certain period of time.

The Next Generation of Portable Oscilloscope

GDS-1000 Series is a general purpose 2-channel oscilloscope and originally designed to meet educational and industrial requirements without specializing in DSO features. This series provides four selective bandwidths of 25MHz, 40MHz, 60MHz, and 100MHz. Together with innovative human machine interface design plus an "A+" class I * TFT color LCD display without any defect pixel, users will enjoy better measurement experience!

GDS-1000 series offers dual sampling mode, giving users two options for 250MS/s Real-Time sampling or 25GS/s high-speed Equivalent sampling rate. What's more, with high-speed wave handling capability, more advanced triggering functions, and 2.5 kg light-weight design, it is a powerful functional oscilloscope with the best price than ever. Ultimately, GDS-1000 series is considered for the replacement of analog oscilloscope and further promoted as a personal DSO affordable to any situation such as each student in educational labs, service technicians, or industrial field needing big quantity.

Besides, the requirement of measuring data exchange and analysis is intergraded into the GDS-1000 series. The convenient PC standard interface is also available, such as USB interface and SD card socket. This two build-in standard interface capability enable the performance of remote control or data transferring to a desktop/laptop for saving and analyzing purpose and enhance your work efficiency.

SELECTION GUIDE				
MODEL	**GDS-1022**	**GDS-1042**	**GDS-1062**	**GDS-1102**
BANDWIDTH	25MHz	40MHz	60MHz	100MHz
CHANNELS	2			
DISPLAY DEVICE	5.6" TFT Color LCD			
SAMPLE RATE	250MSa/s (Real-time Sampling) & 25GSa/s (Equivalent-time Sampling)			
RECORD LENGTH	4k Points per channel			
SD Card Slot	Standard			
USB Device				
Calibration Output				

SPECIFICATIONS

		GDS-1022	GDS-1042	GDS-1062	GDS-1102
VERTICAL	**Channels**	2	2	2	2
	Bandwidth	DC–25MHz(–3dB)	DC–40MHz(–3dB)	DC–60MHz(–3dB)	DC–100MHz(–3dB)
	Rise Time	<14ns Approx.	<8.75ns Approx.	<5.8ns Approx.	<3.5ns Approx.
	Sensitivity	2mV/div – 5V/div (1-2-5 increments)			
	Accuracy	±(3% x |Readout| + 0.1 div + 1mV)			
	Input Coupling	AC, DC & Ground			
	Input Impedance	1MΩ± 2%, –16pF			
	Polarity	Normal & Invert			
	Maximum Input	300V (DC+AC peak), CATII			
	Waveform Signal Process	+, –, FFT			
	Offset Range	2mV/div – 50mV/div : ±0.4V ; 10mV/div – 500mV/div : ±4V ; 1V/div – 5V/div : ±40V			
	Bandwidth Limit	None		20MHz (- 3dB)	
TRIGGER	**Sources**	CH1 , CH2 , Line , EXT			
	Modes	AUTO, NORMAL, SINGLE, TV, Edge, Pulse width			
	Coupling	AC , DC , LF rej. , HF rej. , Noise rej.			
	Sensitivity	DC – 25MHz: Approx. 0.5div or 5mV; 25MHz – 40/60/100MHz: Approx. 1.5div or 15mV			
EXT TRIGGER	**Range**	±1.5V			
	Sensitivity	DC – 25MHz : – 50mV ; 25M – 40/60/100MHz : –100mV			
	Input Impedance	1MΩ ±2% , – 16pF			
	Maximum Input	300V (DC + AC peak) , CATII			
HORIZONTAL	**Range**	1ns/div – 10s/div (1-2.5-5 increments); ROLL : 250ms/div – 10s/div			
	Modes	MAIN, WINDOW, WINDOW ZOOM, ROLL, X-Y			
	Accuracy	±0.01%			
	Pre-Trigger	10 div maximum			
	Post-Trigger	1000 div			
X-Y MODE	**X-Axis Input**	Channel 1			
	Y-Axis Input	Channel 2			
	Phase Shift	±3°at 100kHz			
SIGNAL ACQUISITION	**Real-Time Sample Rate**	250MSa/s maximum			
	Equivalent Sample Rate	25GSa/s maximum			
	Vertical Resolution	8 Bits			
	Record Length	4K Points maximum			
	Acquisition Mode	Normal, Peak Detect, Average			
	Peak Detection	10ns(500ns/div – 10s/div)			
	Average	2 , 4 , 8 , 16 , 32 , 64 , 128 , 256			
CURSORS AND MEASUREMENT	**Voltage Measurement**	V_{pp} , V_{amp} , V_{avg} , V_{rms} , V_{hi} , V_{lo} , V_{max} , V_{min} , Rise Preshoot/ Overshoot , Fall Preshoot/Overshoot			
	Time Measurement	Freq , Period , Rise Time , Fall Time , Positive Width , Negative Width , Duty Cycle			
	Cursors Measurement	Voltage difference between cursors (ΔV) Time difference between cursors (ΔT)			
	Auto Counter	Resolution : 6 digits ; Accuracy : ±2%			
		Signal Source: All available trigger source except the Video trigger mode			
ADJUSTABLE PROBE COMPENSATION SIGNAL	**Frequency Range**	1kHz – 100kHz, 1kHz/STEP			
	Duty Cycle Range	5% – 95%, 5%/STEP			
CONTROL PANEL FUNCTION	**Autoset**	Adjust Vertical VOLT/DIV, Horizontal TIME/DIV, and Trigger level automatically			
	Save Setup	Up to 15 sets of measurement conditions			
	Save Waveform	15 sets of waveform			
DISPLAY	**TFT LCD Type**	5.6 inch			
	Display Resolution	234 (Vertically) x 320 (Horizontally) Dots			
	Display Graticule	8 x 10 divisions			
	Display Brightness	Adjustable			
INTERFACE	**USB Device**	USB1.1 & 2.0 full speed compatible (printers and flash disk not supported)			
	SD Card Slot	Image (BMP) waveform data (CSV) and setup (SET)			
POWER SOURCE	**Line Voltage Range**	AC 100V – 240V , 48Hz – 63Hz , Auto selection			
MISCELLANEOUS	**Multi-Language Menu**	Available			
	Online Help	Available			
DIMENSIONS & WEIGHT	310(W) x 142 (H) x 140(D) mm, Approx. 2.5kg				

Specifications subject to change without notice. GD-1000GD2BH

ORDERING INFORMATION

GDS-1022 25MHz, 2-channel, Color LCD Display DSO
GDS-1042 40MHz, 2-channel, Color LCD Display DSO
GDS-1062 60MHz, 2-channel, Color LCD Display DSO
GDS-1102 100MHz, 2-channel, Color LCD Display DSO

ACCESSORIES

User Manual x 1, Power Cord x 1
Probe-GTP-060A-4:60MHz(10:1/1:1)Switchable Passive Probe for GDS-1022/1042(one per channel)
Probe-GTP-060A-2:60MHz(10:1/1:1)Switchable Passive Probe for GDS-1062(one per channel)
Probe-GTP-100A:100MHz(10:1/1:1)Switchable Passive Probe for GDS-1102(one per channel)

OPTIONAL ACCESSORIES

GTL-242 USB Cable, USB 1.1 A-B TYPE CABLE, 4P

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GW INSTEK

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