

Summary of features

Rich selections of bandwidth and channel, 200/100/60MHz and 2/4ch, cover major applications in laboratories, production lines, or field services. 1GSa/s real-time high sampling rate and 25k point deep memory give much detailed view into the target waveforms, keeping high sampling rate. USB host and device connection allows data save And recall, screen image printout, and remote control. TFT color LCD display with wide viewing angle eliminates obscurity in any situation.

Signal Detection

GDS-2000 Series pick up signals even in the most extreme cases, powered by 1GSa/s real time and 25GSa/s equivalent time sampling rate combined with 3 types of acquisition modes: sample, peak detect, and average. 25k points of deep memory collects more information of a given waveform, guiding us into further signal details. 4 types of flexible triggers add another signal capturing flexibility: edge, video (NTSC, PAL, SECAM) with line selection, pulse-width, and delay/event using external trigger signal (for 2CH models).

Measurement Functions

A variety of measurement shortcuts reduce repetitive manual operations and save your precious time. Autoset automatically configures the horizontal scale, the vertical scale, and the trigger, giving an instant view of almost any signal. 27 types of automatic measurements include voltage, frequency (time), and delay. GDS-2000 Series run and update results of all the relevant measurements in real time. You can view the results independently, or together in a single display view. Add and subtract math operation, with 4 types of FFT are also provided: flattop, blackman, hanning, and rectangular. Go/NoGo test function detects a user-defined incoming waveform shape, and can also send a signal to external devices in case of detection. Program and play feature automatically runs predefined sequence and setup, boosting productivity in routine measurements like production line inspection.

Data Transfer and Printout

USB host connector transfers data quickly and easily between USB flash drive, which guarantees almost unlimited amount of memory. Internal storage includes 4 sets of reference waveform and 20 sets of general-use memory area. GDS-2000 Series handle three types of data: display image (*.bmp) for viewing waveform shape and pasting into documents and presentations, panel setting for saving and restoring system setup, and waveform configuration (*.csv) for further analysis of signal information. Printout of display Image, color with grayscale, is available through the printer connected to the USB host port. You can set the printout or data saving preference to allow a single-press operation for consecutive works.

Setup Recovery and Transfer

The last panel setting is internally stored in nonvolatile memory, ready to be recovered on the next power up. When the measurement environment frequently changes, or if you want to transfer the setup to another GDS-2000 Series, switching between multiple system settings is done by saving and recalling setup files Using USB flash drive. When the setup gets complicated, you can always recover the default system setting in a simple two-step operation.

Remote Access

IEEE based remote control commands include most of the panel operations and the syntax conforms to universally accepted IEEE 488.2 standard. Proprietary PC software with GUI operation, downloadable from GW Instek website, allows you to use your familiar mouse & keyboard, utilizing the larger PC screen. Three types of remote control interface with flexible connection settings are provided: USB device, RS-232, and GPIB (optional).

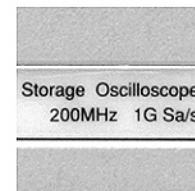
GDS-2000 Series

FEATURES

- 200/100/60 MHz Bandwidth
- 2 or 4 Input Channels
- 1GSa/s Real-Time and 25GSa/s Equivalent-Time Sampling
- 25k Points Record Length Maximum
- Large 5.6-in TFT Color Display
- USB Host/Device: Support USB Printer and USB Flash Drive
- Color Printout



4CH Selection



1GSa/s Real-Time Sampling



USB Flash Drive

APPLICATIONS

- Education Lab and Training Institution
- Production Test and Quality Inspection
- Repair and After-Service
- Circuit Design and Debug

SPECIFICATIONS

		GDS-2062/2064	GDS-2102/2104	GDS-2202/2204
VERTICAL	Channels	2/4	2/4	2/4
	Bandwidth	DC ~ 60MHz (—3dB)	DC ~ 100MHz (—3dB)	DC ~ 200MHz (—3dB)
	Rise Time	5.8ns Approx.	3.5ns Approx.	1.75ns Approx.
	Sensitivity	2mV/div ~ 5V/div (1-2.5 increments)		
	Accuracy	± (3% x Readout + 0.05 div x Volts/div + 0.8mV)		
	Input Coupling	AC, DC & Ground		
	Input Impedance	1MΩ ± 2%, ~16pF		
	Polarity	Normal & Invert		
	Maximum Input	300V (DC+AC peak), CATII		
	Waveform Signal Process	+, —, x, FFT		
	Offset Range	2mV/div ~ 20mV/div : ±0.5V ; 50mV/div ~ 200mV/div : ±5V ; 500mV/div ~ 2V/div : ±50V ; 5V/div : ±300V		
	Bandwidth Limit	20MHz (—3dB)		
TRIGGER	Sources	CH1, CH2, Line, EXT for GDS-2062, GDS-2102, GDS-2202		
	Modes	CH1, CH2, CH3, CH4, Line for GDS-2064, GDS-2104, GDS-2204		
	Coupling	Auto-Level, AUTO, NORMAL, SINGLE, Video, Edge, Pulse Width		
	Sensitivity	Time-delay, Event-delay for GDS-2062, GDS-2102, GDS-2202		
		AC, DC, LF rej., HF rej., Noise rej.		
		DC ~ 25MHz : Approx. 0.5div or 5mV ; 25MHz ~ 60/100/200MHz : Approx. 1div or 10mV		
EXT TRIGGER (2CH Only)	Range	±15V		
	Sensitivity	DC ~ 30MHz : ~ 50mV ; 30M ~ 60/100/200MHz : ~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, SCAN, X-Y		
	Accuracy	±0.01%		
	Pre-Trigger	20 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	1GSa/s maximum		
	Equivalent Sample Rate	25GSa/s maximum		
	Vertical Resolution	8 Bits		
	Record Length	25K Dots maximum		
	Acquisition Mode	Normal, Peak Detect, Average		
	Peak Detection	10ns		
	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		
	Delay Measurement	Eight different delay measurement		
	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		
CONTROL PANEL FUNCTION	Autoset	Adjust Vertical VOLT/DIV, Horizontal TIME/DIV, and Trigger level automatically		
	Save Setup	Up to 20 sets of measurement conditions		
	Save Waveform	24 sets of waveform		
DISPLAY	LCD Type	5.6 inch TFT Color Display		
	Display Resolution	234 (Vertically) x 320 (Horizontally) Dots		
	Display Graticule	8 x 10 divisions ; 8 x 12 divisions (menu off)		
	Display Brightness	Adjustable		
INTERFACE	Go/NoGo Output	5V Maximum/10mA TTL Open Collector Output		
	RS-232 Interface	DB 9-pin male DTE RS-232 interface		
	USB	USB Host/Device 2.0 full speed supported		
	GPIO Interface (Option)	Fully programmable with IEEE 488.2 compliance		
POWER SOURCE	Line Voltage Range	AC 100V ~ 240V, 48Hz ~ 63Hz, Auto selection		
MISCELLANEOUS	Multi-Language Menu	Available		
	Online Help	Available		
	Time Clock	Time and Date, Provide the Date/Time for saved data		
DIMENSIONS & WEIGHT	254Dx142Hx310W(mm), Approx. 4.3kg			

Specifications subject to change without notice. DS-2000GD1DH

ORDERING INFORMATION

GDS-2062 60MHz, 2-channel, Color LCD Display DSO
GDS-2064 60MHz, 4-channel, Color LCD Display DSO
GDS-2102 100MHz, 2-channel, Color LCD Display DSO
GDS-2104 100MHz, 4-channel, Color LCD Display DSO
GDS-2202 200MHz, 2-channel, Color LCD Display DSO
GDS-2204 200MHz, 4-channel, Color LCD Display DSO

OPTION

Opt. 01 : GPIB Interface

FREE DOWNLOAD

PC Software FreeWave software
Driver USB driver ; LabView Driver

ACCESSORIES

User manual x1, Power cord x1
 Probe-GTP-060A-4 : 60MHz (10 : 1/1 : 1) Switchable Passive Probe for GDS-2062/2064 (one per channel)
 Probe-GTP-100A-4 : 100MHz (10 : 1/1 : 1) Switchable Passive Probe for GDS-2102/2104 (one per channel)
 Probe-GTP-250A-2 : 250MHz (10 : 1/1 : 1) Switchable Passive Probe for GDS-2202/2204 (one per channel)

OPTIONAL ACCESSORIES

GRA-405 Rack Mounting, 19" 4U Type
GSC-005 Soft Carrying Case
GTC-001 Instrument Cart, 450(W) x 430(D) mm (120V Input Socket)
GTC-002 Instrument Cart, 330(W) x 430(D) mm (120V Input Socket)
GTL-110 Test Lead, BNC-BNC Heads
GTL-232 RS-232C Cable, 9-pin Female to 9-pin Female, Null Modem for Computer
GTL-242 USB Cable, USB 2.0 A-B TYPE CABLE, 4P

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