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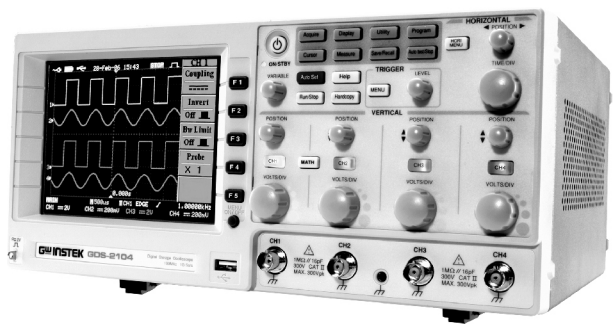
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Find the *Instek GDS-2104* at our website: ***Click HERE***

200MHz/100MHz/60MHz Digital Storage Oscilloscope

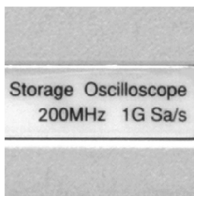
CE



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
- Battery Operation (optional)
- Color Printout



1GSa/s Real-Time Sampling



4CH Selection



USB Flash Drive



Battery Operation (Optional)

APPLICATIONS

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

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 high sampling rate and 25k point deep memory give much detailed view into the target waveforms , keeping high sampling rate . USB host and slave 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 . Battery operation option gives a much-desired mobility in rapidly changeable environments.

Signal Detection

GDS-2000 Series pick up signals even in the most extreme cases, powered by 1GSa/s real time and 25GSa/s equivalent 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 (*.set) for saving and restoring system setup, and waveform configuration (*.csv) for further analysis of signal information. Printout of display image, color or 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 (*.set) 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).

Portability

Battery operation option with typ . 3 hours of running time gives a much-desired mobility. built-in self-calibration and probe compensation help maintaining maximum accuracy even when environment or testing accessories changes . Language support helps you collaborating in multicultural working environments.

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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	1M±2%, ~16pF		
	Polarity	Normal & Invert		
	Maximum Input	300V (DC+AC peak), CATII		
	Waveform Signal Process	+ , — , 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(2CH Only) / (CH3,CH4)		
	Modes	Auto-Level, AUTO, NORMAL, SINGLE, TV, Edge, Pulse Width Time-delay(2CH Only), Event-delay(2CH Only)		
	Coupling	AC , DC , LF rej. , HF rej. , Noise rej.		
	Sensitivity	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 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	**TFT LCD Type**	5.6 inch		
	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		
	GPIB Interface (Option)	Fully programmable with IEEE 488.2 compliance		
	USB	USB Host/Device 2.0 full speed supported		
POWER SOURCE	**Line Voltage Range**	AC 100V ~ 240V , 48Hz ~ 63Hz , Auto selection		
	Battery Power(Option)	Battery : 11.1V Li-Ion battery pack Charge Time : 8 hours (Power ON) Operating Time : 3 hours , depending on operating condition		
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-2000GD0DH

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
Opt. 02: Battery power
(Factory installed, include additional DC Power & Battery charger circuits and Li-Ion Battery pack x 2)

Standard Accessories

Probe-GTP-060A:60MHz x10/x1 Switchable Passive Probe for GDS-2062/2064
Probe-GTP-250A:250MHz x10/x1 Switchable Passive Probe for GDS-2202/2204
Probe-GTP-100A:100MHz x10/x1 Switchable Passive Probe for GDS-2102/2104
User Manual
Power cord

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