



The brand new GDS-1000B Series digital storage oscilloscopes equip with 100MHz, 70MHz and 50MHz bandwidth, 2 or 4 analog input channels (50MHz, 4 channels input only) that provide entry level users with diversified selections. The maximum real time sampling rate can be up to 1GSa/s. The robust functional performance makes the economical oscilloscope more colorful and allows entry level users to sumptuously enjoy the fun and value brought by test and measurement which is precisely the emerging mission of the test and measurement industry that GW Instek works relentlessly to achieve.

10M memory depth for each channel yields exquisite measurement results and allows each retrieved waveform to successfully reveal the details of signal. Engineers are often baffled by failing to retrieve signal details when measuring basic electric circuit signals. Now, GDS-1000B series oscilloscopes, with 10M memory depth for each channel, are capable to uncover all signal details.

7" 800 x 480 WVGA LCD display and the 256 color gradient display function together allow the GDS-1000B Series to distinctly display waveform details in gradients while measuring fast changing analog signals. Additionally, 50,000wfms/s waveform update rate helps engineers clearly understand the gradients of signal variations and easily identify the problem of transient signal variations.

1Mpts FFT signal display makes the frequency domain display function more delicate. Engineers can clearly observe the distributed details of frequency domain signals. Smooth and rapid response can even better locate where the problems are originated. Powerful FFT function realizes high efficient spectrum analysis measurement which is indispensable for technology and education arenas.

The GDS-1000B Series oscilloscopes provide the zero key function for vertical voltage scale adjustment, horizontal time scale adjustment and trigger level adjustment. When processing complicate waveform adjustment and observation, engineers often require the zero key function to start a new measurement, adjust waveform or reset trigger level. The zero key function can reduce time in turning control knobs that is a great benefit for engineers.

GDS-1000B Series

FEATURES

- 100/70/50MHz Bandwidth Selections, 2ch or 4ch Input
- 1GSa/s Maximum Sampling Rate
- 10M Maximum Memory Depth For Each Channel
- 7" 800 x 480 WVGA LCD Display
- 256 Color Gradient Display Function to Strengthen Waveform Performance
- 1Mpts FFT Frequency Domain Signal Display
- Zero Key Function For Horizontal Time, Vertical Voltage and Triggering
- Compact And Innovative Exterior Design



Front



Rear Panel

APPLICATIONS

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

SPECIFICATIONS

		GDS-1054B	GDS-1072B	GDS-1074B	GDS-1102B	GDS-1104B
VERTICAL	Channels Bandwidth Rise Time Bandwidth Limit Vertical Sensitivity Resolution Input Coupling Input Impedance DC Gain Accuracy* Polarity Maximum Input Voltage Offset Position Range Waveform Signal Process	4 DC~50MHz(-3dB) 7ns 20MHz 8 bit : 1mV~10V/div AC, DC, GND 1M Ω // 16pF approx. $\pm 3\%$ Normal & Invert 300Vrms, CAT I (300Vrms CAT II with GTP-070B-4/100B-4 10:1 probe) 1mV/div : $\pm 1.25V$; 2mV/div ~ 100mV/div : $\pm 2.5V$; 200mV/div ~ 10V/div : $\pm 125V$ +, -, $\times$, $\div$, FFT, FFTrms, User Defined Expression; FFT: 1Mpts; FFT: Spectral magnitude, Set FFT Vertical Scale to Linear RMS or dBV RMS; FFT Window Display: Rectangular, Hamming, Hanning, or Blackman-Harris	2 + Ext DC~70MHz(-3dB) 5ns 20MHz CH1, CH2, CH3*, CH4*, Line, EXT** ; *four channel models only ; **two channel models only Auto (supports Roll Mode for 100 ms/div and slower), Normal, Single Sequence Edge, Pulse Width, Video, Pulse Runt, Rise & Fall, Timeout, Alternate, Event-Delay(1~65535 events), Time-Delay (Duration, 4ns~10s), Bus 4ns to 10s AC, DC, LF rej., HF rej., Noise rej. 1div	4 DC~70MHz(-3dB) 5ns 20MHz	2 + Ext DC~100MHz(-3dB) 3.5ns 20MHz	4 DC~100MHz(-3dB) 3.5ns 20MHz
TRIGGER	Source Trigger Mode Trigger Type Holdoff range Coupling Sensitivity	Range Sensitivity Input Impedance	CH1, CH2, CH3*, CH4*, Line, EXT** ; *four channel models only ; **two channel models only Auto (supports Roll Mode for 100 ms/div and slower), Normal, Single Sequence Edge, Pulse Width, Video, Pulse Runt, Rise & Fall, Timeout, Alternate, Event-Delay(1~65535 events), Time-Delay (Duration, 4ns~10s), Bus 4ns to 10s AC, DC, LF rej., HF rej., Noise rej. 1div	Range Sensitivity Input Impedance	Range Sensitivity Input Impedance	Range Sensitivity Input Impedance
EXTERNAL TRIGGER		Range Sensitivity Input Impedance	Range Sensitivity Input Impedance	Range Sensitivity Input Impedance	Range Sensitivity Input Impedance	Range Sensitivity Input Impedance
HORIZONTAL	Time base Range ROLL Pre-trigger Post-trigger Timebase Accuracy Real Time Sample Rate Record Length Acquisition Mode Peak Detection Average	5ns/div ~ 100s/div (1-2.5 increments) 100ms/div ~ 100s/div 10 div maximum 2,000,000 div maximum ± 50 ppm over any ≥ 1 ms time interval 1GSa/s max. Max. 10Mpts Normal, Average, Peak Detect, Single 2nS (typical) selectable from 2 to 256	5ns/div ~ 100s/div (1-2.5 increments) 100ms/div ~ 100s/div 10 div maximum 2,000,000 div maximum ± 50 ppm over any ≥ 1 ms time interval 1GSa/s max. Max. 10Mpts Normal, Average, Peak Detect, Single 2nS (typical) selectable from 2 to 256	5ns/div ~ 100s/div (1-2.5 increments) 100ms/div ~ 100s/div 10 div maximum 2,000,000 div maximum ± 50 ppm over any ≥ 1 ms time interval 1GSa/s max. Max. 10Mpts Normal, Average, Peak Detect, Single 2nS (typical) selectable from 2 to 256	5ns/div ~ 100s/div (1-2.5 increments) 100ms/div ~ 100s/div 10 div maximum 2,000,000 div maximum ± 50 ppm over any ≥ 1 ms time interval 1GSa/s max. Max. 10Mpts Normal, Average, Peak Detect, Single 2nS (typical) selectable from 2 to 256	5ns/div ~ 100s/div (1-2.5 increments) 100ms/div ~ 100s/div 10 div maximum 2,000,000 div maximum ± 50 ppm over any ≥ 1 ms time interval 1GSa/s max. Max. 10Mpts Normal, Average, Peak Detect, Single 2nS (typical) selectable from 2 to 256
X-Y MODE	X-Axis Input Y-Axis Input Phase Shift	Channel 1; Channel 3*(*four channel models only) Channel 2; Channel 4*(*four channel models only) $\pm 3^\circ$ at 100kHz	Channel 1; Channel 3*(*four channel models only) Channel 2; Channel 4*(*four channel models only) $\pm 3^\circ$ at 100kHz	Channel 1; Channel 3*(*four channel models only) Channel 2; Channel 4*(*four channel models only) $\pm 3^\circ$ at 100kHz	Channel 1; Channel 3*(*four channel models only) Channel 2; Channel 4*(*four channel models only) $\pm 3^\circ$ at 100kHz	Channel 1; Channel 3*(*four channel models only) Channel 2; Channel 4*(*four channel models only) $\pm 3^\circ$ at 100kHz
CURSORS AND MEASUREMENT	Cursors Automatic Measurement Cursors Measurement Auto Counter	Amplitude, Time, Gating available; Unit : Seconds(s), Hz(1/s), Phase(degree), Ration(%) 36 sets: Pk-Pk, Max, Min, Amplitude, High, Low, Mean, Cycle Mean, RMS, Cycle RMS, Area, Cycle Area, ROVShoot, FOVShoot, RPRESShoot, FPRESShoot, Frequency, Period, RiseTime, FallTime, +Width, -Width, Duty Cycle, +Pulses, -Pulses, +Edges, -Edges, FRR, FRF, FFR, FFF, LRR, LRF, LFR, LFF, Phase Voltage difference between cursors (ΔV) Time; difference between cursors (ΔT) 6 digits, range from 2Hz minimum to the rated bandwidth	Amplitude, Time, Gating available; Unit : Seconds(s), Hz(1/s), Phase(degree), Ration(%) 36 sets: Pk-Pk, Max, Min, Amplitude, High, Low, Mean, Cycle Mean, RMS, Cycle RMS, Area, Cycle Area, ROVShoot, FOVShoot, RPRESShoot, FPRESShoot, Frequency, Period, RiseTime, FallTime, +Width, -Width, Duty Cycle, +Pulses, -Pulses, +Edges, -Edges, FRR, FRF, FFR, FFF, LRR, LRF, LFR, LFF, Phase Voltage difference between cursors (ΔV) Time; difference between cursors (ΔT) 6 digits, range from 2Hz minimum to the rated bandwidth	Amplitude, Time, Gating available; Unit : Seconds(s), Hz(1/s), Phase(degree), Ration(%) 36 sets: Pk-Pk, Max, Min, Amplitude, High, Low, Mean, Cycle Mean, RMS, Cycle RMS, Area, Cycle Area, ROVShoot, FOVShoot, RPRESShoot, FPRESShoot, Frequency, Period, RiseTime, FallTime, +Width, -Width, Duty Cycle, +Pulses, -Pulses, +Edges, -Edges, FRR, FRF, FFR, FFF, LRR, LRF, LFR, LFF, Phase Voltage difference between cursors (ΔV) Time; difference between cursors (ΔT) 6 digits, range from 2Hz minimum to the rated bandwidth	Amplitude, Time, Gating available; Unit : Seconds(s), Hz(1/s), Phase(degree), Ration(%) 36 sets: Pk-Pk, Max, Min, Amplitude, High, Low, Mean, Cycle Mean, RMS, Cycle RMS, Area, Cycle Area, ROVShoot, FOVShoot, RPRESShoot, FPRESShoot, Frequency, Period, RiseTime, FallTime, +Width, -Width, Duty Cycle, +Pulses, -Pulses, +Edges, -Edges, FRR, FRF, FFR, FFF, LRR, LRF, LFR, LFF, Phase Voltage difference between cursors (ΔV) Time; difference between cursors (ΔT) 6 digits, range from 2Hz minimum to the rated bandwidth	Amplitude, Time, Gating available; Unit : Seconds(s), Hz(1/s), Phase(degree), Ration(%) 36 sets: Pk-Pk, Max, Min, Amplitude, High, Low, Mean, Cycle Mean, RMS, Cycle RMS, Area, Cycle Area, ROVShoot, FOVShoot, RPRESShoot, FPRESShoot, Frequency, Period, RiseTime, FallTime, +Width, -Width, Duty Cycle, +Pulses, -Pulses, +Edges, -Edges, FRR, FRF, FFR, FFF, LRR, LRF, LFR, LFF, Phase Voltage difference between cursors (ΔV) Time; difference between cursors (ΔT) 6 digits, range from 2Hz minimum to the rated bandwidth
CONTROL PANEL FUNCTION	Autoset Save Setup Save Waveform	Single-button, automatic setup of all channels for vertical, horizontal and trigger systems, with undo Autoset 20set 24set	Single-button, automatic setup of all channels for vertical, horizontal and trigger systems, with undo Autoset 20set 24set	Single-button, automatic setup of all channels for vertical, horizontal and trigger systems, with undo Autoset 20set 24set	Single-button, automatic setup of all channels for vertical, horizontal and trigger systems, with undo Autoset 20set 24set	Single-button, automatic setup of all channels for vertical, horizontal and trigger systems, with undo Autoset 20set 24set
DISPLAY	TFT LCD Type Display Resolution Interpolation Waveform Display Waveform Update Rate Display Graticule Display Mode	7" TFT WVGA color display 800 horizontal $\times$ 480 vertical pixels (WVGA) Sin(x)/x Dots, vectors, variable persistence (16ms~4s), infinite persistence 50,000 waveforms per second, maximum 8 $\times$ 10 divisions YT, XY	7" TFT WVGA color display 800 horizontal $\times$ 480 vertical pixels (WVGA) Sin(x)/x Dots, vectors, variable persistence (16ms~4s), infinite persistence 50,000 waveforms per second, maximum 8 $\times$ 10 divisions YT, XY	7" TFT WVGA color display 800 horizontal $\times$ 480 vertical pixels (WVGA) Sin(x)/x Dots, vectors, variable persistence (16ms~4s), infinite persistence 50,000 waveforms per second, maximum 8 $\times$ 10 divisions YT, XY	7" TFT WVGA color display 800 horizontal $\times$ 480 vertical pixels (WVGA) Sin(x)/x Dots, vectors, variable persistence (16ms~4s), infinite persistence 50,000 waveforms per second, maximum 8 $\times$ 10 divisions YT, XY	7" TFT WVGA color display 800 horizontal $\times$ 480 vertical pixels (WVGA) Sin(x)/x Dots, vectors, variable persistence (16ms~4s), infinite persistence 50,000 waveforms per second, maximum 8 $\times$ 10 divisions YT, XY
INTERFACE	USB Port Ethernet Port(LAN) Go-NoGo BNC Kensington Style Lock	USB 2.0 High-speed host port x1, USB High-speed 2.0 device port x1 RJ-45 connector, 10/100Mbps with HP Auto-MDIX (Only for the GDS-1074B, GDS-1104B.) 5V Max/10mA TTL open collector output Rear-panel security slot connects to standard kensington-style lock	USB 2.0 High-speed host port x1, USB High-speed 2.0 device port x1 RJ-45 connector, 10/100Mbps with HP Auto-MDIX (Only for the GDS-1074B, GDS-1104B.) 5V Max/10mA TTL open collector output Rear-panel security slot connects to standard kensington-style lock	USB 2.0 High-speed host port x1, USB High-speed 2.0 device port x1 RJ-45 connector, 10/100Mbps with HP Auto-MDIX (Only for the GDS-1074B, GDS-1104B.) 5V Max/10mA TTL open collector output Rear-panel security slot connects to standard kensington-style lock	USB 2.0 High-speed host port x1, USB High-speed 2.0 device port x1 RJ-45 connector, 10/100Mbps with HP Auto-MDIX (Only for the GDS-1074B, GDS-1104B.) 5V Max/10mA TTL open collector output Rear-panel security slot connects to standard kensington-style lock	USB 2.0 High-speed host port x1, USB High-speed 2.0 device port x1 RJ-45 connector, 10/100Mbps with HP Auto-MDIX (Only for the GDS-1074B, GDS-1104B.) 5V Max/10mA TTL open collector output Rear-panel security slot connects to standard kensington-style lock
POWER SOURCE		AC 100V ~ 240V, 50Hz ~ 60Hz, Auto selection, Power consumption: 30 Watts	AC 100V ~ 240V, 50Hz ~ 60Hz, Auto selection, Power consumption: 30 Watts	AC 100V ~ 240V, 50Hz ~ 60Hz, Auto selection, Power consumption: 30 Watts	AC 100V ~ 240V, 50Hz ~ 60Hz, Auto selection, Power consumption: 30 Watts	AC 100V ~ 240V, 50Hz ~ 60Hz, Auto selection, Power consumption: 30 Watts
MISCELLANEOUS	Multi-Language Menu Operation Environment Online Help	Available Temperature : 0°C ~ 50°C, Relative Humidity $\leq 80\%$ at 40°C or below; $\leq 45\%$ at 41°C ~ 50°C Available	Available Temperature : 0°C ~ 50°C, Relative Humidity $\leq 80\%$ at 40°C or below; $\leq 45\%$ at 41°C ~ 50°C Available	Available Temperature : 0°C ~ 50°C, Relative Humidity $\leq 80\%$ at 40°C or below; $\leq 45\%$ at 41°C ~ 50°C Available	Available Temperature : 0°C ~ 50°C, Relative Humidity $\leq 80\%$ at 40°C or below; $\leq 45\%$ at 41°C ~ 50°C Available	Available Temperature : 0°C ~ 50°C, Relative Humidity $\leq 80\%$ at 40°C or below; $\leq 45\%$ at 41°C ~ 50°C Available
DIMENSIONS & WEIGHT	380(W) $\times$ 208 (H) $\times$ 127.3(D)mm, Approx. 2.8kg					

The specifications apply when the GDS-1000B is powered on for at least 30 minutes under +20°C~+30°C.

Specifications subject to change without notice. DS-1000BGD1DH

ORDERING INFORMATION

GDS-1104B	100MHz, 4 channels, Digital Storage Oscilloscope
GDS-1102B	100MHz, 2 channels, Digital Storage Oscilloscope
GDS-1074B	70MHz, 4 channels, Digital Storage Oscilloscope
GDS-1072B	70MHz, 2 channels, Digital Storage Oscilloscope
GDS-1054B	50MHz, 4 channels, Digital Storage Oscilloscope

ACCESSORIES

User manual x1, Power cord x1
GTP-100B-4 100MHz Passive Probe, Suitable for GDS-1104B, GDS-1102B
GTP-070B-4 70MHz Passive Probe, Suitable for GDS-1074B, GDS-1072B, GDS-1054B

OPTIONAL ASSESSORIES

GDB-03	Demo Board
GTL-110	Test lead, BNC to BNC heads
GTL-246	USB cable, USB 2.0 A-B type cable 4P, 1200mm

FREE DOWNLOAD

Software	OpenWave Software
Driver	USB Driver ; LabView Driver

Global Headquarters

GOOD WILL INSTRUMENT CO., LTD.

No.7-1, Jhongsing Road, Tucheng Dist., New Taipei City 236, Taiwan
 T +886-2-2268-0389 F +886-2-2268-0639
 E-mail: marketing@goodwill.com.tw

China Subsidiary

GOOD WILL INSTRUMENT (SUZHOU) CO., LTD.

No. 521, Zhujiang Road, Snd, Suzhou Jiangsu 215011 China
 T +86-512-6661-7177 F +86-512-6661-7277
 E-mail: marketing@instek.com.cn

Malaysia Subsidiary

GOOD WILL INSTRUMENT (M) SDN. BHD.

27, Persiaran Mahsuri 1/1, Sunway Tunas,
 11900 Bayan Lepas, Penang, Malaysia
 T +604-6309988 F +604-6309989
 E-mail: sales@goodwill.com.my

Europe Subsidiary

GOOD WILL INSTRUMENT EURO B.V.

De Run 5427A, 5504DC Veldhoven, THE NETHERLANDS
 T +31(0)40-2557790 F +31(0)40-2541194

U.S.A. Subsidiary

INSTEK AMERICA CORP.

5198 Brooks Street Montclair, CA 91763, U.S.A.
 T +1-909-399-3535 F +1-909-399-0819
 E-mail: sales@instekamerica.com

Japan Subsidiary

TEXIO TECHNOLOGY CORPORATION.

7F Towa Fudosan Shin Yokohama Bldg., 2-18-13 Shin
 Yokohama, Kohoku-ku, Yokohama, Kanagawa,
 222-0033 Japan
 T +81-45-620-2305 F +81-45-534-7181
 E-mail: info@texio.co.jp

Korea Subsidiary

GOOD WILL INSTRUMENT KOREA CO., LTD.

#1406, Ace Hightech-City B/D 1Dong,
 Mullae-Dong 3Ca 55-20, Yeongduengpo-Gu, Seoul, Korea
 T +82-2-3439-2205 F +82-2-3439-2207
 E-mail: gwinstek@gwinstek.co.kr

GW INSTEK
 Simply Reliable



www.gwinstek.com

www.facebook.com/GWInstek