



The GDS-1000B Series digital storage oscilloscopes equip with 200/100/70 MHz : 2 Channel models; 100/70/50 MHz : 4 Channel models, 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 provides serial bus analysis function with 10M long memory depth. Users can trigger, decode, and analyze frequently used I²C, SPI and UART serial bus and CAN/LIN bus, which is often used by automotive communications.

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

- 200/100/70/50 MHz : 2 Channel models ; 100/70/50 MHz : 4 Channel models
- 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
- I²C/SPI/UART/CAN/LIN Serial Bus Trigger and Decoding Functions
- 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

GDS-1000B Series

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SPECIFICATIONS

| | | GDS-1054B | GDS-1072B | GDS-1074B | GDS-1102B | GDS-1104B | GDS-1202B |
|-------------------------|--|--|---|-------------------------------------|--|--|---|
| VERTICAL | Channels Bandwidth Calculated Rise Time Bandwidth Limit | 4 DC~50MHz(-3dB) 7ns 20MHz | 2 + Ext DC~70MHz(-3dB) 5ns 20MHz | 4 DC~70MHz(-3dB) 5ns 20MHz | 2 + Ext DC~100MHz(-3dB) 3.5ns 20MHz | 4 DC~100MHz(-3dB) 3.5ns 20MHz | 2 + Ext DC~200MHz(-3dB) 1.75ns 20MHz |
| | Vertical Sensitivity Resolution Input Coupling Input Impedance DC Gain Accuracy* Polarity Maximum Input Voltage Offset Position Range Waveform Signal Process | 8 bit : 1mV~10V/div AC, DC, GND 1M Ω // 16pF approx. ; GDS-1202B : 1M Ω // 14pF approx. $\pm 3\%$ Normal & Invert 300Vrms, CAT I (300Vrms CAT II with GTP-070B- 4/100B-4, 200B-4 10:1 probe) 1mV/div : $\pm 1.25V$; 2mV/div ~ 100mV/div : $\pm 2.5V$; 200mV/div ~ 10V/div : $\pm 125V$ +,-, x, \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, Handing, or Blackman-Harris | | | | | |
| TRIGGER | Source Trigger Mode Trigger Type Holdoff range Coupling Sensitivity | 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) 4ns to 10s AC, DC, LF rej., Hf rej., Noise rej. 1div | | | | | |
| EXTERNAL TRIGGER | Range Sensitivity Input Impedance | $\pm 2.5V$ DC ~ 100MHz Approx. 100mV ; 100MHz ~ 200MHz Approx. 150mV 1M Ω $\pm 3\%$ ~16pF | | | | | |
| 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 | | | | | |
| 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 | | | | | |
| 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 | | | | | |
| 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 | | | | | |
| 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 | | | | | |
| 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 4 channel models.) 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 | | | | | |
| 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 | | | | | |
| 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-1000BGD2DH

ORDERING INFORMATION

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|------------------|--|
| GDS-1202B | 200MHz, 2 channels, Digital Storage Oscilloscope |
| 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 CD x 1, Power cord x 1
GTP-070B-4 : 70MHz(10:1/1:1) Switchable passive probe for GDS-1074B,GDS-1072B,GDS-1054B(one per channel)
GTP-100B-4 : 100MHz(10:1/1:1) Switchable passive probe for GDS-1104B, GDS-1102B(one per channel)
GTP-200B-4 : 200MHz(10:1/1:1) Switchable passive probe for GDS-1202B(one per channel)

OPTIONAL ASSESSORIES

| | | | |
|-----------------|--------------------------------------|-----------------|---|
| GRA-426 | Rack Adapter Panel | GCP-206P | Power supply for current probe (2 input channel) |
| GAk-003 | 50 Ω Impedance Adapter | GCP-425P | Power supply for current probe (4 input channel) |
| GSC-008 | Soft Carrying Case | GTP-033A | Oscilloscope Probe, 35MHz 1:1 Passive Probe, BNC(P/M) |
| GTL-246 | USB Cable, USB 2.0, A-B Type, 1200mm | GDP-025 | 25MHz High voltage differential probe |
| GCP-300 | 300kHz/200A Current probe | GDP-050 | 50MHz High voltage differential probe |
| GCP-530 | 50MHz/30A Current probe | GDP-100 | 100MHz High voltage differential probe |
| GCP-500 | 500kHz/150A Current probe | | |
| GCP-1030 | 100MHz/30A Current probe | | |
| GCP-1000 | 1MHz/70A Current probe | | |

FREE DOWNLOAD

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|-----------------|-------------------|---------------|-----------------------------|
| Software | OpenWave Software | Driver | USB Driver ; LabView Driver |
|-----------------|-------------------|---------------|-----------------------------|

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