



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

SPECIFICATIONS

| | | GDS-1054B | GDS-1072B | GDS-1074B | GDS-1102B | GDS-1104B | GDS-1202B | |
|-------------------------|---------------------------------|---|----------------|----------------|-----------------|-----------------|-----------------|--|
| VERTICAL | Channels | 4 | 2 + Ext | 4 | 2 + Ext | 4 | 2 + Ext | |
| | Bandwidth | DC~50MHz(-3dB) | DC~70MHz(-3dB) | DC~70MHz(-3dB) | DC~100MHz(-3dB) | DC~100MHz(-3dB) | DC~200MHz(-3dB) | |
| EXTERNAL TRIGGER | Calculated Rise Time | 7ns | 5ns | 5ns | 3.5ns | 3.5ns | 1.75ns | |
| | Bandwidth Limit | 20MHz | 20MHz | 20MHz | 20MHz | 20MHz | 20MHz | |
| | Vertical Sensitivity Resolution | 8 bit : 1mV~10V/div | | | | | | |
| | Input Coupling | AC, DC, GND | | | | | | |
| | Input Impedance | 1MΩ // 16pF approx. ; GDS-1202B : 1MΩ // 14pF approx. | | | | | | |
| | DC Gain Accuracy* | ±3% | | | | | | |
| | Polarity | Normal & Invert | | | | | | |
| | Maximum Input Voltage | 300Vrms, CAT I (300Vrms CAT II with GTP-070B-4/100B-4, 200B-4 10:1 probe) | | | | | | |
| | Offset Position Range | 1mV/div : ±1.25V ; 2mV/div ~ 100mV/div : ±2.5V ; 200mV/div ~ 10V/div : ±125V | | | | | | |
| | Waveform Signal Process | +,-, x, -, 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 | CH1, CH2, CH3*, CH4*, Line, EXT** ; *four channel models only ; **two channel models only | | | | | | |
| | Trigger Mode | Auto (supports Roll Mode for 100 ms/div and slower), Normal, Single Sequence | | | | | | |
| EXTERNAL TRIGGER | Trigger Type | Edge, Pulse Width, Video, Pulse Runt, Rise & Fall, Timeout, Alternate, Event-Delay(1~65535 events), Time-Delay(Duration, 4nS~10S) | | | | | | |
| | Holdoff range | 4ns to 10s | | | | | | |
| | Coupling | AC, DC, LF rej., Hf rej., Noise rej. | | | | | | |
| EXTERNAL TRIGGER | Sensitivity | 1div | | | | | | |
| | Input Impedance | ±15V | | | | | | |
| HORIZONTAL | Range | DC ~ 100MHz Approx. 100mV ; 100MHz ~ 200MHz Approx. 150mV | | | | | | |
| | Time base Range | 1MΩ ±3%~16pF | | | | | | |
| | ROLL | 5ns/div ~ 100s/div (1-2-5 increments) | | | | | | |
| | Pre-trigger | 100ms/div ~ 100s/div | | | | | | |
| | Post-trigger | 10 div maximum | | | | | | |
| | Timebase Accuracy | 2,000,000 div maximum | | | | | | |
| | Real Time Sample Rate | ±50 ppm over any ≥1 ms time interval | | | | | | |
| | Record Length | 1GSa/s max. | | | | | | |
| | Acquisition Mode | Max. 10Mpts | | | | | | |
| | Peak Detection | Normal, Average, Peak Detect, Single | | | | | | |
| X-Y MODE | Average | 2nS (typical) | | | | | | |
| | Phase Shift | selectable from 2 to 256 | | | | | | |
| CURSORS AND MEASUREMENT | X-Axis Input | Channel 1; Channel 3*(four channel models only) | | | | | | |
| | Y-Axis Input | Channel 2; Channel 4*(four channel models only) | | | | | | |
| CURSORS AND MEASUREMENT | Cursors | ±3° at 100kHz | | | | | | |
| | Automatic Measurement | Amplitude, Time, Gating available; Unit : Seconds(s), Hz(1/s), Phase(degree), Ration(%) | | | | | | |
| CONTROL PANEL FUNCTION | Cursors Measurement | 36 sets: Pk-Pk, Max, Min, Amplitude, High, Low, Mean, Cycle Mean, RMS, Cycle RMS, Area, Cycle Area, ROVShoot, FOVShoot, RPREShoot, FPRESShoot, Frequency, Period, RiseTime, FallTime, +Width, -Width, Duty Cycle, +Pulses, -Pulses, +Edges, -Edges, FRR, FRF, FFR, FFF, LRR, LRF, LFR, LFF, Phase | | | | | | |
| | Auto Counter | Voltage difference between cursors (ΔV) Time ; difference between cursors (ΔT) 6 digits, range from 2Hz minimum to the rated bandwidth | | | | | | |
| DISPLAY | Autoset | Single-button, automatic setup of all channels for vertical, horizontal and trigger systems, with undo Autoset | | | | | | |
| | Save Setup | 20set | | | | | | |
| DISPLAY | Save Waveform | 24set | | | | | | |
| | TFT LCD Type | 7" TFT WVGA color display | | | | | | |
| INTERFACE | Display Resolution | 800 horizontal x 480 vertical pixels (WVGA) | | | | | | |
| | Interpolation | Sin(x)/x | | | | | | |
| POWER SOURCE | Waveform Display | Dots, vectors, variable persistence (16ms~4s), infinite persistence | | | | | | |
| | Waveform Update Rate | 50,000 waveforms per second, maximum | | | | | | |
| POWER SOURCE | Display Graticule | 8 x 10 divisions | | | | | | |
| | Display Mode | YT, XY | | | | | | |
| POWER SOURCE | USB Port | USB 2.0 High-speed host port x1, USB High-speed 2.0 device port x1 | | | | | | |
| | Ethernet Port(LAN) | RJ-45 connector, 10/100Mbps with HP Auto-MDIX (Only for 4 channel models.) | | | | | | |
| POWER SOURCE | Go-NoGo BNC | 5V Max/10mA TTL open collector output | | | | | | |
| | Kensington Style Lock | Rear-panel security slot connects to standard kensington-style lock | | | | | | |
| POWER SOURCE | Multi-Language Menu | AC 100V ~ 240V , 50Hz ~ 60Hz , Auto selection , Power consumption: 30 Watts | | | | | | |
| | Operation Environment | Available | | | | | | |
| POWER SOURCE | Online Help | Temperature : 0°C ~ 50°C. Relative Humidity ≤80% at 40°C or below; ≤ 45% at 41°C ~ 50°C | | | | | | |
| | Available | Available | | | | | | |
| DIMENSIONS & WEIGHT | Dimensions | 380(W) x 208 (H) x 127.3(D)mm, Approx. 2.8kg | | | | | | |
| | Weight | | | | | | | |

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

| | |
|------------------|--|
| 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

| | | | |
|-----------------|---|-----------------|--|
| GDB-03 | Demo Board | GCP-425P | Power supply for current probe (4 input channel) |
| GTL-110 | Test lead, BNC to BNC heads | GDP-025 | 25MHz High voltage differential probe |
| GRA-426 | Rack Adapter Panel | GDP-050 | 50MHz High voltage differential probe |
| GAK-003 | 50Ω Impedance Adapter | GDP-100 | 100MHz High voltage differential probe |
| CSC-008 | Soft Carrying Case | | |
| GCP-020 | 40kHz/240A Current probe | | |
| GCP-530 | 50MHz/30A Current probe | | |
| GCP-1030 | 100MHz/30A Current probe | | |
| GTL-246 | USB Cable, USB 2.0, A-B Type, 1200mm | | |
| GCP-206P | Power supply for current probe (2 input channel) | | |
| GTP-033A | Oscilloscope Probe, 35MHz 1:1 Passive Probe, BNC(P/M) | | |

FREE DOWNLOAD

Software OpenWave Software **Driver** USB Driver ; LabView Driver

Global Headquarters

GOOD WILL INSTRUMENT CO., LTD.

T +886-2-2268-0389 F +886-2-2268-0639

China Subsidiary

GOOD WILL INSTRUMENT (SUZHOU) CO., LTD.

T +86-512-6661-7177 F +86-512-6661-7277

Malaysia Subsidiary

GOOD WILL INSTRUMENT (SEA) SDN. BHD.

T +604-6111122 F +604-6115225

Europe Subsidiary

GOOD WILL INSTRUMENT EURO B.V.

T +31 (0)40-2557790 F +31 (0)40-2541194

U.S.A. Subsidiary

INSTEK AMERICA CORP.

T +1-909-399-3535 F +1-909-399-0819

Japan Subsidiary

TEXIO TECHNOLOGY CORPORATION.

T +81-45-620-2305 F +81-45-534-7181

Korea Subsidiary

GOOD WILL INSTRUMENT KOREA CO., LTD.

T +82-2-3439-2205 F +82-2-3439-2207

India Subsidiary

GW INSTEK INDIA LLP.

T +91-80-6811-0600 F +91-80-6811-0626

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