



The brand new portable 7" full touch panel capacitive LCD, featuring multi-point touch panel method which allows engineers to move waveform position, adjust waveform size, and set trigger conditions easily, subverts the traditional handheld instrument. With this unique feature, engineers can retrieve DUT's signals easily under the complex working environment. Landscape or portrait measurement display not only clearly shows waveforms under full screen status but also combines multi-functional measurement environment to achieve unimaginable measurement results.

Built-in, the second to none, the longest 5M sample memory depth helps engineers diagnose waveforms in great details. The long memory depth can record detailed waveform data and help engineers reproduce the original waveforms while engineers are conducting long observation or retrieving detailed transient signals. Any delicate changes of analog waveforms can be clearly presented in front of engineers when they adjust time scale from long to short that leaves no measurement problems unanswered.

Built-in 50,000 counts (GDS-300) or 5,000 counts (GDS-200) DMM helps engineers accurately measure DUT's electric parameters including not only measurements of D.C. voltage, A.C. voltage, D.C. current, A.C. current, resistance and diode polarity, but also temperature measurement and monitoring. The analysis of trend diagrams further completes test and measurement. DMM can simultaneously work with oscilloscope to conduct multi-measurement tasks.

Normally, engineers wish to effectively record intermittent signals while retrieving a series of signals during a long period of time. GDS-300/GDS-200's built-in 30,000 consecutive waveform records logging function not only records 30,000 waveform records in a long period of time but also replays the recorded data that allows engineers to identify intermittent problems occurred during the recorded time. Leave no problems unidentified.

Engineers need to isolate power and solve corresponding grounding issue while conducting circuit debugging. One of the criteria engineers must overcome is to maintain system grounding and isolation safety in the strict test and measurement environment such as no grounding system or no isolation. GDS-300/200 provide optional differential probe to effectively assist engineers in solving isolation and grounding problems that elevates the efficiency and safety of test and measurement.

Engineers often need some calculation tool software to conduct circuit design and debugging analysis during the R&D process. GDS-300/200 oscilloscopes, with the built-in standard engineering calculator, allow engineers to verify parameters during the test and measurement process. While using unknown resistance, engineers can obtain resistance value via color coding calculation software. If any attenuator was designed in the circuit, GDS-300/200 can also provide corresponding attenuator model and attenuation value calculation.

## GDS-300/200 Series

### FEATURES

- 200/100/70MHz Bandwidth Selections, Two Input Channels
- 1GSa/s Maximum Sample Rate
- Maximum 5M/1M Memory Depth Per Channel
- 7" 800 x 480 Full Touch Panel Capacitive LCD Multi-Point Control, Landscape and Portrait Display
- Built-In 50,000/5,000 Counts DMM
- 30,000 Consecutive Waveform Records Logging Function, Replay Measurement Results Any Time
- Temperature Measurement and Logging Function
- Built-In Engineering Calculator, SMD Resistance Coding, Color Coding Info, and Attenuator Calculation Application Software
- Optional Differential Probe to Achieve Isolation Effect



GDS-300/200 Series Front



GDS-300 Series Rear Panel



GDS-200 Series Rear Panel

### APPLICATIONS

- Large Electric System Tests
- Power Product Tests
- Motor Tests
- Solar Power Battery Inspection and Repair
- Maintenance Personnel Always on Field Assignments



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## SPECIFICATIONS

|                            |                                                                                                                                     | GDS-307                                                                                                         | GDS-310         | GDS-320         | GDS-207         | GDS-210         | GDS-220         |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| VERTICAL                   | Channels                                                                                                                            | 2 (BNC-Shield)                                                                                                  |                 |                 |                 |                 |                 |
|                            | Input Impedance                                                                                                                     | 1MΩ±2%, 16.5pf approx.                                                                                          |                 |                 |                 |                 |                 |
|                            | Maximum Input                                                                                                                       | CAT II 300VRMS                                                                                                  |                 |                 |                 |                 |                 |
|                            | Input Coupling                                                                                                                      | AC, DC, GND                                                                                                     |                 |                 |                 |                 |                 |
|                            | Bandwidth                                                                                                                           | DC~70MHz(-3dB)                                                                                                  | DC~100MHz(-3dB) | DC~200MHz(-3dB) | DC~70MHz(-3dB)  | DC~100MHz(-3dB) | DC~200MHz(-3dB) |
|                            | Rise Time                                                                                                                           | <5ns                                                                                                            | <3.5ns          | <1.75ns         | <5ns            | <3.5ns          | <1.75ns         |
|                            | Sensitivity                                                                                                                         | 2mV/div~10V/div (1-2-5 increments)                                                                              |                 |                 |                 |                 |                 |
| Accuracy                   | ±(3% x Readout + 0.1 div + 1mV)                                                                                                     |                                                                                                                 |                 |                 |                 |                 |                 |
| Bandwidth Limit            | 20MHz(-3dB)                                                                                                                         |                                                                                                                 |                 |                 |                 |                 |                 |
| Polarity                   | Normal, Invert                                                                                                                      |                                                                                                                 |                 |                 |                 |                 |                 |
| Offset Position Range      | 2mV/div~50mV/div : ±0.4V; 100mV/div~500mV/div : ±4V; 1V/div~5V/div : ±40V; 10V/div : ±300V                                          |                                                                                                                 |                 |                 |                 |                 |                 |
| SIGNAL ACQUISITION         | Realtime Sample Rate                                                                                                                | 1GSa/s                                                                                                          |                 |                 |                 |                 |                 |
|                            | Memory Depth                                                                                                                        | 5Mpoints per ch                                                                                                 |                 |                 | 1Mpoints per ch |                 |                 |
|                            | Acquisition Mode                                                                                                                    | Average : 2~256 waveforms; Peak detect : 10ns; sin(x)/x or ET                                                   |                 |                 |                 |                 |                 |
|                            | Replay Wfms.                                                                                                                        | 30,000 wfms.                                                                                                    |                 |                 |                 |                 |                 |
| TRIGGER                    | Source                                                                                                                              | Ch1 or Ch2                                                                                                      |                 |                 |                 |                 |                 |
|                            | Trigger mode                                                                                                                        | Auto, Normal, Single, Force                                                                                     |                 |                 |                 |                 |                 |
|                            | Trigger type                                                                                                                        | Edge, Pulse Width, Video, Alternate                                                                             |                 |                 |                 |                 |                 |
|                            | Trigger Holdoff                                                                                                                     | 10ns ~ 10s                                                                                                      |                 |                 |                 |                 |                 |
|                            | Coupling                                                                                                                            | AC, DC, LFR, HFR, NR                                                                                            |                 |                 |                 |                 |                 |
| Sensitivity                | DC~25MHz : approx. 0.5div or 5mV; 25MHz~ 70/100/200MHz : approx. 1.5div or 15mV                                                     |                                                                                                                 |                 |                 |                 |                 |                 |
| HORIZONTAL                 | Range                                                                                                                               | 5ns~100s/Div (1-2-5 increments)                                                                                 |                 |                 |                 |                 |                 |
|                            | Roll                                                                                                                                | 100ms/div ~ 100s/div                                                                                            |                 |                 |                 |                 |                 |
|                            | Pre-trigger                                                                                                                         | 10 div max.                                                                                                     |                 |                 |                 |                 |                 |
|                            | Post-trigger                                                                                                                        | 1,000 div max(depend on time base)                                                                              |                 |                 |                 |                 |                 |
|                            | Accuracy                                                                                                                            | ±20ppm over any > 1ms time interval                                                                             |                 |                 |                 |                 |                 |
| XY MODE                    | Phase Shift                                                                                                                         | ±3° at 100KHz                                                                                                   |                 |                 |                 |                 |                 |
| CURSOR AND MEASUREMENT     | Cursors                                                                                                                             | Voltage difference between cursors(ΔV), Time difference between cursors(ΔT), frequency measure(1/ΔT)            |                 |                 |                 |                 |                 |
|                            | Auto-measurement                                                                                                                    | 36 sets.                                                                                                        |                 |                 |                 |                 |                 |
|                            | Auto-counter                                                                                                                        | 6 digits. Range: 2Hz to rated bandwidth                                                                         |                 |                 |                 |                 |                 |
| Autoset                    |                                                                                                                                     |                                                                                                                 |                 |                 |                 |                 |                 |
| TEMPERATURE MEASUREMENT    |                                                                                                                                     | Available                                                                                                       |                 |                 | Non-Available   |                 |                 |
| MISCELLANEOUS              | Multi-Language Menu                                                                                                                 | Available                                                                                                       |                 |                 |                 |                 |                 |
|                            | On-line Help                                                                                                                        | Available                                                                                                       |                 |                 |                 |                 |                 |
|                            | Time and Clock                                                                                                                      | Available                                                                                                       |                 |                 |                 |                 |                 |
| BATTERY                    | Battery power                                                                                                                       | Li-polymer 6100mA/hr, 7.4V (Built-in)                                                                           |                 |                 |                 |                 |                 |
|                            | Charge time                                                                                                                         | 2.0 hour (75%)                                                                                                  |                 |                 |                 |                 |                 |
|                            | Operation time                                                                                                                      | 4.1 hour, depending on operating condition.                                                                     |                 |                 |                 |                 |                 |
| PROBE COMPENSATION         |                                                                                                                                     | 2V, 1kHz, 50% Duty cycle                                                                                        |                 |                 |                 |                 |                 |
| INTERFACE                  | USB                                                                                                                                 | USB Device (Isolation)                                                                                          |                 |                 |                 |                 |                 |
|                            | Internal Flash Disk                                                                                                                 | 120MB                                                                                                           |                 |                 |                 |                 |                 |
| DISPLAY                    | Type                                                                                                                                | 7 inch                                                                                                          |                 |                 |                 |                 |                 |
|                            | Display Resolution                                                                                                                  | 480 x 800 pixels                                                                                                |                 |                 |                 |                 |                 |
|                            | Display Direction                                                                                                                   | Landscape & Portrait                                                                                            |                 |                 |                 |                 |                 |
|                            | Backlight Control                                                                                                                   | Manual adjustable, ECO mode                                                                                     |                 |                 |                 |                 |                 |
|                            | Touch Panel                                                                                                                         | Capacitive                                                                                                      |                 |                 |                 |                 |                 |
| DMM                        | Digit Level                                                                                                                         | 50,000 counts                                                                                                   |                 |                 | 5000 counts     |                 |                 |
|                            | DC Voltage                                                                                                                          | CAT II 600VRMS, CAT III 300VRMS                                                                                 |                 |                 |                 |                 |                 |
|                            | Range                                                                                                                               | 50mV, 500mV, 5V, 50V, 500V, 1000V 6 ranges                                                                      |                 |                 |                 |                 |                 |
|                            | Accuracy                                                                                                                            | GDS-320/310/307:50mV,500mV,5V,50V,500V±(0.05%+5digits); GDS-220/210/207:50mV,500mV,5V,500V,1000V±(0.1%+5digits) |                 |                 |                 |                 |                 |
|                            | Input Impedance                                                                                                                     | 10MΩ                                                                                                            |                 |                 |                 |                 |                 |
|                            | DC Current                                                                                                                          | 50mA, 500mA, 10A 3 ranges                                                                                       |                 |                 |                 |                 |                 |
|                            | Range                                                                                                                               | GDS-320/310/307:50mA ~ 500mA, 2 range , ±(0.1% + 5 digits), 10A±(0.5% + 1 digit)                                |                 |                 |                 |                 |                 |
|                            | Accuracy                                                                                                                            | GDS-220/210/207:50mA~500mA, 10A 3 ranges, ±(0.5% + 1 digit)                                                     |                 |                 |                 |                 |                 |
|                            | AC Voltage                                                                                                                          | 50mV, 500mV, 5V, 50V, 700V 5 ranges                                                                             |                 |                 |                 |                 |                 |
|                            | Range                                                                                                                               | 50mV, 500mV, 5V, 50V, 700V ±(1.5% + 15 digits) at 50Hz~1kHz                                                     |                 |                 |                 |                 |                 |
|                            | Accuracy                                                                                                                            |                                                                                                                 |                 |                 |                 |                 |                 |
|                            | AC Current                                                                                                                          | 50mA, 500mA, 10A 3 ranges                                                                                       |                 |                 |                 |                 |                 |
|                            | Range                                                                                                                               | 50mA, 500mA, ±(1.5% + 15 digits) at 50Hz~1kHz; 10A ±(3% + 15 digits) at 50Hz~1kHz *Measurement range:>10mA      |                 |                 |                 |                 |                 |
| Accuracy                   |                                                                                                                                     |                                                                                                                 |                 |                 |                 |                 |                 |
| RESISTANCE                 | 500Ω, 5KΩ, 50KΩ, 500KΩ, 5MΩ 6 range                                                                                                 |                                                                                                                 |                 |                 |                 |                 |                 |
| Range                      | 500Ω, 5KΩ, 50KΩ, 500KΩ ±(0.3% + 3 digits); 5MΩ±(0.5% + 5 digits) *Measurement range:50Ω~5MΩ                                         |                                                                                                                 |                 |                 |                 |                 |                 |
| Accuracy                   |                                                                                                                                     |                                                                                                                 |                 |                 |                 |                 |                 |
| Diode Test                 | Maximum forward voltage 1.5V, Open voltage 2.8V                                                                                     |                                                                                                                 |                 |                 |                 |                 |                 |
| Temperature (thermocouple) | -50°C ~ +1000°C                                                                                                                     |                                                                                                                 |                 |                 |                 |                 |                 |
| Resolution                 | 0.1°C                                                                                                                               |                                                                                                                 |                 |                 |                 |                 |                 |
| Thermocouple               | B, E, J, K, N, R, S, T *Specifications do not include probe accuracy. Temperature specifications only apply to the GDS-320/310/307. |                                                                                                                 |                 |                 |                 |                 |                 |
| Continuity Beep            | <15 Ω                                                                                                                               |                                                                                                                 |                 |                 |                 |                 |                 |
| Functions                  | Auto Range, Max, Min, Hold, Trend plot                                                                                              |                                                                                                                 |                 |                 |                 |                 |                 |
| POWER ADAPTOR              | Line Voltage                                                                                                                        | AC 100V~240V, 47~63Hz, Power Consumption 40W; DC Output : 12V/3A, Double Shield                                 |                 |                 |                 |                 |                 |
| OPTION                     | Differential Probe                                                                                                                  | Dual-channel, 40MHz, CAT II 600V                                                                                |                 |                 |                 |                 |                 |
| DIMENSIONS & WEIGHT        |                                                                                                                                     | 240.2(W) x 136.0(H) x 59.7(D) mm; Approx. 1.5 Kg                                                                |                 |                 |                 |                 |                 |

Specifications subject to change without notice. DS300200GD1DH

## ORDERING INFORMATION

|         |                                          |
|---------|------------------------------------------|
| GDS-320 | 200MHz, 2 Channels, Digital Oscilloscope |
| GDS-310 | 100MHz, 2 Channels, Digital Oscilloscope |
| GDS-307 | 70MHz, 2 Channels, Digital Oscilloscope  |
| GDS-220 | 200MHz, 2 Channels, Digital Oscilloscope |
| GDS-210 | 100MHz, 2 Channels, Digital Oscilloscope |
| GDS-207 | 70MHz, 2 Channels, Digital Oscilloscope  |

## ACCESSORIES

|                                                                |         |                    |
|----------------------------------------------------------------|---------|--------------------|
| Quick start guide x 1, User manual CD x 1, Power cord x 1      | GSC-010 | Soft Carrying Case |
| GTP-150B-2 150MHz Probe, Suitable for GDS-307/207, GDS-310/210 | GSC-011 | Soft Carrying Bag  |
| GTP-250B-2 250MHz Probe, Suitable for GDS-320/220              | GAP-001 | AC-DC Adaptor      |
| GTL-207 Multimeter Test Lead x 2                               | GWS-001 | Wrist Strap        |

## OPTIONAL ACCESSORIES

|                                                   |         |                                  |
|---------------------------------------------------|---------|----------------------------------|
| GDP-040D 40MHz Dual-channel Differential Probe    | GCL-001 | Vertical Calibration Cable       |
| GPF-700 Protective Films for 7" Touch Screen      | GTL-131 | Test Clip, Suitable for GDP-040D |
| GTL-253 USB Cable, USB 2.0, A-mini B Type, 1400mm |         |                                  |

## FREE DOWNLOAD

|              |          |
|--------------|----------|
| OpenWave 200 | Software |
|--------------|----------|