GDS-3000 Specifications

The specifications apply when the GDS-3000 is powered on for at least 30 minutes under +20°C~+30°C.

Model-specific

GDS-3152 (Phase out)	Channels	2 + Ext
	Bandwidth	DC ~ 150MHz (–3dB)
	Calculated Rise time	2.3ns
GDS-3154 (Phase out)	Channels	4 + Ext
	Bandwidth	DC ~ 150MHz (–3dB)
	Calculated Rise time	2.3ns
GDS-3252 (Phase out)	Channels	2 + Ext
	Bandwidth	DC ~ 250MHz (–3dB)
	Calculated Rise time	1.4ns
GDS-3254 (Phase out)	Channels	4 + Ext
	Bandwidth	DC ~ 250MHz (–3dB)
	Calculated Rise time	1.4ns
GDS-3352	Channels	2 + Ext
	Bandwidth	DC ~ 350MHz (–3dB)
	Calculated Rise time	1ns
GDS-3354 (Phase out)	Channels	4 + Ext
	Bandwidth	DC ~ 350MHz (–3dB)
	Calculated Rise time	1ns
GDS-3502	Channels	2 + Ext
	Bandwidth	DC ~ 500MHz (–3dB)
	Calculated Rise time	700ps
GDS-3504	Channels	4 + Ext
	Bandwidth	DC ~ 500MHz (–3dB)
	Calculated Rise time	700ps

The bandwidth of the 75Ω input impedance is limited to 150MHz only.

Common

Vertical	Resolution Sensitivity	8 bit @1MΩ: 2mV~5V/div @50/75Ω: 2mV~1V/div
	Input Coupling	AC, DC, GND
	Input Impedance	1MΩ// 15pF
	DC Gain Accuracy	±3% full scale
	Polarity	Normal & Invert
	Maximum Input Voltage	@1 MΩ: 300Vrms, CAT I @50/75Ω: 5 Vrms max
	Offset Position Range	2mV/div ~ 100mV/div : ±0.5V 200mV/div ~ 5V/div : ±25V
	Bandwidth Limit	Dependent on the oscilloscope bandwidth (BW. BW=150: Full/20MHz BW=250: Full/20MHz/100MHz BW=350: Full/20MHz/100MHz/200MHz BW=500: Full/20MHz/100MHz/200MHz/350MHz
	Waveform Signal Process	Add, subtract, multiply, and divide waveforms, FFT, FFTrms, Integration*, Differentiation* *: App installation required.
		FFT:Spectral magnitude. Set FFT Vertical Scale to Linear RMS or dBV RMS, and FFT Window to Rectangular, Hamming, Hanning, or Blackman-Harris.
Trigger	Sources	CH1, CH2, CH3, CH4, Line, EXT
	Modes	Auto (supports Roll Mode for 100 ms/div and slower), Normal, Single Sequence

	Type	Edge, Pulse Width(Glitch), Video, Pulse Runt, Rise & Fall(Slope), Alternate, Event-Delay(1~65535 events), Time-Delay(Duration)(10ns~10s), I^2C*, SPI*, UART* *optional Runt:Trigger on a pulse that crosses one threshold but fails to cross a second threshold before crossing the first again. SPI (optional):Trigger on SS, MOSI, MISO, or MOSI and MISO on SPI buses. I^2C (optional):Trigger on Start, Repeated Start, Stop, Missing ACK, Address (7 or 10 bit), Data, or Address and Data on I^2C buses. UART (optional): Trigger on Tx Start Bit, Rx Start Bit, Tx End of Packet, Rx End of Packet, Tx Data, Rx Data, Tx Parity Error, and Rx Parity Error.
	Holdoff range	10ns to 10s
	Coupling	AC, DC, LF rej., Hf rej., Noise rej.
	Sensitivity	GDS-31XX ~ GDS-33XX: DC ~ 50MHz Approx. 1div or 10mV 50MHz ~ 150MHz Approx. 1.5div or 15mV 150MHz ~ 350MHz Approx. 2div or 20mV GDS-350X: DC ~ 50MHz Approx. 1div or 1.0mV 50MHz ~ 150MHz Approx. 1.5div or 15mV 150MHz ~ 350MHz Approx. 2div or 20mV 350MHz ~ 500MHz Approx. 2.5div or 25mV
External Trigger	Range	±15V
	Sensitivity	GDS-31XX ~ GDS-33XX: DC ~ 150MHz Approx. 100mV 150MHz ~ 250MHz Approx. 150mV 250MHz ~ 350MHz Approx. 150mV 350MHz ~ 500MHz Approx. 200mV
	Input Impedance	1MΩ±3%, ~16pF
Horizontal	Timebase Range	GDS-315X, GDS-325X, GDS-335X: 1ns/div ~ 100s/div (1-2-5 increments); ROLL : 100ms/div ~ 100s/div GDS-350X: 1ns/div ~ 100s/div (1-2.5-5 increments); ROLL : 100ms/div ~ 100s/div
	Pre-trigger	10 div maximum
	Post-trigger	1000 div maximum. The number of divisions depends on the time division.
	Timebase Accuracy	±20 ppm over any ≧1 ms time interval
X-Y Mode	X-Axis Input	Channel 1; Channel 3
	Y-Axis Input	Channel 2; Channel 4
	Phase Shift	±3° at 100kHz
Signal Acquisition	Real Time Sample Rate	150/250/350MHz models: 5GSa/s (MAX) 150/250MHz models with 2CH: 2.5GSa/s 500MHz models: 4GSa/s (MAX), 2GSa/s per channel
	ET Sample Rate	100GSa/s maximum for all models
	Record Length	25k points / channel
	Acquisition Mode	Normal, Average, Peak Detect, High Resolution, Single Sequence
	Peak (Glitch) Detection	2ns (MAX)
		Normal: Acquire sampled values. Average: From 2 to 256 waveforms included in average. Peak Detect: Captures glitches as narrow as 2 ns at all sweep speeds Hi Res: Real-time boxcar averaging reduces random noise and increases vertical resolution

Cursors and Measurement	Cursors	Amplitude, Time, Gating available
	Automatic Measurement	28 sets: Vpp, Vamp, Vavg, Vrms, Vhi, Vlo, Vmax, Vmin, Rise Preshoot/Overshoot, Fall Preshoot/Overshoot, Freq, Period, Rise Time, Fall Time, Positive Width, Negative Width, Duty Cycle, and nine different delay measurements (FRR, FRF, FFR, FFF, LRR, LRF, LFR, LFF, Phase)
	Cursors measurement	Voltage difference between cursors (ΔV) Time difference between cursors (ΔT)
	Auto counter	6 digits, range from 2Hz minimum to the rated bandwidth
Power Measurements (Option)	Power Quality Measurements	V RMS, I RMS, True Power, Apparent Power, Reactive Power, Frequency, Power Factor, Phase Angle, V Crest Factor, I Crest Factor, (+)V Peak, (-)V Peak, (+)I Peak, (-)I Peak, DC Voltage, DC Current, Impedance, Resistance, Reactance
	Harmonics	Frequency (Hz), Magnitude (%), Mag. RMS (A), Phase (˚), Limit (A), Limit (%), Pass | Fail, Max all , Windows (A), 200% Limit, POHC Limit, THD-F, THD-R, RMS, Overall, POHC, POHL, Input Power, Power Factor, Fundamental Current, Harmonic 3, Harmonic 5
	Ripple Measurements	Ripple, Noise
	In-rush current	First peak, Second peak
Control Panel Function	Autoset	Single-button, automatic setup of all channels for vertical, horizontal and trigger systems, with undo autoset
	Auto-Range	allow you to quickly move from test point to test point without having to reset the oscilloscope for each test point
	Save Setup	20 sets
	Save Waveform	24 sets
Display	TFT LCD Type	8" TFT LCD SVGA color display
	Display Mode	YT, XY
	Display Resolution	800 horizontal × 600 vertical pixels (SVGA)
	Interpolation	Sin(x)/x & Equivalent Time Sampling
	Waveform Display	Dots, vectors, variable persistence, infinite persistence
	Display Graticule	8 x 10 divisions
	Waveform Update Rate	3500 waveforms per second maximum
Interface	RS232C	DB-9 male connector
	USB Port	2 sets USB 2.0 High-speed host port 1 set USB High-speed 2.0 device port
	Ethernet Port (LAN)	RJ-45 connector, 10/100Mbps
	SVGA Video Port	DB-15 female connector, monitor output for display on SVGA monitors
	GPIB	GPIB to USB adapter (Option)
	Go-NoGo BNC	5V Max, 10mA CMOS open collector output
	Internal flash disk	64MB
	Kensington Style Lock	Rear-panel security slot connects to standard Kensington-style lock.
	Line output	3.5mm stereo jack for Go/NoGo audio alarm
Power Source	Line Voltage Range	AC 100V ~ 240V , 48Hz ~ 63Hz , Auto selection
	Power Consumption	96VA
Miscellaneous	Multi-language menu	Available
	On-line help	Available
	Time clock	Time and Date ,Provide the Date/Time for saved data
Dimensions	400W X 200H X 130D, Approx. 4kg	

Probe Specifications

Model-specific Probe Specifications

GTP-151R	Applicable to	GDS-3152 / GDS-3154
	Bandwidth	DC ~ 150MHz
	Rise time	2.3ns
	Input Capacitance	~12pF
	Compensation Range	10 ~ 30pF
GTP-251R	Applicable to	GDS-3252 / GDS-3254
	Bandwidth	DC ~ 250MHz
	Rise time	1.4ns
	Input Capacitance	~12pF
	Compensation Range	10 ~ 30pF
GTP-351R	Applicable to	GDS-3352 / GDS-3354
	Bandwidth	DC ~ 350MHz
	Rise time	1.0ns
	Input Capacitance	~12pF
	Compensation Range	10 ~ 30pF
GTP-501R	Applicable to	GDS-3502 / GDS-3504
	Bandwidth	DC ~ 500MHz
	Rise time	0.7ns
	Input Capacitance	~11.5pF @ 100MHz
	Compensation Range	8 ~ 20pF

Common Probe Specifications

Position x 10	Attenuation Ratio	10:1 (fixed) with readout pin
	Input Resistance	10MΩ when used with 1MΩ input oscilloscope
	Maximum Input Voltage	500V CAT I, 300V CAT II derating with frequency
Operating Condition	Temperature	–0°C ~ 50°C
	Relative Humidity	≤85% @35°C
Safety Standard	EN61010-031 CAT II	