GDS-3000 Series

VPD
Visual Persistence Oscilloscope

350MHz/250MHz/150MHz Digital Storage Oscilloscope

FEATURES

- 350/250/150MHz Bandwidth, 2/4 Input Channel
- 5GSa/s Real-time Sampling Rate and 100GSa/s Equivalent Time Sampling Rate
- 25k Points Memory for Each Input Channel
- VPO (Visual Persistence Oscilloscope) Technology to Display Less-Frequently-Occurred Signals
- 8" 800 x 600 High Resolution TFT LCD Display
- Unique Split Screen System with Independent Setting and Display for Each Input Channel
- Three Input Impedance Selections: 50Ω/75Ω/1MΩ
- Optional Power Analysis Software for Power Source Measurement and Analysis
- Optional Serial bus Analysis Software for Trigger & Decode of I^2C, SPI and UART Interfaces

GW INSTEK
Made to Measure Since 1975

350/250/150 MHz Digital Storage Oscilloscope

A High-tech Platform Carry

1. 8"TFT LCD Panel

The bright 8" TFT LCD display makes multiple signal observation easy.

2. 5GSa/s Real-time Sampling Rate for Fast Waveform Capture

The high speed sampling technology used for data acquisition truthfully reconstructs complex signals.

3. VPO Visual Persistence Oscilloscope Signal Processing Technology

VPO signal processing technology displays waveforms in 3 dimensions - amplitude, time and intensity.

4. Compact Design

With a depth of only 5 inches, the compact size of the product doesn't occupy valuable work space.

5. Split Window Function (Split Screen)

The GDS-3000 Series supports up to four independently operated and triggered windows at a time so that you can simultaneously monitor up to 4 signals carrying different characteristics.

6. Auto-Range Function

The Auto Range function automatically adjusts the time base and/or the vertical scale of displayed waveform when the frequency and/or the amplitude of input signal changed.

7. High Speed USB 2.0 Port

USB Host port for easy access of stored data.

8. Three Input Impedance Selections

The three built-in input impedances (75Ω, 50Ω ,1MΩ) can be selected to meet the requirements of various applications.

9. Serial Bus Triggering and Decode (Optional)

2 dedicated keys used for setting recall in the serial bus analysis applications supporting UART, I^2C and SPI serial bus.

10. Independent Channel Design

The independent zone of vertical operations for each channel substantially increases the measurement efficiency.

4 Channel Model

SELECTIO			
Model	GDS-3354	GDS-3352	C
Bandwidth	350MHz	350MHz	
Channels	4	2	
Record Length	25k/Channel	25k/Channel	25
Real-Time Sampling	5 GSa/s	5 GSa/s	
Equivalent-Time Sampling	100GSa/s	100GSa/s	1

* 2 Channels on Max Sampling Rate: 2.5GSa/s (GDS-33
* 3, 4 Channels on Max Sampling Rate: 1.25GSa/s (GDS

Our low TCO helps you control costs with reliable products and services.

ng Advanced Technologies

11. USB Ports as Standard

USB Host/Device interfaces for easy access of stored data and direct print-out through a PictBridge compatible printer.

12. LAN Port as Standard

LAN interfaces for remote control and monitoring.

13. Line Output

3.5mm stereo sound output for Go/NoGo buzzer.

14. RS-232 Interface

15. SVGA Video Output

SVGA video output port allows the transfer of DSO screen image to an external projector or monitor for remote monitoring or big screen observation.

16. Go/NoGo BNC

The open collector output signal allows external instrument to be controlled by the test result.

17. Trigger Output Port

A 5V TTL Level trigger signal is available for the synchronization with other devices.

18. Self-Calibration Signal Output

Self-Calibration signal output for input channel vertical gain calibration.

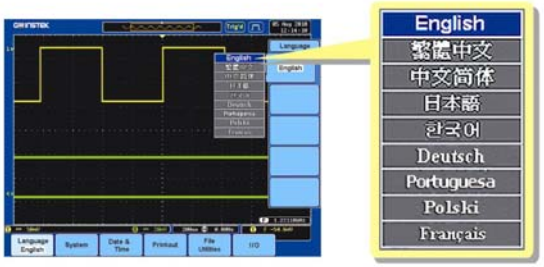
2 Channel Model

GUIDE

S-3254	GDS-3252	GDS-3154	GDS-3152
0MHz	250MHz	150MHz	150MHz
4	2	4	2
Channel	25k/Channel	25k/Channel	25k/Channel
GSa/s	2.5 GSa/s	5 GSa/s	2.5 GSa/s
GSa/s	100GSa/s	100GSa/s	100GSa/s

/3352/3254/3154); 1.25GSa/s (GDS-3252/3152)
354/3254/3154)

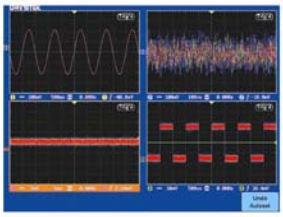
Multi-Language Support



The GDS-3000 Series interface supports multiple languages to provide the upmost convenience for cross-country team cooperation and multinational engineering efforts.

350/250/150 MHz Digital Storage Oscilloscope

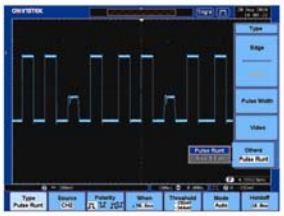
A. UNIQUE SPLIT SCREEN FUNCTION



The unique split screen feature of GDS-3000 Series allows each input channel to be operated independently with respective setting and waveform display. The time base, the vertical sensitivity, and the trigger selections can be done by each channel separately, and the waveform of each input signal can be shown on the individual part of the screen. This nearly four-DSO-in-one feature* is very useful for the applications that need to simultaneously see the details of multiple waveforms with very different characteristics. The 8-inch high resolution 800x600 LCD display makes the split screen a pleasant observation environment to view the details of complex signals.

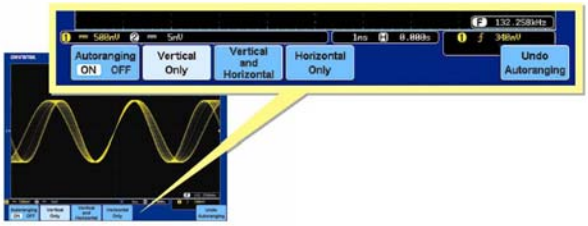
** only four-channel models support these function.*

B. COMPLETE SET of TRIGGER FUNCTIONS



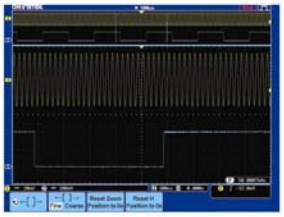
Besides Edge trigger, the GDS-3000 Series also offers various trigger functions, including Video, Pulse Width, Runt, Rise Time & Fall Time (specific time length), Alternate, Delay by Time, Delay by Event, and Hold-Off. The high sampling rate, the VPO signal processing & display, and the flexible trigger function all together make the GDS-3000 Series a powerful tool for waveform capture and display of various types of signals.

C. AUTO RANGE for both TIME BASE and VERTICAL SCALE



The Auto Range function automatically adjusts the time base and/or the vertical scale of displayed waveform when the frequency and/or the amplitude of input signal changed. This function gives user the convenience to have DSO always display waveform in a proper fashion on the screen tracking the frequency and amplitude changes of the input signal. It is especially useful when the user needs to alternately probe and test multiple circuit points containing signals with different frequencies and amplitudes.

D. DUAL DISPLAY WINDOW ZOOM

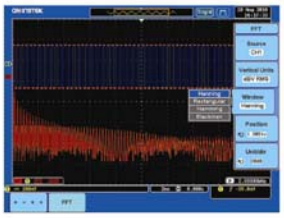


The GDS-3000 Series Window Zoom function provides dual display mode to show the main waveform and the magnified section of zoomed-in waveform at the same time. Under "Zoom" mode, the width and the position of zoom-in window over the main waveform can be selected to get the magnified waveform as needed for detailed observation. To quickly and accurately move the zoom-in window to the expected position, the "Coarse" mode helps move the window to the needed position immediately and the "Fine" mode provides fine adjustment to precisely place the window in the exact position.

E. 28 AUTOMATIC MEASUREMENTS

The GDS-3000 Series supports simultaneous measurement of up to 28 waveform measurement items grouped into three main waveform parameters: amplitude, time and delay measurements. The display modes include an individual mode and a Display All mode. The former can display any 8 of the automatic measurements while the later can display all the automatic measurements for a channel.

F. FFT TEST FUNCTION



To observe fundamental and harmonic frequency components of a signal, the FFT function on a digital storage oscilloscope is often used. Typically the traditional unit of the FFT is decibel (dB). However, when using dB it is sometimes difficult to identify the fundamental frequency of a signal from a noisy spectrum. With FFTrms function, the GDS-3000 Series can clearly display the fundamental frequency of an acquired waveform.
The FFT function of GDS-3000 supports Rectangular, Hamming, Hanning, and Black-harris windows.

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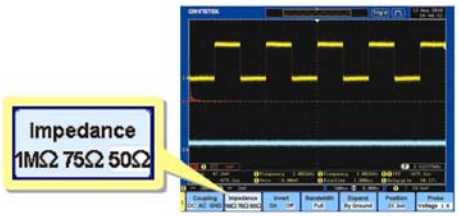
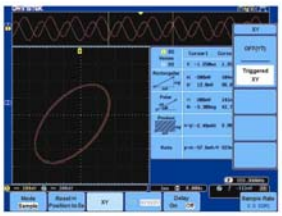
G. THREE INPUT IMPEDANCE SELECTIONS



Three input impedance, 1MΩ, 75Ω, and 50Ω are available for user's selection. The flexibility of impedance selections, including 1MΩ to get minimum loading effect, 75Ω to accommodate Video transmission applications and 50Ω to fit RF communication applications, extends the GDS-3000 Series utilization range.

H. X-Y MODE



The X-Y mode of GDS-3000 defines CH1 and CH3 as the horizontal axis and CH2 and CH4 as the vertical axis, allowing the display of 2 sets of X-Y pattern simultaneously. The measurement items include Rectangular, Polar, Product and Ratio that fits most of the popular X-Y applications. The X-Y pattern and the time domain waveforms can be shown on the screen simultaneously. Two cursors on the time domain waveforms allow the identification of cursor-associated locations on the X-Y pattern display.

I. EXTENDABLE APPLICATION SOFTWARE

The GDS-3000 Series allows future installation of additional application software at the user site. This provides an open environment for optional software upgrade and additional feature built-in in whenever the GDS-3000 Series user has the need. The flexibility of software installation platform keeps the DSO being in use always up-to-date.

J. WAVEFORM FILE PREVIEW

The GDS-3000 provides an optimized operation interface for viewing screen captures. Generally, the oscilloscope may store large amounts of waveform data after a long period of time. To help prevent engineers from selecting the wrong file from a large number of stored waveform files, the screen capture preview function can be used to preview the waveform file without opening files so that operation of the oscilloscope is more efficient and convenient.

K. FREE REMOTE CONTROL SOFTWARE

Using a USB port coupled with FreeWave remote monitoring software is the easiest and most convenient way to capture data from the GDS-3000 Series. With FreeWave, a screenshot can be saved as an image file (.bmp/.jpg), waveform data (.csv) can be logged and movie files(.wmv) can be recorded in real-time. Not only can FreeWave monitor and record waveforms over a long period of time, but previously recorded waveforms can also be observed. Instrument settings can even be configured without the need to learn incomprehensible command line syntax. With the simple user interface and robust features, FreeWave allows you to get the most out of the GDS-3000 with little effort.

L. SVGA OUTPUT

A SVGA video output port in the rear panel of GDS-3000 Series allows the screen-image transfer from DSO to an external projector or a monitor for remote monitoring or big screen observation. This direct image transfer feature greatly increase the efficiency of presentation in the meeting, teaching in the class, remote monitoring of hazardous events from a secured zone, and fast and easy monitoring in the production line.

350/250/150 MHz Digital Storage Oscilloscope

M. VARIOUS INTERFACES SUPPORT

Two high-speed USB 2.0 Host ports located in both front panel and rear panel are used for easy access of stored data. In the rear panel, a USB Device port is available for remote control and hardcopy print-out through a PictBridge compatible printer. RS-232 and LAN interfaces are provided as standard for system communication & ATE applications.

A SVGA video output port allows the transfer of DSO screen image to an external projector or monitor for remote monitoring or big screen observation. A GPIB to USB adaptor is available as an option for interface conversion though the USB Device port in the front panel.

N. SERIAL BUS ANALYSIS SOFTWARE SUPPORTING I²C, SPI and UART (OPTIONAL)

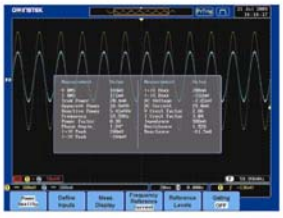
Serial Bus Analysis Software

The GDS-3000 Series provides two dedicated keys in the front panel for tow sets of setting recall

With serial bus technology being widely used in embedded applications, the proper triggering and analysis of flowing data, control signal and associated pulse waveforms in serial bus communication has been a difficult job and challenge to design engineers. The Serial Bus Analysis software of GDS-3000 Series carries complete analysis tools for triggering and decoding of commonly used serial bus interfaces, including I² C, SPI and UART. Without spending time to study serial bus regulation details, the user only needs to set the trigger condition on GDS-3000 to get the data slots of interest.

** Only four-channel models support these optional functions.*

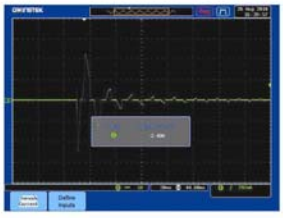
O. POWER ANALYSIS SOFTWARE FOR POWER SUPPLY MEASUREMENTS (OPTIONAL)



Power Quality

Harmonics

Ripple



In-rush Current

The Power Analysis software contains four measurement functions, including Power Quality, Harmonics, Ripple and Inrush Current. The Power Quality analysis function allows the measurements of Voltage, Current, Frequency, Power and other quality related parameters for power source efficiency improvement. The Harmonics analysis function performs evaluation of power waveform distortion and gives harmonic test data for power source design and quality check. This function is complied with IEC 61000-3-2 standard. The Ripple measurement function, acquiring the ripple and noise overriding the DC waveform, is used to evaluate the DC power source quality. The Inrush Current measurement function is used to measure the power-on surge current, which may cause the damage of the device circuit.

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Current Probe and Differential Probe Selections

GCP-530/1030

GCP-206P/425P

GDP-025

GDP-050/100

Besides the included accessory of passive probes, the optional differential probes and current probes are also available with the GDS-3000 Series for user's selection. Three new differential probes, GDP-025, GDP-050 & GDP-100, and two new current probes, GCP-530 & GCP-1030, are coming along with GDS-3000 to provide total solutions for a wide variety of applications in the industry, service and education market sectors.

** Current probe power supply is needed for both GCP-530 and GCP-1030 current probe.*

CURRENT PROBE	GCP-530	GCP-1030
Probe Bandwidth	DC ~ 50MHz	DC ~ 100MHz
Rise Time	7ns or less	3.5ns or less
Maximum Continuous Input Range	30Arms	30Arms
Maximum Peak Current Value	50Arms	50Arms
Output Voltage Rate	0.1V/A	0.1V/A
Amplitude Accuracy	±1.0%rdg±1mV (0~30Arms/DC, 45 ~66Hz) : ±2.0%rdg (30Arms~50A peak/ DC, 45~66Hz)	±1.0%rdg±1mV (0~30Arms/DC , 45~66Hz) : ±2.0%rdg (30Arms~50A peak/ DC, 45~66Hz)
Noise	2.5mArms or less	2.5mArms or less
Rate Supply Voltage	±12V± 0.5V	±12V± 0.5V
Maximum Rated Power	5.6VA	5.3VA
Maximum Rated Voltage	300V ,CAT I	300V ,CAT I

CURRENT PROBE POWER SUPPLY	GCP -206P	GCP-425P
Compatible Current Probe	GCP-530 GCP-1030	GCP-530 GCP-1030
Number of Power Supply Connectors	2	4
Output Voltage	±12V± 0.5V	±12V± 0.5V
Rated Output Current	600mA	±2.5A
Rated Supply Voltage (50/60Hz)	100V AC±10%	100V~240VAC±10%
Maximum Rated Power	20VA	170VA
Dimensions Weight	73(W)x110(H)x 186(D)mm ; Approx.1.1kg	80(W)x119(H)x 200(D) mm ; Approx.1.1kg
Accessories	Power cord, fuse	Power cord, fuse

HIGH-VOLTAGE DIFFERENTIAL PROBE	GDP-025	GDP-050	GDP-100
Probe Bandwidth	DC ~ 25MHz(attenuationx50 ,x200) ; DC ~ 15MHz(attenuationx20)	DC ~ 50MHz(attenuationx200 ,x500 ,x1000) ; DC ~ 25MHz(attenuationx100)	DC ~ 100MHz(attenuationx200 ,x500 ,x1000) ; DC ~ 50MHz(attenuationx100)
Attenuation	x20 ,x50 ,x200	x100 ,x200 ,x500 ,x1000	x100 ,x200 ,x500 ,x1000
Accuracy	±2%	±2%	±2%
Voltage Input Range (DC+AC peak to peak)	≤140Vp-p for x 20 , ≤350Vp-p for x 50 , ≤1400Vp-p for x 200	≤ 700Vp-p for x 100 ≤ 1400Vp-p for x 200 ≤ 3500Vp-p for x 500 ≤ 7000Vp-p for x 1000	≤ 700Vp-p for x 100 ≤ 1400Vp-p for x 200 ≤ 3500Vp-p for x 500 ≤ 7000Vp-p for x 1000
Permitted Max Input Voltage	Maximum differential voltage: Max voltage between input terminal and ground: 600Vrms	Maximum differential voltage: Max voltage between input terminal and ground: 6500Vrms	Maximum differential voltage: Max voltage between input terminal and ground: 6500Vrms
Input Impedance	Differential:4MΩ /1.2pF ; Between terminals and ground: 2MΩ /2.3pF	Differential:54MΩ /1.2pF ; Between terminals and ground:27MΩ /2.3pF	Differential: 54MΩ /1.2pF ; Between terminals and ground:27MΩ /2.3pF
Output	≤±7.0V	≤ 7.0V	≤ 7.0V
Output impedance	50Ω	50Ω	50Ω
Rise Time	14ns(x50 ,x200 attenuation) ; 23.4ns(x20 attenuation)	7ns(x2000 ,x500,x1000 attenuation) ; 14ns(x100 attenuation)	3.5ns(x2000 ,x500,x1000 attenuation) ; 7ns(x100 attenuation)
Rejection Rate on Common Mode (CMRR)	60Hz>80dB , 100Hz>60dB, 1MHz>50dB	60Hz>80dB , 100Hz>60dB, 1MHz>50dB	60Hz>80dB , 100Hz>60dB, 1MHz>50dB
Power Supply	External DC adapter	External DC adapter	External DC adapter
Consumption	Maximum 35mA(0.4Watt)	Maximum 35mA(0.4Watt)	Maximum 35mA(0.4Watt)

350/250/150 MHz Digital Storage Oscilloscope

SPECIFICATIONS

	GDS-3152	GDS-3154	GDS-3252	GDS-3254	GDS-3352	GDS-3354
VERTICAL						
Channels	2Ch+EXT	4Ch+EXT	2Ch+EXT	4Ch+EXT	2Ch+EXT	4Ch+EXT
Bandwidth	DC~150MHz(-3dB)	DC~150MHz(-3dB)	DC~250MHz(-3dB)	DC~250MHz(-3dB)	DC~350MHz(-3dB)	DC~350MHz(-3dB)
Rise Time	2.3ns	2.3ns	1.4ns	1.4ns	1ns	1ns
Vertical Resolution	8 bits					
Vertical Resolution (1MΩ)	2mV~5V/div					
Vertical Resolution (50/75Ω)	2mV~1V/div					
Input Coupling	AC, DC, GND					
Input Impedance	1MΩ// 15pF approx.					
DC Gain Accuracy	±(3% X |Readout| + 0.1div + 1mV)					
Polarity	Normal , Invert					
Maximum Input Voltage(1MΩ)	300V (DC+AC Peak), CAT I					
Maximum Input Voltage(50/75Ω)	5 Vrms , CAT I					
Offset Position Range	2mV/div ~ 100mV/div : ±0.5V ; 200mV/div ~ 5V/div : ±25V					
Bandwidth Limit	20MHz/100MHz/200MHz (-3dB)					
Waveform Signal Process	Add, Subtract, Multiply, and Divide waveforms, FFT, FFTrms ; FFT : Spectral magnitude. Set FFT vertical scale to Linear RMS or dBV RMS, and FFT window to Rectangular, Hamming, Hanning or Blackman-Harris.					
TRIGGER						
Source	2CH model: CH1, CH2, Line , EXT ; 4CH model: CH1 , CH2 , CH3 , CH4 , Line , EXT					
Trigger Mode	Auto (Supports Roll Mode for 100 ms/div and slower), Normal, Single					
Trigger Type	Edge, Pulse Width, Video, Runt, Rise & Fall, Alternate, Event-Delay(1~65,535 events), Time-Delay(10ns~10s), I^2C, SPI, UART(optional)					
Trigger Holdoff Range	10ns ~ 10s					
Coupling	AC, DC, LF rej. , Hf rej. , Noise rej.					
Sensitivity	DC~30MHz Approx. 1div or 10mV; 50MHz~150MHz Approx. 1.5div or 15mV; 150MHz~350MHz Approx. 2div or 20mV					
EXT TRIGGER						
Range	±50V					
Sensitivity	DC ~ 150MHz Approx. 100mV 150MHz ~ 250MHz Approx. 150mV;250MHz ~ 350MHz Approx. 150mV					
Input Impedance	1MΩ ±3%, ~16pF					
HORIZONTAL						
Range	1ns/div ~ 100s/div (1-2-5 increments); ROLL : 100ms/div ~ 100s/div					
Pre-trigger	10 div maximum					
Post-trigger	1,000 div					
Accuracy	±20 ppm over any ≥ 1 ms time interval					
X-Y MODE						
X-Axis Input/Y-Axis Input	Channel 1; Channel 3/Channel 2; Channel 4					
Phase Shift	±3°at 100kHz					
SIGNAL ACQUISITION						
Real Time Sample Rate	2.5GSa/s	5GSa/s	2.5GSa/s	5GSa/s	5GSa/s	5GSa/s
ET Sample Rate	100GSa/s maximum for all models					
Record Length	25k points					
Acquisition Mode	Normal, Average, Peak detect, High resolution, Single Normal: Acquire sampled values ; Average: From 2 ~ 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, Phase, and eight different delay measurements (FRR, FRF, FFR, FFF, LRR, LRF, LFR, LFF)					
Cursors measurement	Voltage difference between cursors (△V) Time difference between cursors (△T)					
Auto counter	6 digits, range from 2Hz minimum to the rated bandwidth					
POWER MEASUREMENTS(OPTION)						
Power Quality Measurements	VRMS, VCrest factor, Frequency, IRMS, ICrest factor, True power, Apparent power, Reactive power, Power factor, Phase angle.					
Harmonics	Freq, Mag, Mag rms, Phase, THD-F, THD-R, RMS					
Ripple Measurements	Vripple ,Iripple					
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 automatically adjusts the time base and/or the vertical scale of displayed waveform when the frequency and/or the amplitude of input signal changed.					
Save Setup	20set					
Save Waveform	24set					

SPECIFICATIONS

	GDS-3152	GDS-3154	GDS-3252	GDS-3254	GDS-3352	GDS-3354
DISPLAY SYSTEM						
TFT LCD Type	8" TFT LCD SVGA color display(LED Back-light)					
Display Resolution	800 horizontal x 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					
Display Brightness	Adjustable					
INTERFACE						
RS-232C	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	RJ-45 connector, 10/100Mbps					
SVGA Video Port	DB-15 female connector, monitor output for display on SVGA monitors					
GPIB	USB-to-GPIB converter (Option)					
Go/NoGo BNC	5V Max/10mA TTL 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					
MISCELLANEOUS						
Multi-Language Menu	Available					
On-Line Help	Available					
Time clock	Time and date, provide the date/time for saved data					
DIMENSIONS & WEIGHT						
400(W) X 200(H) X 130(D)mm, Approx. 4 kg						

* Three-year warranty, excluding probes & LCD display panel.

Specifications subject to change without notice.

ORDERING INFORMATION

GDS-3352	350MHz, 2-Channel, Visual Persistence DSO
GDS-3354	350MHz, 4-Channel, Visual Persistence DSO
GDS-3252	250MHz, 2-Channel, Visual Persistence DSO
GDS-3254	250MHz, 4-Channel, Visual Persistence DSO
GDS-3152	150MHz, 2-Channel, Visual Persistence DSO
GDS-3154	150MHz, 4-Channel, Visual Persistence DSO

Accessories

User manual x 1 ,Power cord x 1
GTP-151R : 150MHz 10:1 passive probe for GDS-3152/3154 (one per channel)
GTP-251R : 250MHz 10:1 passive probe for GDS-3252/3254 (one per channel)
GTP-351R : 350MHz 10:1 passive probe for GDS-3352/3354 (one per channel)

Option

DS3-PWR	Power analysis software: Power quality/Harmonic/Ripple/In-rush current measurements
DS3-SBD	Serial Bus analysis software: I^2C/SPI/UART (for 4-channel models only)
GUG-001	GPIB to USB adapter

Optional Accessories

GTP-033A	35MHz 1:1 Passive Probe
GDP-025	25MHz High voltage differential probe
GDP-050	50MHz High voltage differential probe
GDP-100	100MHz High voltage differential probe
GCP-530	50MHz/30A Current probe
GCP-1030	100MHz/30A Current probe
GCP-206P	Power supply for current probe (2 input channel)
GCP-425P	Power supply for current probe (4 input channel)
GTC-001	Instrument cart 450(W) x 430(D)mm(120V input socket)
GTC-002	Instrument cart 330(W) x 430(D)mm(120V input scoket)
GSC-008	Soft Carrying Case
GTL-110	Test lead, BNC to BNC connector
GTL-232	RS-232C cable, 9-pin female to 9-pin female, Null Modem for computer
GTL-242	USB 1.1 cable, A-B type cable 4P, 1800mm

Free Download

PC Software FreeWave software **Driver** USB driver ; LabView driver

DISTRIBUTOR :

DS-3000GD1BH

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