New Bench-Mark of Mainstream DSO

GDS-800 Series

60MHz/100MHz/150MHz/250MHz Digital Storage Oscilloscope

60MHz	100MHz	150MHz	250MHz
GDS-806C	GDS-810C	GDS-820C	GDS-840C
GDS-806S	GDS-810S	GDS-820S	GDS-840S

- 60MHz/100MHz/150MHz/250MHz Bandwidth With Either Color or Monochrome LCD Display
- 125k Long Memory and 12 Division Horizontal Display
- 25GS/s Sampling Rate for Repetitive Waveforms

**GW INSTEK**

GDS-800 Series

Digital Storage Oscilloscope

GDS-800 Series at 60MHz/100MHz/150MHz/250MHz bandwidth with Color or Monochrome LCD display , are designed and built to meet the demands of a modern Digital Storage Oscilloscope (DSO) in the main stream market today.

With 125k memory and 25GS/s ET sampling rate per channel , GDS-800 series provides a good balance of DSO performance in terms of memory length and **sampling speed. The easy-to-remember menu tree, the analog-scope-like front panel design , the advanced** trigger functions of Pulse Width , TV Line ,Event and Time-Delay, and the availability of RS-232C, GPIB, USB and Printer Port, make GDS-800 series a general purpose product to meet most of the waveform measurement applications in the market.

FEATURES :

- 60MHz/100MHz/150MHz/250MHz Bandwidth With Either Color or Monochrome LCD Display
- 125k Long Memory and 12 Division Horizontal Display
- 25GS/s Sampling Rate for Repetitive Waveforms
- 15 Auto Measurements and simultaneous △T/△V Cursors
- Advanced Trigger : Pulse Width , TV Line, Event Delay and Time Delay
- Go/NoGo and Auto Setup Sequence
- FFT Function
- Zoom IN / OUT
- Adjustable Probe Compensation Signal:
  Adjustable Frequency Range: 1kHz~100kHz
  Adjustable Duty Cycle: 5%~95%

- Built-In Help Manual, PC Software and Multi-Language (Eleven languages total Including English, French, Italian, German, Korean, Russian, Simplified Chinese, Traditional Chinese, Polish, Finnish, and Spanish)
- Standard Interface :
  RS-232C, USB, Printer Port, Go/NoGo Output (GDS-820/840 Series)
  RS-232C (GDS-806/810 Series)
- Optional Interface :
  GPIB (GDS-820/840 Series)
  GPIB, USB, Printer Port, Go/NoGo Output (GDS-806/810 Series)
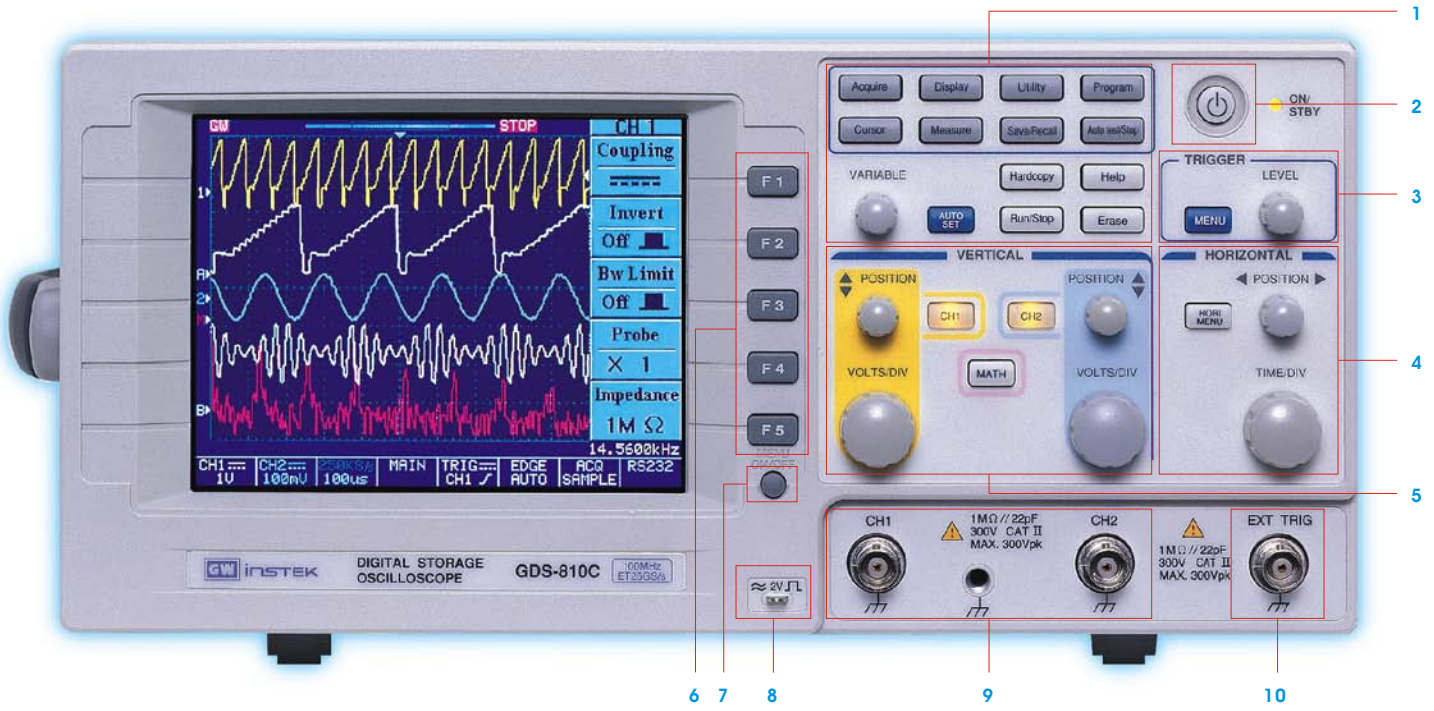
Panel Introduction:

1. Key Function Control
2. Power Switch
3. Trigger Function
4. Horizontal System
5. Vertical System
6. Function Keys
7. Menu ON/OFF
8. Probe Compensation Output
9. CH1, CH2 Input Connectors
   and Ground
10. External Trigger Signal
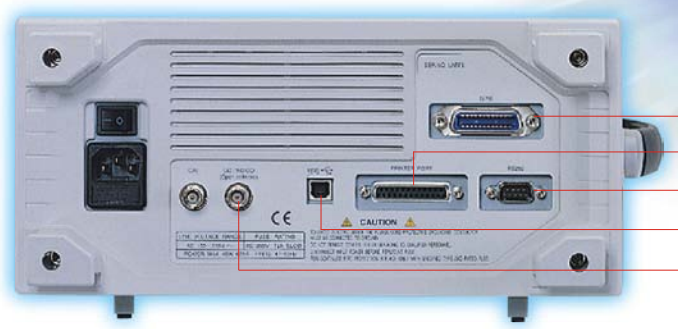
GPIB

Printer Port

RS-232C

USB

Go/NoGo Output

GDS-840C Rear Panel

MODEL	GDS-806S	GDS-806C	GDS-810S	GDS-810C	GDS-820S	GDS-820C	GDS-840S	GDS-840C
DISPLAY DEVICE	Mono	Color	Mono	Color	Mono	Color	Mono	Color
BANDWIDTH	60 MHz		100 MHz		150 MHz		250 MHz	
SAMPLE RATE	25GS/s Max on each channel							
CHANNEL	2							
RECORD LENGTH	125k/CH							
ADVANCED	Pulse Width, TV Line, Event Delay, Time Delay							
VALUED FEATURE PLUS	Multi-Language, FFT, Go/NoGo, Auto Setup Sequence, 15 Auto-Measurement							
STANDARD INTERFACE	RS-232C				RS-232C, USB, Printer Port, Go/NoGo Output			
OPTIONAL INTERFACE Opt.01	GPIB							
OPTIONAL INTERFACE Opt.11	USB, Printer Port, Go/NoGo Output				—			

Scientific Research and Data Analysis

In order to achieve the complicated demands of scientific research and data analysis, the GDS-800 series can be connected to a personal computer with various interfaces. From a PC at a remote site, the user can monitor the real-time image of GDS-800 series screen via USB interface, or control the GDS-800 series settings and waveform capturing via RS-232C/GPIB interface. These remote monitor/control capabilities of GDS-800 series facilitate the remote scientific research and avoid human hazard and interference. GDS-800 series, equipped with an abundant 125k acquisition memory, provides a good means for scientific experiments. The entire 125k acquision memory can be transferred to a personal computer for further analysis and research.

Circuit Design and Debug

With 25GS/s sampling capability, GDS-800 series is able to capture and reconstruct waveforms at a very high resolution of 40ps. The 125k long memory of GDS-800 series enables the observation of a transient signal in more detail than any other Short-Memory DSO can do. The advanced trigger capability, including Pulse Width, TV Line, Event Delay and Time Delay, greatly facilitate the complicated signal tests for the performance evaluation of the products under development. The higher sampling rate , longer memory and advanced trigger make the GDS-800 series suitable for circuit design and debug.

Production Automatic Test and Quality Inspection

As far as the speed of production test is concerned , the Auto Set-Up Sequence and Go/NoGo features give you a fast and convenient way to perform the routine tests without tedious software programming. Under Auto Set-Up Sequence mode, the saved front panel Set-Ups in the memories could be recalled to tailor an auto test routine with user assigned test time period of each individual test step . At a push of the button , GDS-800 series automatically goes through all the test procedures you want. The Go/NoGo mode allows you to easily create the template to monitor abnormal signals or events.The ratio of failed events to all events is also shown to give a real time statistics.

Repair and After Service

The straightforward operation of GDS-800 series requires little knowledge from a user, and allows him/her to quickly get started with his/her job. At a press of the Auto-Set button , the GDS-800 series automatically adjusts its Set-Up, and displays waveforms in the manner of most convenient view. With 15 auto measurement functions and 10 measurement readings shown simultaneously, GDS-800 series easily gets your test data all on a screen at once. These features give service engineers an easy start and time-saving solution under a limited budget consideration.

Education Lab. and Training Institution

The Built-In FFT feature of GDS-800 series provides a useful means to convert a waveform display from time domain to frequency domain . The capability of simultaneous displays of time domain and frequency domain of a signal is especially suitable for the educational purposes.The embedded USB interface of the GDS-800 series along with USB PC software gives nearly synchronous waveform display on the GDS-800 series and PC monitor respectively. This makes the training effective and easy through sharing waveform measurement procedures and results among the instructor and the students. The on-screen Help Manual is also useful to give students an environment for Self-Study of the GDS-800 series features and operations.
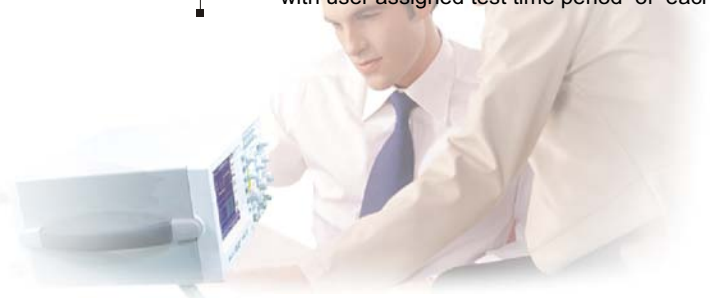
GSC-005 Soft Carrying Case

GSC-005 soft carrying case is specially designed for outdoor usage of GDS-800 series. Inside the carrying case, there are four enhanced protection spacers which can completely isolate any impact to GDS-800 series. This soft carrying case can also collect all the accessories including probes, power cord, operation manual and jotters, etc. for GDS-800 series. The GSC-005 is also an excellent storage bag of the product even not for outdoor usage.

Test Leads & Option

GTP-060A CE
10 : 1 DC~60MHz
1 : 1 DC~6MHz
For: GDS-806S/806C

GTP-100A CE
10 : 1 DC~100MHz
1 : 1 DC~6MHz
For: GDS-810S/810C

GSC-005 Soft Carrying Case
For : GDS-800 Series

GTP-150A CE
10:1 DC~150MHz
1:1 DC~6MHz
For:GDS-820S/820C

GTP-250A CE
10:1 DC~250MHz
1:1 DC~6MHz
For: GDS-840S/840C

GRA-405 Rack Adapter Panel
For : GDS-800 Series

GTL-232 RS-232C Cable
For: GDS-800 Series

Ordering Information

GDS-806C 60MHz, 2-Channel Color LCD Display DSO
GDS-806S 60MHz, 2-Channel Mono LCD Display DSO
GDS-810C 100MHz, 2-Channel Color LCD Display DSO
GDS-810S 100MHz, 2-Channel Mono LCD Display DSO
GDS-820C 150MHz, 2-Channel Color LCD Display DSO
GDS-820S 150MHz, 2-Channel Mono LCD Display DSO
GDS-840C 250MHz, 2-Channel Color LCD Display DSO
GDS-840S 250MHz, 2-Channel Mono LCD Display DSO

Standard Accessories

Probe-GTP060A : 60MHz ×10/×1 Switchable Passive Probe for GDS-806 Series
Probe-GTP100A : 100MHz ×10/×1 Switchable Passive Probe for GDS-810 Series
Probe-GTP150A-2 : 150MHz ×10/×1 Switchable Passive Probe for GDS-820 Series
Probe-GTP250A-2 : 250MHz ×10/×1 Switchable Passive Probe for GDS-840 Series
Instruction Manual & Power Cord

Options

GDS-806/810 Series

Opt.01 : GPIB Interface (Factory Installed)
Opt.11 : USB Interface, Printer Port, Go/NoGo Output (Factory Installed)
Opt.02 : RS-232C Cable, 9-pin Female to 9-pin, Null Modem for Computer
Opt.03 : USB Cable, USB1.1A-B Type Cable, 1800mm
Opt.04 : GSC-005 Soft Carrying Case
Opt.05 : GRA-405 Rack Mounting (19",4U)

GDS-820/840 Series

Opt.01 : GPIB Interface (Factory Installed)
Opt.02 : RS-232C Cable, 9-pin Female to 9-pin, Null Modem for Computer
Opt.03 : USB Cable, USB1.1A-B Type Cable, 1800mm
Opt.04 : GSC-005 Soft Carrying Case
Opt.05 : GRA-405 Rack Mounting (19",4U)

Specifications

		GDS-806S	GDS-806C	GDS-810S	GDS-810C	GDS-820S	GDS-820C	GDS-840S	GDS-840C
DISPLAY SYSTEM	**Display Device**	Mono (320 x 240) 5.7 LCD	Color (320 x 240) 5.7 LCD	Mono (320 x 240) 5.7 LCD	Color (320 x 240) 5.7 LCD	Mono (320 x 240) 5.7 LCD	Color (320 x 240) 5.7 LCD	Mono (320 x 240) 5.7 LCD	Color (320 x 240) 5.7 LCD
	Display Contrast **Waveform Display Graticule** **Display Mode**	Adjustable 8 x 10 divisions (8 x 12 div, when menu off) Dot, Vector, Accumulate							
VERTICAL SYSTEM	**Bandwidth**	60MHz (-3dB)		100MHz (-3dB)		150MHz (-3dB)		250MHz (-3dB)	
	Channels **Vertical Resolution** **Vertical Sensitivity** **Vertical Accuracy**	2 8-Bit 2mV/div ~ 5V/div $\pm$ 3%							
	Rise Time	<5.8ns		<3.5ns		<2.3ns		<1.4ns	
	Input Impedance	1MΩ ± 2% , ~18pF				1MΩ ± 2% , ~22pF		1MΩ ± 2% , ~18pF	
	Input Coupling **Polarity** **Maximum Voltage Between Signal & Common at Input BNC** **Waveform Signal Process** **Offset Range** **BW Limit**	AC, DC, & Ground Normal & Invert 300V (DC+AC peak), CATII CH1+CH2 , CH1-CH2 , FFT 2mV/div ~ 50mV/div : $\pm$0.5V ;100mV/div ~ 500mV/div : $\pm$5V ; 1V/div ~ 5V/div : $\pm$50V 20MHz (-3dB)							
HORIZONTAL SYSTEM	**Time Base Range** **Time Base Mode** **Time Base Accuracy** **Delay Range**	1ns/div ~ 10s/div (1-2-5 increments) ; Roll : 250ms/div ~ 10s/div Main , Window , Window Zoom , Roll , X-Y $\pm$0.01% Pre-trigger : 20 div maximum ; Post-trigger : 1000 div							
SIGNAL ACQUISITION SYSTEM	**Real-Time Sample Rate** **Equivalent Sample Rate** **Record Length** **Peak Detection** **Acquisition Mode** **Average**	100MS/s maximum on each channel 25GS/s E.T. maximum on each channel 125k/CH 10ns (500ns/div ~ 10s/div) Sample , Peak Detect , Average 2 , 4 , 8 , 16 , 32 , 64 , 128 , 256							
TRIGGER	**Trigger Source** **Mode** **Coupling**	CH1 , CH2 , Line , Ext Auto Level , Auto , Normal , Single , TV , Time Delay , Event Delay , Edge , Pulse Width AC , DC , HF , LF , Noise Reject							
	Sensitivity	DC ~ 25MHz : 0.5div or 5mV 25MHz~60MHz : Approx. 1.5div or 15mV		DC ~ 25MHz : 0.5div or 5mV 25MHz~100MHz : Approx. 1.5div or 15mV		DC ~ 30MHz : Approx. 0.5div or 5mV; 30MHz~150MHz : Approx. 1.5div or 15mV		DC ~ 30MHz : Approx. 0.5div or 5mV; 30MHz~150MHz : Approx. 1.5div or 15mV 150MHz ~ 250MHz : Approx. 2.0div or 20mV	
X-Y MODE	**X-Axis Input / Y-Axis Input** **Phase Shift**	Channel 1 / Channel 2 $\pm$ 3° at 100kHz							
CURSOR & MEASUREMENT	**Auto Voltage Measurement** **Auto Time Measurement** **Cursor Measurement**	V_{pp} , V_{amp} , V_{avg} , V_{rms} , V_{hi} , V_{lo} , V_{max} , V_{min} Freq , Period , Rise Time , Fall Time , Positive Width , Negative Width , Duty Cycle Voltage difference between cursors ($\triangle$V) Time difference between cursors ($\triangle$T) Frequency difference between cursors (1/ $\triangle$T)							
FREQUENCY COUNTER	**Readout Resolution** **Frequency Range** **Signal Source**	6 digits AC Coupled , 20Hz ~ bandwidth ; resolution : 10Hz All available trigger source except the Pulse Width & Video Trigger mode							
ADJUSTABLE PROBE COMPENSATION SIGNAL	**Frequency Rang** **Duty Cycle Rang**	1kHz ~ 100kHz , 1kHz/STEP 5% ~ 95%; 5%/STEP				1kHz 50%			
EXTERNAL TRIGGER	**Range** **Sensitivity**	$\pm$15V							
		DC ~ 25MHz : ~50mV 25MHz ~ 60MHz : ~100mV		DC ~ 25MHz : ~50mV 25MHz ~ 100MHz : ~100mV		DC ~ 30MHz : ~50mV 30MHz ~ 150MHz : ~100mV		DC ~ 30MHz : ~50mV 30MHz ~ 150MHz : ~100mV 150MHz ~ 250MHz : ~150mV	
	Input Impedance **Maximum Input**	1M Ω± 2% , ~18pF 300V(DC+ AC peak) , CATII				1MΩ ± 2% , ~22pF 300V(DC+ AC peak) , CATII		1MΩ ± 2% , ~18pF	
CONTROL PANEL FUNCTION	**AutoSet** **Save/Recall** **Waveform Trace Save/Recall**	" Autoset " can adjust vertical (Volt/div) , Horizontal (Sec/div) and Trigger level automatically Up to 15 sets of measurement conditions can be saved and recalled 2 sets of waveform can be saved and recalled							
INTERFACE	**Standard**	RS-232C				RS-232C, USB, Printer Port, Go/NoGo Output			
	Optional Opt. 01	GPIB							
	Optional Opt. 11	USB, Printer Port, Go/NoGo Output				—			
POWER SOURCE		100V ~ 240V AC , 47Hz ~ 63Hz , Auto selection							
ACCESSORIES		Instruction manual x 1, Power Cord x 1, Probe x 2							
DIMENSIONS & WEIGHT		310W x 142H x 254D (mm) , Approx. 4.1kg							

Specifications subject to change without notice.

DS-800NGD1BH