HANDHELD DIGITAL STORAGE OSCILLOSCOPE & MULTIMETER

CE USB DMM PC Software

GDS-122 (20MHz)

FEATURES

- 20 MHz Bandwidth
- 100 MS/s Realtime Sampling Rate
- Digital Storage Oscilloscope & Multimeter
- True RMS Multimeter Volts, Amps, Ohms, Continuity, Diode
- Dual Independant Floating Isolated Channels (for Multimeter and Between Oscilloscope and Multimeter)
- Trigger Modes Free Run, Single Shot, Edge, Video
- USB Interfaces
- 6 Hour Capacity Li-ion Rechargeable Battery
- 3.8" Color LCD, Resolution: 320 × 240
- Light Weight at 690g

Two-In-One Function : Dual Channel Oscilloscope and True RMS DMM

GDS-122 is a multi-function measurement tool. By using the oscilloscope functionalities , you can measure simple waveforms, use advanced measurement functions, and configure system settings. The multimeter functionality includes three major items (Voltage, Current, and Impedance) and three additional items (Diode, Continuity, and Capacitance). The current measurement and capacitance measurement use extension modules to deal with large current and small capacitance, respectively. Delta measurement and automatic range switching features offer flexibility and convenience.

Dual Waveform Math

The waveform math function runs mathematical operations between CH1 and CH2 waveform, and then shows the result in the display. It offers 5 math function, CH1-CH2, CH2-CH1, CH1+CH2, CH1 x CH2, CH1/CH2.

Automatic Measurement

The automatic measurement function measures the input signal's characteristics and lists them in the top left corner of the display. The measurement items are Frequency, Period, Mean Voltage, Peak-to-Peak Voltage, Cycle Voltage (True RMS).

Autoset Function

The autoset function automatically configures the following parameters according to the input signal. It can offer CH1/CH2 on/off, Vertical scale/level, Horizontal scale/level, Trigger level.

Self Calibration

The self calibration function automatically configures internal parameters to maintain the sensitivity and accuracy. Run the self calibration in the following cases.
When the temperature changes more than 5 degrees Celsius during operations
When operating the GDS-122 in a new benchtop or field environment.

6 Hours Running Time Li-ion Battery & Very Light Weight

GDS-122 is equipped with a Li-ion battery, which is able to maintain its normal operation for about 6 hours. After pressing the power key, press any key (for example the MENU key) to enter the oscilloscope or multimeter mode. See the battery level icon at the top left corner of the display and connect the power cord if the level is < 25%. With only 690g light weight and compact size, GDS-122 well fits into outdoor applications.

Free PC Software

The GDS-122 PC software, included in the CD-ROM, allows you to view the waveforms in your familiar PC environment large display and mouse operation. Multiple cursors provide flexible waveform measurements. The PC Software is through from USB connection.

APPLICATIONS

- Automotive Testing
- Electric Cooling Fans Maintain & Development
- Industrial Troubleshooting
- Installation Maintain
- Circuit Repair & Debug

SPECIFICATIONS

VERTICAL	**Analog Digital Converter A/D**	With the resolution of 8 bits,make sampling on both channels synchronously
	Sensitivity Range V/div	5mV/div 5V/div at the input BNC
	Displacement Range	±50V(500mV 5V), ±1V(5mV 200mV)
	Analog Bandwidth	20MHz
	Single Bandwidth	Full bandwidth
	Low Frequency Response AD Coupling,-3dB	±5Hz at the BNC
	Rise Time Typical One at the BNC	17.5ns
	DC Gain Accuracy	±5%
	DC Measurement Accuracy Average Value Sampling Mode	The voltage difference (V) between any two points on the waveform after averaging the captured waveforms more than16: ±(5% reading + 0.05 divisions)
TRIGGER	**Trigger Sensitivity Edge Triggering**	DC coupling : CH1 and CH2: 1div (DC full bandwidth) AC coupling : Same as the DC coupling when it is equal to or larger than 50Hz
	Triggering Lever Range	±6 divisions from the screen center
	Triggering Level Accuracy (Typical)	±0.3 divisions
	Trigger Displacement	655 divisions for pre-triggering and 4 divisions for post- triggering
	Make a 50% Level Setting (Typical)	Operation with the input signal frequency equal to or larger than 50Hz
	Trigger Sensitivity	2 divisions of peak-to-peak value
	Signal System and Line/Field Frequency	Support the NTSC, PAL and SECAM broadcasting systems of any field or line frequency
HORIZONTAL	**Sampling Rate Range**	10S/s~100MS/s
	Waveform Interpolation	sin x / x
	Record Length	6K points on each channel
	Scanning Speed Range S/div	5ns/div 5s/div, stepping in the "1-2.5-5" mode.
	Sampling Rate and Relay Time Accuracy	±100ppm(any time interval which is equal to or larger than 1ms)
	Time Interval	Single: ±(1 sampling interval time+100ppm×reading+0.6ns)
	(T)Measurement Accuracy Full Bandwidth	>average 16 : ±(1 sampling interval time +100ppm×reading+0.4ns)
INPUT	**Input Coupling**	DC, AC
	Input Impedance	1MΩ±2% connected in parallel with 20pF±3pF
	Probe Attenuation Coefficient	1X, 10X, 100X, 1000X
	Max. Input Voltage	400V (peak)
	Channel Delay Time (Typical)	150ps
SAMPLING	**Sampling Modes**	Normal sampling Peak detection Average value
	Sampling Rate	100 MSa/s
MEASUREMENT	**Cursor Measurement**	Voltage difference (V) and time difference (T) between cursors
	Auto Measurement	Peak-to-peak value,average value,root mean square value,frequency and cycle
MULTIMETER SPECIFICATIONS	**Input Impedance**	10MΩ
	Voltage	VDC: 400mV, 4V, 400V ±(1% +1 digit)
	Max Input	DC 400V
	VAC	4V, 40V, 400V ±(1% +3 digit)
	Frequency	40Hz ~ 400Hz
	Max Input	AC 400V (Virtual value)
	Current	DCA : 40mA, 400mA ±(1.5% +1 digit); 20A: ±(3% +3 digit) DAA : 40mA ±(1.5% +3 digit), 400mA ±(2% +1 digit); 20A: ±(5% +3 digit)
	Impedance	400Ω ±(1%+3 digit), 4KΩ, 40KΩ, 400KΩ, 4MΩ ±(1%+1 digit), 40MΩ ±(1.5%+3 digit)
	Capacitance	51.2nF ~ 100uF ±(3%+3 digit)
	Diode	0V ~ 1.5V On/Off measurement < 50 (±30) beeping
GENERAL SPECIFICATIONS	**Display**	Display type : 3.8" color liquid crystal display Display resolution : 320 (horizontal) x 240 (vertical) pixels Display color : 4096 colors
	Power Adapter	Power supply : 100-240 VAC, 50/60Hz, CAT II ; Power consumption : < 6W
	Operating Temperature	Used battery : 0~50 °C (32~122 °F);Power adapter : 0~40 °C (32~104 °F)

Note : (*)USE "REL" Mode

Specifications subject to change without notice. DS-1220GD1DH

ORDERING INFORMATION

GDS-122 Handheld Digital Storage Oscilloscope & Multimeter

ACCESSORIES:
User Manual x 1, Probe x 2, Multimeter test lead x 2, AC-DC adaptor x 1,
Probe adjustment tool x 1, Soft Carrying case x 1, 1kHz square wave cable x 1,
Extension module for large current measurement x 1,
Extension module for small capacitance measurement x 1,
USB communication cable x 1, CD-ROM (PC software) x 1