# GDM-8255A/8251A

199999/120000 Counts Dual Display Digital Multimeter

## FEATURES

- VFD Two Colors Display
- 0.012% DCV Accuracy
- True RMS (AC, AC+DC)
- 9 Major Measuring Functions and 10 Advanced
- Measurement Functions
- 2W/4W Resistance Measurement
- High Voltage 1000V and 10A Current Range
- Standard Interface：RS-232C, USB Device, Digital I/O
- Free PC Software (DMM-VIEWER), LabVIEW Driver
- Optional 18 Channels Scanner Card
  (GDM-SC1  for GDM-8255A only)

CE · RS-232 · USB · Digital I/O · PC Software · LabVIEW Driver

1. Primary Display
2. Secondary Display
3. Input Terminal
4. SHIFT/EXIT Key
5. Power Switch
6. Measurement Funtion Keys
7. Operation Keys
8. Display ON/OFF Key
9. Scanner Card Slots
10. Digital I/O
11. USB Device
12. CAL Key Port
13. RS-232

## 199999/120000 COUNTS DUAL DISPLAY DIGITAL MULTIMETER

Is the resolution of your current mulitmeter inadequate to read the smallest signal? Need an easy to use multimeter with data-logging? Take a look at the GoodWill GDM-825xA series 5 1/2 digit dual-display digital multimeter. It features a DC voltage accuracy of 0.012% with an industry-leading response time. With robust hardware and software the GDM-825xA series will save time on debugging and analysis whilst saving you money.

The GDM-825xA series can measure up to 10A of current, 2/4 wire resistances, and features other advanced functions such as a simultaneous dual display measurements and a convenient remote control function for easy of use compared to other instruments in its market.

## FEATURES

- **GDM-8255A：199,999 Counts Display**
  **GDM-8251A：120,000 Counts Display**
- **VFD Two Colors Display**
- **0.012% DCV Accuracy**
- **True RMS (AC, AC+DC)**
- **9 Major Measuring Functions and 10 Advanced Measurement Functions**
- **2W/4W Resistance Measurement**
- **High Voltage 1000V and 10A Current Range**
- **Standard Interface : RS-232C, USB Device, Digital I/O**
- **Free PC Software (DMM-VIEWER), LabVIEW Driver**
- **Optional 18 Channels Scanner Card (GDM-SC1 for GDM-8255A only)**

### 199999 Counts Dual Display Digital Multimeter



**GDM-8255A**

### 120000 Counts Dual Display Digital Multimeter



**GDM-8251A**

| A. | **RICH MEASURING FUNCTIONS WITH ENHANCED FEATURES** |
|----|---|

| Advanced Measurement | Basic Measurement | | | | | |
|---|---|---|---|---|---|---|
| | AC/DCV | AC/DCI | 2/4W | Hz/P | ˚C/˚F | ⊣⊢/•)) |
| dB | ✓ | — | — | — | — | — |
| dBm | ✓ | — | — | — | — | — |
| Max/Min | ✓ | ✓ | ✓ | ✓ | ✓ | — |
| Relative | ✓ | ✓ | ✓ | ✓ | ✓ | — |
| Hold | ✓ | ✓ | ✓ | ✓ | ✓ | — |
| Compare | ✓ | ✓ | ✓ | ✓ | ✓ | — |
| Math | ✓ | ✓ | ✓ | ✓ | ✓ | — |
| Dual Measurement | ✓ | ✓ | ✓ | ✓ | — | — |

Nine major measuring functions such as DCV/ACV, DCI/ACI, 2w/4w Resistance, Diode, Frequency, Continuity test and Temperature are provided on the GDM-8255A / 8251A. The 0.012% DC voltage accuracy provides great precision for the DC voltage applications. In addition to the major measuring functions there are several advanced measuring functions such as Max, Min, dB, dBm, REL/REL#, Hold, Compare and Math functions ( MX+B, %, 1/X) to enhance the effectiveness of measuring results.

| B. | **FAST MEASUREMENT SPEED & TRANSFER RATE** |
|----|---|

| Mode | Resolution | Measurement Speed | Transfer Speed |
|---|---|---|---|
| Fast | 3½ digits | 60 readings/second | Typical 17mS |
| Medium | 4½ digits | 30 readings/second | Typical 34mS |
| Slow | 5½ digits | 10 readings/second | Typical 100mS |

The GDM-8255A / 8251A offer selectable measurement speed rates under different modes. The speed rates allow you to maximize measurement efficiency while maintaining sufficient accuracy. In fast mode, the instrument delivers 60 readings/sec (see table below), adequately meeting today's speed demands. The display can be turned off by pressing the OUTPUT ON/OFF button at anytime. When using remote control, the display can be turned off to increase the measurement speed by reducing the operating load.

| C. | **DIVERSE MEASURING COMBINATIONS WITH VFD DUAL COLOR DISPLAY** |
|----|---|



Offering a variety of dual display combinations, the GDM-8255A/8251A allows a main measurement function and an auxiliary measurement function to be displayed at the same time. The dual measuring function will save measurement time when dealing with applications requiring multiple simultaneous parameters. The high quality dual color VFD (Vacuum Fluorescent Display) is strongly illuminated with a clear contrast for both red and green.

| D. | **MULTIPLE STANDARD INTERFACES** |
|----|---|



The GDM-8255A/8251A provide multiple interfaces for PC connection as standard: RS232C and USB. With RS232 and USB as standard, remote control and data transfer is faster and smoother. Without the need for expensive propriety communication interfaces, costs are significantly reduced for PC control and monitoring. In addition, the digital I/O terminal outputs comparison measurement results to control external devices for ATE applications and the VCC output can be used as a power source for TTL or CMOS circuits.

| E. | **CONVENIENT PC SOFTWARE** |
|----|---|



For convenient remote control and long data captures, the GDM-8255A/8251A is accompanied with free software, DMM-Viewer. This software allows users to remotely control the GDM-8255A/8251A without the need to issue commands or develop new program interfaces. DMM-Viewer's software interface resembles the GDM-8255A/8251A front panel, shortening training. For data capturing through a PC, the software allows you to observe measurement results before saving to a file for further study. Additionally saved files can be loaded and viewed as a graph. With DMM-Viewer, operating the GDM-8255A / 8251A multimeter can be much more effective.
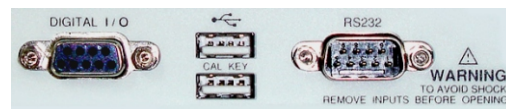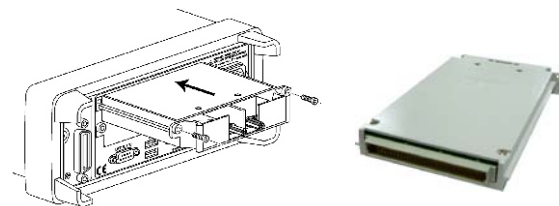
| F. | **EFFECTIVE MULTIPLE MEASUREMENT SCANNER CARD** |
|----|---|



The optional scanner card (GDM-SC1), creates a self-contained multipoint measurement solution with plug-in design. This approach eliminates the complexities of multipoint measurements and data processing. The scanner lets users effectively measure multiple channels connected to a single GDM-8255A. Each scanner card has 16 general purpose channels and 2 extra channels for current (ACI, DCI) measurements. All channels are fully isolated (Hi and Lo). Up to two scanner cards can be inserted into each multimeter for a maximum of 36 channels. These optional modules not only provide customers with a complete hands-free multiple measurement solution, but also provide a cost effect upgrade path compared to purchasing dedicated instruments. (OPTIONAL FOR GDM-8255A ONLY)

## SPECIFICATIONS

| | | GDM-8255A | GDM-8251A |
|---|---|---|---|
| FULL SCALE | | 199999 Counts | 120000 Counts |
| SAMPLE RATE | | Slow : 5 1/2 digits, 10 readings/second<br>Medium : 4 1/2 digits, 30 readings/second<br>Fast : 3 1/2 digits, 60 readings/second | |
| DC VOLTAGE | Range<br>Accuracy<br>Input Impedance | 100mV, 1V, 10V, 100V, 1000V  5 ranges<br>± (0.012% rdg + 5 digits)<br>10MΩ | |
| AC VOLTAGE True RMS | Range<br>Accuracy<br><br><br><br>Input Impedance | 100mV, 1V, 10V, 100V, 750V  5 ranges<br>20Hz~45Hz : ±(1% rdg + 100 digits)<br>45Hz ~ 10kHz : ± (0.2% rdg + 100 digits)<br>10kHz ~ 30kHz : ± (1% rdg + 100 digits)<br>30kHz~100kHz : ±(3% rdg + 200 digits)<br>1.1MΩ in parallel with approx. 100pF | |
| DC CURRENT | Range<br>Accuracy | 10mA , 100mA, 1A, 10A  4 ranges<br>10mA , 100mA : ±(0.05% rdg + 15 digits)<br>1A, 10A range : ±(0.2% rdg + 5 digits) | |
| AC CURRENT TRUE RMS | Range<br>Accuracy | 10mA, 100mA, 1A, 10A  4 ranges<br>10mA , 100mA range :<br>20Hz ~ 50Hz : ±(1.5% rdg + 100 digits)<br>50Hz ~ 10kHz : ±(0.5% rdg + 100 digits)<br>10kHz~20kHz : ±(2% rdg + 200 digits)<br>1A , 10A range : 50Hz ~ 10kHz : ±(1% rdg + 100 digits) | |
| RESISTANCE | Range<br>2W Accuracy<br><br><br><br><br>4W Accuracy | 100Ω, 1kΩ, 10kΩ, 100kΩ, 1MΩ, 10MΩ, 100MΩ  7 ranges<br>100Ω range : ±(0.1% rdg + 8digits)(*)<br>1kΩ range : ±(0.08% rdg + 5 digits)(*)<br>10kΩ ~ 1MΩ 3 ranges : ±(0.06% rdg + 5digits)<br>10MΩ range : ±(0.3% rdg + 5 digits)<br>100MΩ range : ±(3% rdg + 8 digits)<br>100Ω range : ±(0.05% rdg + 8 digits)(*)<br>1kΩ ~ 1MΩ 4 ranges : ±(0.05% rdg + 5 digits)<br>10MΩ range : ±(0.3% rdg + 5 digits)<br>100MΩ range : ±(3% rdg + 8 digits) | |
| FREQUENCY | | 10Hz ~ 800kHz : 0.1V ; Accuracy : ±(0.05% rdg + 15 digits)<br>100kHz ~ 600kHz : 1V ; Accuracy : ±(0.05% rdg + 3 digits)<br>600kHz ~ 800kHz : 2.5V ; Accuracy : ±(0.05% rdg + 3 digits) | |
| DIODE TEST | | Open Circuit Voltage 2.0V, Test Current 0.5mA; Accuracy : ±(0.025% rdg + 5 digits) | |
| CONTINUITY BEEPER | | 1 ~ 1000Ω Define by user; Accuracy : ±(0.08% rdg + 5 digits) | |
| TEMPERATURE | | 0°C ~ 300°C : J , K , T Type | |
| OTHER FUNCTIONS | | Auto range / Manual, Math : MX + B/ % / 1/X Max, Min, dBm, dB, REL, Hold, Compare, Store, Recall | |
| DISPLAY | | VFD, Two colors display | |
| INTERFACE | | Digital  I/O, USB, RS-232C | |
| POWER SOURCE | | AC 100V~240V ± 10%, 50/60Hz | |
| DIMENSIONS & WEIGHT | | 265(W) x 107(H) x 350(D) mm, Approx. 2.6 kg | |

NOTE : (*)USE "REL" Mode

Specifications subject to change without notice.  DM-8255A51AGD1BH

### ORDERING INFORMATION

**GDM-8255A**  199999 Counts Dual Display Digital Multimeter
**GDM-8251A**  120000 Counts Dual Display Digital Multimeter

ACCESSORIES :
Quick start user manual x 1, Power cord x 1, Test lead GTL-117 x 1, USB Cable GTL-247 x 1
CD x 1 (including complete user manual, upgrade program and PC software DMM Viewer),
Calibration key GDM-01 x 1 (Compatible with Fluke 5720A/5725A calibrators only)

#### Optional Accessories

**GTL-108A**  4W Type test lead
**GTL-232**  RS232C Cable, 9-pin female to 9-pin, null modem for computer

#### Option

Opt.01  Scanner Card GDM-SC1 (GDM-8255A only)

### GDM-SC1 SCANNER CARD

**Specifications**

| Maximum Voltage | 250V |
|---|---|
| Maximum Current | 2A |

**Connection**

| Item | No. of Wire | No. of Channels |
|---|---|---|
| DCV, ACV | 2 wires ( H, L) | 16 ( CH 1 ~ 16 ) |
| DCI, ACI | 2 wires ( H, L) | 2 ( CH 17 , 18 ) |
| 2W Resistance | 2 wires ( H, L) | 16 ( CH 1 ~ 16 ) |
| 4W Resistance | 4 wires(Input H,L+Sense H,L) | 8 pairs(CH1input & 9sense,2&10,...8&16) |
| Diode/Continuity | 2 wires ( H, L) | 16 ( CH 1 ~ 16 ) |
| Period/Frequency | 2 wires ( H, L) | 16 ( CH 1 ~ 16 ) |
| Temperature | 2 wires ( H, L) | 16 ( CH 1 ~ 16 ) |