SG SERIES
QUICK START GUIDE

SGA-60
Vector Signal Generator
Up to 6 GHz

V1.0
21/04/2026

HAROGIC

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1. Version Update Description

Version Update Description Table

Version	Content	Date
V1.0	1. Initial version	21/04/2026

2. System Requirements

SGA-60 is a USB-based vector signal generator that requires host computer software for operation. The recommended host system environment is detailed in the table below.

The table only specifies the recommended configuration. For systems operating below the recommended specifications, actual performance should be verified through testing.

Table 1 System Requirements

Operating System	Windows 11/10/8/7 (requires VS2019 C++ redistributable)
Architecture	Windows: x64
Processor	Intel i3 or above
Memory	8 GB; for generating digital modulation waveforms with PN > 15, 16 GB is recommended for better performance and processing capability
Storage	Sustained disk read/write speed > 250 MBytes/s (For streaming mode at 50 MHz bandwidth)
Data Port	USB 2.0 or USB 3.0 (USB 3.0 recommended); streaming mode is limited by interface bandwidth
Display Resolution	At least 1280 × 800 pixels
Others	Some antivirus software may interfere with normal system operation

3. Quick Start Guide

This chapter provides a quick start guide for the SG

A series, including safety instructions, instrument operation, software operation, and external interface descriptions.

3.1 Safety Instructions

1. Adapter Selection: The original manufacturer-provided power adapter is recommended. Alternatively, choose an adapter with matching specifications as detailed in the product manual;
2. DC Power Requirements: Voltage 9 V ~ 12 V, current ≥ 3 A, ripple < 200 mVpp.

⚠ Failure to comply may result in instrument damage. Always strictly adhere to the product manual.

3.2 Using the SGA series Instruments

3.2.1 Installing Drivers (Windows)

The following procedure describes how to install the Win10_x64 driver. Note: the Win10 driver is compatible with Windows 11.

1. Verify the OS version and architecture in your computer's system information;
2. Navigate to the folder Windows\driver\Win10_x64 on the included USB drive;
3. Right-click the Install_Driver.bat file and select "Run as administrator" to install the driver;

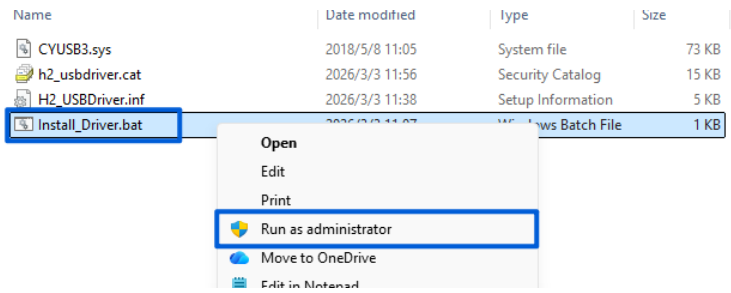

Figure 1 Install the driver

4. Verify that the terminal displays the message "USB Driver Installation Succeeded" to confirm successful installation.

3.2.2 Connecting the Instrument

1. Connect the instrument's power port to the power adapter using the Type-C cable, and plug the adapter into a power outlet;
2. Connect the instrument's data port to the computer or embedded device using the Type-C cable. USB 3.0 is recommended for optimal performance.

3.3 Running the Software

Assuming the instrument is properly connected and the driver is installed:

1. Copy the software folder from the USB drive's Windows directory to the desktop or another location on your computer;
2. Open the \bin folder within the software directory and double-click the executable to run the program. (Ensure that the corresponding device calibration and license files are present in the \bin\CalFile folder.) The signal generator interface will appear as shown below.

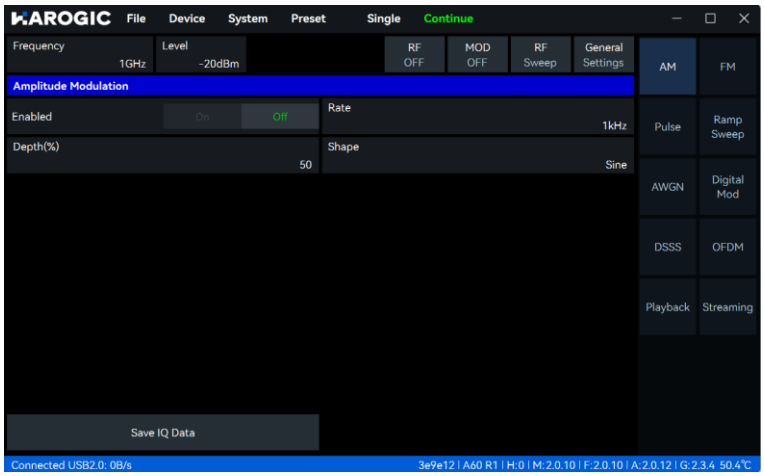

Figure 2 Normal software operating interface

As shown above, the status bar at the bottom of the interface displays the following information from left to right: USB real-time transfer speed (USB: 0B/S), device UID (169eXXXX3435), device model, hardware version, MCU version, FPGA version, API version, GUI version, and instrument operating temperature.

3.4 External Interface Description

Figure 3 SGA-60 Interface Description

Table 2 SGA-60 Interface Description

No.	Interface Name	Description
1	**RF Signal Output**	N (F), output impedance 50 Ω
2	**GNSS Antenna Input**	SMA (F)
3	**Arbitrary Waveform Generator Output**	SMA (F)
4	**Power Port**	Instrument charging port, Type-C 12 V 3A
5	**Data Port**	Type-C, USB 3.0 recommended (USB 2.0 supported but bandwidth limited)
6	**Device Status Indicator**	At any given moment, only one color indicator light is lit. Green: Normal status. Red: Abnormal status. Yellow: Remote update failed
7	**Reference Clock Input**	MMCX (F), supports 10 MHz reference clock
8	**Reference Clock Output**	MMCX (F), outputs 100 MHz clock signal
9	**Reserved Interface**	/
10	**Multi-function AUXIO**	See detailed description in the table below

Table 3 Multi-function AUXIO Pin Description for Port 10 (orientation shown from right to left)

Pin	Name	Direction	Voltage Standard	Description
1	TRG in	I	3.3 V	External trigger input
2	TRG out	O	3.3 V	Trigger output
3	TRG IO3	/	/	/
4	NC	/	/	/
5	NC	/	/	/
6	3V3D	O	/	Power output, 3.3 V
7	UART_TX	/	/	/
8	GND	/	/	Ground
9	UART_RX	/	/	/
10	NC	/	/	/
11	NC	/	/	/
12	NC	/	/	/
13	GND	/	/	Ground
14	NC	/	/	/

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