

Specification



LED / LCD

Signal Generator & Analyzer

- Built-in 200+ Resolution
- Fullcolor Touch LCD
- Built-in 50+ Test Pattern
- HDCP · SCDC · HDR

AMS - SG2

Safety

This Chapter Illustrates Safety Of The Signal Generator & Analyzer AMS-SG2 To Ensure The Product's Storage, Transport, Installation And Use Safety. Safety Instructions Are Applicable To All Personnel Who Contact Or Use The Product. First Of All, Pay Attention To Following Points.

- Read through the instructions.
- Retain all instructions.
- Comply with all instructions

■ Storage And Transport Safety

- Pay attention to dust and water prevention.
- Avoid long-term direct sunlight.
- Do not place the product at a position near fire and heat.
- Do not place the product in an area containing explosive materials and strong electromagnetic environment.
- Place the product at a stable position to prevent damage or personal injury caused by dropping.
- Save the packing box and materials which will come in handy if you ever have to store and ship the product. For maximum protection during storage and shipping, repack the product as it was originally packed at the factory.

■ Installation And Use Safety

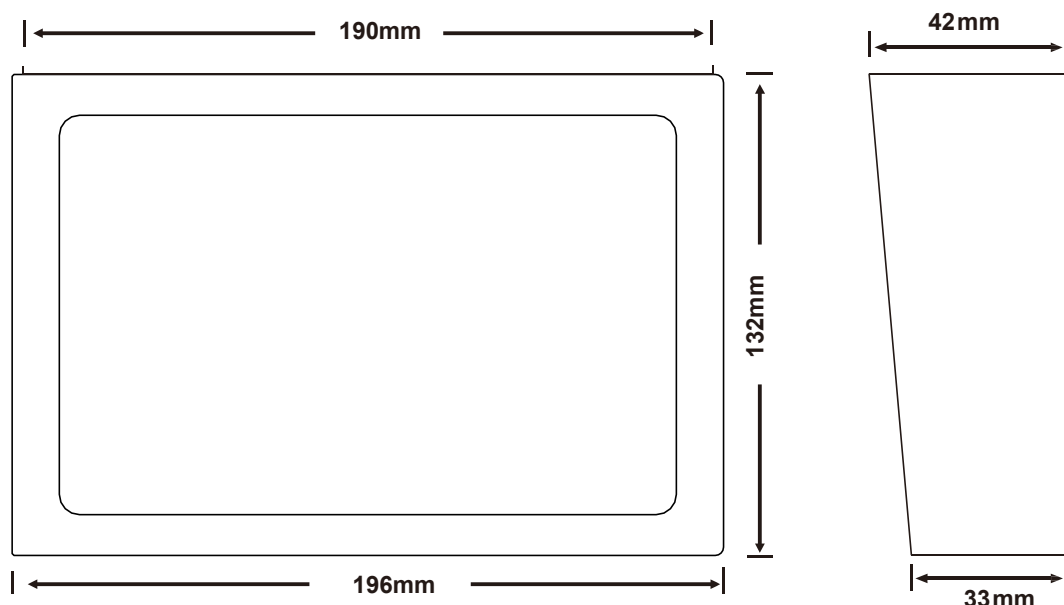
- Only trained professionals may install the product.
- Plugging and unplugging operations are prohibited when the power is on.
- Ensure safe grounding of the product.
- Always wear a wrist band and insulating gloves.
- Do not place the product in an area having frequent or strong shake.
- Perform dust removing regularly.
- Contact Amoonsky for maintenance at any time, rather than have the product disassembled and maintained by non-professionals without authorization.
- Replace faulty parts only with the spare parts supplied by Amoonsky.

■ Overview

AMS-SG2 Is A Signal Generator & Analyzer That Supports 4K@60Hz Ultra HD Input And Output; Can Switch The Operation Modes Via The System Menu On Full-Color Touch LCD Screen, Output Mode As A Signal Generator, Input Mode As A Signal Analyzer, And Loop Mode As A Tester; Simple Operation, Stable Performance, Widely Used In The Audio&Video Products Development, Testing, Debugging, Control And Other Application.

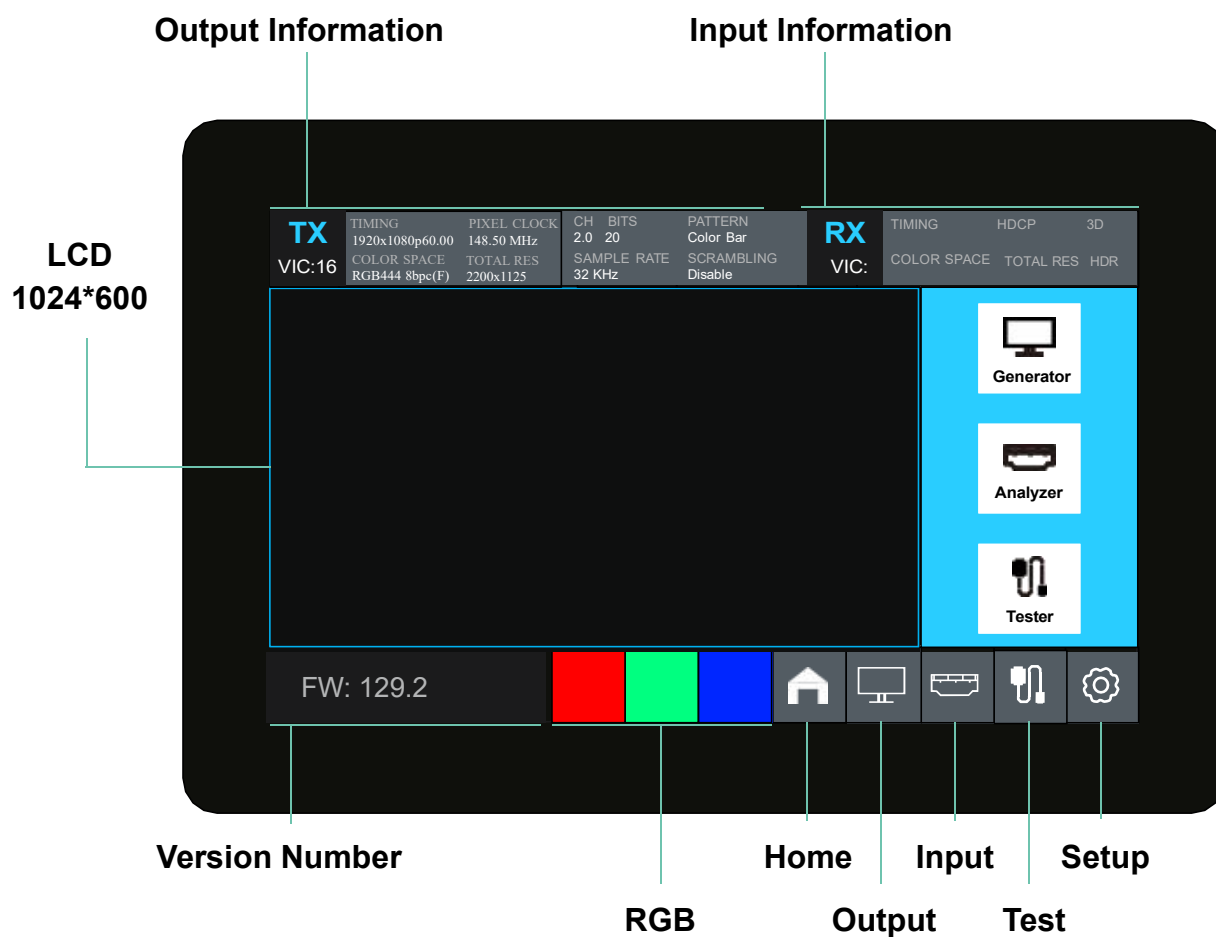
- **Built-in 200+ Resolution** -- The Maximum Resolution Support 4096x2160 @60Hz, Support Custom Output Resolution, The Port Maximum Bandwidth Transmission Of 18Gbps, Support HDCP, SCDC, HDR .etc;
- **Built-in 50+ Test Pattern** -- Built-in Universal Test Bitmap Pattern And Support Users To Import Custom Bitmap Pattern;
- **Testing & Analysis Function**
 - Built-in 8-Channel LPCM Sine Wave Generator, Support Bit-width And Sampling Rate To Adjustable;
 - Built-in EDID Read Or Write And Analysis, Support EDID Data USB Import And Export Via User;
 - Support SCDC Read And Write, And Infoframe Display Analysis;
- **Wide Color Gamut** -- Support Output Various Timing Sequences Within The EIA-CEA-861-F Standard Range, And Can Set Ycbcr 4:4:4, 4:2:2, 4:2:0 Chromaticity Sampling Formats;
- **Flexible Operating System** -- Equipped With A 7 Inch Fullcolor Touch LCD Screen Display, Can Freely Choose The Operation;

■ Size

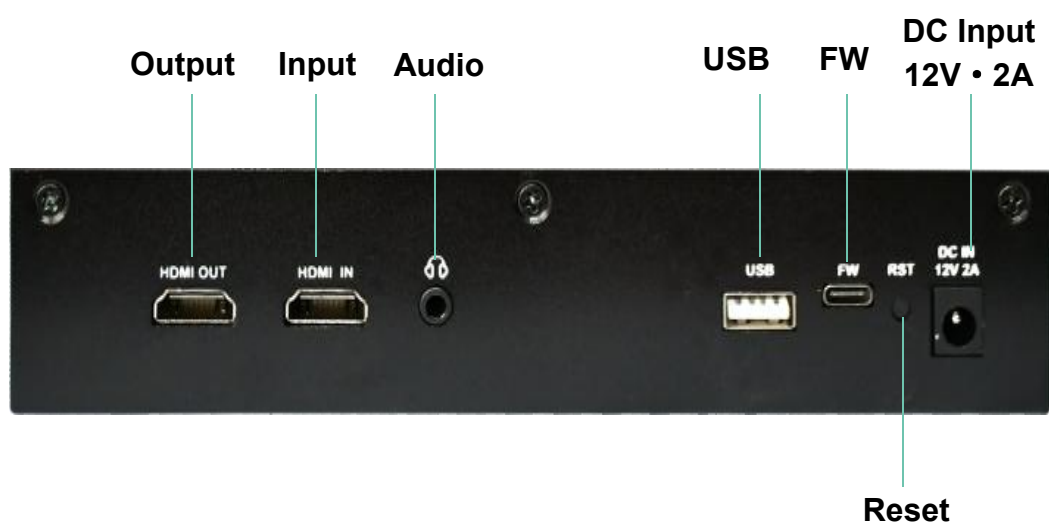


■ Panel Introduction

➤ Home



➤ Interface



■ Output Mode -- Signal Generator

- When The Device Operating In Signal Generator Mode,It Can Output Variety Of Timing Sequence Within The Range Of EIA-CEA-861-F Standard. Color Space, Color Depth, And Quantization Range Can Be Set Independently. Built-in 8 Channel Sine Wave Audio Generator, Supports Adjustable Sampling Rates From 32K Hz To 192K Hz And Bit Depths Of 16-20-24. Each Channel Can Be Set Independently For Volume Level And Frequency.

➤ Format

TX					RX				
TIMING		PIXEL CLOCK	CH	BITS	PATTERN	TIMING		HDCP	3D
1920x1080p60.00		148.50 MHz	2.0	20	Color Bar	VIC:		COLOR SPACE	TOTAL RES
COLOR SPACE RGB444 8bpc(F)		TOTAL RES 2200x1125	SAMPLE 32 KHz	RATE	SCRAMBLING Disable				HDR
Format	CEA	Resolution			Timings			Setting	
Pattern	VESA	480i 576i 1080i			VIC 1920 x 1080 p 16 FR 60.00 A 16 : 9			Color Space YCbCR4:4:4	
Audio	USER	480p 576p 720p			VIC 1920 x 1080 p 16 FR 59.94 A 16 : 9			Range Limit	
EDID	AUTO	1080p 2160p			VIC 1920 x 1080 p 76 FR 60.00 A 64 : 27			Bit Depth 8 Bit	
HDCP/SCDC		Frame Rate			VIC 1920 x 1080 p 76 FR 59.94 A 64 : 27			Page Up	
		25 30 100/200			VIC 2560 x 1080 p 90 FR 60.00 A 64 : 27			Page Down	
		50 60 120/240							
FW: 129.2									

➤ Pattern

TX					RX				
TIMING		PIXEL CLOCK	CH	BITS	PATTERN	TIMING		HDCP	3D
1920x1080p60.00		148.50 MHz	2.0	20	Color Bar	VIC:		COLOR SPACE	TOTAL RES
COLOR SPACE RGB444 8bpc(F)		TOTAL RES 2200x1125	SAMPLE 32 KHz	RATE	SCRAMBLING Disable				HDR
Format					P1/4				
Pattern									
Audio									
EDID									
HDCP/SCDC					Page Up				
				Page Down					
版本: 129.2									

➤ Audio

TX				RX														
TIMING		PIXEL CLOCK		CH		BITS		PATTERN		TIMING		HDCP		3D				
VIC:16		1920x1080p60.00		148.50 MHz		2.0		Color Bar		VIC:		COLOR SPACE		TOTAL RES		HDR		
COLOR SPACE		TOTAL RES		SAMPLE RATE		SCRAMBLING		Disable										
RGB444 8bpc(F)		2200x1125		32 KHz														
Format	2.0	SAMPLE RATE(KHz)		LINK CHANNELS														
		32	44.1	FL: -20 FC: -20 FR: -20														
Pattern	2.1	48	88.2	LFE: -20														
Audio	5.1	96	176.4	RL: -20 RLC: -20 RRC: -20 RR: -20														
EDID	6.1	192	LEVE (- 90 to 0)															
HDCP/SCDC	7.1	SAMPLE BITS		- -20 db FS +														
		16	20	FREQUENCY(6 to 20 K)														
		24			- 1000 Hz +													
				Reset														
				Apply														

FW: 129.2

■ Input Mode -- Signal Analyzer

- When The Device Is Operating In Signal Analyzer Mode, It Can Analyze Input Signal Timing, HDCP And SCDC HDMI Infoframe Data. Built-in 60 (+) Preset EDID, Capable Of Simulating Various Display Devices.

➤ In Format

TX				RX													
TIMING		PIXEL CLOCK		CH		BITS		PATTERN		TIMING		HDCP		3D			
VIC:16		1920x1080p60.00		148.50 MHz		2.0		Color Bar		VIC:		COLOR SPACE		TOTAL RES		HDR	
COLOR SPACE		TOTAL RES		SAMPLE RATE		SCRAMBLING		Disable									
RGB444 8bpc(F)		2200x1125		32 KHz													
In Format																	
Packet																	
EDID																	
Audio																	
SCDC																	

FW: 129.2

➤ Packet

TX		TIMING		PIXEL CLOCK	CH	BITS	PATTERN	RX		TIMING		HDCP	3D
VIC:16		1920x1080p60.00		148.50 MHz	2.0	20	Color Bar	VIC:		COLOR SPACE		TOTAL RES	HDR
		COLOR SPACE		TOTAL RES	SAMPLE	RATE	SCRAMBLING						
		RGB444 8bpc(F)		2200x1125	32 KHz		Disable						
In Format	AVI- IF	Check Sum OK						Update					
Packet	GCP	Scan Info No Data											
EDID	VS- IF	Bar Info Bar Data not valid											
Audio	HDR-	Active Format Preset No Active Format Information valid											
SCDC	AUD-	RGB Or YUV RGB											
		Active Format Aspect 16:9 (14:9 V Just)						P 1 / 1 Page Up Page Down					
		Picture Aspect No Data											
		Colorimetry No Data											
		Non-uni formm Scaling Unknown											
		RGB Quantization Range Default											
		Extended Colorimetry xvYCC601											
		IT Content No Data											
		Video Code [16] 1920x1080p60Hz 16:9											
		Repetition No Repetition											
		IT Content Type Graphics											
		YCC Quantization Range Limited Range											
		RAW DATA											
		82 02 0D											
		57 00 08 00 10 00 00						00 00 00 00 00 00 00					
		00 00 00 00 00 00 00						00 00 00 00 00 00 00					

FW: 129.2

■ Loop Mode -- Tester

- When The Device Is Operating In Tester Mode, It Supports Cable Testing, Extender Testing, VIC Testing, etc. The Cable Testing Mode Tests The Quality Of The Cable By Comparing The Differences Of Sending And Receiving Pixel Data. The Extender Test Mode Tests The Ability Of The Extender By Comparing The Differences In EDID, Timing, Color Space, And Packet Data. VIC Test Mode Tests The Standardization Of InputTiming Sequence Comparing Whether Complies With VIC Standards.

➤ Cable Test

TX		TIMING		PIXEL CLOCK	CH	BITS	PATTERN	RX		TIMING		HDCP	3D
VIC:16		1920x1080p60.00		148.50 MHz	2.0	20	Color Bar	VIC:		COLOR SPACE		TOTAL RES	HDR
		COLOR SPACE		TOTAL RES	SAMPLE	RATE	SCRAMBLING						
		RGB444 8bpc(F)		2200x1125	32 KHz		Disable						
Cable Test		Status						Result: Passed		Start Test			
Extender Test													
VIC Test		1. Connect Both Ends Of The HDMI Cable To The Input And Output Ports Of The Device. 2. Verify The Output Format, Set It To 1080P60, 3840x2160P30 Or 3840x2160P60. 3. Verify The Output Colorspace, Set It To YUV444, Set Color Depth To 8 Bit. 4. The Test Duration Is Approximately 60 Seconds. 5. Click "Start Test" And Patiently Await The Result. 6. The Test Will Examine The HDMI Bitstream Pixel By Pixel.											
		P 1 / 1 Page Up Page Down											

FW: 129.2

■ Specification

Port Specifications		
HDMI Port Input • Output	Interface Type: HDMI-A Socket, Quantity: 1* Input & 1* Output; Signal Standard: HDMI2.0 Backward compatible; Resolution: VESA Standard, ≤3840×2160p@60Hz;	
USB Port	USB-A, Can Import Or Export Data Through USB Disk;	
Audio Port	3.5mm, Left&Right Channels, Listening To Input&Output Audio;	
FW Port	Interface Type: Type-C, Debugging Interface;	
Power Port	DC Female Connector, DC12V 2A	
RST	Reset Button, Hold Down 3 Seconds To Reset The Device;	
General Specifications		
Power Supply	Adapter Power Supply, Input: 100~240V AC, 50~60Hz; Output:12V_2A;	
Temperature	Storage : T: -40℃ ~ +80 ℃ 、 H: 10% ~ 90%, Non-condensing; Working: T: 0 ℃ ~ +60 ℃ 、 H: 10% ~ 90%, Non-condensing;	
Machine Size	196mm (Length) x 132mm (Width) x 42mm (Height)	
Packing Size	255mm (Length) x 190mm (Width) x 135mm (Height)	
Product Weight	Gross Weight : 1.0Kg ;	
Package Weight	Volume Weight: 1.5Kg ;	
Warranty	1 Year; Note: All Rated Voltages Are On Average ±10%;	
Packing List		
Standard	Adapter Power * 1, Certificate * 1; Warranty Card * 1;	
Model AMS-SG2	Description Standard Model	P/N PN202511003