

# VG-876 / VG-879

DIGITAL VIDEO GENERATOR

## Options

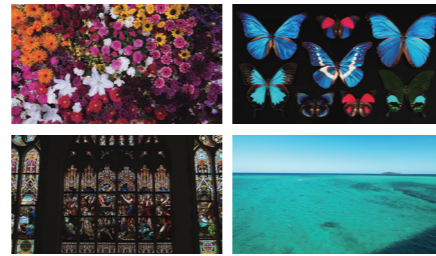
### 8K and 4K HDR Picture Library **VT-7009** New

- 10 and 12-bit versions of 8K (7680 x 4320) and 4K (3840 x 2160) images.
- Each image supports HDR-SMPTE ST 2084 (1000 nits, 4000 nits) and HLG formats, as well as SDR.
- Supports ITU-R BT.2020 (Rec.2020) color space.
- 14 various image of natural scenes and scale patterns.
- Includes a reference manual that indicates proper evaluation of luminance, color, gradation and solidity.



### Ultra-high definition/ wide-color-gamut standard test images **VT-7007**

- 8K (7680 x 4320) and 4K (3840 x 2160) with ITU-R BT.2020 compliant (12-bit)
- 2K (1920 x 1080) with ITU-R BT.709 compliant (10-bit)
- 10 images available.



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 ■ Source: Institute of Image Information & TV Engineers  
 ■ It is necessary to obtain permission from ITE before using VT-7007 in exhibitions, etc.  
<http://www.ite.or.jp/content/mta>

### HDMI High-Bit-Rate Audio **VT-8500-0006** HDMI COMPLIANCE TEST

- Audio Standard**
- DTS-HD Master Audio
  - DTS Express (DTS-HD LBR)
  - DTS-HD High Resolution Audio
  - DTS Digital Surround
  - Dolby Digital Plus
  - Dolby TrueHD
  - DSD (One Bit Audio)

Note) AAC/AC3 (Dolby Digital) is supported as standard audio.

### SP-8871 Image Conversion Tool

- Convert BMP, JPEG and TIFF files to VGD format (VG readable format). This software is necessary, in order to output 10 and 12-bit image programs.
- Save sequential image files to one image file for short video play back functions. (one second with 4K/60p, 4 seconds with 1080/60p)



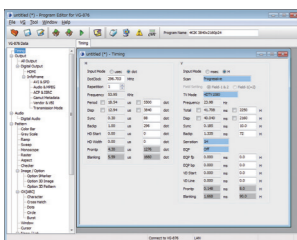
### HDMI 2.0b Test tool

By using PC software (SP-8870), HDMI 2.0b CTS sink test is available.



## Included

### Application Software (SP-8870)



This is a standard accessory for timing and pattern editing and program execution. It gives the user the ability to make their own 3D data using BMP pictures.

## General Specifications

<b>Power Requirements</b>	AC100-240V (50/60Hz)
<b>Power Consumption</b>	VG-876: 200W MAX VG-879: 260W MAX
<b>Operating Temperature Range</b>	5 to 40°C
<b>Operating Humidity Range</b>	20 to 80%RH (No Condensation)
<b>Dimensions</b>	430(W)×177(H)×310(D)mm (Excluding Protrusions)
<b>Weights</b>	VG-876: Approx. 7kg (full interface) VG-879: Approx. 9.3kg (full interface)

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 ■ V-by-One\*HS Logo are trademarks of THine Electronics. ■ Dimensions, specifications etc. in this catalog may change without notice for improvement.

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VG876/879-IB4210E-1000-1

**HDMI**<sup>®</sup>  
HIGH-DEFINITION MULTIMEDIA INTERFACE

**V-by-One**  
HS

**ASTRO**

# DIGITAL VIDEO GENERATOR

VG-876 / VG-879

HDMI 2.0b COMPLIANCE TEST

**HDR**

**8K**

**4K**

**Full HD**

**VG-876**

**VG-879**

- Select from HDMI 2.0b, V-by-One<sup>®</sup> HS, 12G-SDI, DisplayPort 1.2a, and Analog.
- Supports 8K/120p, 4K/120p and 1080/240p.
- Maximum 4 slot-type interface units can be installed.
- HDMI 2.0b test features of 6G, HDR, YC<sub>B</sub>C<sub>R</sub> 4:2:0, HDCP 2.2 and 3D.

Simple operation by selecting pre-installed timings and patterns.  
7-inch display allows viewing of the menu and other program information. (VG-879)  
The user can customize and save original timings and patterns.

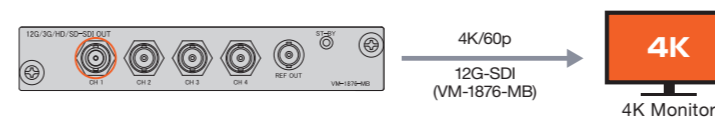


## Interfaces

### SDI Unit

#### 12G-SDI Unit (VM-1876-MB) To be installed in VG-879 only

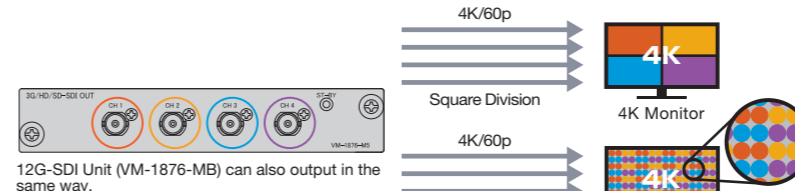
4K/60p is transmitted by one channel of 12G-SDI, two channels of 6G-SDI or four channels of 3G-SDI. The Payload is editable.  
Eight channels of audio and time code packet can be embedded.



Video Out	Interface	BNC×4ch
	Video Format	12G-SDI SMPTE 2082-0 6G-SDI SMPTE 2081-0 3G-SDI SMPTE 425M, 296M, 372M, 428.1M HD-SDI SMPTE 274M, 296M, 372M, 428.1M SD-SDI SMPTE 259M
Audio Out	Color depth	10, 12-bit (depends on timing format)
	Payload	48kHz sampling (Max. 8ch embedded)
Time Code		SMPTE 352M
		Free-run time code

#### SDI Unit (VM-1876-M5) To be installed in VG-876 only

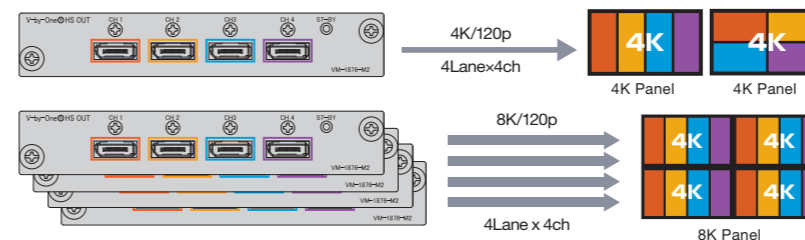
3G-SDI, HD-SDI and SD-SDI supported. 4K is transmitted by Square Division or 2-sample interleave division.



Video Out	Interface	BNC×4ch
	Video Format	3G-SDI SMPTE 425M, 296M, 372M, 428.1M HD-SDI SMPTE 274M, 296M, 372M, 428.1M SD-SDI SMPTE 259M
Audio Out	Color depth	10, 12-bit (depends on timing format)
	Payload	48kHz sampling (Max. 8ch embedded)
Time Code		SMPTE 352M
		Free-run time code

### V-by-One® HS Unit (VM-1876-M2)

4K/120p and 8K/30p are transmitted by one unit. 8K/120p (4 pcs of 4K/120p) is transmitted by 4 slot units in one VG-876/879.  
This unit requires custom cables, please contact your local agent for details.

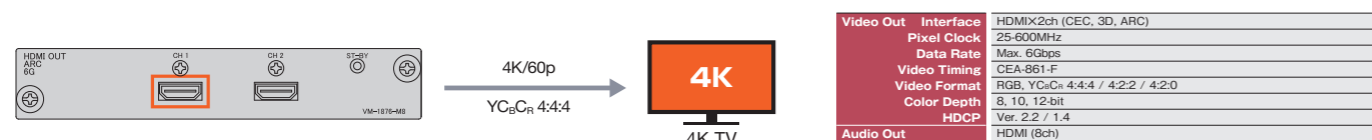


Video Out	Interface	4ch (DisplayPort connector)
	Dot Clock	80-340MHz (4 lanes) 160-680MHz (8 lanes) 320-1360MHz (16 lanes)
12-bit	Video Format	80-300MHz (4 lanes) 160-600MHz (8 lanes) 320-1200MHz (16 lanes)
	Color Depth	RGB, YCbCr 4:4:4

## Interfaces

### HDMI 6G Unit (VM-1876-M8) **HDCP 2.2** / **HDR**

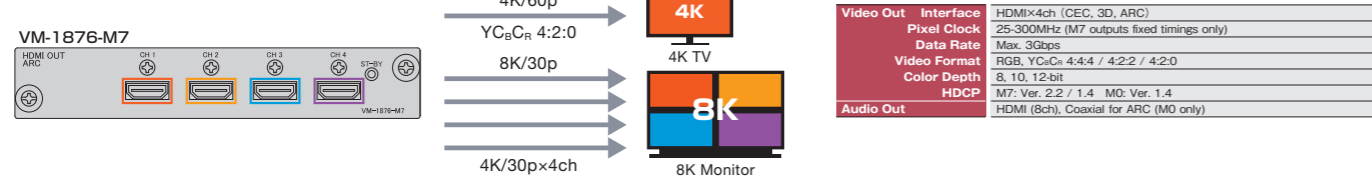
HDMI 2.0b based modules. 4K/60p YCbCr 4:4:4 output is available. HDCP 2.2 and 1.4 are selectable.



Video Out	Interface	HDMI×2ch (CEC, 3D, ARC)
	Pixel Clock	25-600MHz
Data Rate		Max. 6Gbps
	Video Timing	CEA-861-F
Video Format		RGB, YCbCr 4:4:4 / 4:2:2 / 4:2:0
	Color Depth	8, 10, 12-bit
HDCP		Ver. 2.2 / 1.4
	Audio Out	HDMI (8ch)

### HDMI Unit (VM-1876-M7) **HDCP 2.2** / **HDR**

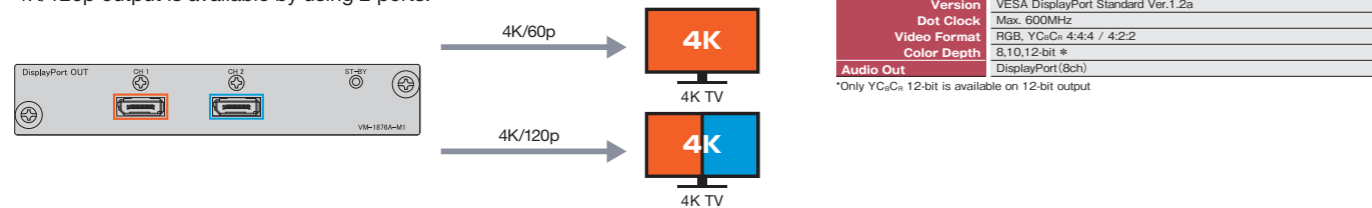
HDMI 2.0b based modules. 4K/60p YCbCr 4:2:0 output is available. M7 supports HDCP 2.2 and 1.4 (Following sink capability). M0 support HDCP 1.4 only.



Video Out	Interface	HDMI×4ch (CEC, 3D, ARC)
	Pixel Clock	25-300MHz (M7 outputs fixed timings only)
Data Rate		Max. 3Gbps
	Video Format	RGB, YCbCr 4:4:4 / 4:2:2 / 4:2:0
Color Depth		8, 10, 12-bit
	HDCP	M7: Ver. 2.2 / 1.4 M0: Ver. 1.4
Audio Out		HDMI (8ch), Coaxial for ARC (M0 only)

### DisplayPort Unit (VM-1876A-M1)

DisplayPort Ver.1.2a based. 4K/60p is transmitted by a single channel.  
SST (Single Stream Transport) and MST (Multi Stream Transport) are supported.  
4K/120p output is available by using 2 ports.

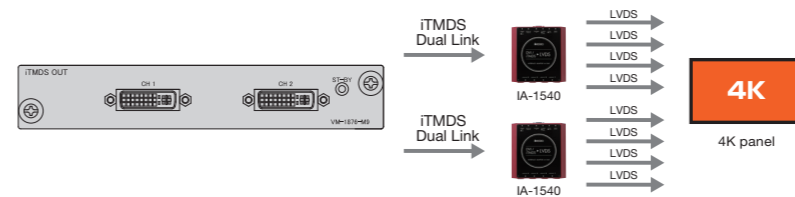


Video Out	Version	DisplayPort×2ch
	Dot Clock	VESA DisplayPort Standard Ver.1.2a
Video Format		Max. 600MHz
	Color Depth	RGB, YCbCr 4:4:4 / 4:2:2
Audio Out		8, 10, 12-bit *
		DisplayPort (8ch)

\*Only YCbCr 12-bit is available on 12-bit output

### iTMDS Unit (VM-1876-M9)

Able to support 4K/60p by one unit, 4K/120p (Cross split, Vertical 4-Split) by two units. LVDS output is possible by using IA-1540.



Video Out	Interface	DVI-I (Digital output only)
	Dot Clock	Dual Link×2 DVI Mode 8-bit 25-165MHz: Single Link 50-330MHz: Dual Link 12-bit 25-150MHz: Single Link 50-330MHz: Dual Link
Timing Setting	Limitation	10 to 16-bit 25-165MHz: Dual Link 50-330MHz: Quad Link
	Video Format	4K×2K (Full HD 240MHz mode) Cross split: setting unit 4 dot, 2 line Vertical 4-Split: setting unit 8 dot, 1 line
E-EDID		RGB / YCbCr 4:4:4
		Ver.1.3(DDC2B)

### DVI/iTMDS to LVDS convertor IA-1540 **Option**

This option will convert VM-1876-M9 output (DVI/iTMDS) to LVDS.  
DVI single input to LVDS quad output.

### Analog Unit (VM-1876-MA)

VGA, COMPOSITE, COMPONENT and Analog Audio output are available.  
Supports NTSC/PAL (COMPOSITE only) output.



Video Out	Interface	Component, Composite, VGA, Analog Audio
	Color	RGB / YPbPr
Dot Clock		5-165MHz
	HDTV	1080p / 1080i / 720p
PC		NTSC / PAL
	Functions	VESA Teletext, Closed Caption, V-chip, Macrovision (Option)

### Synchronizing Unit (VM-1876-MX)

8K/120p timing is output by synchronizing four units of VG-876/879. Please install one video interface and one synchronizing unit in each VG-876/879.

