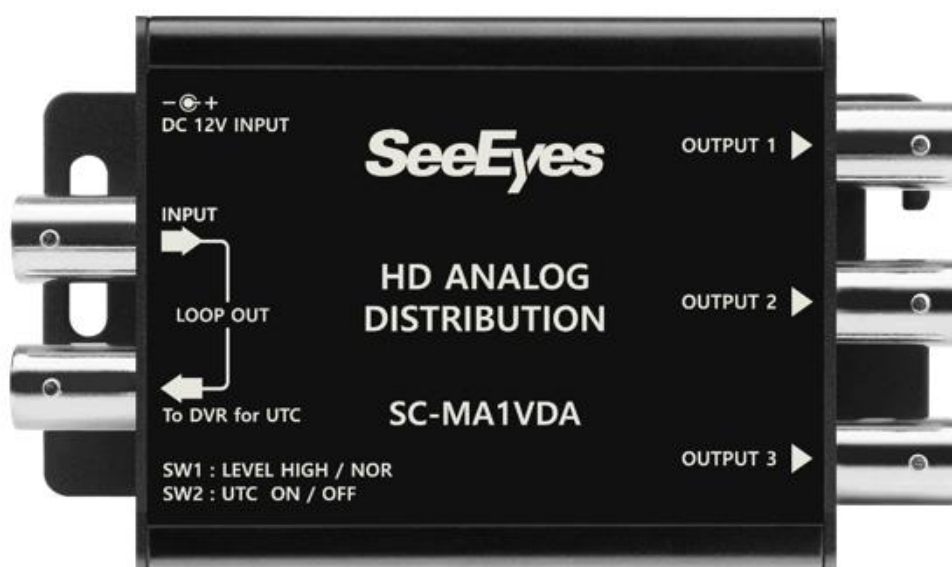


*HD ANALOG SIGNAL 1 IN 4 OUT DISTRIBUTOR*

## SC-MA1VDA

### User Manual

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## Precaution and Safety Guidelines

- Please read this user manual prior to using this product.
  - Avoid installation in the following places: above 50°C or under -10°C; places exposed to rain, snow, or high humidity; places containing or exposed to oil or gas; places exposed to vibration or shock; places under direct sunlight or exposed to outdoor weather conditions; places exposed to strong magnetic forces or high frequency (RF) or near power lines.
  - Do not leave the device at any place where water might fall or splash. Also, do not put anything full of water such as a flower vase on the device.
  - Do not use this device in close proximity to a device that produces strong waves such as radio set (Transceiver, Walkie-talkie, etc.) or repeater. It may affect the image signal, or cause disorders such as noise or crack on the screen.
  - Do not disassemble or put foreign substances in the device.
  - When using the product, be careful with electric shock due to the electric shock hazard in the device.
  - Do not use the device above rated capacity. It may cause malfunction and fire.
  - Disconnect the power plug with care during thunder and lightning.
  - Check the power voltage of this product prior to installation.
  - Strong shock or vibration may cause device failure. Be careful when using the device.
  - If you keep using the device after noticing smoke or smell from the device, it may cause fire or electric shock. In such cases, immediately remove the power cord and contact your place of purchase or our A/S center for professional technical advice.
  - Check if the power cord is properly plugged in when the power is not on.
  - The transmission medium (CABLE) must be a coaxial cable.
  - Transmission distance may vary depending on the type of coaxial cable.
  - Be sure to check the specifications and instructions of this product prior to installation.
  - Refer to the user's manual for problems or questions besides the above. Contact our service center if you need assistance from a professional technician.
  - The joint part of the connectors must be insulated to prevent the metal part from exposure.
  - To extend or terminate the coaxial cables, you should connect them in the following way.
- ☞ BNC-M(Male) - BNC-JJ - BNC-M(Male): BNC Connector Connection Example (for HD-SDI)



1. Introduction

1-1. Overview

SC-MA1VDA is a device that distributes one input signal into four output signals. It is possible to output the same resolution as the input signal resolution, and supports HD Analog and SD/CVBS input. (HD Analog AHD/TVI/CVI ~4K resolution supported)

UTC is available for HD Analog signals (AHD, TVI, CVI) up to 4K resolution. To use UTC function, the UTC setup switch must be set to ON. However, UTC is not available for SD & CVBS signals.




When the switch setup is done, it is able to control the camera's PTZ and OSD by connecting DVR or UTC controller to 'To DVR for UTC' port. Please refer to the UTC setup guide for detailed setting method.

This product is made up of slim aluminum case, so it is ideal for field installation. It also has a built-in surge protector for safety.

1-2. Features

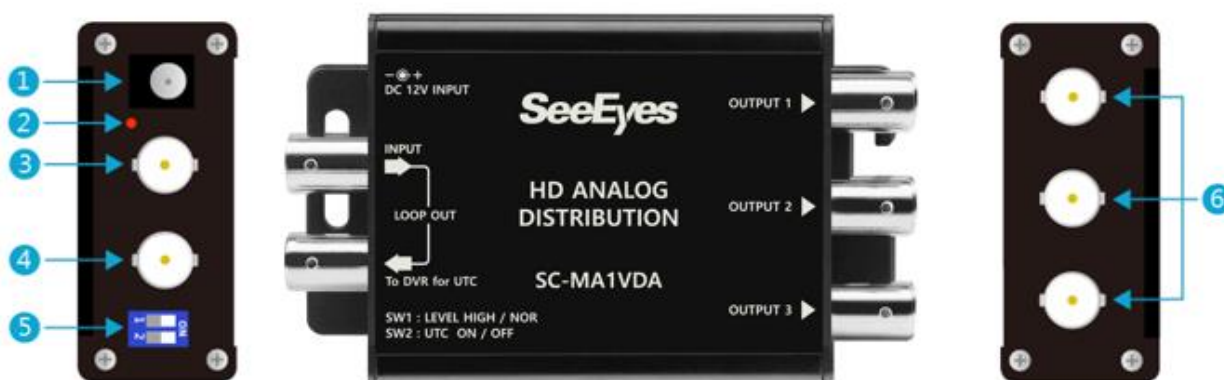
- The same output resolution as the input resolution (HD Analog AHD/TVI/CVI ~ 4K resolution supported)
- UTC function available in AHD, TVI, CVI up to 4K resolution
- Various analog input signals including HD Analog, CVBS
- Distributes signals without distortion at minimum loss
- Built-in surge protect function for safety

1-3 Components

SC-MA1VDA	Adapter (Optional)	User manual
		

## 2. Product Parts & Installation guide

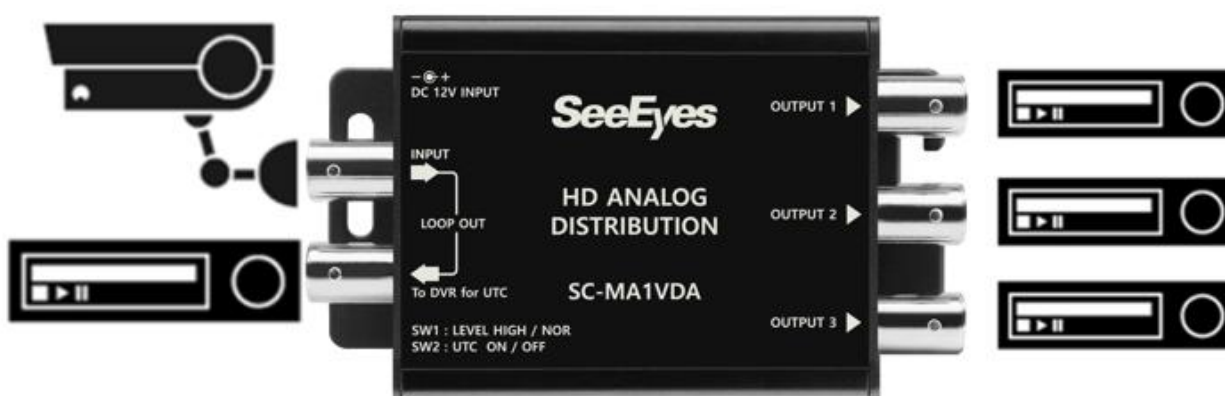
### 2-1. Part names and Function



NO	Name	Function
①	<b>Power Input Part</b>	DC 12V Input port
②	<b>POWER LED</b>	In case of power and Video input, RED LED ON
③	<b>INPUT</b>	Video signal input port
④	<b>LOOP OUTPUT</b>	Video signal output and UTC control port
⑤	<b>Switch</b>	UTC LEVEL selector & UTC ON/OFF
⑥	<b>OUTPUT1, 2, 3</b>	Video signal output port

### 2-2. Application Diagram

- This product is a distributor, so it does not extend the transmission distance.
- The transmission distance may vary depending on the video signal and specifications of recording devices.



## 2-3. How to Set the UTC Setting Switch

### UTC SW1: UTC level bridge

- There is a difference in the level that recognizes UTC signals depending on the format of the video signal and the manufacturer, so if the UTC operation is abnormal, please, set SW1 to HIGH. In usual cases, please, stick to NOR(Normal) on SW1.

### UTC SW2: UTC ON/OFF Bridge

The default setting is set to ON. Please, set to OFF in the following cases:

- When not using the UTC function
- The Loop-out port is not used for a long time
- When connected to a DVR or others which doesn't support UTC (when using for only signal distribution)
- When connected to a device that is not terminated with 75 (Ohm)

※ SD Analog (CVBS) signal does not support UTC function.

※ UTC operation specifications may differ depending on the camera, the DVR and so on.

※ For AHD, TVI, and CVI cameras, since the signal format is not standardized, the video may not be output properly depending on the manufacturer, and the UTC control may not work properly.

## 3. Troubleshooting

Symptoms	Identification method
<b>The product doesn't work</b>	<ul style="list-style-type: none"> <li>Check if the adapter is DC 12V.</li> <li>Check if the adapter is working properly.</li> </ul>
<b>No video</b>	<ul style="list-style-type: none"> <li>Check the power LED on the side to see if the product is working. (If the product is working properly, the RED LED is ON.)</li> <li>Check the operation status of the camera.</li> <li>Check the connection of the coaxial cable across the installation site.</li> <li>Check if the transmission distance exceeds the recommended transmission distance.</li> <li>Check if the cables are crushed, bent or poorly connected.</li> </ul>
<b>The camera control doesn't work</b>	<ul style="list-style-type: none"> <li>Check the operation status of the camera.</li> <li>Check the connection of the coaxial cable across the installation site.</li> <li>Check if the transmission distance exceeds the recommended transmission distance.</li> <li>Check if the cables are crushed, bent or poorly connected.</li> <li>Check if the camera and DVR support UTC.</li> <li>Check SW1(UTC LEVEL) and SW2(UTC ON/OFF)</li> </ul>
<b>Image distortion or image loss</b>	<ul style="list-style-type: none"> <li>Check if it is the LOOP OUT port.</li> <li>If the LOOP OUT port is not used, set the 75Ω terminal or SW2 to OFF.</li> <li>Check if the cables are crushed, bent or poorly connected.</li> </ul>

## 4. Specifications

Model		SC-MA1VDA	
Video Input		AHD, TVI, CVI, CVBS	
Video Output		Same as Input	
UTC Supported Resolutions		AHD	1280x720p 25/30Hz, 1920x1080p 25/30Hz, 2560x1440p 15/25/30Hz, 2592x1944p 12/20Hz 3840x2160p 15
		TVI	1280x720p 25/30Hz, 1920x1080p 25/30Hz, 2560x1440p 15/25/30Hz, 2592x1944p 12/20Hz 3840x2160p 12.5/15
		CVI	1280x720p 25/30Hz, 1920x1080p 25/30Hz, 2560x1440p 25/30Hz, 3840x2160p 12.5/15
Differential Gain		0.1%	
Differential Phase		0.2°	
Bandwidth (-3dB)		200Mhz	
Power Input		DC 12V / 0.5A	
Connection Port	Signal Input	BNC-F, 1 IN	
	Signal Output	BNC-F, 4 OUT	
	Power Input	DC JACK	
LED		In case of power and Video input, RED LED ON	
Power Consumption		0.5W	
Temperature / Humidity		-10°C~+50°C / 0~80%	
Case Material / Weight		Aluminum / 121g	
Dimensions		106(W) X 60(H) X 25(D)mm	

### 4-1. Transmission distance

CABLE	FORMAT	Maximum Transmission Distance		
		TOTAL	To CAMERA	To DVR
RG-59	AHD, TVI, CVI	300m	300m	1m
			1m	300m
RG-6	AHD, TVI, CVI(Except 4M 30fps)	500m	500m	1m
			1m	500m
	CVI (4M 30fps)	500m	500m	1m
			150m	350m

※ Caution: Be sure to connect only Non-PoC camera (general camera). If PoC(Power over Coaxial) camera is connected, it may cause product malfunction.

[MEMO]

## 5. Warranty Certificate

This product has passed thorough quality control and test, and if this gets broken during normal use, we provide the two-year warranty service.

<b>Model No.</b>		
<b>Serial No.</b>		
<b>Distributor</b>		
<b>Date you purchased</b>		
<b>Place you purchased</b>		
<b>Warranty Period</b>		Two (2) year from the date of purchase
<b>Purchaser</b>	<b>Name</b>	
	<b>Address</b>	

- Please check this warranty indication first.
- Please contact your distributor after checking out any defect in the products.
- The standard for repairing, replacement or reimbursement follows Customer.
- Warranty content any defect under normal use within the warranty service period we give you free repair service according to the warranty certificate.
- We charge you with the fee of parts and service despite of free warranty service period. Any breakage made without care such as:
  - Breakdown due to natural disasters (lightning, fire, flood, tsunami, etc.)
  - When disassembled or repaired by the user
  - When connecting power other than rated power.
  - When you want to reassemble for full system or replace parts within warranty service period.
  - When unauthorized person modified or made damage on the product trying to repair it.
  - Failure due to careless handling of the user
  - When replacing consumables
  - Lightning strike.
- Please note that we don't support the breakage after warranty service period expired. If the customer wants to get it repaired, we charge them with the fee.
- The specification is subject to change without prior notice for quality improvement.