

*MULTI SIGNAL 1 IN 3 OUT 8CH DISTRIBUTOR*

# SC-MA8VDA

## User Manual

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SC-MA8VDA

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 **SeeEyes Co., Ltd.**

## **Precaution and Safety Guidelines**

Please use this manual carefully prior to use for your safety and convenient use.

***Caution*** (If you do not keep any of the below guidelines, you may get seriously injured or cause somebody's death)

- Please make sure to turn the power off prior to the installation.
- Do not install the product in the following places: extremely low or high temperature conditions; places exposed to rain, snow, or high humidity; places containing or exposed to oil and gas; places exposed to vibration and shock; places under direct sunlight or exposed to outdoor weather conditions; places exposed to radio waves (RF) or near to power lines. It may cause low performance or malfunction of the unit.
- When using this device adjacent to equipment which generates strong radio waves such as radio transceivers (walkie-talkies), repeaters, it may influence signals, cause a malfunction of the device or some noise on the screen, or the screen may be broken, etc. Therefore, please do not use the influencing and relevant equipment where this device is installed and/or used.
- Do not bend the power cord excessively and/or damage it by pressing it with a heavy object.
- Do not disassemble or remodel this product on your own.
- Do not pull the power plug with excessive force or wet hands. When the power plug is loose, please do not plug in the cord.
- Please make the installation place to stay clean without dirt and dust, and wipe the device with a dry towel when you clean it. In this case, please do not use any organic solvent.
- Please keep at least 15 Cm for the back of this device from the wall and keep at least 5Cm for the sides of this device from the wall. Otherwise, the cables may be bent and/or cut due to the narrow space between the device and the wall, and may cause malfunction or fire.
- In case of the input voltage for the operation of this device, the voltage fluctuation must be within 10% of the rated voltage and the power outlet must be grounded. In addition, the power outlet for this device shall not be used for other electric heating appliances such as hairdryers, irons, refrigerators, etc.
- Please install this device on a flat and stable place and do not use it vertically or obliquely.
- Do not use the device when any smoke or smell is produced from the unit. It may be subject to fire or electric shock. If any smoke or smell is produced, please turn off the unit and remove the power cable immediately, and contact your distributor to check the device properly.
- Please make sure to connect the power plug to a grounded outlet.
- Please put the power plug where can be easily reached.
- Coaxial cables are used for this device.

- The transmission distance depends on cables and connectors quality and type.
- When thunder or lightning, please unplug the power cord for your safety.
- To extend or terminate the coaxial cables, please connect them in the following way.
  - BNC-M(Male) - BNC-JJ - BNC-M(Male): BNC Connector Connection Example (for HD-SDI)
- The joint part of the connectors must be insulated to prevent the metal part from exposure.



- When installing it into a rack, please make sure to have some space as the height of this device.
- Please make sure to have some space between the devices for the thermal emission.
- Please inspect the device at the A/S center regularly to maintain the performance.

# 1. Introduction

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## 1-1. Overview

SC-MA8VDA is an 8-channel distribution device that can output the same resolution as the input signal resolution, and supports HD Analog signals and SD Analog (CVBS) input. (HD Analog AHD/TVI/CVI ~ 4K resolution supported)

UTC is supported with HD Analog signals (AHD, TVI, and CVI) up to 4K resolution. However, SD Analog (CVBS) signals do not support UTC.

## 1-2. Features

- Output the same resolution as the input resolution (HD Analog AHD/TVI/CVI ~ 4K resolution supported).
- UTC available for HD Analog signals (only via Out A port). Same signal output for each channel
- UTC (Up The COAX) communication for HD-Analog signals (via Out A port)
- Built-in surge protection function

## 1-3. Supported resolution for HD-Analog

- As this product is for Analog use, it cannot receive SDI signals.
- In addition to HD analog, SD analog (CVBS) signals can also be input.

| Resolution   | AHD         | CVI         | TVI         |
|--------------|-------------|-------------|-------------|
| 1280 x 720p  | 25/30 Hz    | 25/30 Hz    | 25/30 Hz    |
| 1920 x 1080p | 25/30 Hz    | 25/30 Hz    | 25/30 Hz    |
| 2560 x 1440p | 15/25/30 Hz | 15/25/30 Hz | 15/25/30 Hz |
| 2592 x 1944p | 12/20 Hz    | 12/20 Hz    | N/A         |
| 3840 x 2160p | 15 Hz       | 12.5/15 Hz  | 12.5/15 Hz  |

## 2. Components

- Please check if all of the below components are provided in your package.
- The provided components depend on our items.



### SC-MA8VDA (8CH Input / 24CH Output Multi-format Distributor)

|                                                                                   |                                                                                   |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |
| Power Supply Unit                                                                 | User's Manual                                                                     | Rubber Feet/ Bracket/ Screws                                                        |

## 3. Product Parts & Peripheral Device Connection

### 3-1. Front Side



#### ① Power switch

Power ON/OFF switch (Be sure to turn off the power of the equipment before installation)

#### ② LED: When a video signal is input, the GREEN LED turns on.

#### ③ UTC switch: UTC ON/OFF switch

- When shipped from the factory, the UTC switch is set to "ON". Please, set to "OFF" in the following cases.

- When not using the UTC function
- When the OUT A port is not used
- When connected to a DVR or others which doesn't support UTC (when used for only signal distribution)
- When connecting to a device that is not terminated with 75 (Ohm) (SD Analog (CVBS) signal does not support UTC function)

#### ④ LEVEL switch: If UTC operation is abnormal at "DEFAULT" position, change to "EXTRA".

There is a difference in the level that recognizes the UTC signal depending on the format of the video signal and manufacturer, so if the UTC operation is abnormal, change the switch.

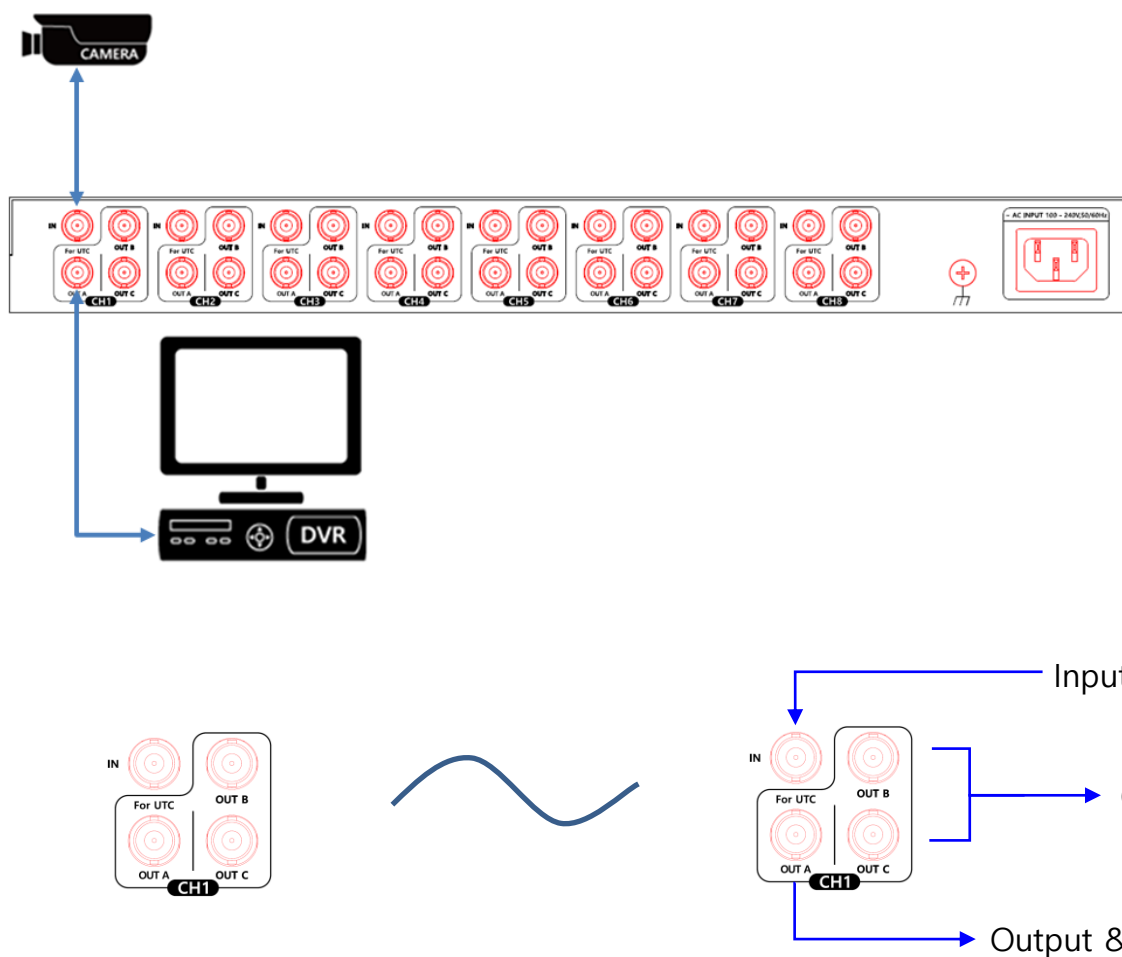
### 3-2. Rear Side



- ① **Input:** HD-Analog video input port (1 ~ 8 Channels, 1 input port for each Channel)
- ② **Output:** HD-Analog video output (OUT B/C: 16 output ports in total)  
HD Analog video output port (1 ~ 8 Channel, 2 output ports for each Channel)
- ③ **Video output (OUT A, total 8 output ports):** HD Analog video output terminal and UTC control terminal (1 ~ 8 channel, 1 output for each Channel)
- ④ **Ground Terminal:** For grounding
- ⑤ **AC Inlet:** AC 100V~240V 50/60Hz input terminal.

## 4. Application diagram

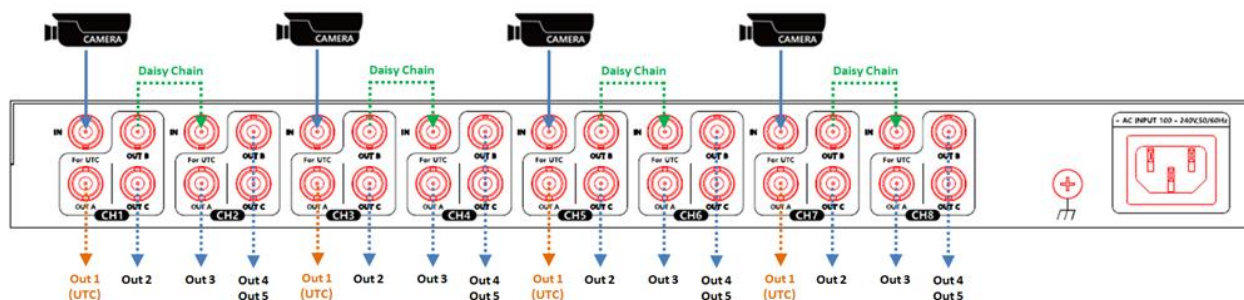
### 4-1. HD analog configuration



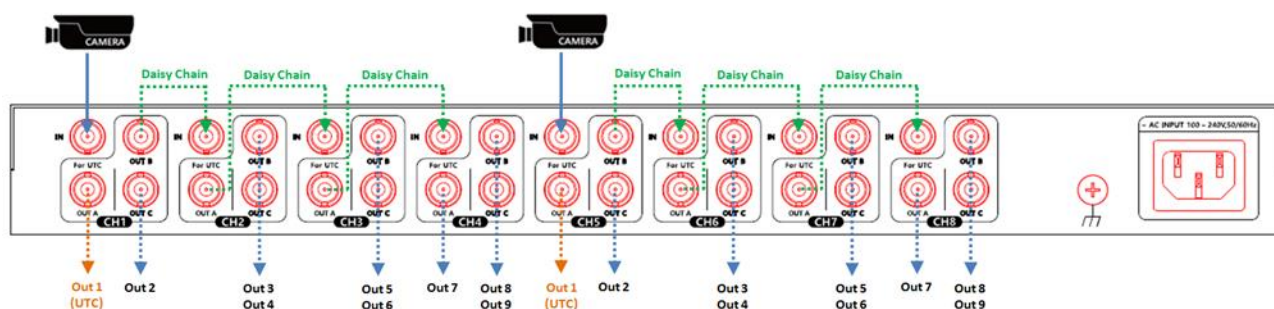
#### ※ Caution

- **UTC function is applied only to OUT A.** If it does not work properly, check whether the camera and DVR support UTC.
- UTC operation specifications may differ depending on camera and DVR specifications.
- 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.

## 4-2. 1-IN 5-OUT configuration



## 4-2. 1-IN 9-OUT configuration



- ※ In case of cascade connection that requires 4 or more distribution signals, please use it by putting OUT B or OUT C signal into the input of another channel. (It is recommended to use only up to 3 cascade connections.)
- ※ If possible, do not use OUT A as an input for other channels.)



## 5. Specifications

| Model                            |                      | SC-MA8VDA                            |                                                                                                           |
|----------------------------------|----------------------|--------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <b>Video Input</b>               |                      | AHD, TVI, CVI, CVBS                  |                                                                                                           |
| <b>Video Output</b>              |                      | Same as Input                        |                                                                                                           |
| <b>UTC Supported Resolutions</b> |                      | <b>AHD</b>                           | 1280x720p 25/30Hz, 1920x1080p 25/30Hz,<br>2560x1440p 15/25/30Hz, 2592x1944p 12/20Hz<br>3840x2160p 15      |
|                                  |                      | <b>TVI</b>                           | 1280x720p 25/30Hz, 1920x1080p 25/30Hz,<br>2560x1440p 15/25/30Hz, 2592x1944p 12/20Hz<br>3840x2160p 12.5/15 |
|                                  |                      | <b>CVI</b>                           | 1280x720p 25/30Hz, 1920x1080p 25/30Hz,<br>2560x1440p 25/30Hz, 3840x2160p 12.5/15                          |
| <b>Differential Gain</b>         |                      | 0.1%                                 |                                                                                                           |
| <b>Differential Phase</b>        |                      | 0.2°                                 |                                                                                                           |
| <b>Bandwidth (-3dB)</b>          |                      | 200Mhz                               |                                                                                                           |
| <b>Power Input</b>               |                      | AC 100V~AC 240V 50/60Hz              |                                                                                                           |
| <b>Connection Port</b>           | <b>Signal Input</b>  | BNC-F                                |                                                                                                           |
|                                  | <b>Signal Output</b> | BNC-F                                |                                                                                                           |
| <b>LED</b>                       |                      | In case of power input, GREEN LED ON |                                                                                                           |
| <b>Power Consumption</b>         |                      | 0.5W                                 |                                                                                                           |
| <b>Temperature / Humidity</b>    |                      | -10°C~+50°C / 0~80%                  |                                                                                                           |
| <b>Case Material / Weight</b>    |                      | STEEL / 3.5kg                        |                                                                                                           |
| <b>Dimensions</b>                |                      | 430(W) X 350(D) X 44(H) mm           |                                                                                                           |

### 5-1. Transmission distance

| CABLE | FORMAT                            | Transmission distance |           |        |
|-------|-----------------------------------|-----------------------|-----------|--------|
|       |                                   | TOTAL                 | To CAMERA | To DVR |
| RG-59 | AHD, TVI, CVI                     | 300m                  | 300m      | 1m     |
|       |                                   |                       | 1m        | 300m   |
| RG-6  | AHD, TVI,<br>CVI(except 4M 30fps) | 500m                  | 500m      | 1m     |
|       |                                   |                       | 1m        | 500m   |
|       | CVI (4M 30fps)                    | 500m                  | 500m      | 1m     |
|       |                                   |                       | 150m      | 350m   |

## 6. Troubleshooting

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| Symptom              | Checking Method                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NO Power</b>      | <ul style="list-style-type: none"> <li>• Check the connection status of the AC cord.</li> <li>• Check the power ON/OFF switch.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>NO Video</b>      | <ul style="list-style-type: none"> <li>• Check if the video signal is input by checking the GREEN LED on the front. (GREEN LED is lit when signal is input.)</li> <li>• Check the operation status of the camera.</li> <li>• Check the coaxial cable connections of the entire configuration.</li> <li>• Check if the transmission distance is beyond the recommended transmission distance.</li> <li>• Check if the camera and DVR are compatible.</li> <li>• Check the cable status, such as bent cables or poor contact.</li> </ul> |
| <b>No UTC</b>        | <ul style="list-style-type: none"> <li>• Check the operation status of the camera.</li> <li>• Check the coaxial cable connections of the entire configuration.</li> <li>• Check if the transmission distance is beyond the recommended transmission distance.</li> <li>• Check the cable status, such as bent cables or poor contact.</li> <li>• Make sure the camera and DVR support UTC.</li> <li>• Check the UTC LEVEL, UTC ON/OFF switch.</li> </ul>                                                                               |
| <b>Unclear image</b> | <ul style="list-style-type: none"> <li>• Check if the OUT A terminal of the product is used.</li> <li>• If the OUT A terminal is not used, set the 75Ω terminal or the UTC switch to OFF.</li> <li>• Check the connection status, such as bent cables or poor contact.</li> </ul>                                                                                                                                                                                                                                                      |

※ **Caution: Connecting a signal (VP, etc.) with superimposed DC power to the video(camera) input port may cause product failure.**

## 7. 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) years 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:
  - Breakage or trouble made by natural disaster.
  - Breakage or trouble made by breaking the product guide or manual.
  - Breakage or trouble made by wrong power voltage or frequency.
  - 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.
  - Thunderstroke.
- Please note that we don't support the breakage after warranty service period is 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.



Gedistribueerd door:

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