

HDMI EDID Ghost User Manual

Optimize video output for any display.



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Support
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This equipment generates, uses, and can radiate radio-frequency energy, and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio communication. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart B of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be necessary to correct the interference.

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This digital apparatus does not exceed the Class A limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of Industry Canada.

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Instrucciones de Seguridad (Normas Oficiales Mexicanas Electrical Safety Statement)

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.
2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.
3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.
4. Todas las instrucciones de operación y uso deben ser seguidas.
5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc.
6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.
7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.
8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá a lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.
9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.
10. El equipo eléctrico debe ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.
11. El aparato eléctrico deberá ser conectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.
12. Precaución debe ser tomada de tal manera que la tierra física y la polarización del equipo no sea eliminada.
13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.
14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.
15. En caso de existir, una antena externa deberá ser localizada lejos de las líneas de energía.
16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.
17. Cuidado debe ser tomado de tal manera que objetos líquidos no sean derramados sobre la cubierta u orificios de ventilación.
18. Servicio por personal calificado deberá ser provisto cuando:
 - A: El cable de poder o el contacto ha sido dañado; u
 - B: Objetos han caído o líquido ha sido derramado dentro del aparato; o
 - C: El aparato ha sido expuesto a la lluvia; o
 - D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o
 - E: El aparato ha sido tirado o su cubierta ha sido dañada.

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Chapter 1: Specifications

1. Specifications

HDCP Compliance — Yes

Housing — Metal

Resolution (Max.) — Full HD: 1920 x 1080, 2048 x 1152

User Controls — (1) Push button: EDID Copy;

(1) Rotary Switch: (16) default settings + (15) sets of inventory;

(1) Slide Switch: PC/AV/Memory Mode selection;

(6) 2-Position DIP Switch: Positions 1 and 2: Audio, Positions 3 and 4: Color, Positions 5 and 6: Format

Connectors — Input: (1) HDMI female;

Output: (1) HDMI female;

Power: (1) 5-VDC barrel connector

Indicators — (1) Multiple-color Status LED

Power Supply — 5 VDC

Size — 0.9"H x 2"W x 3.2"D (2.2 x 5.1 x 8 cm)

Weight — 0.2 lb. (0.1 kg)

2. Overview

2.1 Introduction

The HDMI EDID Ghost stores and emulates your display's Extended Display Identification Data (EDID) information for optimal video resolution. EDID contains information about manufacturer name and serial number, product type, maximum image size, color characteristics, factory preset timings, frequency range limits, etc. If your display's EDID is not available, the EDID Ghost provides dedicated EDID data that perfectly matches your screen with the device you attach it to. The HDCP pass-through feature allows the unit to pass through HDCP encryption from your source device to your HDCP display without changing anything.

Use the EDID Ghost function to read and reserve the EDID of your displays. The EDID Emulation function enables you to emulate EDID information to display the optimum video resolution. The Ghost can alternatively apply the default or the copied EDID for the connected displays. Plus, it can modify the EDID and upload the revised EDID to displays.

2.2 Features

- EDID learning (read/store) functions prevent computers from deactivating inactive HDMI ports.
- Unique audio inventory features provide 2ch./5.1ch./7.1ch. audio EDID learning, best for home theater system applications
- Innovative technology integrates the emulated EDID parameters and the display's HDCP parameters.
- The rotary switch enables you to manually select video resolutions.
- Provides modes for different applications: PC Mode, AV Mode, and Memory Mode:
 1. PC Mode—used for desktop and laptop systems.
 2. AV Mode—used for home theater AV applications.
 3. Memory Mode—used to reserve your video/audio system's EDID information.
- Supports professional AV performance configuration, such as distinctive 50-Hz/60-Hz frame rate and interlaced/progressive (non-interlaced) scanning system.

EDID Ghost (DDC Ghost)

- Read and store (record) the EDID from the connecting display to the video extension system.
- Handles different types of incoming EDID data reading.
- Stores up to 15 presets/records of EDID data.

EDID Emulation

- Emulates EDID information to display the optimum video resolution.
- Provides EDID data if a display's EDID is not available.
- Alternatively applies the default or the copied EDID for the connected display device.
- Has selectable EDID functions for multimedia system integration.
- Supports a DVI signal.
- Selectable scan mode and frame rate combined with optional video resolution enables flexible uses of your displays.

2.3 What's Included

Your package should include the following items. If anything is missing or damaged, contact Black Box Technical Support at 724-746-5500 or info@blackbox.com.

- (1) HDMI EDID Ghost
- (1) USB power cable
- (1) printed quick start guide
- (1) CD containing this user's manual in PDF format
- (1) set of foot pads

2.4 Optional Items

- Magnetic foot pad with necessary screws

CAUTION: Avoid locating the magnetic foot pad near any strong sources of electromagnetic radiation, such as CRT monitors, high-power electric cabling, audio equipment, and tape recorders.

- HDMI-to-DVI adapter for DVI applications.

NOTES:

Only use good quality connection cables to avoid interference.

Place cables away from fluorescent lights, air conditioners, and machines that are likely to generate electrical noise.

2.5 Hardware Description

Figure 2-1 shows the top, side, and bottom panels of the HDMI EDID Ghost. Table 2-1 describes its components.

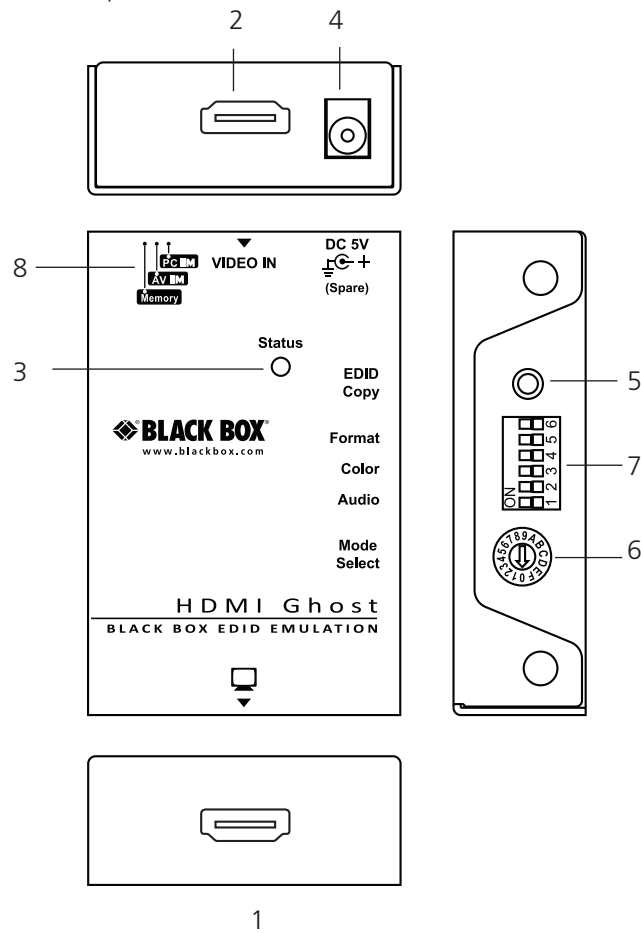


Figure 2-1. HDMI EDID Ghost.

Table 2-1. HDMI EDID Ghost components.

ID in Fig. 2-1	Component	Description
1	Video connector	Connect the input side of the HDMI EDID Ghost to the HDMI extender, monitor, or switch.
2	Video connector	Connect the output side of the Ghost to the PC.
3	LED indicator	Blue: Power on Red: Error Flashes three times: Configuring HDMI EDID Flashes twice: Configuring DVI EDID
4	*Power jack	Apply the proper power to the unit (optional).
5	Push button	EDID Copy button
6	Rotary switch	Resolution selection in PC/AV Mode. Store presets in Memory Mode.
7	DIP switch	System configuration.
8	Slide switch	Mode selection (PC/AV/Memory Mode).

*If the video source can supply enough power from the HDMI connector, it is optional to apply the power to the unit.

2.6 Scale of Rotary Switch

Table 2-2. PC-DVI Mode.

Position	Resolution
0	Auto
1	Manual
2	1024 x 768
3	1280 x 720
4	1280 x 1024
5	1366 x 768
6	1440 x 900
7	1600 x 900
8	1600 x 1200
9	1680 x 1050
A	1920 x 1080
B	1920 x 1200
C	1280 x 800
D	2048 x 1152
E	Reserved
F	Reserved

Table 2-3. PC-HDMI Mode.

Position	Resolution
0	Auto
1	Manual
2	1024 x 768
3	1280 x 720
4	1280 x 1024
5	1366 x 768
6	1440 x 900
7	1600 x 900
8	1600 x 1200
9	1680 x 1050
A	1920 x 1080
B	1920 x 1200
C	1280 x 800
D	2048 x 1152
E	720 x 480 Learn color inventory
F	720 x 576 Learn audio inventory

Table 2-4. Memory.

Position	Presets
0	Preset 1
1	Preset 2
2	Preset 3
3	Preset 4
4	Preset 5
5	Preset 6
6	Preset 7
7	Preset 8
8	Preset 9
9	Preset 10
A	Preset 11
B	Preset 12
C	Preset 13
D	Preset 14
E	Preset 15
F	—

Chapter 2: Overview

There are several options provided for AV Mode applications. Table 2-5 lists resolution, scanning system, and frame rate requirements.

Table 2-5. AV Mode applications.

AV Mode		Frame Rate: 50 Hz		Frame Rate 60 Hz	
Position	Resolution	Interlaced (I)	Progressive (p) Non-interlaced	Interlaced (I)	Progressive (p) Non-interlaced
0	Auto	Automatically record conected display's EDID (ignore DIP Switch 1–6)			
1	Manual	User recorded EDID (ignore DIP Switch 5–6)			
2	1024 x 768	576i @ 50 Hz 640 x 480p @ 60 Hz	576p @ 50 Hz 640 x 480p @ 60 Hz	480i @ 60 Hz 640 x 480p @ 60 Hz	480p @ 60 Hz 640 x 480p @ 60 Hz
3	1280 x 720				
4	1280 x 1024				
5	1366 x 768				
6	1440 x 900				
7	1600 x 900	720p @ 50 Hz 720p @ 24 Hz 576i @ 50 Hz 640 x 480p @ 60 Hz	720p @ 50 Hz 720p @ 24 Hz 576p @ 50 Hz 640 x 480p @ 60 Hz	720p @ 60 Hz 720p @ 24 Hz 480i @ 60 Hz 640 x 480p @ 60 Hz	720p @ 60 Hz 720p @ 24 Hz 480p @ 60 Hz 640 x 480p @ 60 Hz
8	1600 x 1200				
9	1680 x 1050				
A	1920 x 1080	1080i @ 50 Hz 1080p @ 24 Hz 720p @ 50 Hz 720p @ 24 Hz 576i @ 50 Hz 640 x 480p @ 60 Hz	1080p @ 50 Hz 1080p @ 24 Hz 720p @ 50 Hz 720p @ 24 Hz 576p @ 50 Hz 640 x 480p @ 60 Hz	1080i @ 60 Hz 1080p @ 24 Hz 720p @ 60 Hz 720p @ 24 Hz 480i @ 60 Hz 640 x 480p @ 50 Hz	1080i @ 60 Hz 1080p @ 24 Hz 720p @ 60 Hz 720p @ 24 Hz 480p @ 60 Hz 640 x 480p @ 50 Hz
B	1920 x 1200				
C	1280 x 800				
D	2048 x 1152				
E	720 x 480	480i @ 50 Hz 640 x 480p @ 60 Hz	480p @ 50 Hz 640 x 480p @ 60 Hz	480i @ 60 Hz 640 x 480p @ 60 Hz	480p @ 60 Hz 640 x 480p @ 60 Hz
F	720 x 576	576i @ 50 Hz 640 x 480p @ 60 Hz	575p @ 50 Hz 640 x 480p @ 60 Hz	480i @ 60 Hz 640 x 480p @ 60 Hz	480p @ 60 Hz 640 x 480p @ 60 Hz

3. Basic Operation

3.1 EDID Copy (EDID Ghost)

In some cases display problems may occur because of incorrect EDID communication between the display monitor and the unit or inappropriate EDID data programmed by display manufacturers. This function allows the system to copy EDID from EDID compliant displays. However, some devices may require system reboot after adjustment.

3.1.1 PC/AV/Memory Mode

For different applications, we recommend that you apply PC Mode to a desktop or laptop system. For a home theater AV application, use AV Mode because it may need more specific settings. In Memory mode, the Ghost can store and perform the recorded video EDID information.

3.1.2 Inventory

An inventory is a storage system for accumulating a huge mass of EDID data. Users may copy and reserve your display's EDID in the Ghost. For different uses, the HDMI EDID Ghost provides delicate types of inventory, such as audio inventory, video-color inventory, and full EDID inventory. Once recorded, users can apply these EDID data to other displays.

Users may copy whole EDID information from EDID-compliant displays in Memory Mode. However, if you own advanced HDMI displays, like 7.1 ch. Home Theater AV Receiver and Full HD monitors, when switching to a specific position, this function enables you to copy audio EDID from different HDMI monitors or amplifiers for advanced uses.

Table 3-1. EDID settings.

Name	Function
Audio EDID	audio channel
Video EDID	resolution, frame rate, scanning system, color space
Whole EDID	Audio EDID + Video EDID

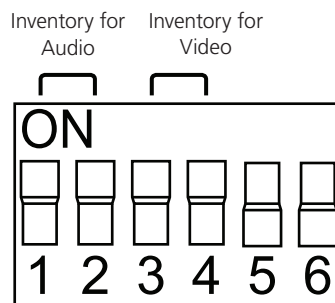



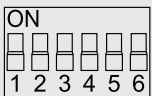
Figure 3-1. DIP switch settings for inventory.

Chapter 3: Basic Operation

3.2 EDID Copy Operation Steps

STEP 1. Set all switches to the correct positions (see Table 3-2).

Table 4-10. DIP switch settings.

Function	Slide Switch	Rotary Switch	DIP Switch (1–6)
			
Copy EDID (Whole)	PC/AV	0 (Auto)	—
		1 (Manual)	—
	Memory	0–9, A–E (15 presets for storage)	—
Copy EDID (Video–Color)	PC/AV	E	3 (ON) and 4 (ON)
Copy EDID (Audio)	PC/AV	F	1 (ON) and 2 (ON)
	Memory	F	1 (ON) and 2 (ON)
			1 (ON) and 2 (OFF) 1 (OFF) and 2 (ON) 1 (OFF) and 2 (OFF)
			(4 presets for storage)

NOTE: According to different copy methods, the system provides 1, 4, or 15 records for copied EDID storage. These data can be applied to EDID Emulation. See Chapter 4, Advanced Operation, for more details.

STEP 2. Apply power to the unit (if the source cannot supply enough power).

STEP 3. Connect display to Monitor Port (Video Out) on the unit and power on the display.

STEP 4. Press the “EDID Copy” button and release the button RIGHT AFTER the LED flashes green.

STEP 5. The LED flashes red and green alternately and then it lights blue, indicating that the copy is successful.

Otherwise, if the LED flashes RED, it means one or more of the following:

- a. The monitor is not properly connected.
- b. The monitor is not powered on.
- c. EDID data of the monitor is not applicable.

(The idle time-out is 20 seconds.)

4. Advanced Operation

4.1 EDID Emulation

If your display's EDID is not available, the EDID Ghost provides a default profile that you can use. Users may apply the system-provided data or user-recorded EDID (see Chapter 3, Basic Operation) to the display in a few simple steps. However, some devices may need system reboot after adjustment.

The PC, AV, and Memory modes are provided for multiple purposes. The following statements describe each mode and its functions, and also provide operation steps.

4.1.1 PC Mode System Configuration

Computer display devices can sometimes lose EDID, so you can't get video from your notebook PC to external displays. To fix these problems, set the Slide Switch on the unit to PC Mode.

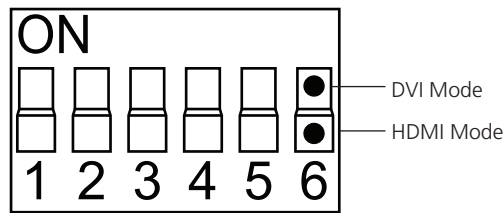


Figure 4-1. DIP switch settings for DVI mode and HDMI mode.

4.1.1.1 PC–DVI Mode

The unit supports both DVI and HDMI video signals. With an HDMI interface, this DVI mode will not carry audio channel. To display a DVI signal, set DIP Switch 6 to ON (UP). For DVI video resolution, see Section 2.6, Scale of Rotary Switch.

- a) Slide switch: PC Mode
- b) Rotary switch: See scale of rotary switch (Table 2-2).
- c) DIP switch: ON (UP)/OFF (DOWN)

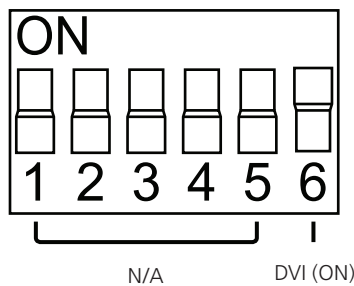


Figure 4-2. DIP switch settings for DVI mode.

NOTE: Rotary Switch:

Position 0: Automatically record connected display's EDID (ignore DIP switch 1–5).

Position 1: Require EDID Copy performance in advance.

Chapter 4: Advanced Operation

4.1.1.2 PC–HDMI Mode

In HDMI mode, audio signal is embedded. To display the HDMI signal, set DIP Switch 6 to OFF (DOWN).

NOTE: If there's no copied information, the system will automatically set to factory default. Rotary Switch position "1" requires EDID Copy performance in advance and only uses HDMI recorded data.

- a) Slide switch: PC Mode.
- b) Rotary switch: See scale of rotary switch (Table 2-3).
- c) DIP switch: ON (UP)/OFF (DOWN)

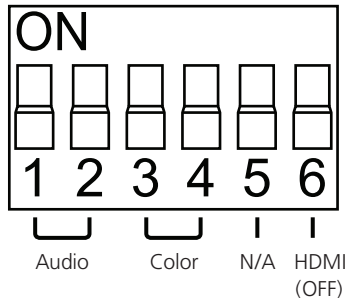


Figure 4-3. DIP switch settings for HDMI mode.

Table 4-1. DIP switch Positions 1 and 2 settings.

DIP Switch Audio		
1	2	Setting
ON	ON	Inventory
ON	OFF	7.1 CH
OFF	ON	5.1 CH
OFF	OFF	2 CH

Table 4-2. DIP switch Positions 3 and 4 settings.

DIP Switch Color		
3	4	Setting
ON	ON	Inventory
ON	OFF	RGB only
OFF	ON	+YCbCr
OFF	OFF	+Deep Color

NOTE: Rotary switch:

Position 0: Automatically record connected display's EDID (ignore DIP switch 1–5).

Position 1: Require EDID Copy performance in advance.

4.1.2 AV Mode System Configuration

When using AV devices, such as Blu-ray DVD players, game consoles, and HD set-top boxes that are connected to projectors, LCD displays, and digital TVs, users may experience a few issues. For example, hue error or color mismatch caused by incorrect color space may occur. Inaccurate audio formats result in 2ch audio rather than 7.1ch, or inexact video resolution displays 480p instead of 1080p. You can solve these problems by adopting AV Mode.

- a) Set the slide switch to AV Mode.
- b) Rotary switch: See scale of rotary switch (Table 2-5).
- c) DIP switch: ON (UP)/OFF (DOWN)

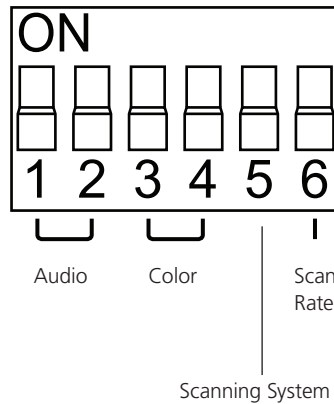


Figure 4-4. AV mode DIP switch settings.

Table 4-3. DIP switch Positions 1 and 2 Audio settings.

DIP Switch Position		Setting
1	2	
ON	ON	Inventory
ON	OFF	7.1 CH
OFF	ON	5.1 CH
OFF	OFF	2 CH

Table 4-4. DIP switch Positions 3 and 4 Color settings.

DIP Switch Position		Setting
1	2	
ON	ON	Inventory
ON	OFF	RGB only
OFF	ON	+YCbCr
OFF	OFF	+Deep Color

Table 4-5. DIP switch scanning system.

DIP Switch Position	Setting
5	ON
	Interlaced
	OFF
	Progressive (Non-interlaced)

Table 4-6. DIP switch scan rate.

DIP Switch Position	Setting
6	Setting
ON	50 Hz
OFF	60 Hz

NOTE: Rotary switch:

Position 0: Automatically record connected display's EDID (ignore DIP switch 1–6).

Position 1: Require EDID Copy performance in advance (ignore DIP switch 5–6).

NOTE: Users may copy audio and/or color information (HDMI source only) for further uses.

4.1.3 Memory Mode System Configuration

Users may apply recorded EDID data to your display for further uses. In Memory mode, the unit can perform the recorded video EDID with or without carrying audio information. Setting DIP switch 6 to "ON" enables users to use recorded video EDID combined with audio EDID in audio inventory to output performance.

If there's no copied EDID information reserved, the system will automatically set to factory default.

- a) Slide switch: Memory Mode
- b) Rotary switch: 0–9, A–E (15 presets for storage; see Figure 4-5).
- c) DIP switch: ON (UP)/OFF (DOWN)

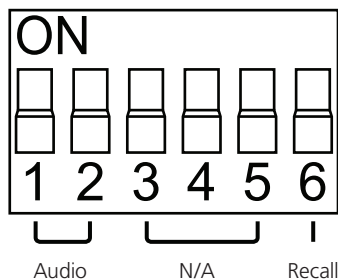


Figure 4-5. DIP switch Memory Mode System Configuration.

Table 4-7. DIP switch audio.

DIP Switch Position		Setting
1	2	
ON	ON	Audio Inventory 0
ON	OFF	Audio Inventory 1
OFF	ON	Audio Inventory 2
OFF	OFF	Audio Inventory 3

Table 4-8. DIP switch Recall.

DIP Switch Position	Setting
6	
ON	Combo type: Recall audio data from Audio Inventory 0–3 and other datas from Table 2-4.
OFF	Non-combo type: Recall whole EDID data from Table 2-4.

NOTE: Inventory 0–3 needs EDID Copy performance in advance.

4.2 EDID Emulation Operation Steps


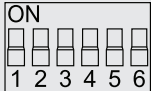
STEP 1: Set the slide switch to PC/AV/Memory Mode.

STEP 2: Connect the video source and display to the unit.

STEP 3: Apply power to the unit (if the source does not supply enough power).

STEP 4: Set all switches to the desired positions (see Table 4-9).

Table 4-9. EDID Emulation settings.

Function	Slide Switch	Rotary Switch	DIP Switch (1–6)
			
For DVI display/PC	PC	0–F (see Table 2-2)	See Figure 4-2
For HDMI display/PC	PC	0–F (see Table 2-3)	See Figure 4-3
For HDMI display/AV	AV	0–F (see Table 2-5)	See Figure 4-4
Combo Type	Memory	0–E (see Table 2-4)	See Figure 4-5 and Table 4-8
Non-combo Type	Memory	0–E (see Table 2-4)	See Figure 4-5 and Table 4-8

NOTES:

1. Hold/wait for 2–3 seconds after adjustment steps.
2. Some devices may need system reboot after adjustment.

Chapter 4: Advanced Operation


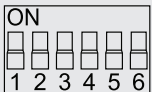
4.3 Factory Default Setting

4.3.1 One-by-One Individually

This function enables each unit to reset to factory defaults.

STEP 1: Set all switches to the designated positions. (See Table 4-10.)

Table 4-10. DIP switch settings.

Function	Slide Switch	Rotary Switch	DIP Switch (1–6)
			
Copy EDID (Whole)	PC/AV	0 (Auto)	—
		1 (Manual)	—
	Memory	0–9, A–E (15 presets for storage)	—
Copy EDID (Video–Color)	PC/AV	E	3 (ON) and 4 (ON)
	PC/AV	F	1 (ON) and 2 (ON)
Copy EDID (Audio)	Memory	F	1 (ON) and 2 (ON)
			1 (ON) and 2 (OFF)
			1 (OFF) and 2 (ON)
			1 (OFF) and 2 (OFF)
			(4 presets for storage)

STEP 2: Apply power to the unit (if the source cannot supply enough power)

STEP 3: Press the button “EDID Copy” and release the button RIGHT AFTER the LED flashes RED.

STEP 4: The LED flashes red and green alternately and then it lights blue indicating that the copy is successful.

If you keep pressing the “EDID Copy” button for 20–25 seconds, it will light white and all EDIDs will be cleared.

4.3.2 All Records of EDID

No matter which position the switches are in, this function will have ALL records return to factory default.

STEP 1: Apply power to the unit (if the source cannot apply enough power).

STEP 2: Press the “EDID Copy” button for 20–25 seconds and release the button right after the LED flashes white.

STEP 3: The LED flashes red and green alternately and then it lights blue, indicating that the copy is successful.

Otherwise, if you keep pressing the “EDID Copy” button for more than 25 seconds, it will light blue, indicating a failed setting.

Go to Step 3 again.

Appendix. Tables

A.1 Scale of Rotary Switch

A.1.1 Rotary Switch — PC-DVI Mode

Table A-1. PC-DVI Mode.

Position	Resolution
0	Auto
1	Manual
2	1024 x 768
3	1280 x 720
4	1280 x 1024
5	1366 x 768
6	1440 x 900
7	1600 x 900
8	1600 x 1200
9	1680 x 1050
A	1920 x 1080
B	1920 x 1200
C	1280 x 800
D	2048 x 1152
E	Reserved
F	Reserved

A.1.2 Rotary Switch—PC–HDMI Mode

Table A-2. PC–HDMI Mode.

Position	Resolution
0	Auto
1	Manual
2	1024 x 768
3	1280 x 720
4	1280 x 1024
5	1366 x 768
6	1440 x 900
7	1600 x 900
8	1600 x 1200
9	1680 x 1050
A	1920 x 1080
B	1920 x 1200
C	1280 x 800
D	2048 x 1152
E	720 x 480 Learn color inventory
F	720 x 576 Learn audio inventory

A.1.3 Rotary Switch—Memory Mode

Table A-3. Memory.

Position	Presets
0	Preset 1
1	Preset 2
2	Preset 3
3	Preset 4
4	Preset 5
5	Preset 6
6	Preset 7
7	Preset 8
8	Preset 9
9	Preset 10
A	Preset 11
B	Preset 12
C	Preset 13
D	Preset 14
E	Preset 15
F	—



A.1.4 Rotary Switch—AV Mode

Table A-4. AV Mode applications.

AV Mode		Frame Rate: 50 Hz		Frame Rate 60 Hz	
Position	Resolution	Interlaced (I)	Progressive (p) Non-interlaced	Interlaced (I)	Progressive (p) Non-interlaced
0	Auto	Automatically record connected display's EDID (ignore DIP switch 1–6)			
1	Manual	User recorded EDID (ignore DIP switch 5–6)			
2	1024 x 768	576i @ 50 Hz 640 x 480p @ 60 Hz	576p @ 50 Hz 640 x 480p @ 60 Hz	480i @ 60 Hz 640 x 480p @ 60 Hz	480p @ 60 Hz 640 x 480p @ 60 Hz
3	1280 x 720				
4	1280 x 1024				
5	1366 x 768	720p @ 50 Hz	720p @ 50 Hz	720p @ 60 Hz	720p @ 60 Hz
6	1440 x 900	720p @ 24 Hz 576i @ 50 Hz	720p @ 24 Hz 576p @ 50 Hz	720p @ 24 Hz 480i @ 60 Hz	720p @ 24 Hz 480p @ 60 Hz
7	1600 x 900	640 x 480p @ 60 Hz	640 x 480p @ 60 Hz	640 x 480p @ 60 Hz	640 x 480p @ 60 Hz
8	1600 x 1200				
9	1680 x 1050				
A	1920 x 1080	1080i @ 50 Hz 1080p @ 24 Hz 720p @ 50 Hz 720p @ 24 Hz 576i @ 50 Hz 640 x 480p @ 60 Hz	1080p @ 50 Hz 1080p @ 24 Hz 720p @ 50 Hz 720p @ 24 Hz 576p @ 50 Hz 640 x 480p @ 60 Hz	1080i @ 60 Hz 1080p @ 24 Hz 720p @ 60 Hz 720p @ 24 Hz 480i @ 60 Hz 640 x 480p @ 50 Hz	1080i @ 60 Hz 1080p @ 24 Hz 720p @ 60 Hz 720p @ 24 Hz 480p @ 60 Hz 640 x 480p @ 50 Hz
B	1920 x 1200				
C	1280 x 800	576i @ 50 Hz 640 x 480p @ 60 Hz	576p @ 50 Hz 640 x 480p @ 60 Hz	480i @ 60 Hz 640 x 480p @ 60 Hz	480p @ 60 Hz 640 x 480p @ 60 Hz
D	2048 x 1152	1080i @ 50 Hz 1080p @ 24 Hz 720p @ 50 Hz 720p @ 24 Hz 576i @ 50 Hz 640 x 480p @ 60 Hz	1080p @ 50 Hz 1080p @ 24 Hz 720p @ 50 Hz 720p @ 24 Hz 576p @ 50 Hz 640 x 480p @ 60 Hz	1080i @ 60 Hz 1080p @ 24 Hz 720p @ 60 Hz 720p @ 24 Hz 480i @ 60 Hz 640 x 480p @ 60 Hz	1080p @ 60 Hz 1080p @ 24 Hz 720p @ 60 Hz 720p @ 24 Hz 480p @ 60 Hz 640 x 480p @ 60 Hz
E	720 x 480	480i @ 50 Hz 640 x 480p @ 60 Hz	480p @ 50 Hz 640 x 480p @ 60 Hz	480i @ 60 Hz 640 x 480p @ 60 Hz	480p @ 60 Hz 640 x 480p @ 60 Hz
F	720 x 576	576i @ 50 Hz 640 x 480p @ 60 Hz	575p @ 50 Hz 640 x 480p @ 60 Hz	480i @ 60 Hz 640 x 480p @ 60 Hz	480p @ 60 Hz 640 x 480p @ 60 Hz

A.2 EDID Copy

Table 4-10. DIP switch settings.

Function	Slide Switch	Rotary Switch	DIP Switch (1–6)
			
Copy EDID (Whole)	PC/AV	0 (Auto)	—
		1 (Manual)	—
	Memory	0–9, A–E (15 presets for storage)	—
Copy EDID (Video–Color)	PC/AV	E	3 (ON) and 4 (ON)
	PC/AV	F	1 (ON) and 2 (ON)
Copy EDID (Audio)	Memory	F	1 (ON) and 2 (ON)
			1 (ON) and 2 (OFF)
			1 (OFF) and 2 (ON)
			1 (OFF) and 2 (OFF)
			(4 presets for storage)

A.3 PC–DVI Mode

- a) Slide switch: PC Mode
- b) Rotary switch: See scale of rotary switch (Table 2-2).
- c) DIP switch: ON (UP)/OFF (DOWN)

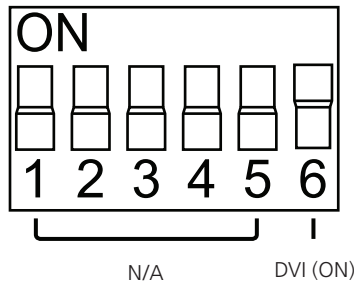


Figure A-1. DIP switch settings for DVI mode.

NOTE: Rotary Switch:

Position 0: Automatically record connected display's EDID (ignore DIP switch 1–5).

Position 1: Require EDID Copy performance in advance.

A.4 PC-HDMI Mode

- a) Slide switch: PC Mode.
- b) Rotary switch: See scale of rotary switch (Table 2-3).
- c) DIP switch: ON (UP)/OFF (DOWN)

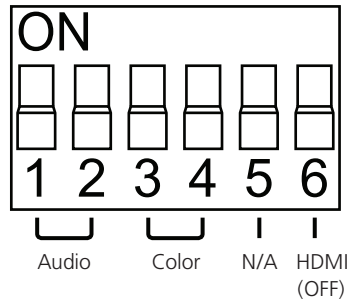


Figure A-2. DIP switch settings for HDMI mode.

Table A-6. DIP switch Positions 1 and 2 settings.

DIP Switch Audio		
1	2	Setting
ON	ON	Inventory
ON	OFF	7.1 CH
OFF	ON	5.1 CH
OFF	OFF	2 CH

Table A-7. DIP switch Positions 3 and 4 settings.

DIP Switch Color		
3	4	Setting
ON	ON	Inventory
ON	OFF	RGB only
OFF	ON	+YCbCr
OFF	OFF	+Deep Color

NOTE: Rotary switch:

Position 0: Automatically record connected display's EDID (ignore DIP switch 1–5).

Position 1: Require EDID Copy performance in advance.

A.5 AV Mode System Configuration

- a) Set the slide switch to AV Mode.
- b) Rotary switch: See scale of rotary switch (Table 2-5).
- c) DIP switch: ON (UP)/OFF (DOWN)

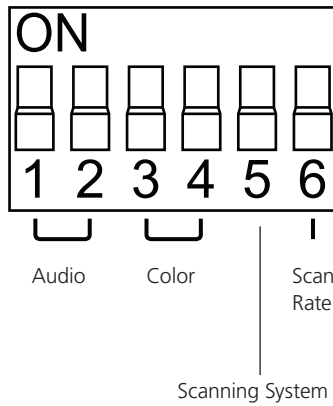


Figure A-3. AV mode DIP switch settings.

Table A-8. DIP switch Positions 1 and 2 Audio settings.

DIP Switch Position		Setting
1	2	
ON	ON	Inventory
ON	OFF	7.1 CH
OFF	ON	5.1 CH
OFF	OFF	2 CH

Table A-9. DIP switch Positions 3 and 4 Color settings.

DIP Switch Position		Setting
1	2	
ON	ON	Inventory
ON	OFF	RGB only
OFF	ON	+YCbCr
OFF	OFF	+Deep Color

Table A-10. DIP switch scanning system.

DIP Switch Position	Setting
5	Interlaced
OFF	Progressive (Non-interlaced)

Table A-11. DIP switch scan rate.

DIP Switch Position	Setting
6	
ON	50 Hz
OFF	60 Hz

NOTE: Rotary switch:

Position 0: Automatically record connected display's EDID (ignore DIP switch 1–6).

Position 1: Require EDID Copy performance in advance (ignore DIP switch 5–6).

NOTE: Users may copy audio and/or color information (HDMI source only) for further uses.

A.6 Memory Mode System Configuration

a) Slide switch: Memory Mode

b) Rotary switch: 0–9, A–E (15 presets for storage; see Figure A-4).

c) DIP switch: ON (UP)/OFF (DOWN)

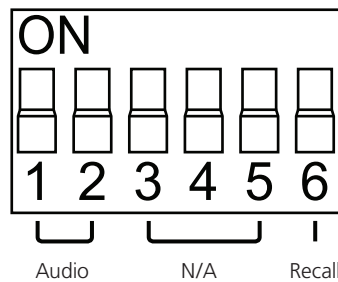


Figure A-4. DIP switch Memory Mode System Configuration.

Table A-11. DIP switch audio.

DIP Switch Position		Setting
1	2	
ON	ON	Audio Inventory 0
ON	OFF	Audio Inventory 1
OFF	ON	Audio Inventory 2
OFF	OFF	Audio Inventory 3



Table A-12. DIP switch Recall.

DIP Switch Position	Setting
6	Setting
ON	Combo type: Recall audio data from Audio Inventory 0–3 and other datas from Table 2-4.
OFF	Non-combo type: Recall whole EDID data from Table 2-4.

NOTE: Inventory 0–3 needs EDID Copy performance in advance.

A.7 EDID Emulation Operation Steps

Table A-13. EDID Emulation settings.


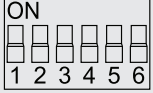
Function	Slide Switch	Rotary Switch	DIP Switch (1–6)
			
For DVI display/PC	PC	0–F (see Table 2-2)	See Figure 4-2
For HDMI display/PC	PC	0–F (see Table 2-3)	See Figure 4-3
For HDMI display/AV	AV	0–F (see Table 2-5)	See Figure 4-4
Combo Type	Memory	0–E (see Table 2-4)	See Figure 4-5 and Table 4-8
Non-combo Type	Memory	0–E (see Table 2-4)	See Figure 4-5 and Table 4-8

NOTES:

1. Hold/wait for 2–3 seconds after adjustment steps.
2. Some devices may need system reboot after adjustment.

A.8 Factory Default Setting

Table 4-10. DIP switch settings.

Function	Slide Switch	Rotary Switch	DIP Switch (1–6)
			
Copy EDID (Whole)	PC/AV	0 (Auto)	—
		1 (Manual)	—
	Memory	0–9, A–E (15 presets for storage)	—
Copy EDID (Video–Color)	PC/AV	E	3 (ON) and 4 (ON)
Copy EDID (Audio)	PC/AV	F	1 (ON) and 2 (ON)
	Memory	F	1 (ON) and 2 (ON)
			1 (ON) and 2 (OFF) 1 (OFF) and 2 (ON) 1 (OFF) and 2 (OFF)
			(4 presets for storage)

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