

4k2k HDMI EDID Emulator - ID# 15227



Operation Manual

Introduction

The HDMI EDID Emulator is designed to allow the adjustment of HDMI/DVI EDID information that is provided to a source device by a connected display so that it can output the correct video/audio signal. Aiming to simplify the technical complications involved in video/audio system integration, home theater installation, video/audio equipment testing and experimentation, the unit's learning function allows the user to Read and Write the video/audio EDID to the system. It also supports EDID Emulation and Bypass modes.

Features

- HDMI and DVI 1.0 compliant
- Supports the following HDMI features:
 - High video bandwidth up to 300MHz/9Gbps
 - Resolutions up to 1080p@60Hz and 4K×2K@24/25/30Hz
 - 12-bit Deep Color
 - LPCM 7.1CH, Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio (Sampling rates from 32kHz to 192kHz)
- Supports four different EDID functions:
 - Read: Reads the TV/display's EDID information
 - Write: Overwrites the TV/display's EDID information (TV/display needs to support overwrite function)
 - Emulator: Allows the source device to read the selected EDID information from the unit's Default or Learned EDID memory
 - Bypass: Allows the source device to read the EDID information directly from the TV/display
- Supports up to 8 sets of default EDID settings
- Supports DVI sources by using a HDMI to DVI adaptor
- Supports CEC and EDID pass-through
- Supports being powered by USB or compatible HDMI input

Applications

- HDMI/DVI EDID manipulation
- Video/Audio system integration and home theater installation
- Video/Audio equipment testing
- EDID preset management

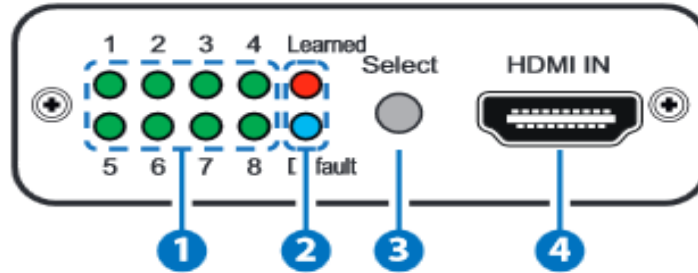
System Requirements

Video/Audio source device, TV/display equipment with HDMI input and output.



Operation Controls and Functions

Front Panel



1. 1~8 LEDs:

When in 'Learned' or 'Default' mode, each of these LEDs indicates a different EDID setting (1 to 8). Repeatedly press the 'Select' button to switch between settings, the LED will illuminate to indicate the current selected settings.

2. Learned LED:

Select the 'Learned' mode to save up to 8 unique sets of HDMI EDID settings. Please refer to the "EDID learning procedure" Section below.

Default LED:

Select the 'Default' mode to use the built-in default EDID settings, press 'Select' button to choose from 1~8. Please refer to "the default EDID settings" Section Below.

3. Select Button:

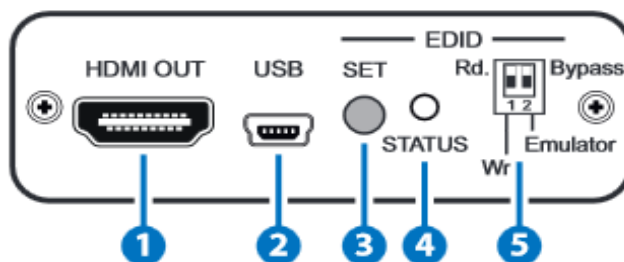
Press for 3 seconds to switch between the 'Learned' and 'Default' modes, the LED will illuminate to indicate the selected mode.

Then repeatedly press the 'Select' button to cycle through EDID settings (1 to 8).

4. HDMI IN:

Connect to an HDMI source such as a DVD/Blu-ray or set-top box. The unit can also be powered by a source device that provides power over the HDMI connection.

Back Panel



1. HDMI OUT:

Connect to an HDMI equipped TV/display.

EDID Learning Procedure

2. USB:

Connect the Mini-USB cable to an active USB device to power the system. It can also be powered from a device that has HDMI connection that supplies power.

3. EDID SET Button:

Press to execute the EDID Read/Write function.

4. EDID STATUS LED:

Indicates the EDID Read/Write status.

5. EDID Switch:

Selects the Read/Write and Bypass/Emulator functions.

Rd (Read):

Sets the Emulator mode to 'Read' Please refer to the "EDID learning procedure" Section below.

Wr (Write):

Sets the Emulator mode to 'Write' Please refer to the "EDID learning procedure" Section below.

Emulator:

When the DIP switch is set to the 'Emulator' position, the Video/Audio source device will read the unit's current set EDID (1~8). To change to another EDID, press the 'Select' button to switch between settings, the LED will illuminate to indicate the current selected settings.

Bypass:

When the DIP switch is set to 'Bypass' position, the Video/Audio source device will read HDMI TV/display's EDID settings directly.

To Read the EDID:

1. Connect a TV/display to the HDMI output for EDID reading.
2. Set the 'Emulator/Bypass (2)' switch to 'Emulator' first then set the 'Rd/Wr (1)' switch to the 'Rd. (Read)' position.
3. Press the 'Select' button for 3 seconds to put the unit into 'Learned' mode.
4. Press the 'Select' button repeatedly to cycle through to the required 1 to 8 EDID setting.
5. Press the 'SET' button for 3 seconds to write the EDID to the corresponding memory as indicated by the LED.
6. When the 'STATUS' LED illuminates in Green the EDID learning has been successful but if the 'STATUS' LED is Red the learning has failed.

To Write the EDID:

1. Connect a TV/display to the HDMI output for EDID writing.
2. Set the 'Emulator/Bypass (2)' switch to 'Emulator' first then set the 'Rd/Wr (1)' switch to the 'Wr. (Write)' position.
3. Press the 'Select' button repeatedly to cycle through to the required 'Learned/Default' 1 to 8 EDID setting.
4. Press the 'SET' button for 3 seconds to overwrite the HDMI TV/

display EDID setting. The 'STATUS' LED will blink during the writing process.

5. When the 'STATUS' LED illuminates in Green the EDID writing has been successful but if the Status LED is Red the writing has failed. If the 'STATUS' LED did not blink and illuminate in Red it means TV's EDID is not writable.

Warning: *Once the writing is successfully done the original EDID will be erased. It is recommended that the original EDID settings are backed-up by storing them in the unit before performing the overwrite. Caution is advised when using this function*

Default EDID Settings

LED No.	VIDEO	AUDIO
1	DVI	N/A
2	1080p@60Hz, 8-bit	LPCM 2CH
3	1080p@60Hz, 12-bit Deep Color	LPCM 2CH
4	3D or 1080p@60Hz, 12-bit Deep Color	LPCM 2CH
5	4K×2K@24/25/30Hz	LPCM 2CH
6	1080p@60Hz, 8-bit	LPCM 5.1CH
7	3D or 1080p@60Hz, 12-bit Deep Color	Dolby TrueHD or DTS-HD Master Audio
8	4K×2K@24/25/30Hz or 3D	Dolby TrueHD or DTS-HD Master Audio

EDID Application Installation

The following section lists the procedures to follow when installing the EDID application on your Windows PC. Please follow the steps outlined below to successfully install the software.

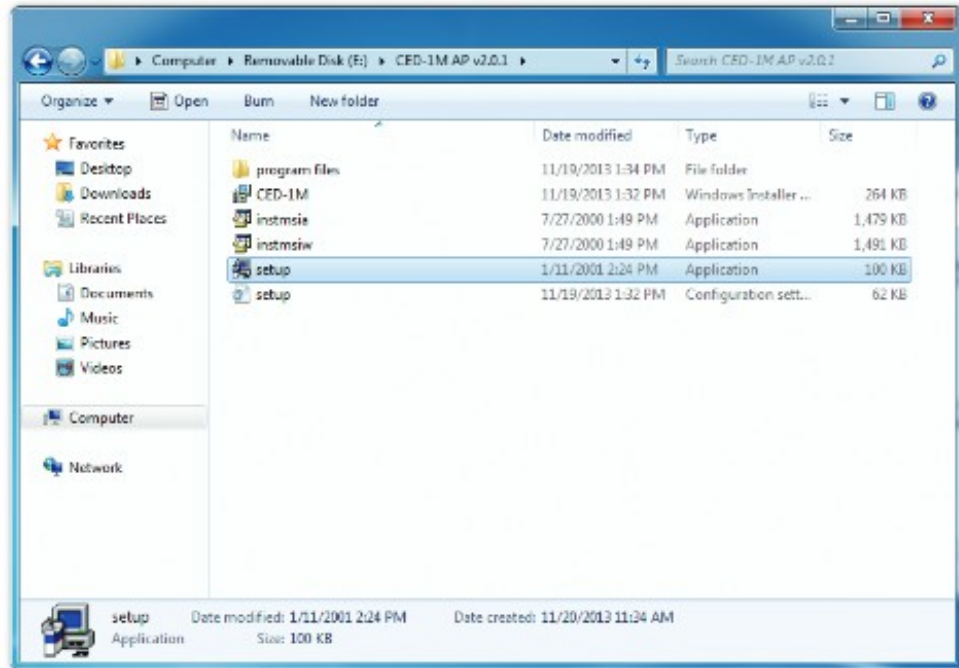
The application can be downloaded from the product page on the Cypress website

(<http://en.cypress.com.tw/store/catalog/app/product/CED-1M/HDMI-EDID-Emulator>) and selecting the 'Downloads' tab.



Once the software has downloaded to the PC, navigate to the download location and extract the installation folder from the compressed file by right clicking on the .zip file and selecting 'Extract to Folder'

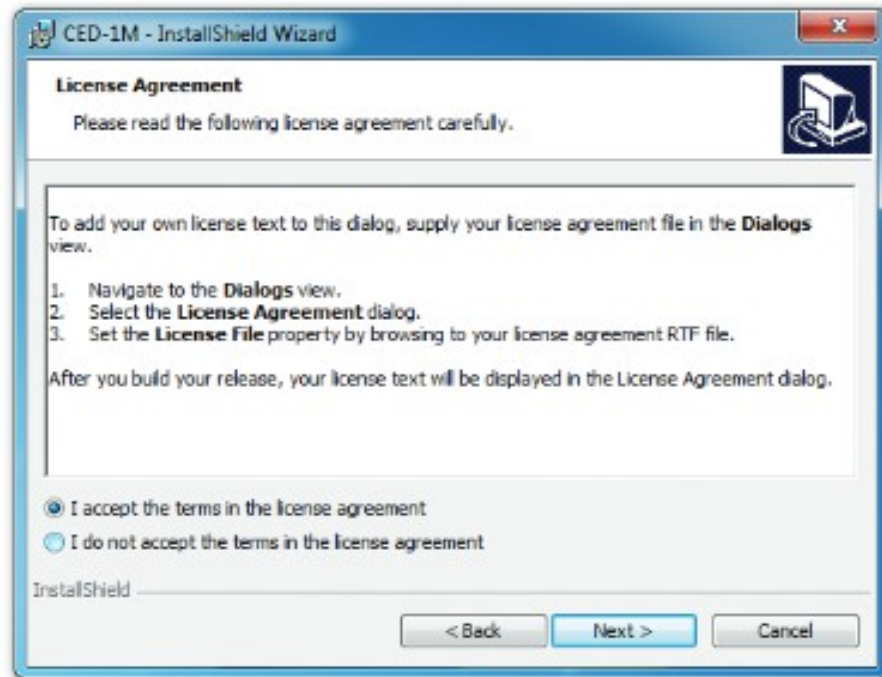
Once the software has extracted, enter the folder and double click on the 'setup' application icon (highlighted below) to begin the installation process.



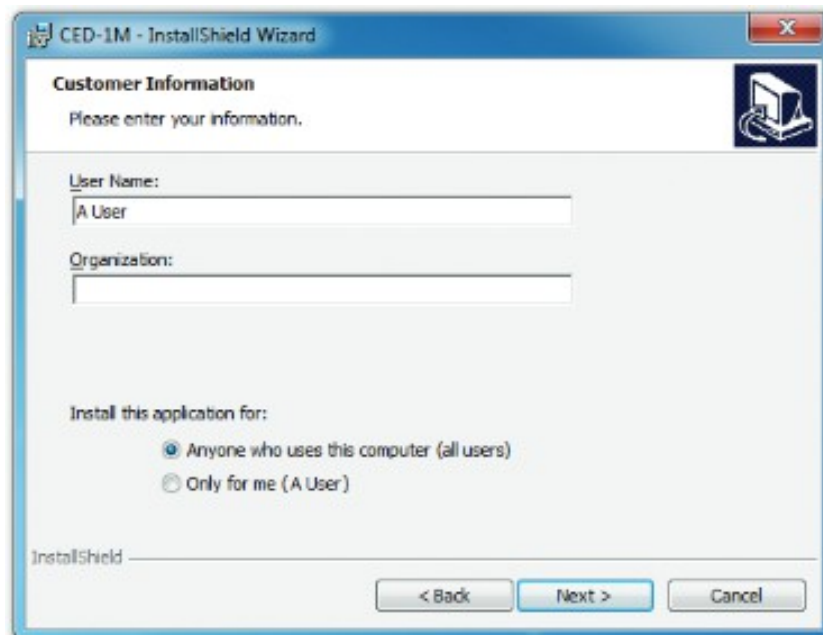
The installation wizard will appear, click 'Next' to continue the installation.



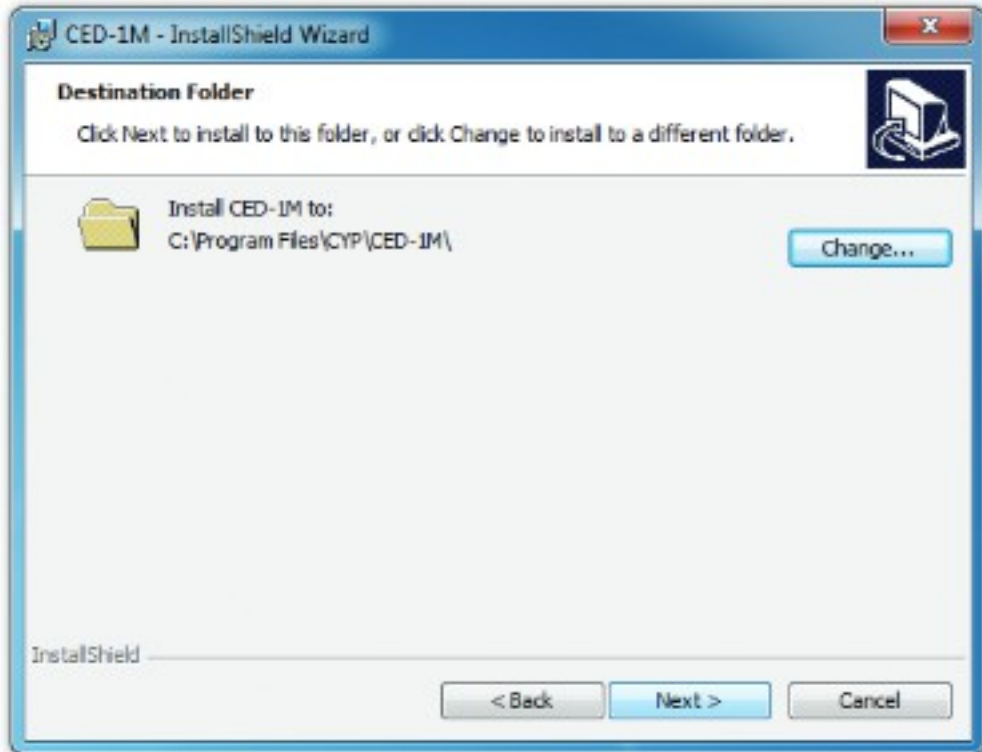
Click on 'I accept ...' and then 'Next' to accept the license terms to continue the installation.



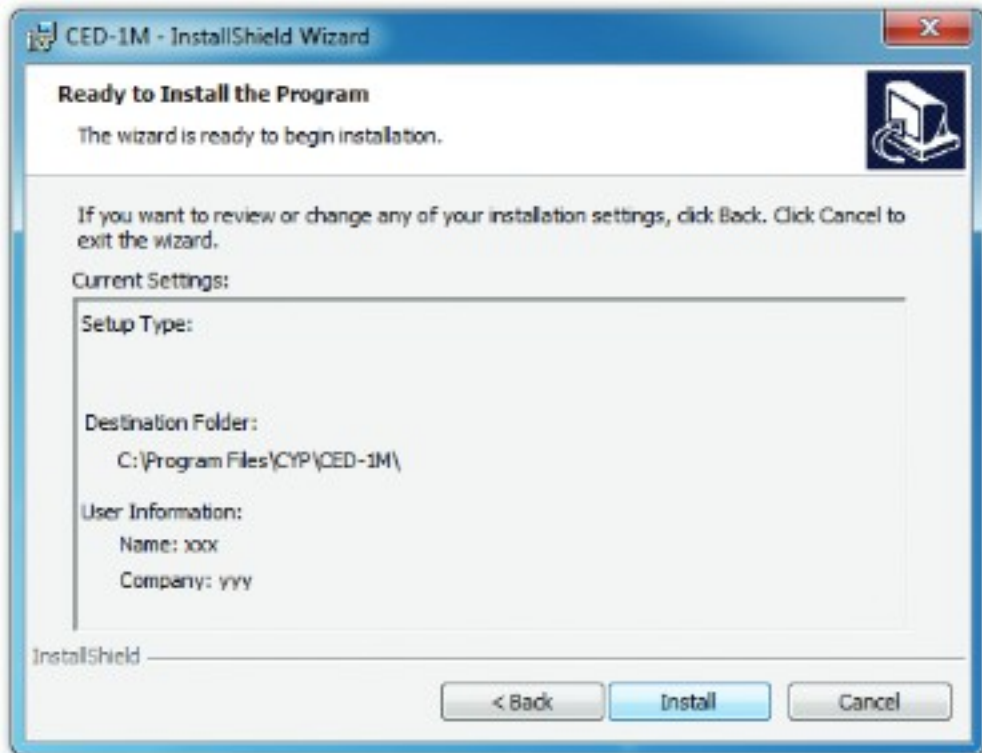
Insert the user name and set the access rights for this application as required and click on 'Next' to continue.



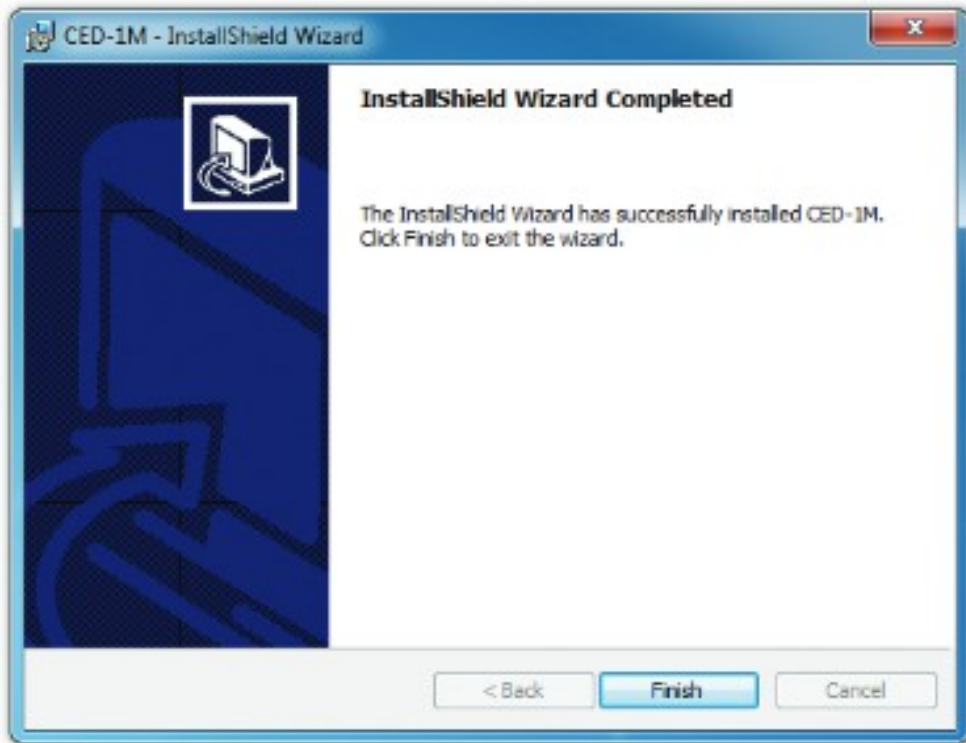
Choose a location to install the application, default is 'C:\Program Files\CYP\CED-1M'. Click on 'Next' to continue.



Click on 'Install' to confirm the user name and save location.



Click on 'Finish' to complete the installation.

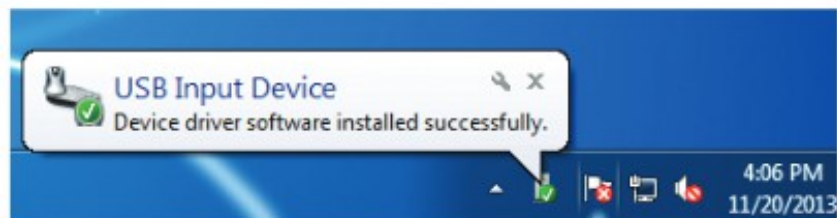


An icon will appear on the desktop to indicate the successful installation of the application.

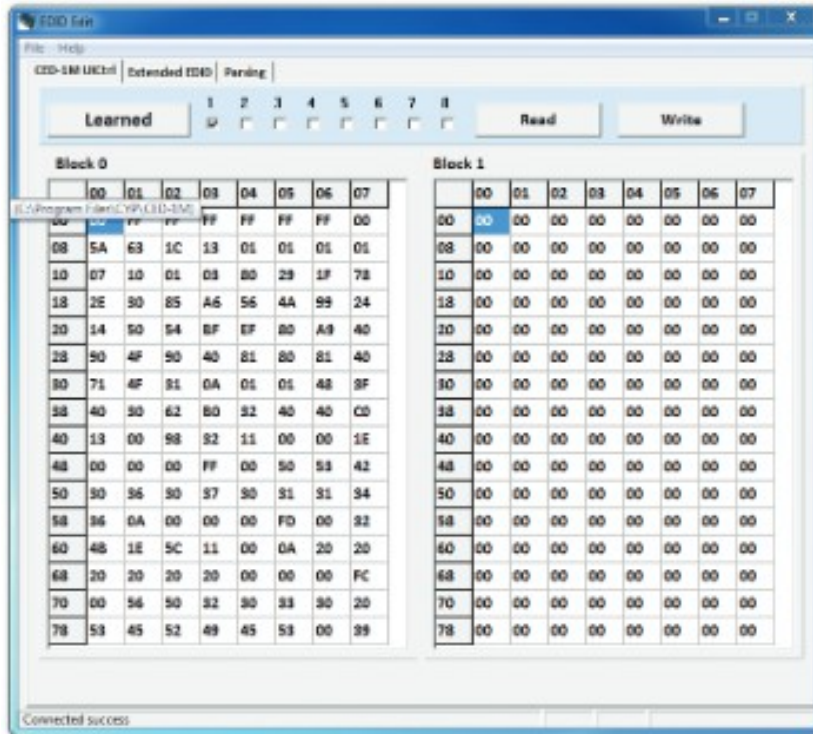


Using the EDID Application

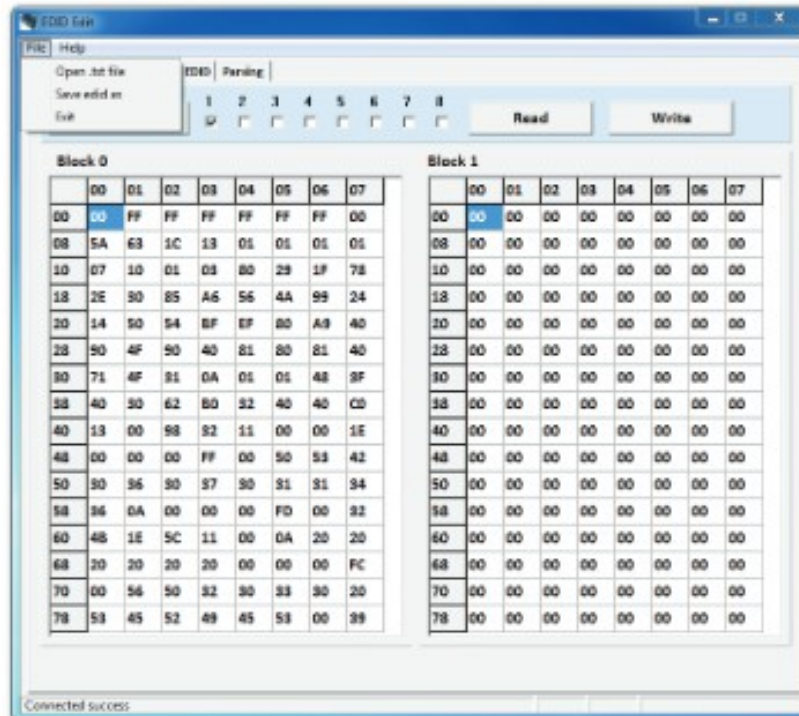
Ensure that the HDMI EDID Emulator device is connected to the PC and that the driver has installed successfully before double clicking on the 'CED-1M' icon to start using the application.



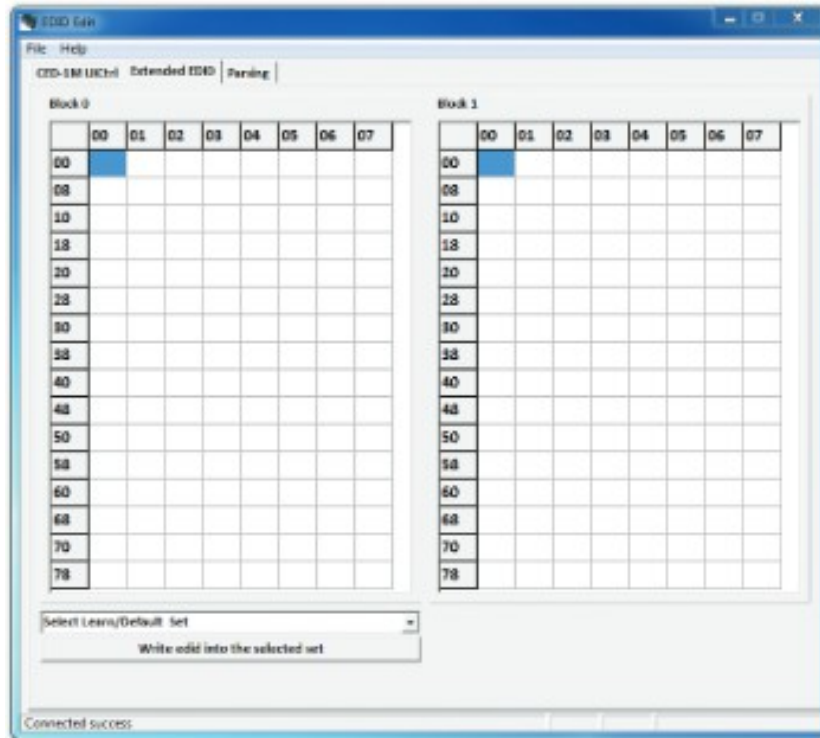
The EDID Application includes EDID Learning, Reading, Writing and Default settings.



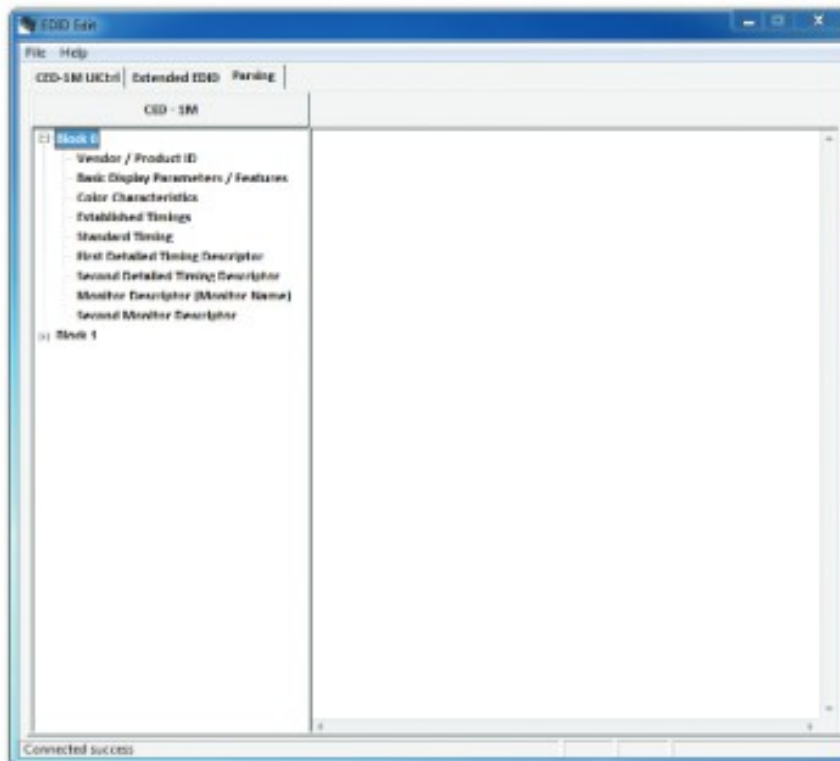
Click on 'File' to save the Learned and Default EDID settings (up to 8 sets each). Click on the 'Learned/Default' button to switch between modes.



Click on 'Extended EDID' with File's 'Open .text file' to save the contents of the Learned EDID's amended contents.



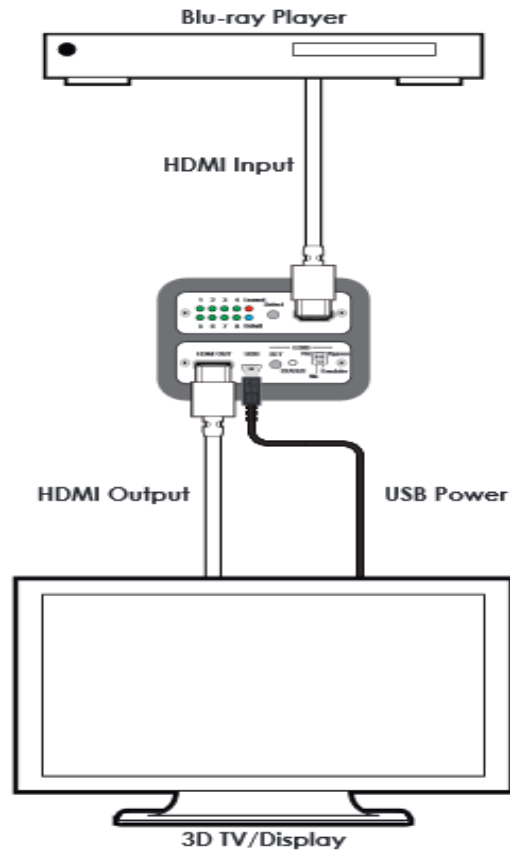
Click on 'Parsing' to display the contents of EDID Block 0 and 1.



Specifications

Video Bandwidth	300Mbps/9Gbps
Input Ports	1×HDMI, 1×Mini-USB (Power only)
Output Port	1×HDMI
HDMI Input Cable Distance	10m@1080p/12-bit, 5m@4K×2K
HDMI Output Cable Distance	10m@1080p/12-bit, 5m@4K×2K
Resolutions	Up to 4K×2K@24/25/30Hz
USB Power	5V/500mA
Dimensions	71mm(W)×71mm(D)×23mm(H)
Weight	108g
Chassis Material	Metal
Color	Black
ESD Protection	Human body model: ±8kV (air-gap discharge) ±4kV (contact discharge)
Operating Temperature	0 °C ~ 40 °C
Storage Temperature	-20 °C ~ 60 °C / -4 °F ~ 140 °F
Relative Humidity	20 ~ 90 % RH (non-condensing)
Power Consumption	2.5W

Connection Diagram



Note: In this example the unit is powered by a USB port on the TV/Display. It can also be powered by a compatible device that can provide power over HDMI