

Kramer Electronics, Ltd.



USER MANUAL

Model:

VA-1DVIN

Virtual EDID

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1 Introduction

Welcome to Kramer Electronics! Since 1981, Kramer Electronics has been providing a world of unique, creative, and affordable solutions to the vast range of problems that confront the video, audio, presentation, and broadcasting professional on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better! Our 1,000-plus different models now appear in 11 groups¹ that are clearly defined by function.

Congratulations on purchasing your Kramer Pico TOOLS **VA-1DVIN** *Virtual EDID*, which is ideal for:

- Presentation graphics distribution
- Graphics production studios
- Extending a display away from the computer

Each package includes the following items:

- **VA-1DVIN** *Virtual EDID*
- Power adapter (5V DC Input)
- This user manual²

2 Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment
- Review the contents of this user manual
- Use Kramer high performance high-resolution cables³

¹ GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Matrix Switchers; GROUP 3: Control Systems; GROUP 4: Format/Standards Converters; GROUP 5: Range Extenders and Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scan Converters and Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; GROUP 10: Accessories and Rack Adapters; GROUP 11: Sierra Products

² Download up-to-date Kramer user manuals from our Web site at <http://www.kramerelectronics.com>

³ The complete list of Kramer cables is on our Web site at <http://www.kramerelectronics.com>

3 Overview

The Kramer **VA-1DVIN** is a unique DVI EDID emulator, with a DVI-D input and DVI-D output on DVI-I connectors¹. When connecting the **VA-1DVIN** to a display device and pressing the CAPTURE EDID button, the **VA-1DVIN** reads and stores the EDID (Extended Display Identification Data) from the display device². For example, when the DVI signal is extended more than 100 meters over fiber optic cable, the **VA-1DVIN** can emulate the EDID information³. The display can be disconnected and later reconnected, without rebooting the operating system.

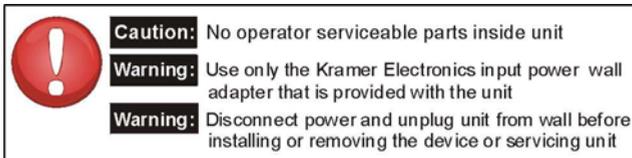
Note: The **VA-1DVIN** does not pass HDCP signals.

In addition, the **VA-1DVIN**:

- Features a maximum data rate of 3.3Gbps
- Is housed in a Pico TOOLS enclosure⁴
- Is fed from a 5V DC power supply

To achieve the best performance:

- Connect only good quality connection cables, thus avoiding interference, deterioration in signal quality due to poor matching, and elevated noise- levels (often associated with low quality cables)
- Avoid interference from neighboring electrical appliances and position your Kramer **VA-1DVIN** away from moisture, excessive sunlight and dust



1 Available for digital signals (DVI-D). Analog signals (DVI-I) are passed unchanged between the input and the output

2 The computer needs to have the EDID information available when it boots up, otherwise the DVI output will be disabled

3 The DDC (Digital Display Channel) cable has no effect for distances over 100 meters

4 Four units can be rack mounted side-by-side in a 1U rack space with the optional RK-4PT rack adapter

3.1 Defining EDID

The Extended Display Identification Data (EDID¹) is a data-structure, provided by a display, to describe its capabilities to a graphics card (that is connected to the display's source). The EDID enables the **source** (for example, a PC) to "know" what kind of monitor is connected to the output.

The EDID includes the manufacturer's name, the product type, the timing data supported by the display, the display size, luminance data and (for digital displays only) the pixel mapping data.

4 Your VA-1DVIN Virtual EDID

[Figure 1](#) and [Table 1](#) define the **VA-1DVIN** Virtual EDID:

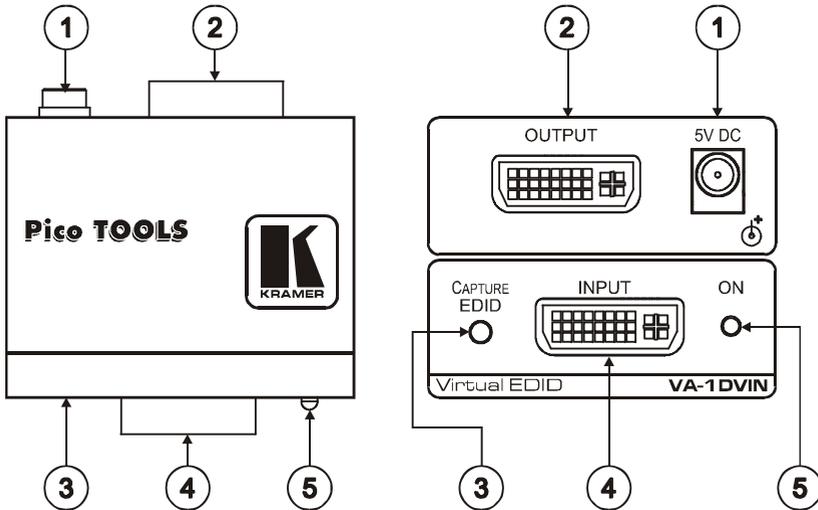


Figure 1: VA-1DVIN Virtual EDID

Table 1: VA-1DVIN Virtual EDID

#	Feature	Function
1	5V DC	+5V DC connector for powering the unit
2	OUTPUT DVI Connector	Connect to the DVI acceptor
3	CAPTURE EDID Button	Press to acquire EDID
4	INPUT DVI Connector	Connect to the DVI source
5	ON LED	Lights when the power is connected

¹ EDID is defined by a standard published by the Video Electronics Standards Association (VESA)

5 Connecting the VA-1DVIN Virtual EDID

In the example illustrated in [Figure 2](#) a projector is disconnected from a PC in order to reinstall it at a distance, after the PC has read the projector's acquired EDID from the **VA-1DVIN**. The projector is then reconnected, without the need to reboot the system.

The configuration illustrated in [Figure 3](#) requires two separate stages:

- The **VA-1DVIN** needs to acquire the projector's EDID information (see section [5.1](#))
- The PC is connected to the VA-1DVIN, letting it read the projector's EDID information even if it is not connected to the PC (see section [5.2](#)). The projector can now be reconnected at a distance to the PC via the **VA-1DVIN**

5.1 Acquiring the EDID

To use the **VA-1DVIN** to acquire the EDID information, as illustrated in the example in [Figure 2](#), do the following:

1. Connect the OUTPUT DVI connector to the input DVI connector of the display (for example, a projector), using a short cable.
2. Connect the 5V DC power adapter to the power socket and connect the adapter to the mains electricity¹ (not shown in this illustration). The ON LED should light.
3. Press the CAPTURE EDID button.
The ON LED turns off while the EDID information is read and stored in the **VA-1DVIN** non-volatile memory. When the ON LED lights again, the EDID is stored.
4. Disconnect the projector's DVI connector from the OUTPUT DVI on the **VA-1DVIN**.
5. Disconnect the power source.

¹ Also make sure that the projector is connected to the power supply

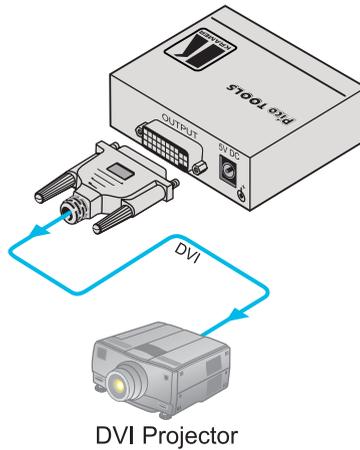


Figure 2: VA-1DVIN – Acquiring the EDID from the Display Device

5.2 Reconnecting the Projector

To reconnect the projector at a distance from the PC, as illustrated in the example in [Figure 3](#), do the following¹:

1. Connect a DVI source (for example, a DVI computer graphics source) to the INPUT DVI connector on the **VA-1DVIN**.

Turn on the DVI source only after connecting the VA-1DVIN, so it can acquire the EDID properly

2. If required², connect the 5V DC power adapter to the power socket and connect the adapter to the mains electricity.
3. When installation is complete³, connect the OUTPUT DVI connector of the **VA-1DVIN** to the projector, using the required cable length.

¹ Switch OFF the power on each device before connecting it to your VA-1DVIN

² Usually, the PC can supply power to the unit

³ The EDID is transmitted to the PC via the VA-1DVIN, so the PC gets the EDID information even if the projector is temporarily disconnected. When installing the display again at a distance, there is no need to reboot the PC

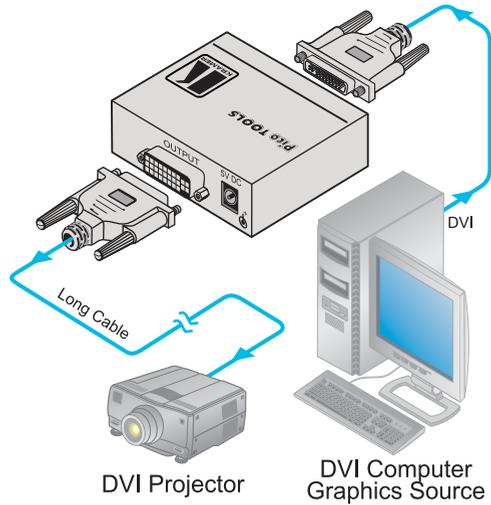


Figure 3: Connecting the VA-1DVIN Virtual EDID

6 Technical Specifications

[Table 2](#) includes the technical specifications:

Table 2: Technical Specifications¹ of the VA-1DVIN Virtual EDID

INPUT:	1 x DVI ² Dual Link, DVI 1.0, 1.2Vpp on a DVI Molex 24-pin female connector; DDC signal 5Vpp (TTL)
OUTPUT:	1 x DVI ² , Dual Link, DVI 1.0, 1.2Vpp on a DVI Molex 24-pin female connector; DDC signal 5Vpp (TTL)
BANDWIDTH:	3.3Gbps
CONTROLS:	Capture EDID button
POWER SOURCE:	5V DC, 20mA
DIMENSIONS:	6.22cm x 5.24cm x 2.41cm (2.45" x 2.06" x 0.95") W, D, H
WEIGHT:	0.15kg (0.55lbs) approx.
ACCESSORIES:	5V DC power supply
OPTIONS:	RK-4PT 19" rack adapter

¹ Specifications are subject to change without notice

² On a DVI connector, available for digital signals (DVI-D). Analog signals (DVI-I) are passed unchanged between the input and the output

LIMITED WARRANTY

Kramer Electronics (hereafter *Kramer*) warrants this product free from defects in material and workmanship under the following terms.

HOW LONG IS THE WARRANTY

Labor and parts are warranted for three years from the date of the first customer purchase.

WHO IS PROTECTED?

Only the first purchase customer may enforce this warranty.

WHAT IS COVERED AND WHAT IS NOT COVERED

Except as below, this warranty covers all defects in material or workmanship in this product. The following are not covered by the warranty:

1. Any product which is not distributed by Kramer, or which is not purchased from an authorized Kramer dealer. If you are uncertain as to whether a dealer is authorized, please contact Kramer at one of the agents listed in the Web site www.kramerelectronics.com.
2. Any product, on which the serial number has been defaced, modified or removed, or on which the WARRANTY VOID IF TAMPERED sticker has been torn, reattached, removed or otherwise interfered with.
3. Damage, deterioration or malfunction resulting from:
 - i) Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature
 - ii) Product modification, or failure to follow instructions supplied with the product
 - iii) Repair or attempted repair by anyone not authorized by Kramer
 - iv) Any shipment of the product (claims must be presented to the carrier)
 - v) Removal or installation of the product
 - vi) Any other cause, which does not relate to a product defect
 - vii) Cartons, equipment enclosures, cables or accessories used in conjunction with the product

WHAT WE WILL PAY FOR AND WHAT WE WILL NOT PAY FOR

We will pay labor and material expenses for covered items. We will not pay for the following:

1. Removal or installations charges.
2. Costs of initial technical adjustments (set-up), including adjustment of user controls or programming. These costs are the responsibility of the Kramer dealer from whom the product was purchased.
3. Shipping charges.

HOW YOU CAN GET WARRANTY SERVICE

1. To obtain service on you product, you must take or ship it prepaid to any authorized Kramer service center.
2. Whenever warranty service is required, the original dated invoice (or a copy) must be presented as proof of warranty coverage, and should be included in any shipment of the product. Please also include in any mailing a contact name, company, address, and a description of the problem(s).
3. For the name of the nearest Kramer authorized service center, consult your authorized dealer.

LIMITATION OF IMPLIED WARRANTIES

All implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty.

EXCLUSION OF DAMAGES

The liability of Kramer for any effective products is limited to the repair or replacement of the product at our option. Kramer shall not be liable for:

1. Damage to other property caused by defects in this product, damages based upon inconvenience, loss of use of the product, loss of time, commercial loss; or
2. Any other damages, whether incidental, consequential or otherwise. Some countries may not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from place to place.

NOTE: All products returned to Kramer for service must have prior approval. This may be obtained from your dealer.

This equipment has been tested to determine compliance with the requirements of:

- EN-50081: "Electromagnetic compatibility (EMC);
generic emission standard.
Part 1: Residential, commercial and light industry"
- EN-50082: "Electromagnetic compatibility (EMC) generic immunity standard.
Part 1: Residential, commercial and light industry environment".
- CFR-47:
FCC* Rules and Regulations:
Part 15: "Radio frequency devices
Subpart B Unintentional radiators"

CAUTION!

⊗ Servicing the machines can only be done by an authorized Kramer technician. Any user who makes changes or modifications to the unit without the expressed approval of the manufacturer will void user authority to operate the equipment.

⊗ Use the supplied DC power supply to feed power to the machine.

⊗ Please use recommended interconnection cables to connect the machine to other components.

* FCC and CE approved using STP cable (for twisted pair products)



For the latest information on our products and a list of Kramer distributors, visit our Web site: www.kramerelectronics.com, where updates to this user manual may be found. We welcome your questions, comments and feedback.



Caution

Safety Warning:

Disconnect the unit from the power supply before opening/servicing.



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Rev: 5

Kramer Electronics, Ltd.

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