# KRAMER





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## VM-2HDT, VM-3HDT Quick Start Guide

This guide helps you install and use your VM-2HDT, VM-3HDT for the first time.

Go to <u>www.kramerav.com/downloads/VM-2HDT</u> to download the latest user manual and check if firmware upgrades are available.

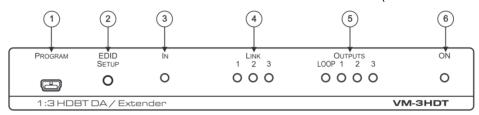
## Step 1: Check what's in the box

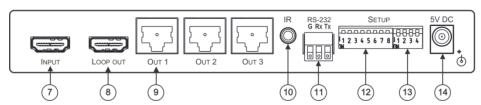
✓ VM-2HDT or VM-3HDT HDBT DA/Extender ✓ 4 Rubber feet ✓ 1 Bracket set

✓ 1 Power adapter and cord
 ✓ 1 Quick start guide

#### Step 2: Get to know your VM-2HDT, VM-3HDT

This section defines the VM-3HDT. VM-2HDT is identical but has 2 HDBT OUT connectors (OUT 1 and OUT 2).





| #  | Feature                      | Function  |  |
|----|------------------------------|---|--|
| 1  | PROGRAM Mini USB             | Use to send RS-232 commands.  |  |
|    | Connector                    | Connect to a PC to perform firmware upgrades (via K-Upload) and work with the EDID        |  |
|    |                              | Designer. K-Upload and EDID Designer can be downloaded from our Web site at:              |  |
|    |                              | www.kramerav.com/support  |  |
| 2  | EDID SETUP Button            | Press to capture one of the output EDIDs or the default EDID to the input EDID.           |  |
| 3  | IN LED                       | Lights when an active input signal is detected.   |  |
| 4  | LINK LEDs (1 to 3)           | Lights when a link is established with the receiver (VM-2HDT: 1 to 2).                    |  |
| 5  | OUTPUT LEDs (LOOP and 1 to   | Lights when an active output acceptor (sink) is detected on the LOOP or HDBaseT           |  |
|    | 3)                           | receiver that is connected to the output ( <b>VM-2HDT</b> : LOOP and 1 to 2).             |  |
| 6  | ON LED                       | Lights when the unit receives power.  |  |
| 7  | INPUT HDMI Connector         | Connects to the HDMI source.  |  |
| 8  | LOOP OUT HDMI Connector      | Connect to a local monitor or a daisy-chained distributor, for example, a VM-4HDT.        |  |
| 9  | HDBT OUT Connectors (1 to 3) | Connect to an HDBT acceptor, for example <b>TP-580R</b> ( <b>VM-2HDT</b> : 1 to 2).       |  |
| 10 | IR 3.5mm Mini Jack           | Connect to the remote IR sensor/emitter.  |  |
| 11 | RS-232 3-pin Terminal Block  | Connect to a serial controller to control a remote device that is connected to the RS-232 |  |
|    |                              | port of the HDbaseT receiver.   |  |
| 12 | SETUP 8-way DIP-switch       | Used to set the IR and RS-232 command behavior.   |  |
| 13 | SETUP 4-way DIP-switch       | For future use.   |  |
| 14 | 5V DC Connector              | Connects to the 5V DC power supply.   |  |



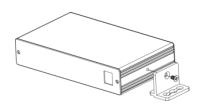
VM-2HDT, VM-3HDT Quick Start (P/N: 2900-300859QS REV 1)

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#### Step 3: Install VM-2HDT, VM-3HDT

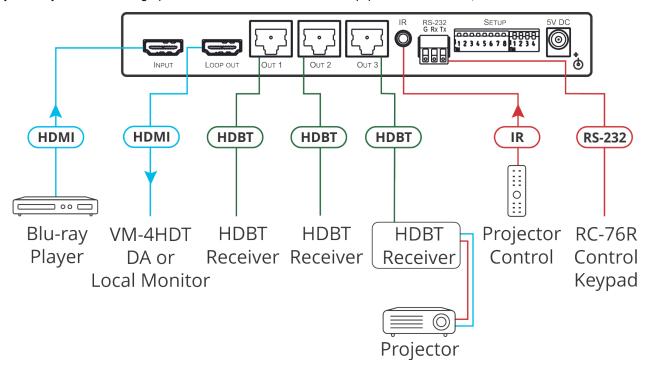
Install VM-2HDT, VM-3HDT using one of the following methods:

- · Attach the rubber feet and place the unit on a flat surface.
- Fasten a bracket (included) on each side of the unit and attach it to a flat surface.
   For more information go to <a href="https://www.kramerav.com/downloads/VM-2HDT">www.kramerav.com/downloads/VM-2HDT</a>, VM-3HDT.
- Mount the unit in a rack using an optional RK-T2B rack adapter.



#### Step 4: Connect the inputs and outputs

Always switch OFF the power on each device before connecting it to your **VM-2HDT**, **VM-3HDT**. For best results, we recommend that you always use Kramer high-performance cables to connect AV equipment to **VM-2HDT**, **VM-3HDT**.



### Step 5: Connect the power

Connect the 5V DC power adapter to **VM-2HDT**, **VM-3HDT** and plug it into the mains electricity. **Safety Instructions** 



**Caution:** There are no operator serviceable parts inside the unit.

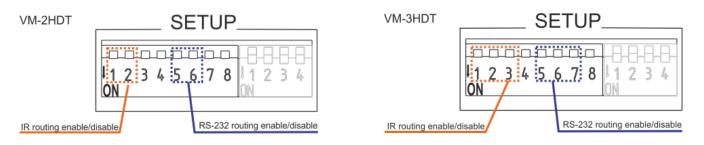
**Warning:** Use only the Kramer Electronics power supply that is provided with the unit. **Warning:** Disconnect the power and unplug the unit from the wall before installing.

See  $\underline{www.KramerAV.com}$  for updated safety information.

## Step 6: Operate VM-2HDT, VM-3HDT

To enable/disable IR and RS-232 routing, set the DIP-switches (by default, set to OFF) as follows:

| Out#  | IR Routing is enabled when: | RS-232 Routing is enabled when: |
|-------|-----------------------------|---------------------------------|
| OUT 1 | DIP 1 – OFF (up)            | DIP 5 – OFF (up)                |
| OUT 2 | DIP 2 – OFF (up)            | DIP 6 – OFF (up)                |
| OUT 3 | DIP 3 – OFF (up)            | DIP 7 – OFF (up)                |



#### Acquire EDID by:

- Manually sending RS-232 serial commands via a touch screen connected to USB.
- Using the Kramer EDID Designer tool connected to USB.
- Pressing the EDID SETUP front panel button.

#### USB:

| RS-232  |   |  |  |  |  |  |  |
|---|---|--|--|--|--|--|--|
| Baud Rate:  | 115200  |  |  |  |  |  |  |
| Data Bits:  | 8   |  |  |  |  |  |  |
| Command Format:   | ASCII   |  |  |  |  |  |  |
| Stop Bits:  | 1   |  |  |  |  |  |  |
| Parity: None  |   |  |  |  |  |  |  |
| Example (Copy the EDID data from the Output 1 to the Input): "#CPEDID 1,1,0 <cr></cr> |   |  |  |  |  |  |  |
| Factory Reset   |   |  |  |  |  |  |  |
| Protocol 3000:  | #FACTORY command to reset to factory default configuration. |  |  |  |  |  |  |

#### To Read the EDID via EDID SETUP front panel button:

1. Press EDID SETUP.

The LEDs indicate the current EDID source:

Default EDID – all the connected output LEDs flash.

An output – that output LED lights for about 5 seconds.

- 2. Press EDID SETUP.
- 3. Press repeatedly to cycle through EDID source options until the desired EDID source is selected: OUT 1>OUT 2>OUT 3>all LEDs flash (OUT 1 and OUT 2 for **VM-2HDT**).
- 4. Wait a few seconds for **VM-2HDT**, **VM-3HDT** to read the EDID.

  When complete, all the LEDs return to normal operation and display the current output connection status.

If a disconnected output is chosen, the VM-2HDT, VM-3HDT loads the default EDID.

#### To force RGB mode:

To force the EDID to support only RGB color space:

- 1. Press and hold **EDID SETUP** until all the LEDs fast-flash together several times then turn off.
- 2. If required, read the EDID.

To return to normal mode:

- 1. Press and hold **EDID SETUP** until all the LEDs flash once.
- 2. If required, read the EDID.

## **Technical Specifications**

|                                 | VM-2HDT                                     | VM-3HDT             |   |
|---------------------------------|---|---------------------|---|
| Inputs                          | 1 HDMI                                      | 1 HDMI              | On a female HDMI connector                        |
| Outputs                         | 1 LOOP HDMI                                 | 1 LOOP HDMI         | On a female HDMI connector                        |
|                                 | 2 HDBT                                      | 3 HDBT              | On RJ-45 female connectors                        |
| Ports                           | 1 USB                                       | 1 USB               | On a Mini female connector                        |
|                                 | 1 RS-232                                    | 1 RS-232            | On a 3-pin terminal block connector               |
|                                 | 1 IR  | 1 IR                | On a 3.5mm mini jack                              |
| Maximum Extension Range         | 40m (130ft)                                 |                     | At 4K@60Hz (4:2:0)                                |
|                                 | 70m (230ft)                                 |                     | At full HD (1080p@60Hz 36bpp)                     |
| Video                           | Max. Resolution  Max. Data Rate  Compliance |                     | 4K@30Hz and 4K@60Hz 4:2:0                         |
|                                 |   |                     | 10.2Gbps (3.4Gbps per graphic channel)            |
|                                 |   |                     | Supports HDMI 2.0, HDCP 1.4, and HDBaseT 1.0      |
| Control                         | Front Panel                                 |                     | EDID setup button                                 |
|                                 |   |                     | IN, LINK, OUTPUT and ON indication LEDs           |
|                                 | Rear Panel                                  |                     | DIP-switches                                      |
| Power Consumption               | 5V DC, 1.6A                                 | 5V DC 2.1A          |   |
| Power Source                    | 5V DC, 4A                                   |                     |   |
| Environmental Conditions        | Operating Temperature                       |                     | 0° to +40°C (32° to 104°F)                        |
|                                 | Storage Temperature                         |                     | -40° to +70°C (-40° to 158°F)                     |
|                                 | Humidity                                    |                     | 10% to 90%, RH non-condensing                     |
| General                         | Net Dimensions (W, D, H)                    |                     | 18.8cm x 11.5 cm x 2.54cm<br>(7.4" x 4.53" x 1.") |
|                                 | Shipping Dimensions (W, D, H)               |                     | 34.5cm x 16.5cm x 5.2cm<br>(13.6" x 6.5" x 2.05") |
|                                 | Net Weight                                  |                     | 0.53kg (1.17lbs) approx.                          |
|                                 | Shipping Weight                             |                     | 1.29kg (2.84lbs) approx.                          |
| Accessories                     | Included                                    |                     | Power adapter and cord                            |
| Specifications are subject to o | change without notice                       | at www.kramerav.com |   |

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