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## VM-214DT Quick Start Guide

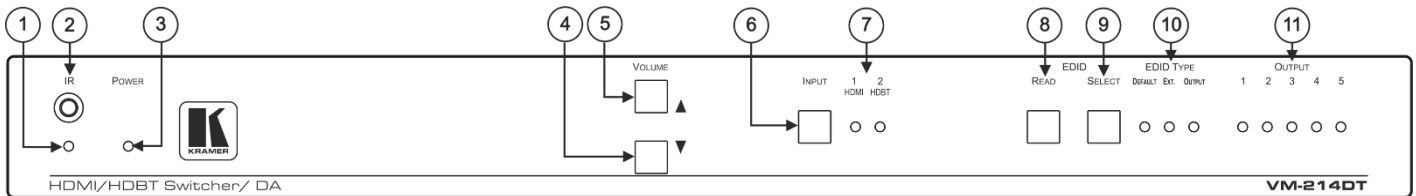
This guide helps you install and use your VM-214DT for the first time.

Go to [www.kramerav.com/downloads/VM-214DT](http://www.kramerav.com/downloads/VM-214DT) to download the latest user manual and check if firmware upgrades are available.

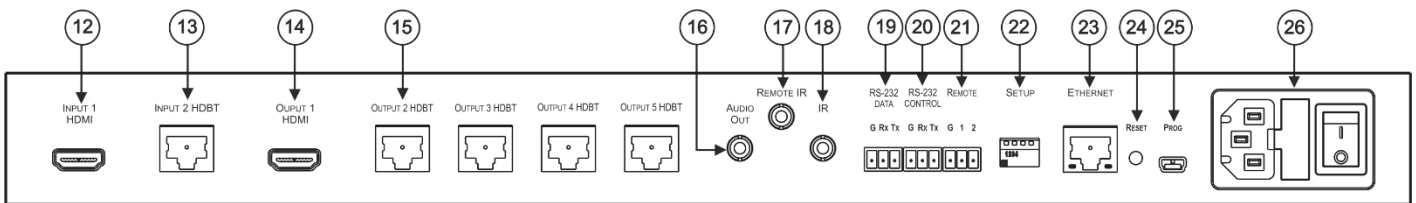
### Step 1: Check what's in the box

- ✓ VM-214DT HDMI/HDBT Switcher/DA
  - ✓ 1 Power cord
- ✓ 1 Quick start guide
  - ✓ 4 Rubber feet
- ✓ 1 Set of rack ears

### Step 2: Get to know your VM-214DT



#	Feature	Function
1	IR LED	Lights orange when the unit accepts IR remote commands.
2	IR Sensor	Extends a detected IR signal to the connected HDBT devices as defined in the Data Switching embedded web page – when an IR sensor is <b>not connected</b> to the IR 3.5mm mini jack on the rear panel. Disabled when the IR 3.5mm mini jack on the rear panel is connected.
3	POWER LED	Lights when the unit is powered.
4	VOLUME (▼)	Press to decrease the volume of the analog audio output.
5	VOLUME (▲)	Press to increase the volume of the analog audio output.
6	INPUT Selector Button	Press to select input 1 HDMI or input 2 HDBT.
7	HDMI / HDBT INPUT LED	Lights green to indicate that the HDMI 1 / HDBT 2 input is selected.
8	EDID READ Button	Press to read the selected EDID and write it to both inputs.
9	EDID SELECT Button	Press to cycle through the sources from which to read the EDID: Default, External, or Output. When Output is selected, cycles through outputs 1 to 9. The relevant EDID TYPE and OUTPUT LEDs light green.
10	EDID TYPE LEDs	Lights green to indicate that the DEFAULT EDID / EXT. (external) EDID / OUTPUT EDID is selected.
11	OUTPUT LEDs (1 to 5)	In normal operation mode: lights green when an acceptor is connected to the output. In EDID mode: when EDID TYPE OUTPUT LED lights green, press the EDID SELECT button briefly to cycle through output 1 to 9 to select the output from which to read EDID. The relevant LED lights during EDID setup and remains lit after completing the EDID setup.



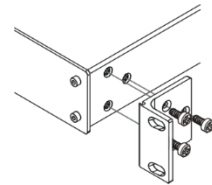
#	Feature	Function
12	INPUT 1 HDMI™ Connector	Connect to a local HDMI source.
13	INPUT 2 HDBT on RJ-45 Connectors	Connect to an HDBT transmitter (for example, <b>TP-580Txr</b> ).
14	OUT 1 HDMI Connector	Connect to a local HDMI acceptor.
15	OUT HDBT RJ-45 Connectors (2 to 5)	Connect to HDBT receivers (for example, <b>TP-580Rxr</b> ).
16	AUDIO OUT 3.5mm Mini Jack	Connect to an analog audio acceptor.
17	REMOTE IR 3-pin Terminal Block Connector	For future use.
18	IR on 3.5 Mini Jacks	Connect to an IR sensor/emitter cable to send/receive an IR control signal via HDBT links.
19	RS-232 DATA 3-pin Terminal Block Connector	Connect to serially control the devices that are connected to the HDBT transmitters/receivers via HDBT links.
20	RS-232 CONTROL 3-pin Terminal Block Connector	Connect to the serial controller to control the <b>VM-214DT</b> .
21	REMOTE 3-pin Terminal Block Connector	For future use
22	SETUP DIP-switches	Use to set the device behavior.
23	ETHERNET RJ-45 Connector	Connect to LAN for Ethernet extension via IN and OUT HDBT ports and remote IP control of the <b>VM-214DT</b> .
24	RESET Button	Press and hold while powering on the device to reset to factory default parameters.
25	PROG Mini USB Connector	Connect to a PC to perform firmware upgrades.
26	Mains Power Connector, Fuse, and Switch	Connect to the mains supply.

### Step 3: Install VM-214DT

Install **VM-214DT** using one of the following methods:

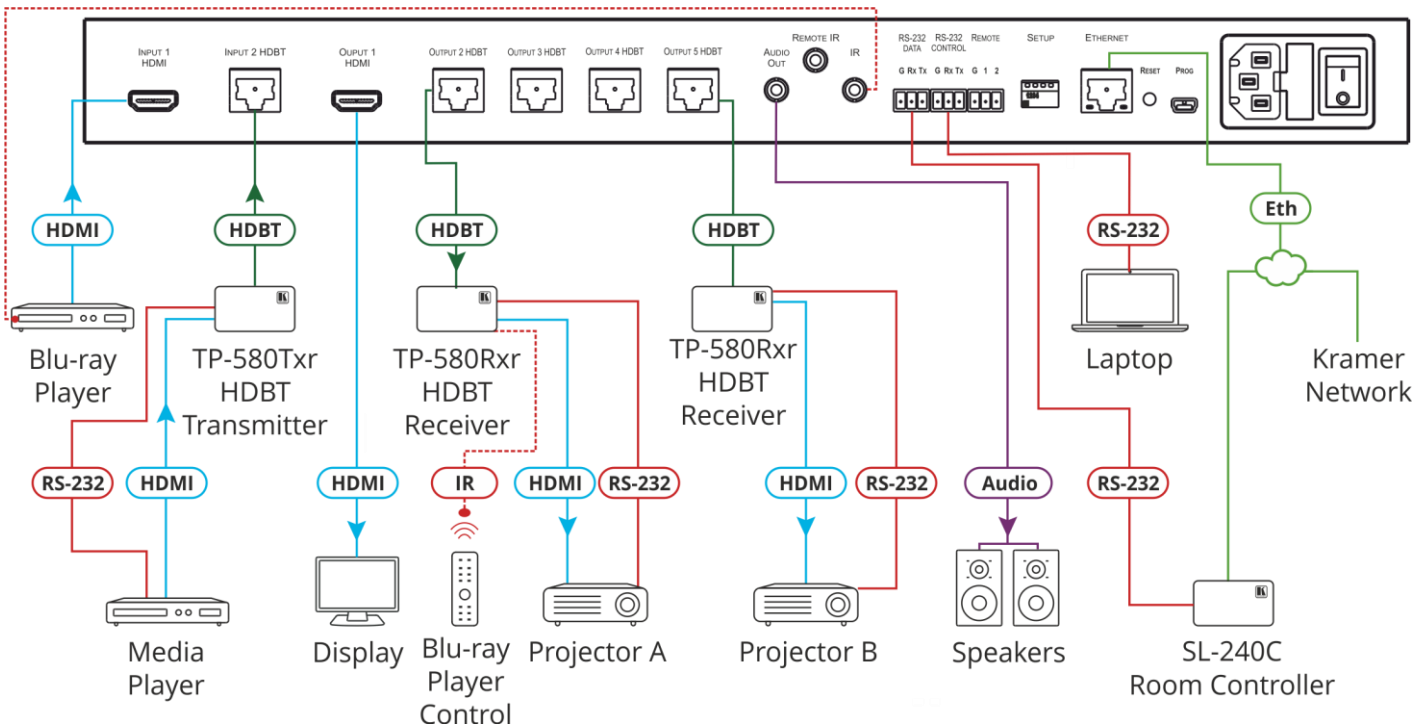
Remove the three screws from each side of the unit, reinsert those screws through the rack ears and mount on a 19" rack.

Attach the rubber feet and place the unit on a flat surface.



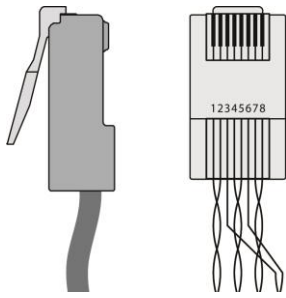
### Step 4: Connect the inputs and outputs

Always switch OFF the power on each device before connecting it to your **VM-214DT**. For best results, we recommend that you always use Kramer high-performance cables to connect AV equipment to the **VM-214DT**.



### RJ-45 Pinout:


For the Ethernet connector, see the wiring diagram below:



PIN EIA /TIA 568B	
PIN	Wire Color
1	Orange / White
2	Orange
3	Green / White
4	Blue
5	Blue / White
6	Green
7	Brown / White
8	Brown

### DIP-Switch Settings

Changes to the DIP-switches only take effect on power-up. After changing a switch, reboot the device. All DIP-switches are set to Off (up) by default.

#	Feature	Dip-switch Settings
1	IR Pass-through	On (down) – Add IR modulation to the IR output signal (applicable only when the IR port is connected to an IR emitter cable). Off (up) – Pass-through the IR signal (default) to the IR port via an IR cable.
	 The IR Pass-through DIP-switch setup depends on the IR control connectivity application and should be set to either Off or On to ensure that the IR-controlled device responds to the IR controller.	
2	Range mode	On (down) – Enable extra-range. Off (up) – Disable extra-range (default).
	Note that range mode affects the HDBT input only.	
3	Audio de-embedding	On (down) – Disable audio de-embedding. Note that the audio output port is muted. Off (up) – Enable audio de-embedding to the analog audio output port (default).
4	Reserved	N/A

For optimum range and performance use the recommended Kramer cables available at [www.kramerav.com/product/VM-214DT](http://www.kramerav.com/product/VM-214DT).

## Step 5: Connect the power

Connect the power cord to **VM-214DT** and plug it into the mains electricity.

### Safety Instructions



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

**Warning:** Use only the power cord that is supplied with the unit.

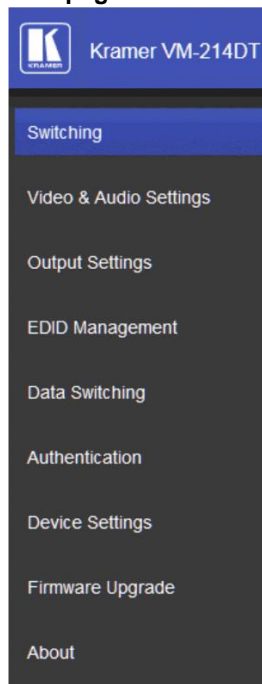
**Warning:** Do not open the unit. High voltages can cause electrical shock! Servicing by qualified personnel only.

**Warning:** Disconnect the power and unplug the unit from the wall before installing.

See [www.KramerAV.com](http://www.KramerAV.com) for updated safety information.

## Step 6: Operate the VM-214DT

### Web pages:



### RS-232 and Ethernet:

RS-232/Ethernet			
Baud Rate:	115,200	Parity:	None
Data Bits:	8	Command Format:	ASCII Protocol 3000
Stop Bits:	1		
Example (Route input 1 to output 1):			#ROUTE 1,1,1 <cr>
Ethernet Parameters			
IP Address:	192.168.1.39		
Subnet Mask:	255.255.0.0	Default UDP Port #:	50000
Default Gateway:	192.168.0.1		
Full Factory Reset			
Front Panel Buttons:	Front panel buttons: power off the device, press and hold the RESET button for 3 seconds while powering the device, and then release.		
Protocol 3000:	"#factory" command.		
Web pages:	In the Device Settings page, click Reset.		

# Technical Specifications

Inputs	1 HDMI	On a female HDMI connector
	1 HDBT	On an RJ-45 connector
Outputs	1 HDMI	On a female HDMI connector
	4 HDBT	On RJ-45 connector
	1 Unbalanced Stereo Audio	On a 3.5mm mini jack
Ports	1 IR	On a 3.5mm mini jack for IR link extension via HDBT input and outputs
	1 DATA RS-232	On a 3-pin terminal block for serial link extension via HDBT input and outputs
	1 RS-232	On a 3-pin terminal block for device control
	1 Mini USB	On a female USB connector for firmware upgrade
	1 10/100BaseT Ethernet	On an RJ-45 female connector for device control via LAN and Ethernet link extension via HDBT input and outputs
Extension Reach	4K @60Hz (4:2:0)	Up to 100m (330ft)
	Full HD (1080p @60Hz 36bpp)	Up to 130m (430ft)
	HDBaseT Ultra Mode and Full HD (1080p @60Hz 24bpp)	Up to 180m (590ft)
	Compliance	HDBaseT 1.0
Video	Max. Resolution	4K@60Hz (4:2:0) and 4K@30Hz (4:4:4)
	Compliance	Supports HDMI 2.0 and HDCP 1.4
RS-232 Extension	Baud Rate	300 to 115,200
Analog Audio	Max Level	1 Vrms
	THD + Noise	0.03% @1kHz at nominal level
Controls	Front Panel	Front panel buttons: input select, volume, EDID, IR
		Indication LEDs: input select, EDID type, outputs
	Rear Panel	RS-232 device control
		RS-232 remote control via HDBT ports
		IR remote control via HDBT ports
		Ethernet
	DIP-switches	
Supported PC Web Browsers	Windows 7 and Higher	Internet Explorer (32/64 bit) version 10 Firefox version 30 Chrome version 35
	MAC	Chrome version 35 Chrome version 63.0.3239.84 Firefox version 30 Firefox version 57.0.2 Safari version 7
	Minimum Browser Window Size	1024 x 768 when in full screen mode
Power	Consumption	46VA
	Source	100-240V AC, 50/60Hz
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%, RHL non-condensing
Regulatory Compliance	Safety	CE, FCC, UL
	Environmental	RoHs, WEEE
Enclosure	Size	19" 1U
	Type	Aluminum
	Cooling	Fan ventilation
General	Net Dimensions (W, D, H)	43.6cm x 23.7cm x 4.4cm (17.2" x 9.3" x 1.7")
	Shipping Dimensions (W, D, H)	52.5cm x 33cm x 10.7cm (20.7" x 13" x 4.2")
	Net Weight	2.5kg (5.5lbs) approx.
	Shipping Weight	3.2kg (7.1lbs) approx.
Accessories	Included	Power cord, rack ears
	Optional	For optimum range and performance use the recommended USB, Ethernet, serial and IR Kramer cables available at <a href="http://www.kramerav.com/product/VM-214DT">www.kramerav.com/product/VM-214DT</a>
Specifications are subject to change without notice at <a href="http://www.kramerav.com">www.kramerav.com</a>		

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