



4x4 HDMI® Coaxial Matrix

Vanco Part Number:
280568

Technical Support

www.vanco1.com • techsupport@vanco1.com • 800-626-6445

DEAR CUSTOMER

Thank you for purchasing this product. For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

This product is 100% inspected and tested in the United States to verify HDMI performance parameters.

WARNING

1. Do not expose this unit to water, moisture, or excessive humidity.
2. Do not install or place this unit in a built-in cabinet, or other confined space without adequate ventilation.
3. To prevent risk of electrical shock or fire hazard, due to overheating, do not obstruct unit's ventilation openings.
4. Do not install near any source of heat, including other units that may produce heat.
5. Do not place unit near flames.
6. Only clean unit with a dry cloth.
7. Unplug unit during lightening storms, or when not used for an extended period of time. A surge protector is strongly recommended.
8. Protect the power cord from being walked on or pinched, particularly at the plugs.
9. Use unit only with accessories specified by the manufacturer.
10. Refer all servicing to qualified personnel.

CAUTION

HDMI is a very complex technology requiring continuous authentication of the signal and the same video resolution and audio settings on all electronic equipment in the system. When there are multiple sources and displays, the video resolution and audio setting on all connected units must be adjusted to correspond with that of the display having the lowest video and audio capability.

FEATURES

The 4x4 HDMI over coaxial cable matrix system allows four HDMI sources to be connected to four displays using the 4 provided coaxial receivers. Any source is accessible at all times by any display by selecting it via IR, RS232, or IP control platforms. This simple plug and play solution allows each output the ability to extend the HDMI signal up to 328ft/100m over a single BNC terminated coaxial cable (RG6). Utilizing HDSDI technology, the model number is fully capable of full 1080P HD video and audio. Additional EDID management can be achieved using the RS232 connection and the interface to encourage device communication and compatibility for a seamless installation.

4x4 HDMI® Coaxial Matrix

Part # 280568

- Allows up to 4 HDMI sources to be distributed simultaneously to up to 4 displays
- Simple plug and play solution allows each output the ability to extend the HDMI signal up to 328ft/100m over a single BNC terminated coaxial cable (RG6)
- Features HDSDI technology, full 1080P HD video and audio
- Additional EDID management can be achieved using the RS232 connection and the interface to encourage device communication and compatibility for a seamless installation
- Supports wideband IR, 30–60KHz (IR accessories included)
- Control via RS-232, TCP/IP, IR, and manual on-panel control
- Supports smart EDID management
- Quick Install Kit includes Matrix Unit and 4 Receivers
- 12V DC, UL Listed Power supply for 4x4 matrix
- 5V DC, UL Listed Power Supplies for Receivers (4 total)
- 4x4 Matrix Dimensions: 17.31" (440mm) W x 1.75" (44.45mm) H x 7.875" (200mm) D
- Receiver Dimensions: 2" (50mm) W x 1" (25mm) H x 3.125" (80mm) D

SPECIFICATIONS

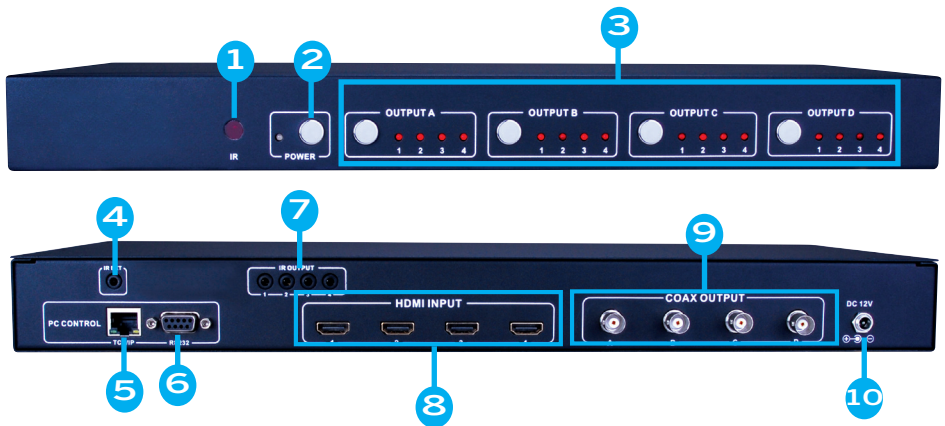
Input Ports	4×HDMI, 1×RS-232, 1×RJ-45(Control), 1×IR EXT
Output Ports	4×BNC, 4×IR OUTPUT
Input Resolutions Support.....	Up to 1920x1080P@60Hz
Output Resolutions Support	Up to 1920x1080P@60Hz
Control	IR , RS-232 , TCP/TP
ESD Protection	± 8KV (Air-gap discharge) ± 4KV (Contact discharge)
Power Supply	12 V/2.5 A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	440mm (W)×200mm (D)×44.5mm (H)
Weight	2.265kg
Chassis Material.....	Metal
Silkscreen Color.....	Black
Operating Temperature	0 °C~40 °C/32 °F~104 °F
Storage Temperature	-20 °C~60 °C/-4 °F~140 °F
Relative Humidity	20~90 % RH (non-condensing)
Power Consumption	18 W(Max)/1.5W(Standby)

PACKAGE CONTENTS

Before attempting to use this unit, please check the packaging and make sure the following items are contained in the shipping carton:

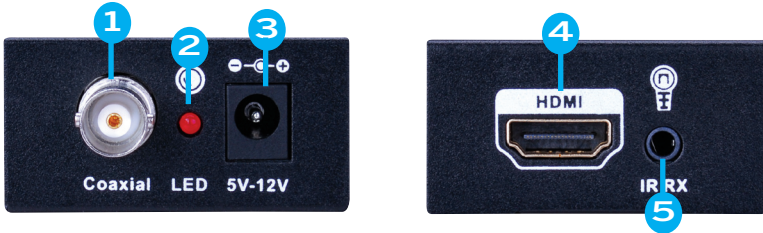
- 4x4 HDMI to Coaxial Matrix Switcher
- (4) HDMI Coaxial Receiver
- (4) Wideband IR TX cable
- (5) Wideband IR RX cable
- HDMI Matrix IR Remote
- RS232 cable
- (1) 12V/2.5A DC power adaptor
- (4) 5V/1A DC power adaptor
- (2) Mounting ears
- (1) User Manual

PANEL DISCRIPTIONS - MATRIX



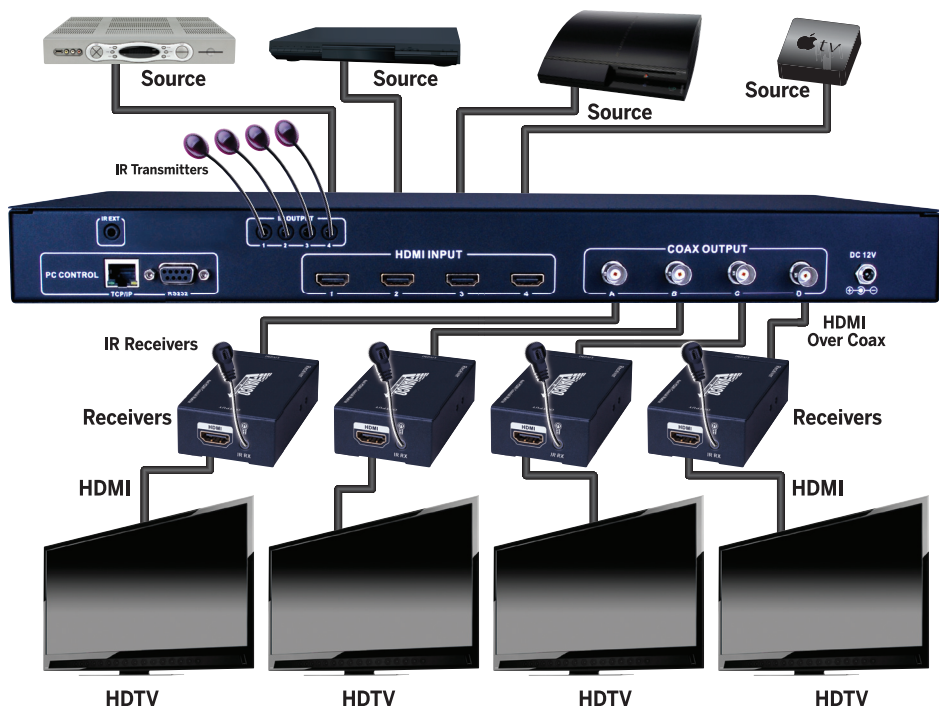
1. IR Receiver window
2. POWER: Press this button to power the device on/off. The LED will illuminate green when the power is on, red when it is in 'Standby' mode.
3. OUTPUT A/B/C/D: Press the OUTPUT A/B/C/D button to manually select the input you wish to have on the specific output.
4. IR EXT: if the panel sensor is obstructed or the unit is installed in a closed area out of infrared line of sight. The included IR RX receiver can be inserted into the IR EXT port at the rear of the matrix to extend the IR sensor range and enable local control of the matrix.
5. TCP/IP: This port is the link for TCP/IP control. Connect to an active Ethernet link with an RJ45 terminated cable.
6. RS232: Connect to a PC or control system with D-Sub 9-pin cable for the transmission of RS-232 commands.
7. IR OUT: Super IR control system interface.
8. HDMI INPUT- Connect to the HDMI input source devices such as a DVD player or a Set-top Box with HDMI cable.
9. COAX OUTPUT - The BNC COAX OUTPUT is connected to the Coaxial Receiver.
10. DC POWER INPUT - Plug the 12V/2.5A DC power supply into the DC12V power in.

PANEL DISCRIPTIONS - RECEIVER



1. BNC-Coaxial INPUT: Connect your BNC terminated coaxial cable from the output of the matrix
2. POWER LED: This red LED illuminate when the device is connected with power supply.
3. DC IN: Plug the 5V-12V DC power supply into the unit.
4. HDMI OUT: This slot is where you connect the HDTV or monitor with HDMI cable.
5. IR RX: Connect with Wideband IR Rx.

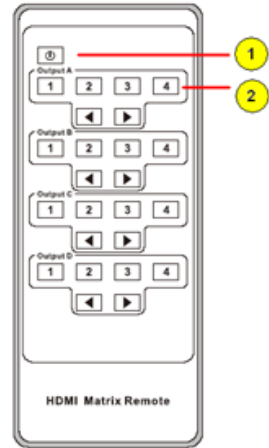
CONNECT AND OPERATE



1. Connect up to 4 sources such as a Blu-Ray Player, game console, A/V Receiver, Cable or Satellite Receiver, etc. to the HDMI inputs on the unit. Insert and extract cables carefully with the power switched off. Connecting and disconnecting while the unit is powered can result in damage to circuitry.
2. Connect the Coax output connector (BNC) to the Coaxial receiver, and connect the Coaxial receiver HDMI output connector to an HDMI equipped display
3. OPTIONAL: Connect the IR receiving extender to the IR EXT port on the matrix.
4. OPTIONAL: Connect an Ethernet cable from the TCP/IP port on the matrix to a local Area Network.
5. OPTIONAL: Connect an RS-232 cable from the RS232 port on the matrix.
6. OPTIONAL: Connect the IR emission extender to the IR output port on the matrix, and the IR receiving extender to the Coaxial receiver IR RX port.
7. Connect the DC 12V Locking power supply to the power receptacle on the matrix.
8. Connect the power supply to an available electrical outlet.

REMOTE CONTROL

1. Press this button to power on the matrix or set it to standby mode.
2. Press these buttons to select an input (1,2,3,4) for a specific output (A,B,C,D)



IR CONTROL SYSTEM

1. The IR control receives an IR signal from TV end to control the source (Blu-ray DVD), and video switching performed by the matrix.
2. At the matrix: Insert the 3.5mm jacks of the IR TX Emitters included with the unit into the IR TX Emitter ports at the rear of the matrix according to input. It is important to match the input number with the correct IR TX Emitter port. For example, if the user is watching a Blu-ray connected to input 1, the IR signal will be directed through the IR TX1 socket to control the device.
3. Some later adjustment may be needed to the location of the sensor to achieve the best performance results - sometimes moving the sensor to different areas on the source can improve IR performance.

IR RECEIVER



IR BLASTER



PC CONTROL

Installation

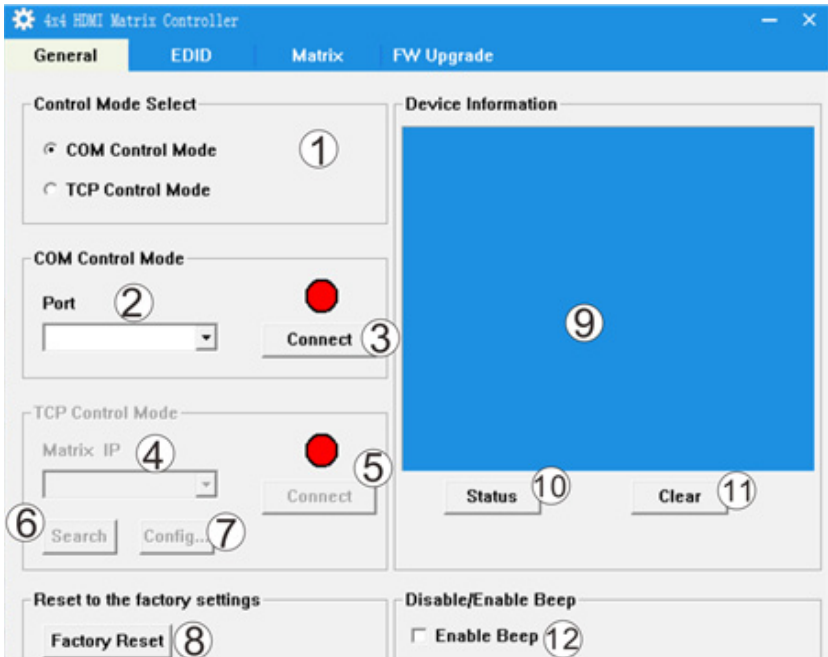
The matrix controller software is a green software. Just copy MatrixController.exe to your PC to control the Matrix by RS232 COM port or TCP/IP to complete installation. (This may not be necessary in all applications.)

Preparation

- Connect PC and Matrix by RS232 cable (headers of both sides of cable should be FEMALE) or TCP/IP(local area network)
- Power-up Matrix
- Double click MatirxController.exe icon to run it

How to control Matrix

"General" page



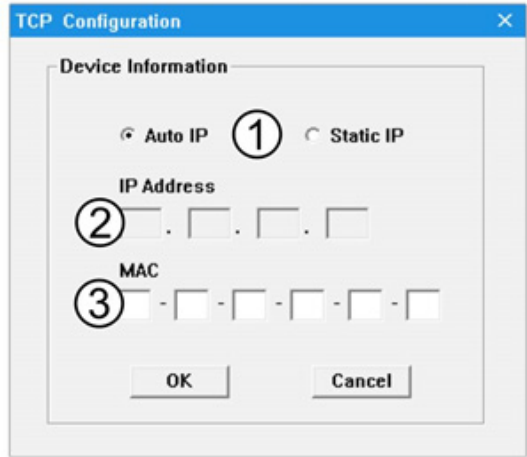
1. Select RS232 COM or TCP mode
2. Select RS232 COM port
3. Click to connect or disconnect PC and Matrix
4. Select Matrix IP
5. Connect to Matrix IP
6. Search Matrix IP
7. Configure Matrix IP and MAC (see following notes for further information)
8. Click to reset to the factory settings
9. Device information display area
10. Click to refresh device status: include device information displayed in 9 area and Input/Output Settings on "Matrix" page
11. Click to clear device information
12. Enable or disable Beep

PC CONTROL CONTINUED

Configure TCP/IP

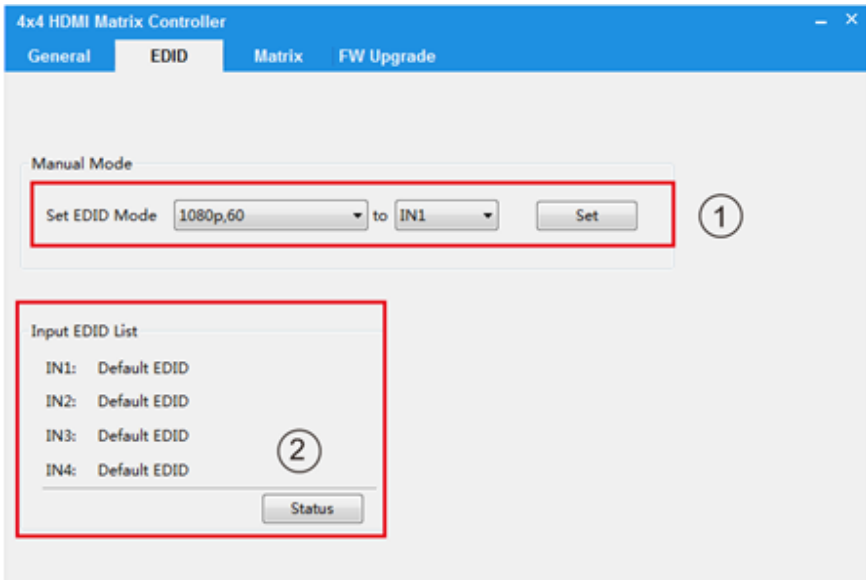
After step 7 , the following edit form will pop-up as below:

1. Select auto or static IP
2. Rewrite the Matrix IP
3. Rewrite the Matrix MAC



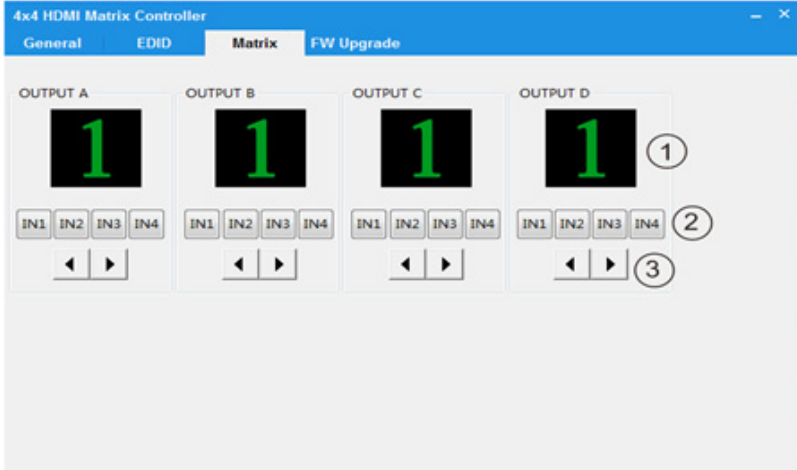
EDID Control Page

1. Select the needed EDID to input port and click set button the EDID will write to the selected HDMI input ports.
2. Click to Status Button retrieve each current HDMI input's EDID information.



Matrix Page

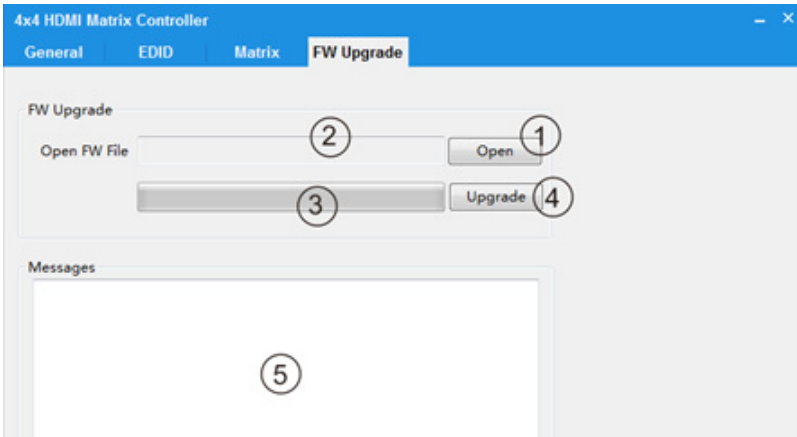
1. LED which displays the input number for respective output.
2. Click to select Input port for each respective Output port.
3. Click to select previous or next Input port for each respective Output port.



FW Upgrade Page

1. Click to open FW file(file extension is ".fw")
2. Display the FW file path
3. Displaying the progress of the software upgrade
4. Click to upgrade the Matrix software
5. Display the message of the software upgrade

Note: To complete the firmware update process, the matrix would need to have the power cycled.



TROUBLE-SHOOTING

1. Best results are usually achieved when the source and display resolutions are the same. If resolutions differ, the extenders will try to adjust the signal to match the resolution of the HDTV with the lowest resolution. This will result in a picture with a lower resolution on the other HDTV sets.
2. If you do not get audio and video, access the "setup" menu on the TV to adjust the audio and video settings. If the HDMI control circuit cannot establish a handshake, then there usually will be no audio or video in addition to a blue or black screen with a statement similar to "this protocol not supported" or "weak signal".
3. If the above mentioned messages display, reset the receiver by disconnecting the power supply. You can also disconnect all of the HDMI and power cables, wait 15 minutes for any voltages to decay and then reconnect all of the cables.
4. If you are still encountering issues, attempt the "hot-plug" concept. With all of the HDMI cables disconnected, turn on the source and plug in the HDMI cable into it's output, then power up the Vanco unit and plug the HDMI cable into it's input, finally turn on the display and plug the HDMI cable from the receiver into it. This activates all of the devices in corresponding order and results in a signal being plugged into a device that is on and will attempt to connect the signal.
5. Most of the major source and display manufacturers employ a proprietary control channel to communicate between devices from the same manufacturer. Sometimes this can interfere with the HDMI control circuit or the authentication of the signal. Call the manufacturer if you experience this issue. Sometimes a player, an audio/video receiver, or a cable/satellite box may not have the latest software update, usually this can be downloaded from the manufacturer's website.
6. If you have problems with the IR control circuit, make sure that the IR RX pigtail is plugged into extender receiver and pointed at the display, and the IR TX pigtail is attached to the extender sender and pointed at the source.

SAFETY AND NOTICE

The 280568 has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the 280568 should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.
- Do not attempt to service this unit yourself, except where explained in this manual.
- Provide proper ventilation and air circulation and do not use near water.
- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.
- Use only the power adapter and power cords and connection cables designed for this unit.
- Do not use liquid or aerosol cleaners to clean this unit.
- Always unplug the power to the device before cleaning.

NOTICE

1. Vanco High Speed HDMI cables are strongly recommended for use with this product to ensure best results.
2. Incorrect placement of IR Blaster and Receiver may result in the failure of the unit. Please check carefully before plugging in the IR accessories into the respective IR sockets.
3. If your HDMI display has multiple HDMI inputs, it is found that the first HDMI input (HDMIinput #1) generally can produce better transmission performance among all HDMI inputs.

TECHNICAL SUPPORT

In case of problems, please contact Vanco Technical Support by dialing 1-800-626-6445. You can also email technical support issues to techsupport@vanco1.com.

When calling, please have the Model Number, Serial Number (affixed to the bottom of the unit) and Invoice available for reference during the call.

Please read this Instruction Manual prior to calling or installing this unit, since it will familiarize you with the capabilities of this product and its proper installation.

All active electronic products are 100% inspected and tested to insure highest product quality and trouble-free installation and operation. The testing process utilizes the types of high-definition sources and displays typically installed for entertainment and home theater applications.

For additional information, such as helpful installation videos, glossary of terms, etc. please visit vanco1.com

LIMITED WARRANTY

With the exceptions noted in the next paragraph, Vanco warrants to the original purchaser that the equipment it manufactures or sells will be free from defects in materials and workmanship for a period of two years from the date of purchase. Should this product, in Vanco's opinion, prove defective within this warranty period, Vanco, at its option, will repair or replace this product without charge. Any defective parts replaced become the property of Vanco. This warranty does not apply to those products which have been damaged due to accident, unauthorized alterations, improper repair, modifications, inadequate maintenance and care, or use in any manner for which the product was not originally intended.

Items integrated into Vanco products that are made by other manufacturers, notably computer hard drives and liquid crystal display panels, are limited to the term of the warranty offered by the respective manufacturers. Such specific warranties are available upon request to Vanco. A surge protector, power conditioner unit, or an uninterruptible power supply must be installed in the electrical circuit to protect against power surges.

If repairs are needed during the warranty period the purchaser will be required to provide a sales receipt/sales invoice or other acceptable proof of purchase to the seller of this equipment. The seller will then contact Vanco regarding warranty repair or replacement.

LIABILITY STATEMENT

Every effort has been made to ensure that this product is free of defects. The manufacturer of this product cannot be held liable for the use of this hardware or any direct or indirect consequential damages arising from its use. It is the responsibility of the user and installer of the hardware to check that it is suitable for their requirements and that it is installed correctly. All rights are reserved. No parts of this manual may be reproduced or transmitted by any form or means electronic or mechanical, including photocopying, recording or by any information storage or retrieval system without the written consent of the publisher.

Manufacturer reserves the right to revise any of its hardware and software following its policy to modify and/or improve its products where necessary or desirable. This statement does not affect the legal rights of the user in any way.

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