

# HDMI over IP Extender Kit with USB and Serial

ST12MHDLANU



\*actual product may vary from photos

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For the latest information, technical specifications, and support for this product, please visit [www.StarTech.com/ST12MHDLANU](http://www.StarTech.com/ST12MHDLANU).

## FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by StarTech.com could void the user's authority to operate the equipment.

## Industry Canada Statement

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe [B] est conforme à la norme NMB-003 du Canada.

CAN ICES-3 (B)/NMB-3(B)

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# Introduction

## Packaging contents

- 1 x HDMI over IP transmitter
- 1 x HDMI over IP receiver
- 2 x power adapters
- 2 x screws
- 1 x screwdriver
- 2 x Cat5 cables
- 2 x mounting brackets
- 1 x quick install guide

## System requirements

- HDMI enabled video source (e.g. a computer or Blu-ray™ player)
- HDMI enabled display device(s) (e.g. television, projector), one for each receiver
- HDMI cabling for your video source and each display
- Available AC electrical outlet for the transmitter and each receiver
- Network cabling for the extender and each receiver
- Standard USB A to USB B cable (optional for USB peripheral extension)
- Up to four USB peripheral devices (optional for USB peripheral extension)

# Product diagram

## Transmitter Unit



1. USB host port
2. Video input port (HDMI)
3. LAN port (RJ-45 connector)
4. Reset button
5. Power jack
6. Link and power LED
7. Function 2 button
8. Function 1 button
9. Dip rotary switch
10. Serial control (not active)
11. Serial extension (for extending RS232 signal)

# Receiver Unit



1. USB peripheral ports
2. Video output port (HDMI)
3. LAN port (RJ-45 connector)
4. Reset button
5. Power jack
6. Link and power LED
7. Function 2 button
8. Function 1 button
9. Dip rotary switch
10. Serial control (not active)
11. Serial extension (for extending RS232 signal)

**Note:** Serial 1 (control) ports are not active. To control the ST12MHDLANU please download our free mobile application. (see Page \*.)

(Additional receiver units sold separately, StarTech.com SKU: ST12MHDLANUR)

# Installation

## Preparing your site

**Note:** The ST12MHDLANU HDMI extender kit lets you extend your video and USB signals over a Gigabit LAN network – beyond the typical cable length restriction of 330 ft. (100m) of Gigabit network portals.

Refer to the manufacturer of the network equipment to determine the length restriction and to ensure the transmitter unit and receiver unit(s) are all within the restricted range of the nearest network portal.

Ensure the transmitter unit, and receiver unit(s) are all situated near AC electrical outlets.

1. Determine where the local video source (i.e. computer, Blu-ray player) will be located and set up the transmitter device near that location.
2. Determine where the remote display will be located and set up the receiver near that location.
3. (Optional) If using additional displays determine where they will be located and set the additional receiver unit(s) near that location.

## Hardware installation

Video wall or point to multi-point installation with a Gigabit LAN network

1. Install the transmitter unit
  - a) Connect a video source device, such as a computer or Blu-ray player, to the transmitter's video input port.
  - b) (Optional) If you're using the ST12MHDLANU extender kit to extend USB peripheral devices, use a standard USB A to USB B cable to connect the USB host port on the transmitter unit to a USB port on a video source device such as a computer or Blu-ray player.
  - c) Connect the transmitter's DC 9-12V power jack to an AC electrical outlet, using one of the included power adapters.
2. Install the receiver unit(s)
  - a) Connect a display to the receiver unit's video output port using an HDMI cable.
  - b) (Optional) If you are using the ST12MHDLANU extender kit to extend USB peripheral devices, connect up to four USB peripheral devices to the receiver unit's USB ports.
  - c) Connect the receiver unit's power jack to an AC electrical outlet, using one of the included power adapters.

d) (Optional) If you are using additional ST12MHDLANUR receivers (sold separately), repeat steps [a] through c)] for each additional receiver.

**Note:** The rotary dip switches on the transmitter and each receiver connected to the network must be set in the same position for the devices to communicate.

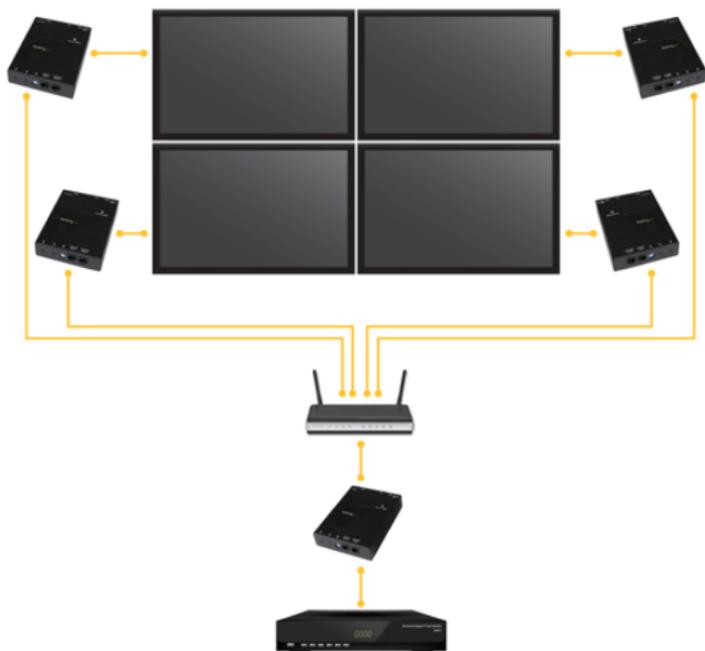
3. Connect the devices to a Gigabit LAN network

a) Connect an RJ-45 terminated Cat5e or Cat6 Ethernet cable to the LAN port on the transmitter unit, and to each of the receiver units.

b) Connect the other end of the Cat5e or Cat6 cable to a Gigabit LAN hub, router or switch.

**Note:** Your router must support IGMP snooping. Please refer to your network switch or router documentation to ensure IGMP snooping is supported and enabled.

4. Verify that the image from your video source appears on video display(s) attached to the receiver unit(s).



(Additional receiver units sold separately, StarTech.com SKU: ST12MHDLANUR)

## Software installation

The HDMI distribution kit features video control software that helps you manage your IP video distribution and video wall configuration. The software is available on iOS for your iPhone or iPad, Android™ for your smartphone or tablet, and for the Google Chrome™ browser.

To install the software:

1. Visit <http://www.StarTech.com/ST12MHDLANU>, using the device you intend to install software on.
2. Under the overview tab, select the link for the store that corresponds with your device.



3. Select the option to download and install the software from the store page.
4. Open the software, to verify that it has installed correctly.

## Software operation

### Connecting your transmitters and receivers to the software

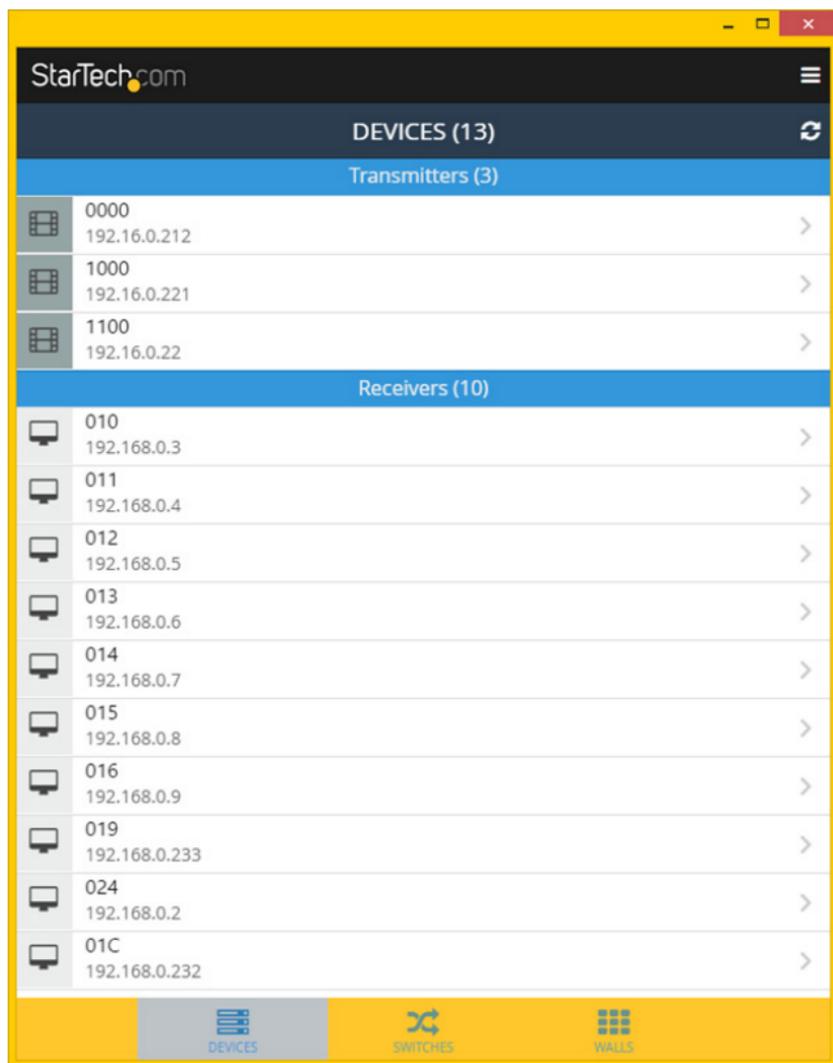
#### Notes:

- Your router must support IGMP snooping. Please refer to your network switch or router documentation to ensure IGMP snooping is supported and enabled on your router.
  - The computer smartphone or tablet, that you've installed the software on, is connected to the same network as your transmitter(s) and receiver(s)
1. Launch the application by clicking the icon on your smartphone, tablet or computer.



2. The application will open on the Devices tab, and will automatically search for transmitters and receivers on your network and list them within the Devices tab.

**Note:** you can reinitiate the device search, by selecting refresh button in the top



right-hand corner of the Devices tab.

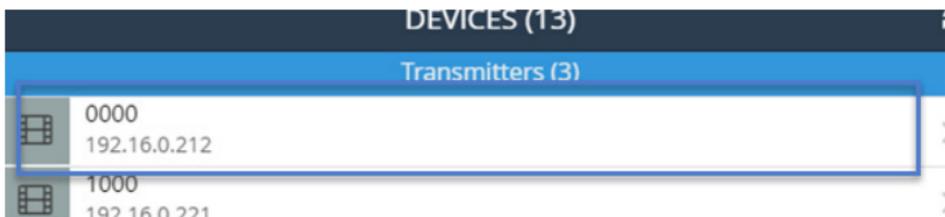
- By default, each video device will have an IP address in the range of 169.254.x.x with a subnet mask of 255.255.0.0.

Each transmitter and receiver must have an IP address in the same range, and have an identical subnet mask, as each other, and the tablet, smartphone or computer you have the software installed on.

**For example:** If your transmitter has an IP address of **169.254.10.10** with a subnet mask of 255.255.0.0.

You must ensure the tablet, smartphone or computer you have the software installed on and each receiver has an IP address that starts with **169.254.x.x** (with a varying last two digits represented here by xx) and a subnet mask of **255.255.0.0**.

### To adjust the IP address and subnet mask of your transmitter(s) and



### receiver(s):

IP: 192.16.0.212



- Select the transmitter or receiver you'd like to adjust from the Devices tab.

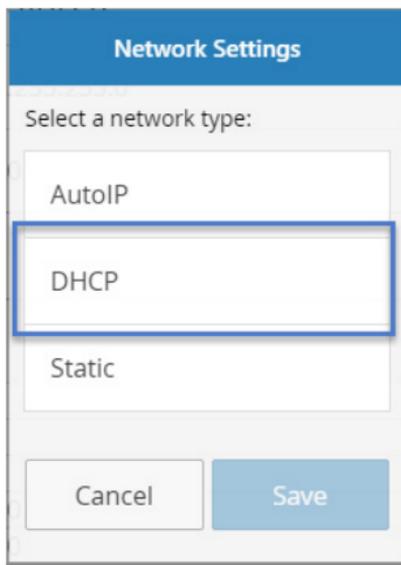
The screenshot shows a 'Network Settings' dialog box. At the top, there is a blue header with the text 'Network Settings'. Below the header, the text 'Select a network type:' is displayed. There are three radio button options: 'AutoIP', 'DHCP', and 'Static'. The 'Static' option is selected, indicated by a checkmark. Below the 'Static' option, there are two text input fields. The first is labeled 'IP Address' and contains the value '192.16.0.212'. The second is labeled 'Subnet Mask' and contains the value '255.255.255.0'. At the bottom of the dialog, there are two buttons: 'Cancel' and 'Save'.

b. Click the edit icon listed in the IP address section.

c. Select **Static IP** and type an IP address and mask for the device.

Or

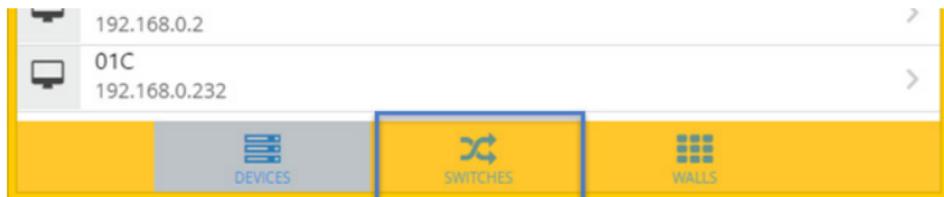
Select DHCP and your network automatically assign an IP address and mask to



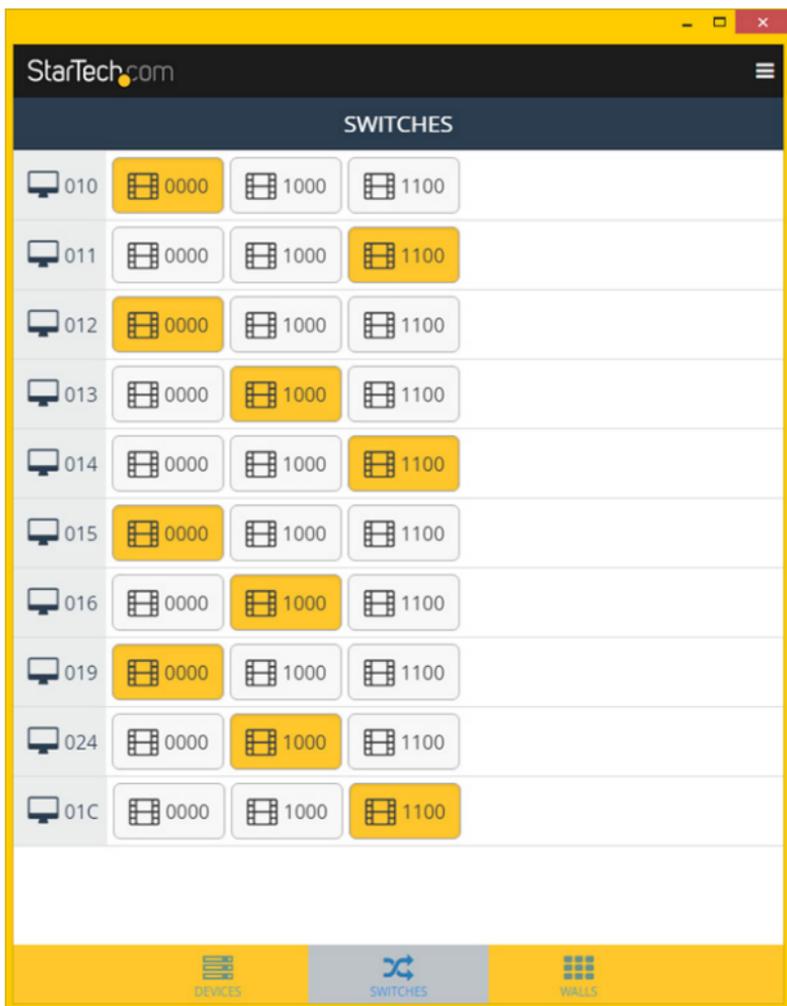
Note: DHCP must be enabled on your network to automatically assign an IP address and mask in that range.

## Switching your remote displays between video sources

1. Once the application is launched, select the Switches tab.

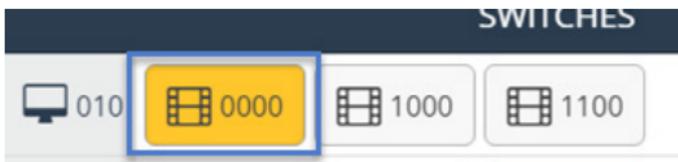


2. A list of each connected receiver will be displayed with all available transmitters displayed beside them. The transmitter that is currently selected for each receiver will be highlighted in yellow.



**Note:** if the receiver is part of a video wall it will be indicated with a button that lists the wall configuration and the location of the receiver.

3. To assign a video source, or change your video source, select the transmitter listed next to your receiver that you'd like to display.



4. The transmitter will turn yellow and your video source will switch on the remote display.

**Note:** If a receiver that was part of a video wall configuration is altered, that display will no longer be part of the video wall configuration.

## Configuring your remote displays for a video wall application

1. Once the application is launched, select the Walls tab.



2. Select the + icon to launch a wizard that will walk you through your video wall creation.



No walls have been created on this device.

To create a wall, press the + icon above.

3. The first page in the wizard enables you to specify the walls name as well as the number of rows and columns you would like to use in your video wall. Each row and column will represent a display in your video wall. Type your preferred name and specify the number of rows and columns, then click next.

Create a new wall  
Name the video wall, select the number of rows and columns, and then tap next.

Wall Name:  
Wall0

2 rows x 2 columns

✕ Cancel → NEXT

**Note:** a Wall Name will be listed by default, once you type a new name the default name will be overwritten.

- The next page in the wizard will create an example of the video wall with the number of rows and columns you specified.

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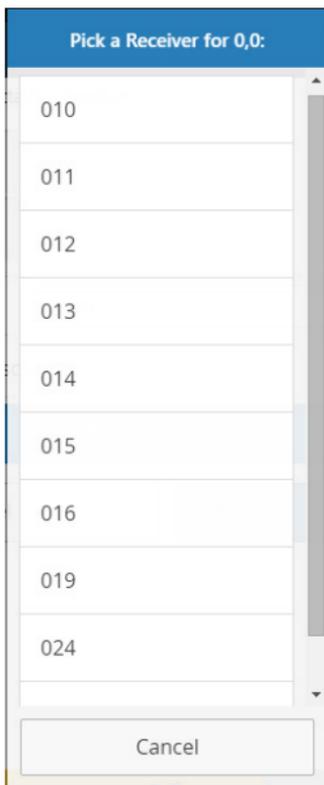
← Video Wall Wall0

Tap each monitor below to attach a receiver:

R0C0	R0C1
R1C0	R1C1

Name:

You'll need to use this example to specify which receivers are represented within your video wall configuration. Select the receiver from the video wall example to display a list of all connected receivers, then choose the receiver that corresponds with the proper location within your video wall configuration.

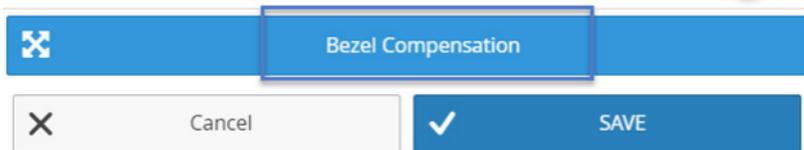


**Note:** If you'd like to see the receiver device name on each screen, so you can easily identify which display is connected to each receiver, please select the show device names on screen switch. This can be deactivated once you've identified your displays.

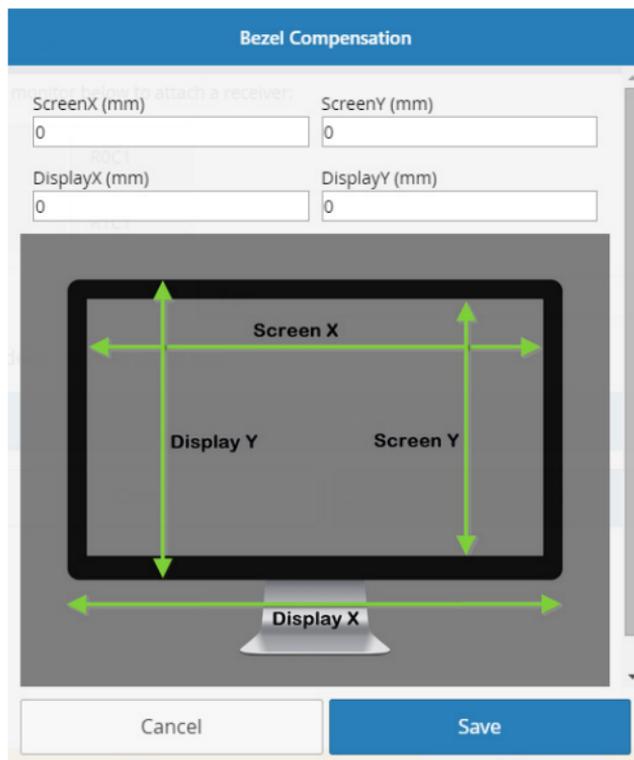
Show device names on screen



5. (Optional) If the displays in your video wall configuration have large bezels or empty space between them, you can scale the image on the displays to create a more natural, seamless look by specifying the bezel compensation. Click the Bezel Compensation button to open the window.



On the bezel compensation window, please enter the following measurements in millimeters (mm): screen width of each display (ScreenX), screen height of each display (ScreenY), total width of each display (DisplayX) and total height of each display (DisplayY). Then click the Save button.



- The wizard is now complete and your created video wall configuration will appear on the Walls tab.

You can select or switch your video source for each created video wall configuration clicking transmitters listed below each created video wall configuration.



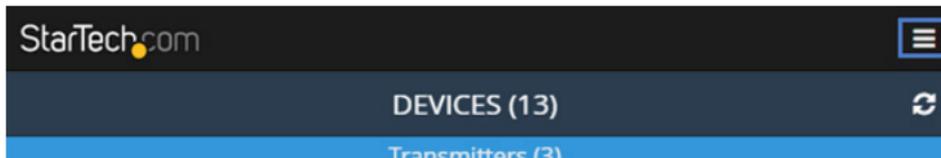
#### Notes:

- The display indicators will show the status of the current wall. Blue indicates that the display is active, Grey indicates it is being used for another wall or switch.
- You can adjust the settings defined for each video wall configuration or delete your video wall configuration by clicking the arrow next to each video wall.



## Advanced operation and help

You can access the software menu from any screen by clicking the menu icon in the top right-hand corner of the application.



From the menu you can access the below each of the below options. A description for each option and listed below:

? Help



Device Search Mode:

Multicast DNS



Clear All Settings



Demo Mode



### Help:

Lists information and walk-throughs regarding operation of the application.

### Device Search Mode:

Enables you to define your preferred method of transmitter and receiver identification over your network that the software uses. You can choose between two methods of identification: Multicast DNS or Target IP for your transmitters and receivers.

**Multicast DNS:** is the default setting and will search automatically for devices over the network.

**Target IP:** is an advanced setting that enables you to specify an IP address that the remote devices are set to in order for the software to identify them. This is a good option if you'd like multiple set ups with different displays and transmitters on different subnets and IP address ranges.

### Clear All Settings:

Restores your software to default settings.

### Demo Mode:

Creates a virtual environment with multiple transmitters and receivers that enables you to configure a virtual setup without connected transmitters and receivers to test the functionality of the software.

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## Warranty information

This product is backed by a two-year warranty.

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