

**Model** : ATZ HDMI-V2-14TW

**Description:** 1x4 HDMI2.0 18G Video Wall Controller HDMI+USB-C input (2x2 wall)



The 18Gbps 1x4 Video Wall Controller is designed to realize truly capturing, AD converting, routing, and distributing all-format signal to the video wall (LCD displays), while maintaining a true digital signal transmission. It features HDMI and USB-C input with resolution up to 4K@60 4:4:4, and 4 HDMI outputs. It supports multiple video wall modes to be set for video output. Furthermore, optical audio and L/R analog audio de-embedding output are also supported. It can be controlled via front panel buttons, IR remote and RS-232 commands.

## Features:

- HDMI 2.0, HDCP 2.2 and DP1.2a compliant
- Support HDMI input and USB-C input, and the resolution is up to 4K@60Hz 4:4:4
- Support optical audio and L/R analog audio de-embedding output
- Support 8 video wall splicing modes: 1x1, 2x1, 3x1, 4x1, 1x2, 1x3, 1x4, 2x2
- Support image 180° rotation, convenient for ceiling installation
- Support bezel adjustment for the splicing edge
- Advanced EDID management
- Control via front panel buttons, IR remote and RS-232 commands
- Simple plug and play, no drive and installation setting are required

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## Specifications:

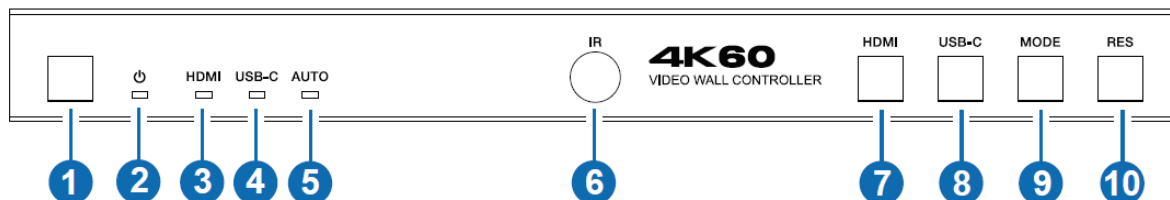
Technical			
HDMI Compliance	HDMI 2.0b		
HDCP Compliance	HDCP 2.2		
Video Bandwidth	18Gbps		
Video Resolution	Input: up to 4K@60Hz 4:4:4 Output: 720P60Hz, 1080P60Hz, 4K30Hz, 1024x768P60Hz		
Color Space	RGB, YCbCr_4:4:4, YCbCr_4:2:2, YCbCr_4:2:0		
Color Depth	8/10/12 bit		
IR Level	5Vp-p		
IR Frequency	38KHz		
Audio Formats	<b>HDMI IN/OUT:</b> LPCM 2.0/5.1/7.1, Dolby Digital/Plus/EX, DTS, DTS-EX, DTS-96/24 <b>L/R OUT:</b> PCM 2.0 <b>SPDIF(OPTICAL):</b> Dolby Digital/plus, DTS 5.1, PCM 2.0		
Audio Latency	No Latency		
Video Latency	No Latency		
ESD Protection	Human body model — ±8kV (Air-gap discharge) & ±4kV (Contact discharge)		
Connection			
Input ports	1x HDMI INPUT [Type A, 19-pin female] 1x USB-C INPUT [Type C, 24-pin female]		
Output ports	4x HDMI OUTPUT [Type A, 19-pin female] 1x OPTICAL AUDIO OUT [S/PDIF] 1x L/R AUDIO OUT [RCA]		
Control ports	1x RS-232 [3pin-3.81mm phoenix connector] 1x IR EXT [3.5mm, Stereo Mini-jack]		
Mechanical			
Housing	Metal Enclosure		
Color	Black		
Dimensions	220mm [W] × 100mm [D] × 30mm [H]		
Weight	590g		
Power Supply	Input: AC 100-240V 50/60Hz, Output: DC 12V/1A (US/EU standard, CE/FCC/UL certified)		
Power Consumption	5.5W (Max)		
Operating Temperature	32 - 104°F / 0 - 40°C		
Storage Temperature	-4 - 140°F / -20 - 60°C		
Relative Humidity	20 - 90% RH (no-condensing)		
Video Resolution	4K60	4K24	1080P60
HDMI Cable Length (HDMI IN / OUT)	8m/26ft	10m/32ft	15m/49ft
The use of "Premium High Speed HDMI" cable is highly recommended.			

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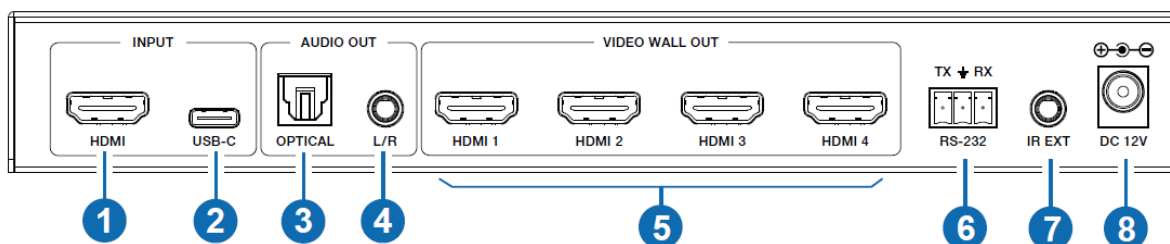
## Operation Controls and Functions

### Front Panel:



NO.	Name	Function Description
1	Power button	In shutdown/standby status, press this button to power on; in power-on status, press this button for 2~3 seconds to enter standby status.
2	Power LED	The LED will light in green when the product is working normally, and red when the product is on standby.
3	HDMI LED	The LED will light in green when HDMI input is selected.
4	USB-C LED	The LED will light in green when USB-C input is selected.
5	AUTO LED	The LED will light in green when auto switching is enabled.
6	IR window	IR signal receiving window.
7	HDMI button	Press this button to select the HDMI input channel.
8	USB-C button	Press this button to select the USB-C input channel.
9	MODE button	Press this button to switch the 8 splicing modes circularly.
10	RES button	Press this button to switch the resolutions of the four HDMI outputs circularly.

### Rear Panel:



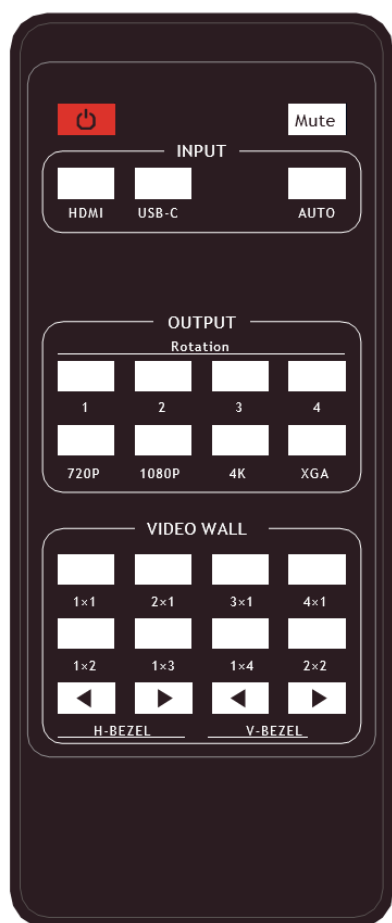
NO.	Name	Function Description
1	HDMI INPUT	HDMI signal input port, connected to an HDMI source device.
2	USB-C INPUT	USB-C signal input port, connected to a USB-C source device.
3	OPTICAL AUDIO OUT	Optical audio output port, connected to an audio output device such as an audio amplifier.
4	L/R AUDIO OUT	Analog audio output port, connected to an audio output device such as a speaker.
5	VIDEO WALL OUT (HDMI1~4)	HDMI signal output port, connected to TVs.
6	RS-232	3-pin phoenix connector, connected to a PC or control system for serial port upgrade or RS-232 command control.

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7	IR EXT	IR signal receiving port, connected with 38KHz IR Receiver cable. If the IR signal receiving window of the unit is blocked or the unit is installed in a closed area out of infrared line of sight, the IR receiver cable can be inserted to the "IR EXT" port to receive the IR remote signal.
8	DC 12V	Connect to 12V/1A power adapter.

## IR Remote:



### Power on or Standby:

Power on the device or set it to standby mode.

### Mute:

Turn off/on the audio output, including HDMI, Optical and L/R audio.

### HDMI:

Press to select HDMI input channel.

### USB-C:

Press to select USB-C input channel.

### AUTO:

Press to disable or enable the input auto **switching**.

### Rotation 1/2/3/4:

Press to switch rotation angle between 0° and 180° for the corresponding output channel.

### Resolution 720P/1080P/4K/XGA:

Press to switch the resolution for the 4 output channels at the same time.

### VIDEO WALL MODE:

There are 8 splicing modes: 1x1, 2x1, 3x1, 4x1, 1x2, 1x3, 1x4, 2x2. Press to select the display mode.

### H/V-BEZEL ◀ ▶:

Press to adjust the bezels of the splicing images.

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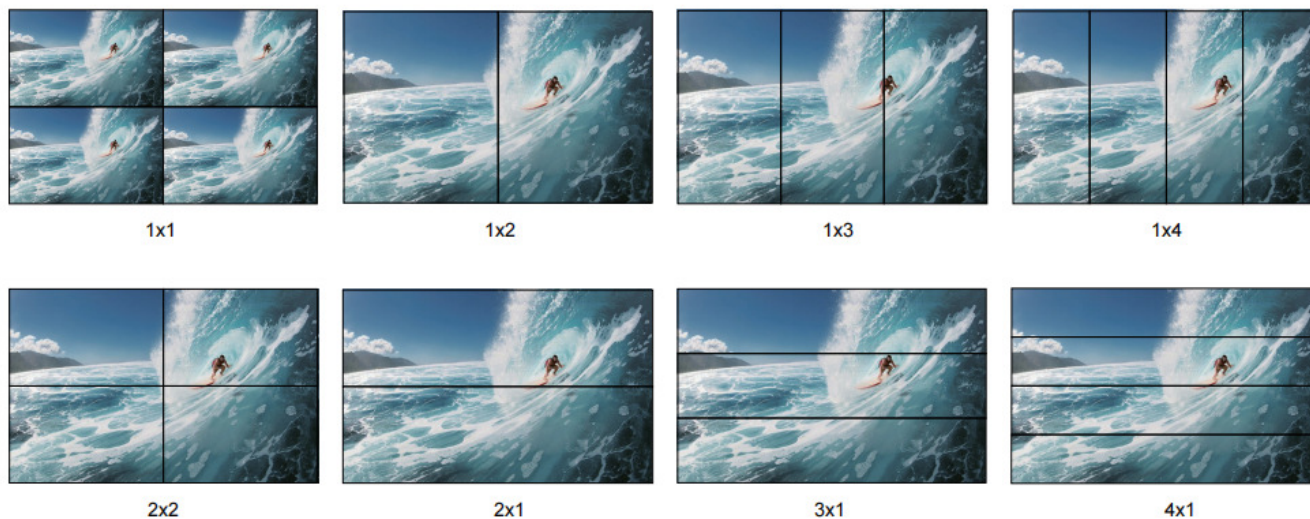
## IR Cable Pin Assignment:

IR Receiver pin's definition is as below:



## Video Wall:

Video wall supports 8 splicing modes as below:



User can set display modes via front panel buttons, IR remote, and RS-232 commands.

### Note:

In the video wall mode (except mode 1x1), only the screens which are selected to perform video wall splicing will display images and their bezels can be adjusted.

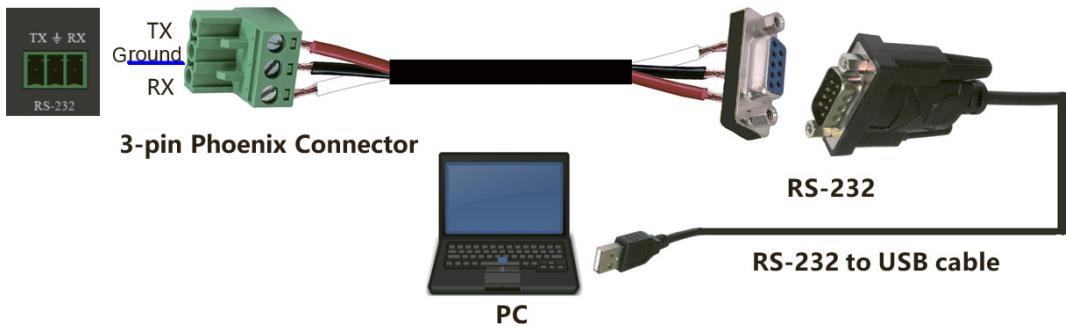


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### RS-232 Control Command:

The product also supports RS-232 command control. Connect the RS-232 port of the product to a PC with a 3-pin phoenix connector cable and an RS-232 to USB cable. The connection method is as follows.



Then, open a Serial Command tool on PC to send ASCII command to control the device. The ASCII command list is shown as below.

ASCII Command				
Serial port protocol. Baud rate: 115200 (Default), Data bits: 8, Stop bits:1, Check bit: 0				
x - Parameter 1, y - Parameter 2, ! - Delimiter				
Command Code	Function Description	Example	Feedback	Default Setting
<b>System Setting</b>				
help!	List all commands	help!		
r status!	Get device current status	r status!	get the unit all status: power, video wall mode, output resolution...	
r type!	Get device model	r type!	1x4 video wall controller	
Command Code	Function Description	Example	Feedback	Default Setting
<b>System Setting</b>				
r fw version!	Get firmware version	r fw version!	mcu fw version : x.xx.xx	
s power z!	Power on/off the device, z=0~1 (z=0 power off, z=1 power on)	s power 1!	power on system initializing... initialization finished! mcu fw version x.xx.xx	
r power!	Get current power state	r power!	power on /power off	
s reboot!	Reboot the device	s reboot!	reboot... 1x4 video wall controller system initializing... initialization finished! mcu fw version : x.xx.xx	

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s reset!	Reset to factory defaults	1x4 video wall controller	reset to factory defaults 1x4 video wall controller system initializing... initialization finished! mcu fw version : x.xx.xx	1.HDMI in; 2.EDID: 4K60 4:4:4 2ch; 3.audio mute off; 4.1x1 video wall mode; 5.1080p output; 6.All HDMI out no rotation; 7.H-Bezel=0, V-Bezel=0;
Command Code	Function Description	Example	Feedback	Default Setting
<b>Input Setting</b>				
s input x edid z!	Set input x edid mode (x=0~2, z=1~6) x=0. all input x=1. input1 x=2. input2 z=1. 4k60, 2.0ch z=2. 4k60, 5.1ch z=3. 4k30, 2.0ch z=4. 4k30, 5.1ch z=5. 1080p, 2.0ch z=6. 1080p, 5.1ch	s input 1 edid 1!	input 1 edid: 4k60, 2.0ch	4k60,2.0ch
r input x edid!	Get input x edid mode (x=0~2) x=0. all input x=1. HDMI in x=2. USB-C in	r input 1 edid!	hdmi in edid: 4k60, 2.0ch	
s output in source x!	Route input source to output ( x=1~2) x=1. HDMI in x=2. USB-C in	s output in source 1!	output->hdmi in	output->HDMI in
r output in source!	Get output y selected input source	r output in source!	output->hdmi in	
<b>Output Setting</b>				
s tw mode x!	Set tv wall display mode (x=1~8) x=1. 1x1 mode x=2. 2x1 mode x=3. 3x1 mode x=4. 4x1 mode x=5. 1x2 mode x=6. 1x3 mode x=7. 1x4 mode x=8. 2x2 mode	s tw mode 1!	tv wall mode: 1x1	tv wall mode: 1x1
r tw mode!	Get tv wall display mode	r tw mode!	tv wall mode: 2x2	
s tw h bezel +!	Set tv wall horizontal bezel	s tw h bezel +!	tv wall horizontal bezel: (bezel+1)	tv wall horizontal bezel: 0
Command Code	Function Description	Example	Feedback	Default Setting
<b>Output Setting</b>				
s tw h bezel -!	Set tv wall horizontal bezel	s tw h bezel -!	tv wall horizontal bezel: (bezel-1)	tv wall horizontal bezel: 0
s tw h bezel x!	Set tv wall horizontal bezel (x=0~10)	s tw h bezel 0!	tv wall horizontal bezel: 0	tv wall horizontal bezel: 0
r tw h bezel!	Get tv wall row bezel	r tw h bezel!	tv wall horizontal bezel: 0	

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s tw v bezel +!	Set tv wall vertical bezel	s tw v bezel +!	tv wall vertical bezel: (bezel+1)	tv wall vertical bezel: 0
s tw v bezel -!	Set tv wall vertical bezel	s tw v bezel -!	tv wall vertical bezel: (bezel-1)	tv wall vertical bezel: 0
s tw v bezel x!	Set tv wall vertical bezel (x=0~10)	s tw v bezel 0!	tv wall vertical bezel: 0	tv wall vertical bezel: 0
r tw v bezel!	Get tv wall vertical bezel	r tw v bezel!	tv wall vertical bezel: 0	
s tw res x!	Set tv wall resolution (x=1~4) 1. 1280x720p60, 2. 1920x1080p60, 3. 3840x2160p30, 4. 1024x768@60 (XGA)	s tw res 2!	tv wall resolution: 1920x1080p60	tv wall resolution: 1920x1080p60
r tw res!	Get tv wall resolution	r tw res!	tv wall resolution: 1920x1080p60	tv wall resolution: 1920x1080p60
s output y rotate x!	Set output y mirror (y=1~4, x=0,1) y=1. output 1 y=2. output 2 y=3. output 3 y=4. output 4 x=0. 0° rotation x=1. 180° rotation	s output 1 rotate 0!	output1: 0° rotation	output1: 0° rotation output2: 0° rotation output3: 0° rotation output4: 0° rotation
r output y rotation!	Get output y mirror status (y=0~4) y=0. output all y=1. output 1 y=2. output 2 y=3. output 3 y=4. output 4	r output 0 rotation!	output1: 0° rotation output2: 0° rotation output3: 0° rotation output4: 0° rotation	
<b>Command Code</b>	<b>Function Description</b>	<b>Example</b>	<b>Feedback</b>	<b>Default Setting</b>
<b>Output Setting</b>				
s output audiomute x!	Set output audio mute on/off (x=0~1) 0. mute off 1. mute on	s output audio mute 0!	output audio mute: off	off
r output audio mute!	Get output audio mute on/off	r output audio mute!	output audio mute: off	

## Package Contents :

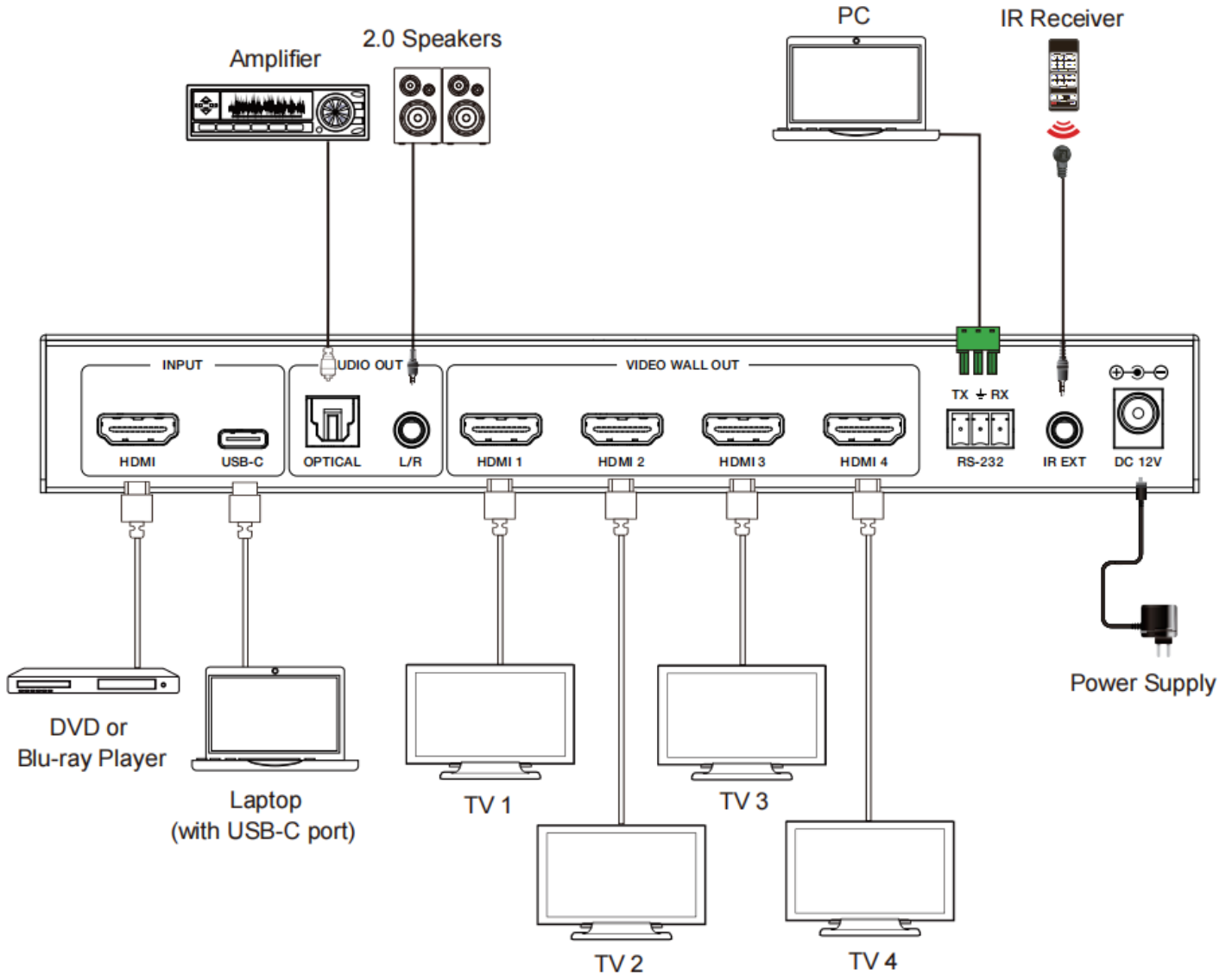
- 1x 18Gbps 1x4 Video Wall Controller
- 1x 12V/1A Locking Power Supply
- 1x Power Adapter
- 1x IR Remote
- 1x 5V IR Receiver Cable (1.5m)
- 1x 3pin-3.81mm Phoenix Connector (male)
- 4x Machine Screw (KM3\*4)
- 2x Mounting Ear
- 1x User Manual



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### Application Diagram:



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## Warranty: 2 Years

Warranty is effective from the date of original delivery.

This warranty shall be void if a serial number has been removed from the product.



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