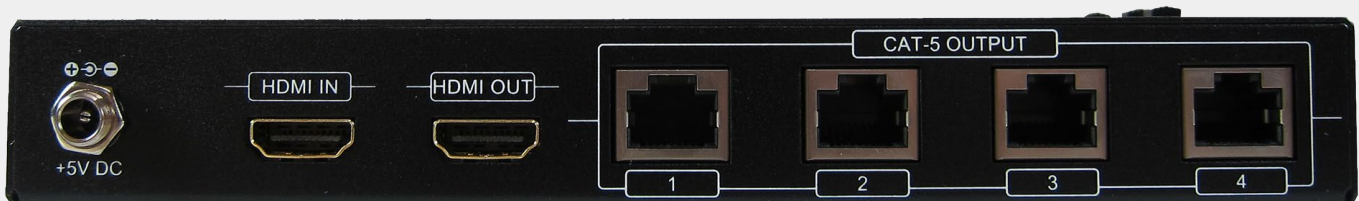# Avenview
AV Connectivity, Distribution And Beyond...

VIDEO WALLS VIDEO PROCESSORS
VIDEO MATRIX SWITCHES
EXTENDERS **SPLITTERS** WIRELESS
CABLES & ACCESSORIES

1x4 HDMI Extender / Splitter
Single CAT5 with 3D Support and
Local Output

Model #: **HDM3D-C5SP-4**

Product Application & Market Sectors

Corporate

House Of Worship

Military

Residential

Education

Industrial

Medical

Aviation

TABLE OF CONTENTS

SECTION 1: GETTING STARTED

1.1 IMPORTANT SAFEGUARDS

Please read all of these instructions carefully before you use the device. Save this manual for future reference.

What the warranty does not cover

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
- Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
- Repair or attempted repair by anyone not authorized by us.
- Any damage of the product due to shipment.
- Removal or installation of the product.
- Causes external to the product, such as electric power fluctuation or failure.
- Use of supplies or parts not meeting our specifications.
- Normal wear and tear.
- Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

1.2 SAFETY INSTRUCTIONS

The Avenview HDM3D-C5SP-4 HDMI Extender / Splitter over CAT5 with Full 3D Support has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment's, the HDM3D-C5SP-4 should be used with care. Read the following safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- ⚠ Do not dismantle the housing or modify the module.
- ⚠ Dismantling the housing or modifying the module may result in electrical shock or burn.
- ⚠ Refer all servicing to qualified service personnel.
- ⚠ Do not attempt to service this product yourself as opening or removing housing may expose you to dangerous voltage or other hazards
- ⚠ Keep the module away from liquids.
- ⚠ Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- ⚠ Have the module checked by a qualified service engineer before using it again.
- ⚠ Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

This equipment has been tested and found to comply with Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

Any changes or modifications made to this equipment may void the user's authority to operate this equipment.

Warning symbols	Description
	ONLY USE THE PROVIDED POWER CABLE OR POWER ADAPTER SUPPLIED. DO NOT TAMPER WITH THE ELECTRICAL PARTS. THIS MAY RESULT IN ELECTRICAL SHOCK OR BURN.
	DO NOT TAMPER WITH THE UNIT. DOING SO WILL VOID THE WARRANTY AND CONTINUED USE OF THE PRODUCT.
BEWARE this unit contains static sensitive devices	THE VIDEO BOARDS ARE VERY SENSITIVE TO STATIC. PLEASE ENSURE IF RACK MOUNTED OR INSTALLED ON A SURFACE, IT SHOULD BE IN A GROUNDED ENVIROMENT.

⚠WARNING

Read & understand user guide before using this device.

Failure to follow the proper installation instructions could result in damage to the product and preventing expected results.

2. INTRODUCTION

The Avenview HDM3D-C5SP-4 HDMI over Single CAT5 with Full 3D Support Distribution Amplifier with Local Output provides the most flexible solution by which the high definition video and high quality audio can be transmitted to different locations over a long distance. These devices can cascade, allowing you to extend HDMI compliant displays almost anywhere. The input HDMI source can be duplicated and distributed to up to 4 HDMI enable displays through cost effective Cat-5/6 cables and RJ-45 to HDMI mini-extenders HDM3D-C5-R-M or Long Range HDM-C53X-R aka HDM3D-C53X-R. With the built in equalization, the input HDMI cable can be extended up to 20 meters (66 feet) long under Full HD, and make the overall transmission distance superior than regular HDMI splitters or matrix switches in the market. With use of Long Range Receiver, HDMI signal can be extended to 50 meters (165 feet).

- Supports HDMI Deep Color & Full 3D
- HDMI
- HDCP compliant
- Regenerates the HDMI signal
- HDMI local output
- Supports default HDMI EDID and has the ability to learn the EDID of the displays
- Extends up to 20m (66ft) of input HDMI cable with Mini Receiver
- Extends up to 50m (165ft) (720p / 1080i) of output CAT5/6 cable with Long Range Receiver
- Extends up to 40m (130ft) (1080p) of output CAT5/6 cable with Long Range Receiver
- Pure unaltered uncompressed 7.1ch digital HDMI over LAN cable transmission
- Allows cascading
- Perfectly integrated with other HDM-C5XD Series products

2.1 PACKAGE CONTENTS

Before you start the installation of the Extender/Splitter, please check the package contents.

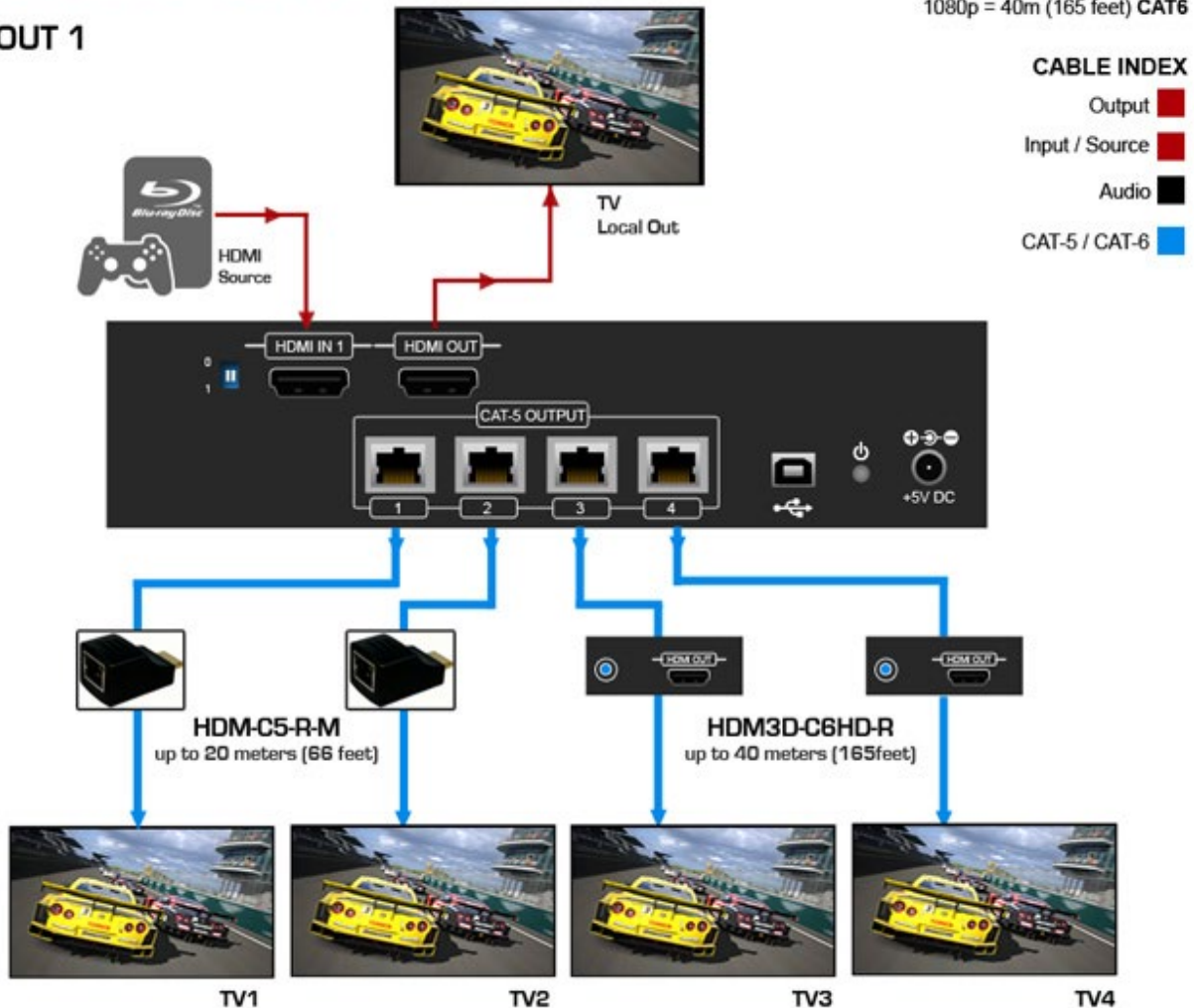| 1	HDM3D-C5SP-4	X 1	
2	POWER ADAPTER (+5VDC, 4A)	X1	
3	USER'S MANUAL	X 1	

- Put the product in an even and stable location. If the product falls down or drops, it may cause an injury or malfunction.
- Don't place the product in too high temperature (over 50°C), too low temperature (under 0°C) or high humidity.
- Use the DC power adapter with correct specifications. If inappropriate power supply is used then it may cause a fire.
- Do not twist or pull by force ends of the UTP cable. It can cause malfunction.

2.3.1 Front Panel
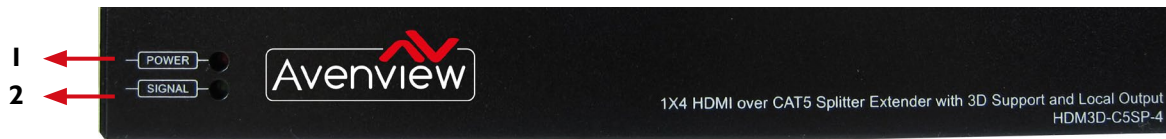
2.3.2 Rear Panel
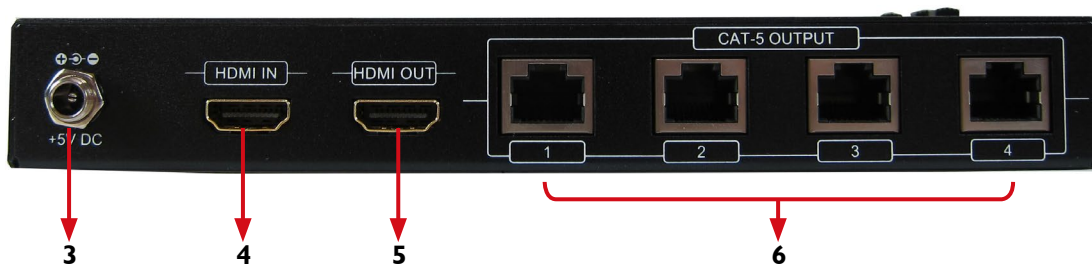
2.3.3 Bottom Panel
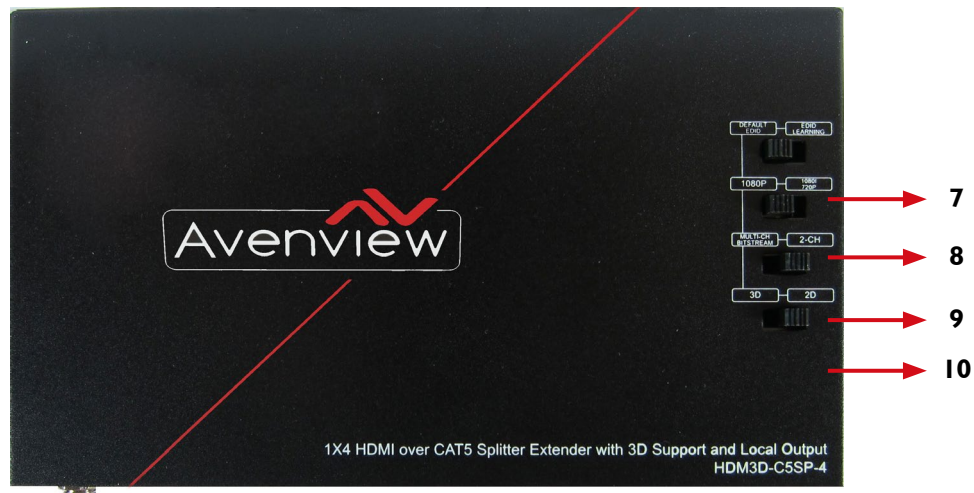
1. Power LED	2. Signal LED
3. Power Jack	4. HDMI Input
5. HDMI Local Output	6. CAT 5/6/7 Output 1 – 4
7. SW1: EDID Mode	8. SW2: EDID – Full HD Selection
9. SW3: EDID – Audio Selection	10. SW4: 3D/2D Selection

3.   EDID LEARNING

1. Power up the HDM3D-C5SP-4. Connect to HDMI OUTPUT with the display you want the HDM3D-C5SP-4 to learn its EDID.

2. To learn the display's EDID for source device connected to HDMI OUTPUT, Set SW1 to left Position. Power on and wait for about 2-3 seconds to complete the EDID learning process; the users do not need to power cycle again or even twice while plugging on different displays.

	Left Position	Right Position
SW1	DEFAULT EDID	EDID LEARNING
SW2	FULL HD	HD
SW3	AUDIO-MULTI CHANNEL	AUDIO – 2 CHANNEL
SW4	3D	2D

- *The instant switching is enabled only when the video and audio setting of the source has been adjusted to "Auto" or "Pass Through"*

4.   INSTALLATION

To setup Avenview HDM3D-C5SP-4 follow these steps for connecting to a device:

1. Turn off all devices including monitors / TV
2. Connect to a HDMI source (such as a Blu-Ray Disc player) to HDMI Input of HDM3D-C5SP-4
3. Connect the receiver HDM-C53X-R or HDM-C5-R-M to HDM3D-C5SP-4 from RJ45 Out with CAT5 / CAT6 cable
4. Plug in 5V 4A DC Power (supplied).
5. Power on the HDMI display
6. Power on HDMI Sources.

PROBLEM	POSSIBLE SOLUTION
NO IMAGE	• Check if connection to the source and the display are correct. • Ensure that display device supports 480p, 720p and 1080p resolution
SCREEN DEFECTS APPEAR	• This product supports up to 1080p resolution. • Check the HDMI connection • If outputting from a PC. Check the maximum resolution range of the graphics card.
EQUALIZER SET-TINGS	• Please check the RX (Receiver) Dial Mode to ensure it is on Min or gradually increase it to Max until the video appears.

WARNING

Do Not Over Power The Eq Signal Strength

When Adjusting The Eq Please Ensure A Slow Clockwise
Turn From Min-Max

Stop Once The Picture/Audio Is Working Properly

Do Not Continue To Turn Dial.

Persistance Will Cause An Over Power Condition Of The Signal
And May Affect Long Term Reliability.

Thank You.

5. SPECIFICATIONS

ITEM	DESCRIPTION
UNITS	HDM3D-C5SP-4
UNIT DESCRIPTION	HDMI 1.3 Transmitter / Splitter over CAT5 / CAT6 with Full 3D Support
HDMI COMPLIANCE	HDMI Deep Colour & Full 3D
HDCP COMPLIANCE	Yes
VIDEO BANDWIDTH	Single Link 225 MHz (6.75Gbps)
SUPPORTED RESOLUTIONS	480i / 480p / 720p / 1080i / 1080p60
RESOLUTION AND DISTANCE	Full HD: (1080p) ~ 40meter (130feet) (CAT5e) / 50meter (165feet) (CAT6) HD: (720p/1080i) ~ 50meter (165feet) (CAT5e) / 60meter (200feet) (CAT6)
AUDIO SUPPORT	Surround Sound (up to 7.1 Ch) or Stereo Digital Audio
EQUALIZATION	Built-in
INPUT TMDS SIGNAL	1.2 Volts (peak-to-peak)
INPUT DDC SIGNAL	5 Volts (peak-to-peak, TTL)
ESD PROTECTION	- Human body model — ±15kV (air-gap discharge) & ±8kV (contact discharge) - Core chipset — ±8kV
INPUT	1 x HDMI
OUTPUT	4 x Rj45
HDMI CONNECTOR	Type A (19 pin female)
RJ45 CONNECTOR	WE/SS 8P8C
DIMENSIONS (L X W X H)	7.6" x 4.3" x 1.1"
POWER SUPPLY	5V 4A DC
POWER CONSUMPTION	13 Watt (max)

Environmental

ITEM	DESCRIPTION
OPERATING TEMPERATURE	32˚ ~ 104˚F (0˚ to 40˚C)
STORAGE TEMPERATURE	-4˚ ~ 140˚F (-20˚ ~ 60˚C)
RELATIVE HUMIDITY	20~90% RH (no condensation)
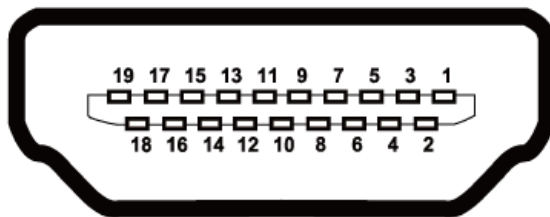
Type A (Receptacle) HDMI

Pin 1	TMDS Data2+	Pin 11	TMDS Clock Shield
Pin 2	TMDS Data2 Shield	Pin 12	TMDS Clock–
Pin 3	TMDS Data2–	Pin 13	NC
Pin 4	TMDS Data1+	Pin 14	Reserved (N.C. on device)
Pin 5	TMDS Data1 Shield	Pin 15	SCL
Pin 6	TMDS Data1–	Pin 16	SDA
Pin 7	TMDS Data0+	Pin 17	DDC/CEC Ground
Pin 8	TMDS Data0 Shield	Pin 18	+5V Power
Pin 9	TMDS Data0–	Pin 19	Hot Plug Detect
Pin 10	TMDS Clock+		

Notice

1. All HDMI over CAT5 transmission distances are measured using Belden CAT6A (625MHz), 4-Pair, U/UTP-Unshielded, Riser-CMR, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, Polyolefin Insulation, Patented Double-H spline, Ripcord, PVC Jacket using Quantum 980 signal HDMI Video Generator Module Video Pattern Testing.

2. The transmission length is largely affected by the type of category cables, also the type of HDMI sources, and the type of HDMI display. The testing result shows solid UTP cables (usually in the form of 300m or 1000ft bulk cable) can transmit a lot longer signals than stranded UTP cables (usually in the form of patch cords). Shielded STP connectors are better suit than unshielded UTP connectors. A solid UTP CAT5e cable shows longer transmission length than stranded STP CAT6 cable. For long extension users, solid cables are your only choice.

3. EIA/TIA-568-B termination (T568B) for category cables is recommended for better performance.

4. To reduce the interference among the unshielded twisted pairs of wires in category cable, you can use shielded STP cables with shielded connector to improve EMI problems, which occurs in long transmission.

5. Because the quality of the category cables has the major effects in how long transmission distance will be made and how good is the received display, the actual transmission length is subject to your category cables. For resolution greater than 1080i or 1280x1024, a solid CAT6 cable is the only viable choice.

Data Link TIA/EIA-568-B

PIN	Color	Function
1	W-O	TX0-
2	O	TX0+
3	W-G	TX1-
4	BL	TX2-
5	W-BL	TX2+
6	G	TX1+
7	W-BR	TXC-
8	BR	TXC+

RJ-45 Jack

PAIR3
PAIR2 PAIR1 PAIR4

1 2 3 4 5 6 7 8
W-O O W-G BL W-BL G W-BR BR

JACK POSITION
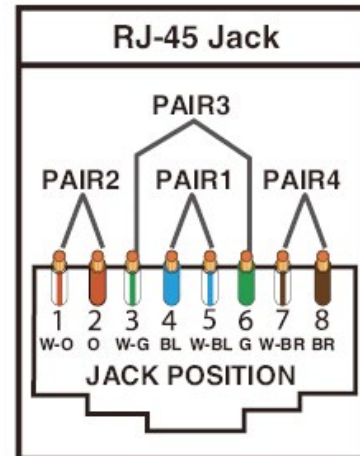
PERFORMANCE GUIDE FOR HDMI OVER CATEGORY CABLE TRANSMISSION

PERFORMANCE RATING		TYPE OF CATEGORY CABLE		
WIRING	SHIELDING	CAT5	CAT5E	CAT6
SOLID	UNSHIELDED (UTP)	★★★	★★★★	★★★★
	SHIELDED (STP)	★★★	★★★★	★★★★★
STRANDED	UNSHIELDED (UTP)	★	★★	★★
	SHIELDED (STP)	★	★	★★
TERMINATION		PLEASE USE EIA/TIA-568-B TERMINATION (T568B) AT ANY TIME		

Notes

Avenview Warranty Certificate

AVENVIEW CORP. ("Avenview") warrants Avenview-branded product(s) contained in the original packaging against defects in materials and workmanship when used normally in accordance with Avenview's enclosed manual guidelines for a period of THREE (3) YEARS from the date of original retail purchase - Warranty Period. Avenview's published guidelines include but are not limited to information contained in technical specifications, user manuals and service communications.

LABOR: During the Warranty Period of THREE (3) YEARS, Avenview will repair or replace the product(s) at no cost using new or used parts equivalent to novel performance and reliability if the product(s) is determined to have abide by Avenview's published guidelines. Cost of Labor applicable to product(s) after Warranty Period. For labor costs, please contact support@avenview.com.

PARTS: During the Warranty Period of of THREE (3) YEARS, Avenview will supply new or rebuilt replacements in exchange for defective parts of the product(s) at no cost if the product(s) is determined to have abide by Avenview's published guidelines. Cost of Parts applicable to product(s) after Warranty Period. For part(s) costs, please contact support@avenview.com.

To obtain Warranty: (a) proof of purchase in the form of a bill of sale or receipted invoice reflecting that the registered product(s) is within warranty period must be presented to obtain warranty service; (b) product(s) must be registered at time of purchase. Failure to do so will result in applicable parts and labor charges. Returning product(s) must be shipped in Avenview's original packaging or in packaging pertaining equal degree of protection to Avenview's. Both Avenview and purchaser are responsible for freight charges and brokerages when shipping the product(s) to the receiver.

NOT COVERED BY THIS WARRANTY

This warranty does not apply to any non-Avenview branded product(s); non-registered Avenview product(s). This warranty does not apply: (a) to cosmetic damage, including but not limited to scratches, dents and broken cords; (b) to damage caused by use with another product; (c) to damage caused by accident, abuse, misuse, liquid contact, fire, earthquake or other external cause; (d) to damage caused by operating the Avenview product(s) outside Avenview's manuals or guidelines; (e) to damage caused by service performed by anyone who is not a representative of Avenview or an Avenview authorized personnel; (f) to defects caused by normal wear and tear or otherwise due to the normal aging of the Avenview product(s), or (g) if any serial number has been removed or defaced from the Avenview product(s).

AVENVIEW IS NOT LIABLE FOR DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, OR UNDER ANY OTHER LEGAL THEORY, INCLUDING BUT NOT LIMITED TO LOSS OF USE; LOSS OF REVENUE; LOSS OF ACTUAL OR ANTICIPATED PROFITS (INCLUDING LOSS OF PROFITS ON CONTRACTS); LOSS OF THE USE OF MONEY; LOSS OF ANTICIPATED SAVINGS; LOSS OF BUSINESS; LOSS OF OPPORTUNITY; LOSS OF GOODWILL; LOSS OF REPUTATION; LOSS OF, DAMAGE TO, COMPROMISE OR CORRUPTION OF DATA; OR ANY INDIRECT OR CONSEQUENTIAL LOSS OR DAMAGE REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER.

Some states do not allow the inclusion or limitation of incidental or consequential damages, or allow limitations on duration implements of the Warranty Period; therefore the above limitations or exclusions may not be applicable to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

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TECHNICAL SUPPORT