

# KanexPro®

## EXT-AVIP120M

### USER MANUAL



HDMI® Video Over IP Decoder Kit up to 120m

**All Rights Reserved**

Version: EXT-AVIP120M\_2017V1.2

## Preface

Read this user manual carefully before using this product. Pictures displayed in this manual are for reference only. Different models and specifications are subject to the actual product.

This manual is only for operational instruction, not for any maintenance usage. The functions described in this version are updated till June 2017. Any changes of functions and parameters since then will be informed separately. Please refer to the dealers for the latest details.

**All product function is valid till 2017-6-2.**

## Trademarks

Product model and logo are trademarks. Any other trademarks mentioned in this manual are acknowledged as the properties of the trademark owner. No part of this publication may be copied or reproduced without the prior written consent.

## FCC Statement

This equipment can generate, use, and radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. It has been tested and found to comply with the limits of 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 commercial installation.

Operation of this equipment in a residential area is likely to cause interference, in which case the user at their own expense will be required to take whatever measures may be necessary to correct the interference

Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.



## SAFETY PRECAUTIONS

To ensure the best from the product, please read all instructions carefully before using the device. Save this manual for further reference.

- Unpack the equipment carefully and save the original box and packing material for possible future shipment.
- Follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burn.
- Using supplies or parts not meeting the products' specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- To prevent fire or shock hazard, do not expose the unit to rain or moisture. Do not install this product near water.
- Do not place any heavy items on the extension cable in case of extrusion.
- Do not remove the housing of the device as opening or removing housing may expose you to dangerous voltage or other hazards.
- Install the device in a place with fine ventilation to avoid damage caused by overheating.
- 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.
- Do not twist/pull by force the ends of the optical cable. It can cause malfunction.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power cord to the device before cleaning.
- Unplug the power cord when left unused for a long period.
- Information on disposal for scrapped devices: Do not burn or mix with general household waste; please treat the devices as normal electrical waste.

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# 1. Introduction

## 1.1 Introduction to EXT-AVIP120M

The KanexPro NetworkAV 120m is a simple and cost-effective encoder / decoder set which allows you to extend full HD 1080p/60 HDMI signals over IP up to 120 meters. The IP Extender kit can be used as point-to-point, point-to-many and many-to-many based on network configuration. This HDCP compliant extender set can also be cascaded or daisy-chained to many layers by adding 10G Ethernet switches supporting TCP/IP protocols.

## 1.2 Features

- Extends 1080p HDMI signals up to 120m over a single UTP CATx cable
- Uses MJPEG compression technology
- Supports Point-to-Point, Point-to-Many and Many-to-Many network configurations
- Many to many requires set up of VLAN
- Control via IR (Kit included)
- Can be cascaded for many layers by adding 10G more Ethernet switches
- Wideband IR control (38-56kHz) to the source
- HDCP compliant
- Supports TCP/IP protocol
- Metal enclosure built with mounting ears
- 5 V DC power supplies included

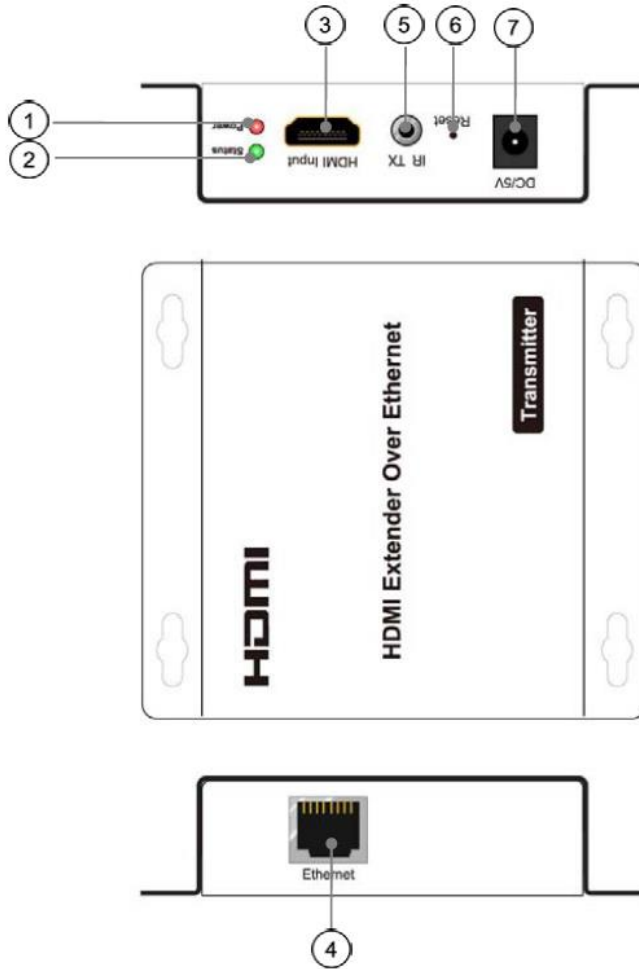
## 1.3 Package List

- 1 x Main Unit Transmitter & Receiver
- 1 x IR-TX Cable & IR-RX Cable
- 1 x Power adapter (DC 5V @ 1A x2 PCS)
- 1 x User manual


**Notes:** If there are defective parts or parts are missing, please contact your local dealer(s).

## 2. Panel Description

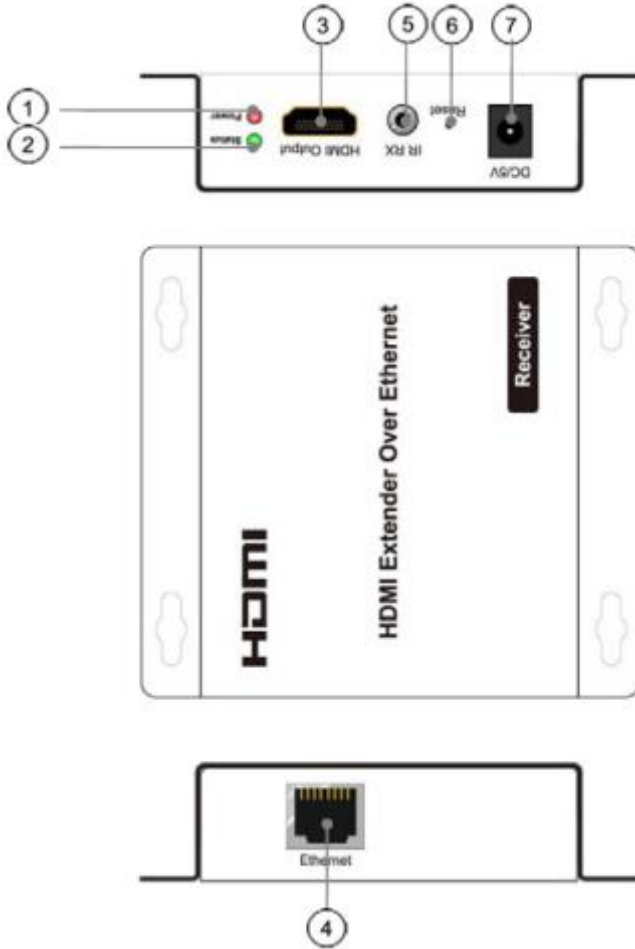
### Transmitter Panel




- ① Indicator of power input
- ② Status of signal connection
- ③ HDMI input
- ④ Ethernet Port
- ⑤ IR-TX Port
- ⑥ Reset Button
- ⑦ Power input port (DC/5V)

 Pictures shown in this manual are only for reference.

### Receiver Panel



- ① Indicator of power input
- ② Status of signal connection
- ③ HDMI input
- ④ Ethernet Port
- ⑤ IR-RX Port
- ⑥ Reset Button
- ⑦ Power input port (DC/5V)

 Pictures shown in this manual are only for reference.

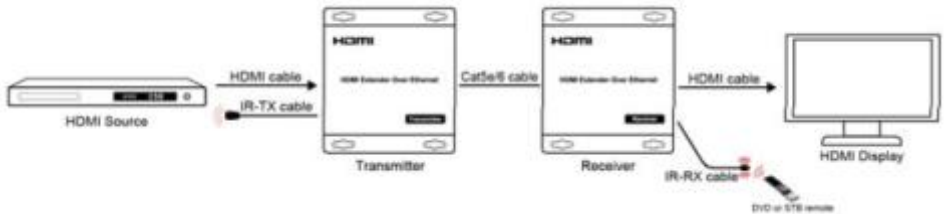
### 3. System Connection

#### 3.1 Usage Precautions

- 1) System should be installed in a clean environment, which should have a proper temperature and humidity.
- 2) All the power switches, plugs, sockets and power cords should be insulated and safe.
- 3) All devices should be connected before powered on.
- 4) System Diagram shown in this manual is for reference only; more specific schemes depend on real-time applications.

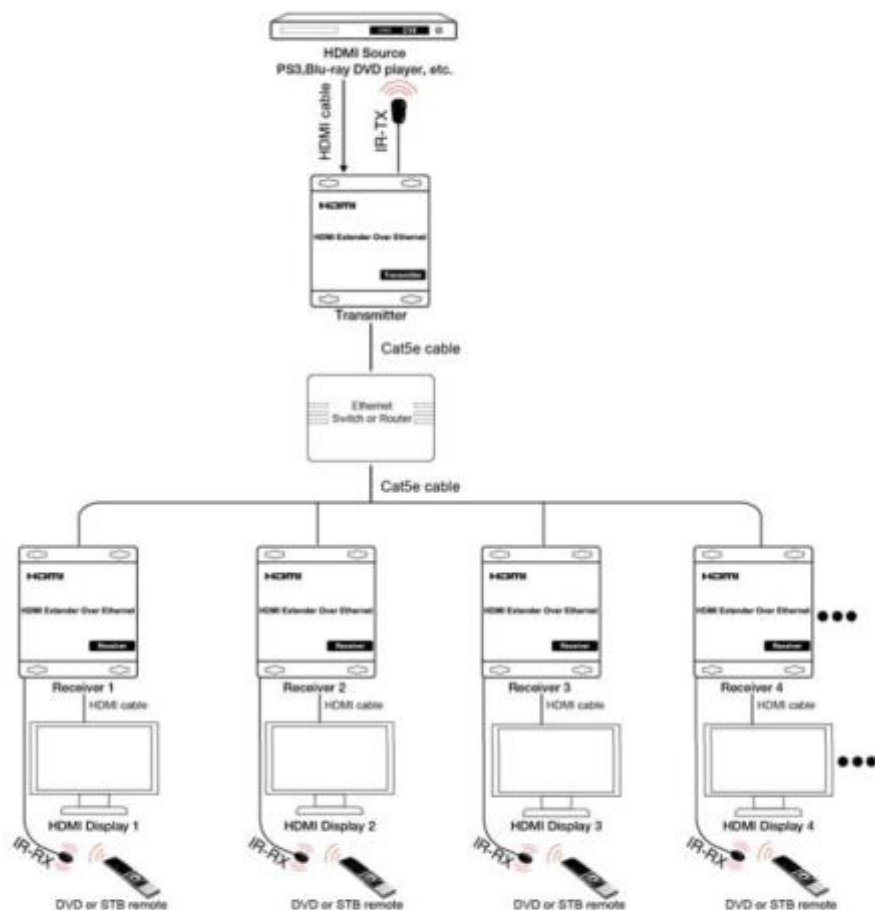
#### 3.2 System Diagram

##### 1) One to One



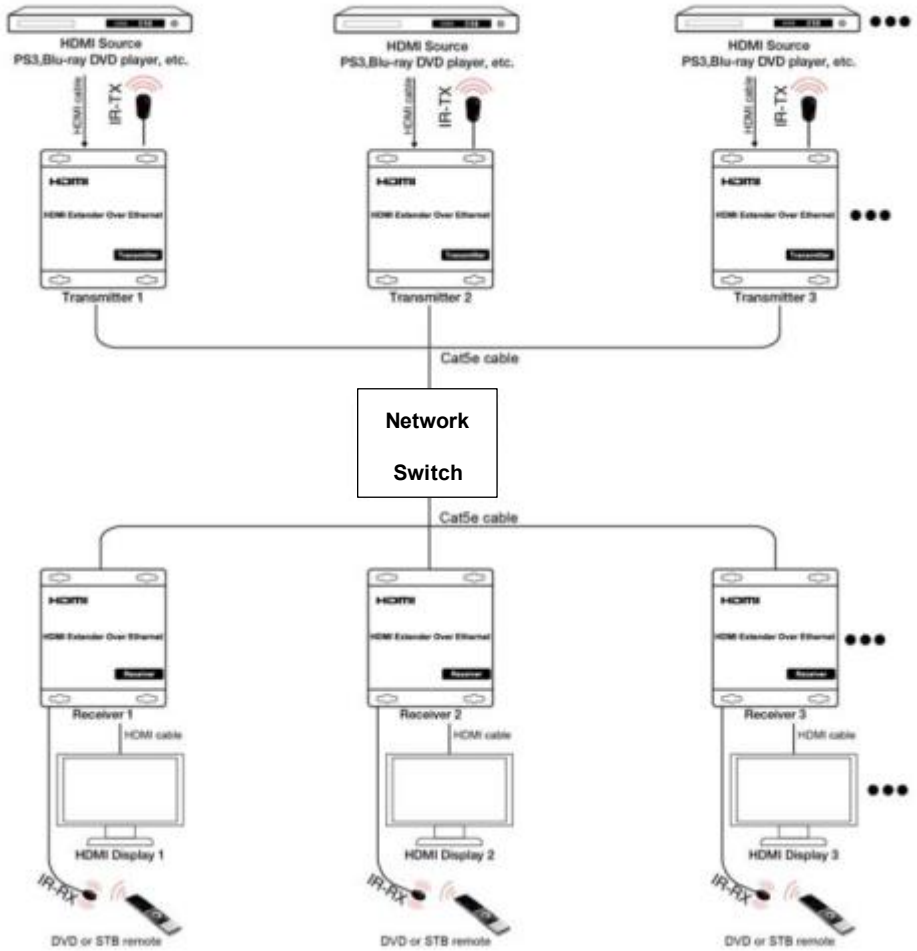


## 2). One to many



Note Connect HDMI Transmitter port and Receiver ports to the Ethernet Switch

### 3). Many to many



Note

1. Connect HDMI TX ports with GES24 port, also connect HDMI RX ports with GES24 ports. (GES24 is a specified VLAN switch for this extender).
2. A HTTP server is embedded in TX and RX, you can setup IP address for RX via web browser. Please refer to "Setup HDMI TX and RX" in page 11.

## Setup HDMI TX and RX

A HTTP server is embedded in each TX and RX. you can setup IP address for HDMI extender via web browser.

The default IP address of the TX is 192.168.168.55, MAC address is: 00:0b:78:00:60:01.

The default IP address of the RX is 192.168.168.56, MAC address is: 00:0b:78:00:60:02.

**Step 1:** Assign the PC (or laptop) IP address on the computer: “Control Panel” → “Network Connections” → “Local Area Connections Status” → “Properties” → “Internet Protocol (TCP/IP)”, Type the IP address field with 192.168.168.11 (0-255) and Subnet mask with 255.255.255.0. After that press OK to save the configuration.

**Note:** The IP address of PC should be different from the IP address of TX and RX.

**Step 2:** Use an Ethernet Cable to connect the PC (or laptop) and the extender. the power LED for the extender is red and the status LED becomes green.

**Step 3:** Please Ping the connected device through the sequence on computer: “Start” → “Run” → input “CMD” → input “ping 192.168.168.55” for TX or input “ping 192.168.168.56” for RX, you will receive the reply if the connection is established.

**Step 4:** Login in IE :192.168.168.55 (default IP for TX) or 192.168.168.56(default IP for RX), You can setup IP address, subnet mask, gateway, and MAC address for the TX and RX.

Please set IP address for each TX and each RX, IP:192.168. 168.XX (XX:1-255). All IP address for TX and RX must be different.

Please set MAC address for TX and RX, MAC:00:0b:78: XX:XX-XX (XX:01-FF).

The MAC address for each TX and each RX must be different.

**Step 5:** After click “Apply” button, the green LED light on the device will go out, you have successfully set IP address for TX and RX now.

**Note:** If you need to restore the device to its factory default settings, please power on the device, the red light becomes lighting, waiting about 10 seconds, the green LED light starts working, now to press the reset button about 5-10 seconds, then the green light will go out, you have successfully restored IP address to factory IP address now.

### 3.3 Connection Procedure

- Step1.** Connect the HDMI signal source (e.g. Blu-Ray Player) to the HDMI Transmitter (Tx) via HDMI into the HDMI Input Port of the Transmitter.
- Step2.** Connect CAT5e or CAT6 cables to both the Ethernet Port of the Transmitter (Tx) and the Ethernet Port of the Receiver (Rx). This will link the transmitter unit to the receiver unit.
- Step3.** Connect the HDMI display (e.g. TV) to the HDMI Receiver (Rx) via HDMI into the HDMI Output Port of the Receiver.
- Step4.** Connect the power supply into the Power Port (DC/5V) of the Transmitter (Tx).
- Step5.** Connect the power supply into the Power Port (Dc/5V) of the Receiver (Rx).
- Step6.** Connect the IR-TX cable into the IR-TX Port on the back panel. Attach the emitter onto the source IR windows.
- Step7.** Connect the IR-RX cable into the IR-RX Port on the receiver. Attach the IR receiver in direct line of site with the handheld remote control. It is recommended to attach the receiver on the display frame/bezel or the display stand.

**ATTENTION:** Insert/Extract the cables gently during the process of setting up.

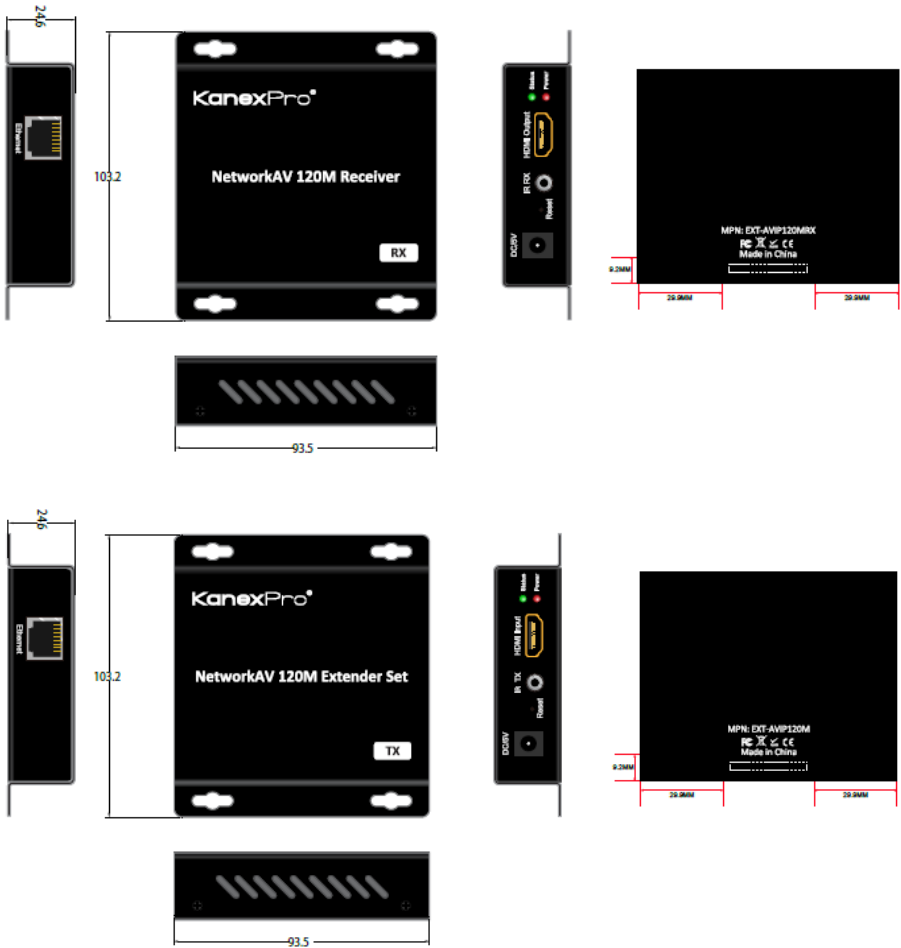
## 4. Specifications

<b>Operating Temperature Range</b>	-5 to +35°C(+23 to +95°F)
<b>Operating Humidity Range</b>	5 to 90%RH (No Condensation)
<b>Input Video Signal</b>	0.5-1.0 Volts P-P
<b>Input DDC Signal</b>	5 volts p-p(TTL)
<b>Support Video Format</b>	DTV/HDTV:480i/576i/480P/576P/720P/1080i/1080P
<b>Video Output</b>	HDMI
<b>Transmission Distance</b>	1080P 8-bit 120m(Maximum) over single CAT5E/6 /24AWG/Solid
<b>Power Consumption</b>	TX:3watts; RX:3watts((Maximum)
<b>IR Frequency</b>	38kHz-56kHz
<b>Dimension (L×W×H)</b>	103.5x93.5x24.6mm
<b>Net Weight</b>	Receiver: 220g, Transmitter: 220g
<b>TX</b>	Default IP address:192.168.168.55 MAC address: 00:0b: 78:00:60:01
<b>RX</b>	Default IP address:192.168.168.56 MAC address: 00:0b: 78:00:60:02

**Note1:** Specifications are subject to change without notice. Mass and dimensions are approximate.

**Note2:** One TX to many RX or many TX connected to many RX → IP and MAC addresses must be different.

# 5. Panel Drawing



## 6. Troubleshooting & Maintenance

Problems	Causes	Solutions
Output images in display show with ghost	Incorrect setting on the display	Check the display's setting
	A cable of bad quality	Try another high-quality connection cable
No output image when switching	No signal at the input / output end	Check with oscilloscope or multimeter if there is any signal at the input / output end.
	Fail or loose connection	Make sure the connection is good
	The extender is defective	Send it to authorized dealer for repairing.
Static becomes stronger when connecting the video connectors	Bad grounding	Check the grounding and make sure it is connected well.

If your problem persists after following the above troubleshooting steps, seek further help from authorized dealer or our technical support.

## 7. After-sales Service

If problems arise when operating the device, please refer to this user manual. Any transport costs are borne by the users during the warranty.

- 1) **Product Limited Warranty:** We warrant that products will be free from defects in materials and workmanship for **three years**, which starts from the first day the product exits warehouse. (Make note of the serial number on the product)  
Proof of purchase in the form of a bill of sale or receipted invoice **MUST** be presented to obtain warranty service.
- 2) **What the warranty does not cover:**
  - Warranty expiration.
  - Factory applied serial number has been altered or removed from the product.
  - Damage, deterioration or malfunction caused by:
    - Normal wear and tear
    - Use of supplies or parts not meeting our specifications
    - No certificate or invoice as the proof of warranty.
    - The product model showed on the warranty card does not match with the model of the product for repairing or had been altered.
    - Damage caused by force majeure.
    - Servicing not authorized
    - Any other causes which does not relate to a product defect
  - Delivery, installation or labor charges for installation or setup of the product
- 3) **Technical Support:** Email or call our after-sales department if there are any problems or any unanswered questions. Please inform us the following information about your cases:
  - Product version and name.
  - Detailed failure situations.
  - The formation of the cases.

**Remarks:** For any questions or problems, please try to get help from your local distributor or contact [kanexpro.com](http://kanexpro.com) or call us at 888-975-1368 for further support.



## **8. Warranty**

### **A. LIMITED WARRANTY**

KanexPro™ warrants that (a) its products (the “Product”) will perform greatly in agreement with the accompanying written materials for a period of 36 months (3 full years) from the date of receipt and (b) that the product will be free from defects in materials and workmanship under normal use and service for a period of 3 years.

### **B. CUSTOMER REMEDIES**

KanexPro’s entire liability and Customer’s exclusive remedy shall be, at KanexPro option, either return of the price paid for the product, or repair or replacement of the Product that does not meet this Limited Warranty and which is returned to KanexPro with a copy of customers’ receipt. This Limited Warranty is void if failure of the Product has resulted from accident, abuse, or misapplication. Any replacement Product will be warranted for the remainder of the original warranty period of 3 years, whichever is longer.

### **C. NO OTHER WARRANTIES**

To the maximum extent permitted by applicable law, KanexPro disclaims all other warranties, either express or implied, including, but not limited to implied warranties of merchantability and fitness for a purpose, about the product and any related written materials. This limited warranty gives customers specific legal rights. Customers may have other rights depending on the jurisdiction.

### **D. NO LIABILITY FOR DAMAGES**

To the maximum extent permitted by applicable law, in no event shall KanexPro be liable for any damages whatsoever (including without limitation, special, incidental, consequential, or indirect damages for personal injury, loss of business profits, business interruption, loss of business information, or any other pecuniary loss) arising out of the use of or inability to use this product, even if KanexPro has been advised of the possibility of such damages.

**KanexPro**

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