Avenview

Control Your Video

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

4K Video Wall Processor

DVI | HDMI | HD ready 1080p | RS-232 | RoHS Compliant

Model #: HDM-AVXWPRO-4K

© 2015 Avenview Inc. All rights reserved.
The contents of this document are provided in connection with Avenview Inc. ("Avenview") products. Avenview makes no representations or warranties with respect to the accuracy or completeness of the contents of this publication and reserves the right to make changes to specifications and product descriptions at any time without notice. No license, whether express, implied, or otherwise, to any intellectual property rights is granted by this publication. Except as set forth in Avenview Standard Terms and Conditions of Sale, Avenview assumes no liability whatsoever, and disclaims any express or implied warranty, relating to its products of Avenview Inc. is strictly prohibited.

Product Application & Market Sectors

Corporate

House Of Worship

Military

Residential

Education

Industrial

Medical

Aviation

TABLE OF CONTENTS

1. GETTING STARTED 1

1.1 IMPORTANT SAFE GUARDS 1

1.2 SAFETY INSTRUCTIONS 1

1.3 REGULATORY NOTICES FEDERAL COMMUNICATIONS COMMISSION 2

2. INTRODUCTION AND FEATURES 3

2.1 PACKAGE CONTENTS 4

2.2 BEFORE INSTALLATION 5

2.3 PANEL DESCRITION 5

2.3.1 HDM-AVXPRO-4K Front panel 5

2.3.2 HDM-AVXPRO-4K Rear panel 5

3. INSTALLATION 6

4. APPLICATION DIAGRAM 7

5. PC CONNECTION 8

5.1 OPERATION AND CONFIGURATION 8

6. SPECIFICATIONS 20

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.
- u se 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 HDM-AVXPRO-4K Modular Video Wall processor has been tested for conformity to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment's, the HDM-AVXPRO-4K 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.

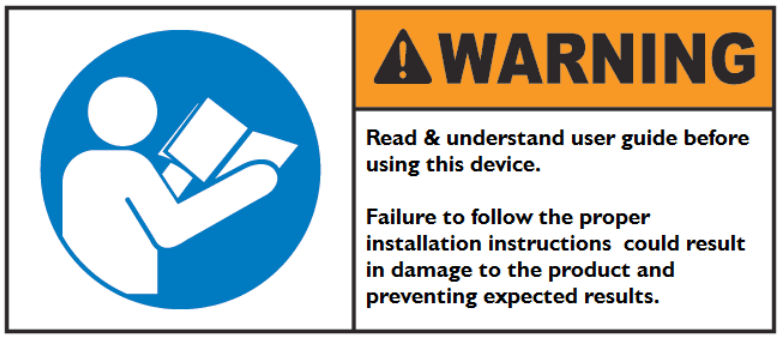
- ⚠ Do not dismantle the housing or modify the module.
- ⚠ Dismantling the housing or modifying the module may result in electrical shock or burn.
- ⚠ Refer all servicing to qualified service personnel.
- ⚠ Do not attempt to service this product yourself as opening or removing housing may expose you to dangerous voltage or other hazards
- ⚠ k eep 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.

1.3 REGULATORY NOTICES FEDERAL COMMUNICATIONS COMMISSION (FCC)

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.
	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.



2. INTRODUCTION AND FEATURES

The HDM-AVXPRO-4K 4-Display Video Wall Processor was designed to perform the dedicated function of a one input to 4 displays in differnt layouts. Enhanced with real time data/video Thru digital transmission processing chips for displaying content on your flat panel displays or projectors. Bundled with its own control software the user can simply configure different layouts for any solution such as 1x1, 1x3, 1x4, 2x2 and mosiac. The HDM-AVXPRO-4K can accept both DVI/HDMI source inputs/outputs, made with the embedded scaler that converts signals from either DVI/HDMI source to match the native resolution of monitors, flat panel displays, projectors connected to the 4 outputs connectors. Each output resolution can be selected for each display, also settings up to PC resolutions WUXGA (1920x1200). The HDM-AVXPRO-4K sends the input source video thru DVI/HDMI interface to the connected monitors/ projectors based on the display layout and configured in the software. Recommended applications include retail digital signage, commercial applications and broadcasting/education/ surveillance systems etc.

Key Features:

- 4 outputs (DVI / VGA) supporting resolution of (800x600 to 1920x1200@ 60Hz)
- Available in three input modes models (DVI or HDMI or DP) supporting resolution up to 3840X2400 @ 30Hz
- Supports 4K/1080p/WUXGA
- Flexible Video Wall Configuration;
- Built-in Bezel Correction;
- Supports Cascading, Unlimited daisy-chained via HDMI;
- Control Software supports accurate monitor position management
- Supports input rotation, resize, position, zoom output video, Frame Locking, Overlap and Scalable Resolution;
- 1U Rack mount format;
- Each DVI output has an independent controllable display area
- ISO 9001/14001 Certified
- Up to 330 MHz Pixel Clock;

2.1 PACKAGE CONTENT

Before you start the installation of the converter, please check the package contents.

1	HDM-AVXPRO-4K X 1	
2	POWER SUPPLY X 1	
3	INSTALLATION SOFTWARE / CD X 1	
4	USER MANUAL	

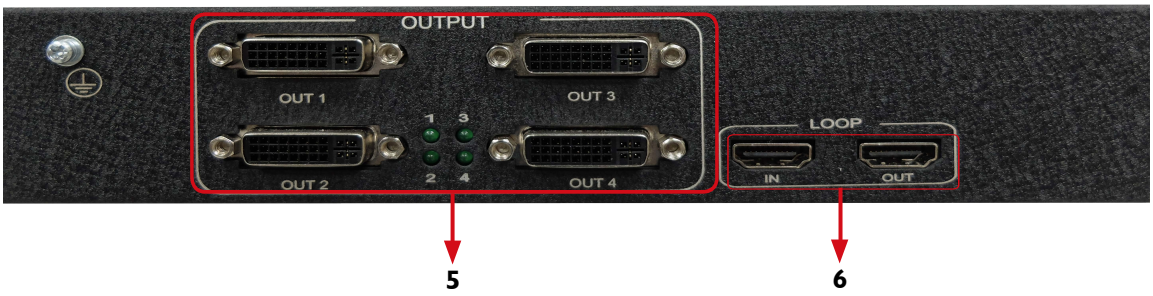
2.2 BEFORE INSTALLATION

- 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 video cable. It can cause malfunction.

2.3 PANEL DESCRIPTION

2.3.1 HDM-AVXPRO-4K Front Panel

2.3.2 HDM-AVXPRO-4K Rear Panel



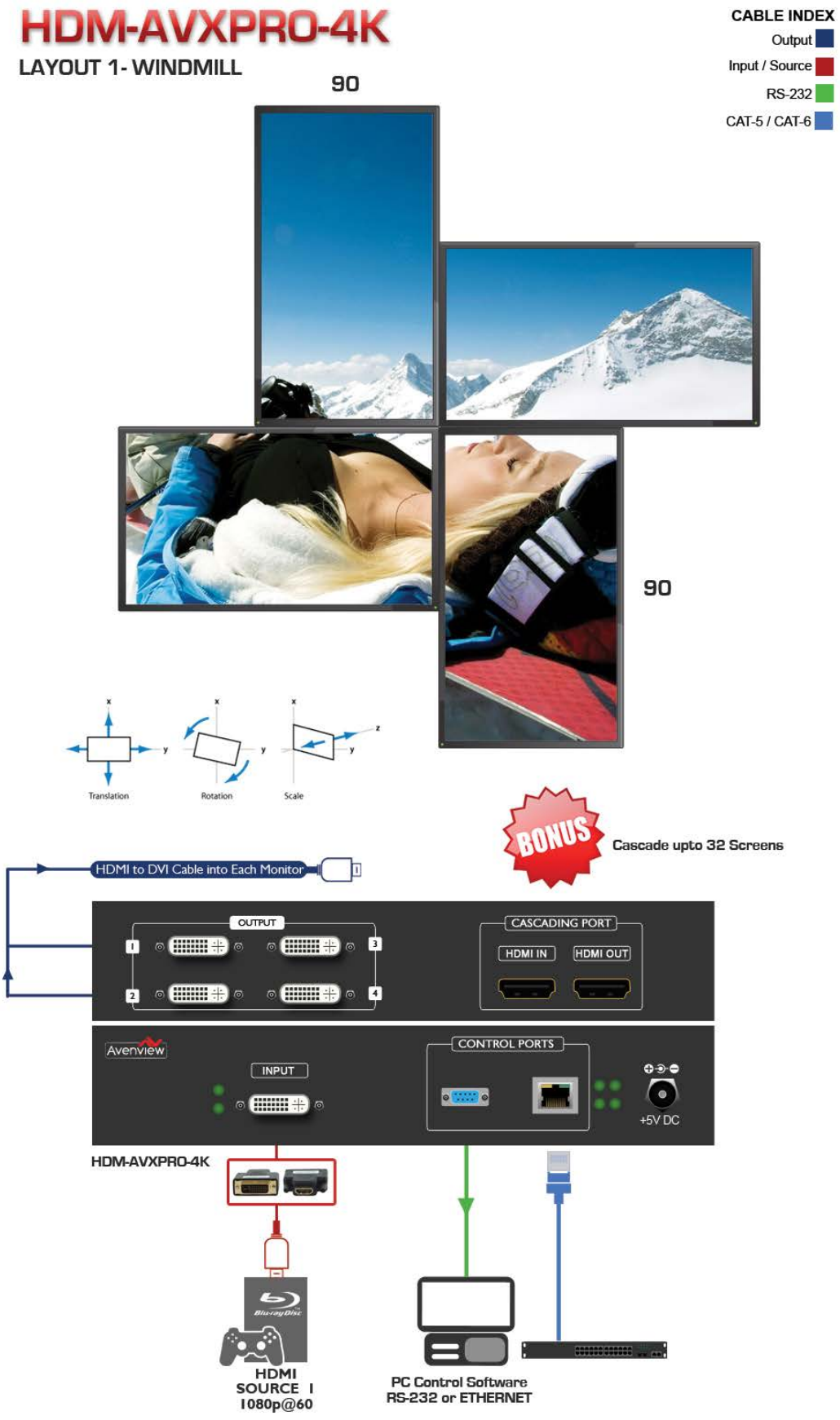
1. **DVI IN:** Connect to DVI/HDMI source	2. **RS 232:** Connect to PC using RS 232 cable for software control
3. **LAN:** Connect to PC for software control	4. **POWER JACK:** Connect supplied 12V power supply
5. **DVI OUT:** Connect to DVI/HDMI Displays	6. **HDMI LOOP:** HDMI Cascade interface

3. INSTALLATION

To setup Avenview HDM-AVXPRO-4K follow the steps outlined below for connecting to a device.

1. Use the best quality DVI and DVI-HDMI cables.
2. Make sure all devices are powered off; the HDM-AVXPRO-4K and all devices that are to be connected to it.
3. Connect DISPLAYS (or projectors, TV or other display devices) to OUTPUT interfaces of HDM-AVXPRO-4K.
4. Connect the Source device (such as, PC, DVD player, or Media player etc.) to HDM-AVXPRO-4K.
5. Connect a Windows based laptop or desktop (that will used to configure the HDM-AVXPRO-4K) to HDM-AVXPRO-4K by RS-232 to USB Cable.
6. Power ON HDM-AVXPRO-4K.
7. Turn ON all devices connected to HDM-AVXPRO-4K and then setup the HDM-AVXPRO-4K from the system through RS-232 to USB Cable and provided Avenview software.

4. APPLICATION DIAGRAM



5. PC CONNECTION

The Avenview HDM-AVXPRO-4K includes Software Control program which runs under Windows XP/7/8/8.1/10

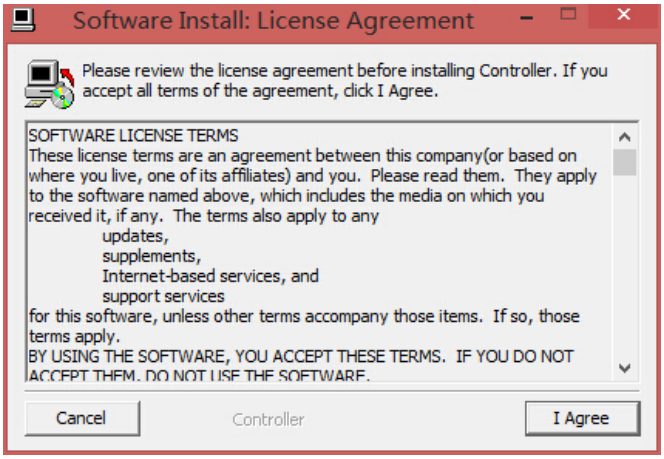
Connect an RS-232 to USB cable to HDM-AVXPRO-4K and USB port to your Windows based system that will be used to configure the HDM-AVXPRO-4K. Once it is connected to a USB port, power on the HDM-AVXPRO-4K, Windows will search for required drivers. If drivers were not installed by Windows, using the provided Installation CD might be required for windows to install the necessary drivers.

5.1 SOFTWARE INSTALLATION AND OPERATION

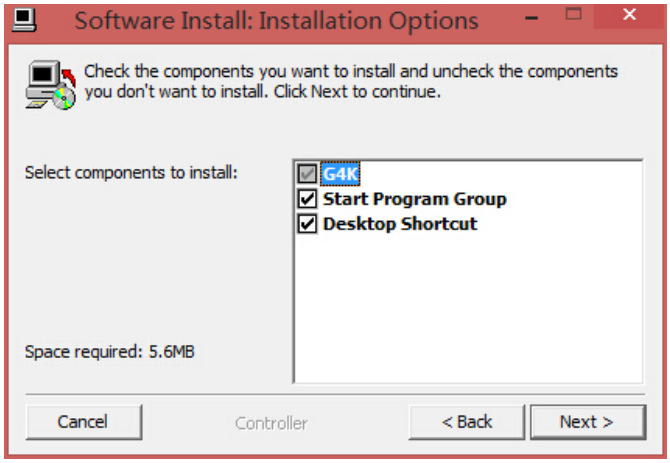
A. Software Installation

1. Insert the CD provided and open contents

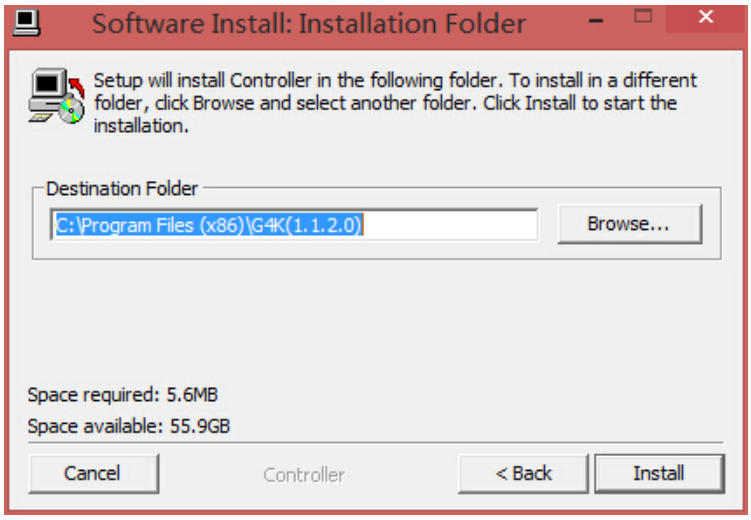
2. Run the installation file of **SmartEditor-x.x.x.x.exe** to start installation.



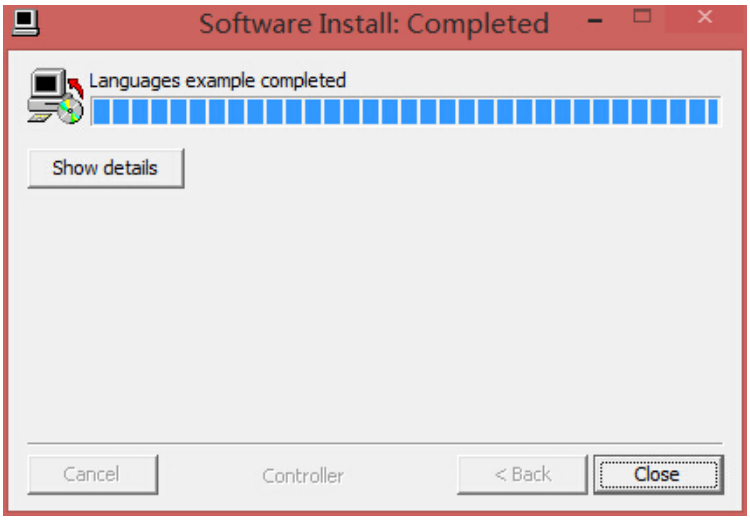
2. Click "Next"



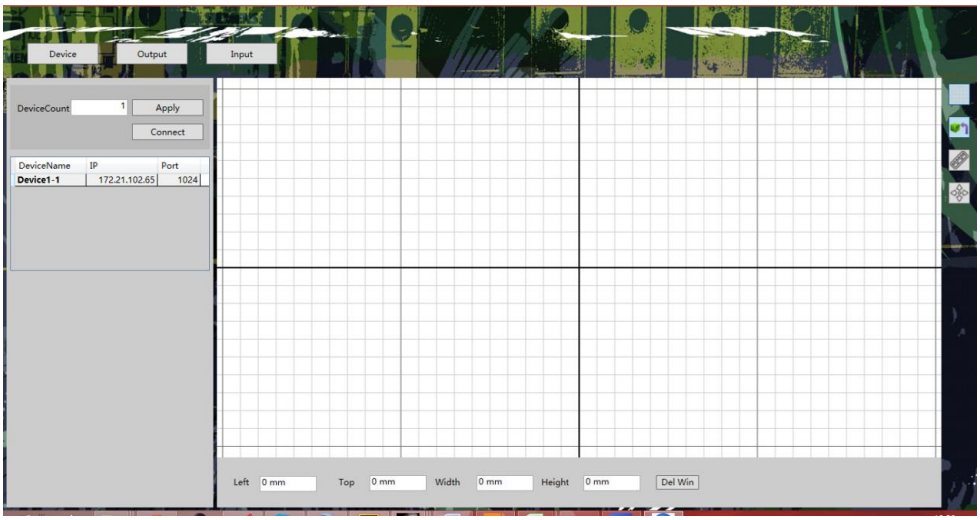
3. Select the prefered installation root directory, and click “Install”



4. Click "Close". Installation process is now complete.



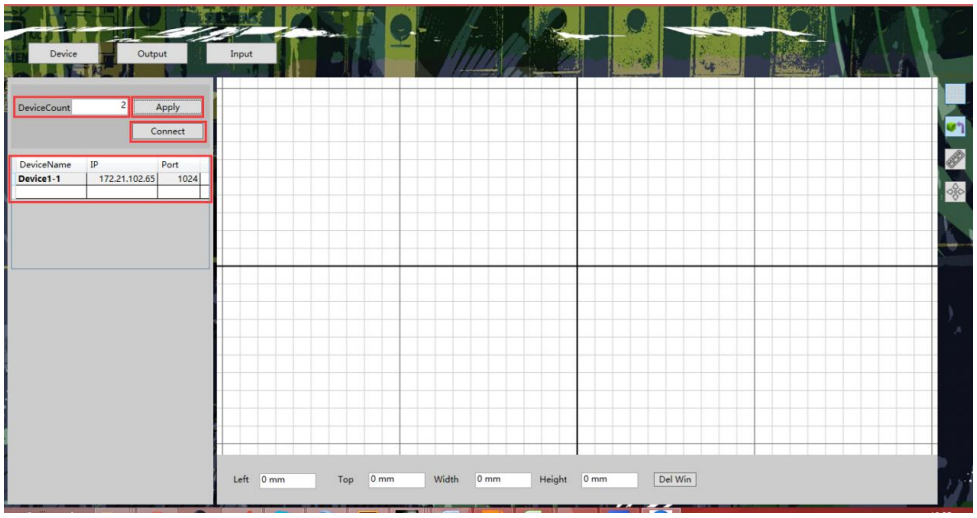
5. Double click created software shortcut, Software will start with the main window showing as below:



B. System Login

Connect to Server

1. The number of connected devices should be filled in "DeviceCount" field. After clicking “apply” a list of devices will show up with its corresponding information.



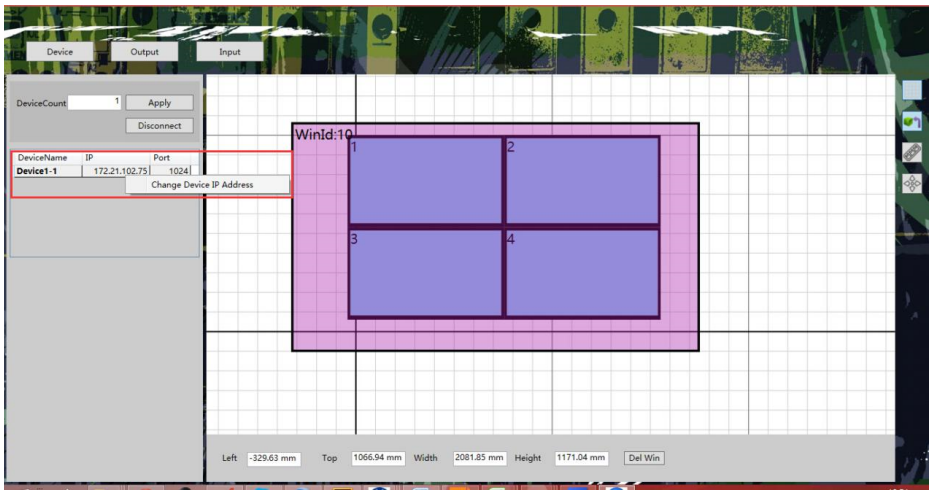
Type the Device IP Address in the corresponding space. Devices can be renamed for easy identification.
Press “Connect” to establish the connection between the device and the computer.

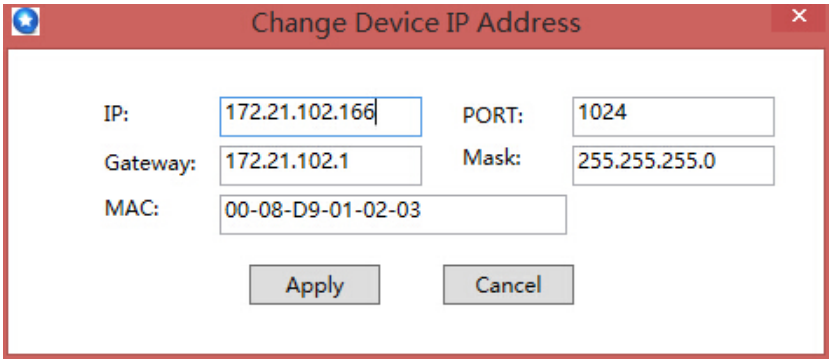
Press "Disconnect" to disconnect the device from computer.

* The default IP address is 172.21.102.75.

Modify IP

1. Right click the device list and select "Change Device IP Address"

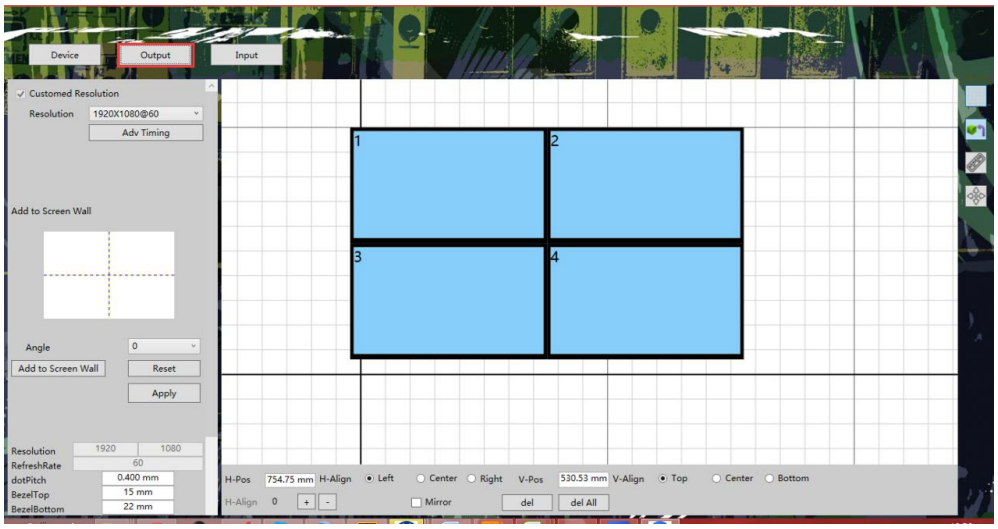




Modify the corresponding values, and click “Apply”. The devices will reboot with the new IP address.

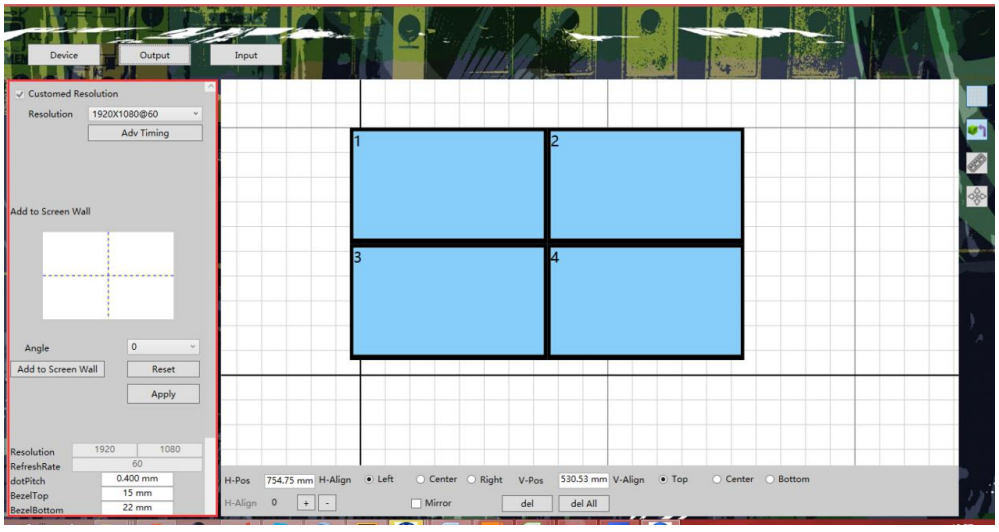
Output Settings

Click "Output" button to access the output settings interface:



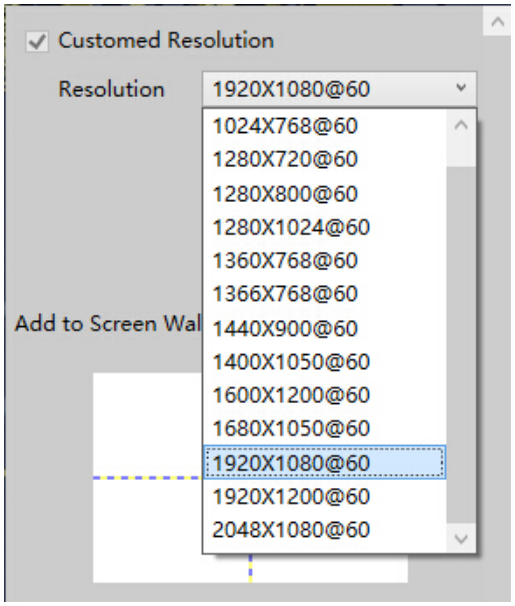
1) Screen Setup Area

The left gray area is the screen setup area.



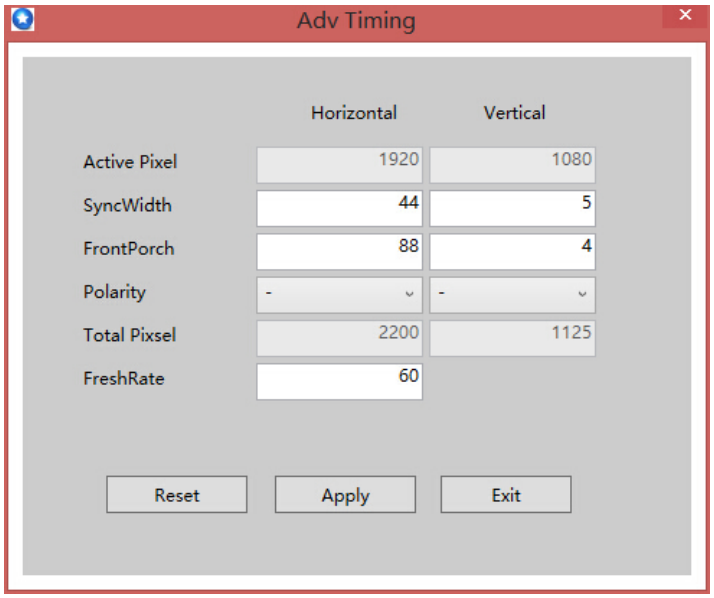
A) Resolution Ratio

Allows the selection of different supported resolutions.



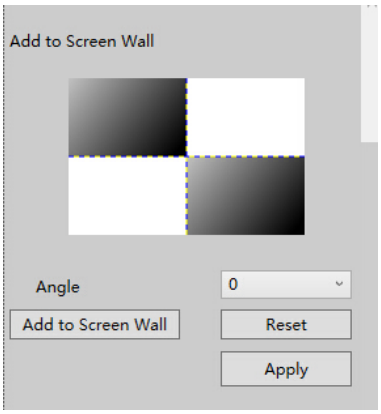
B) Advanced Timing

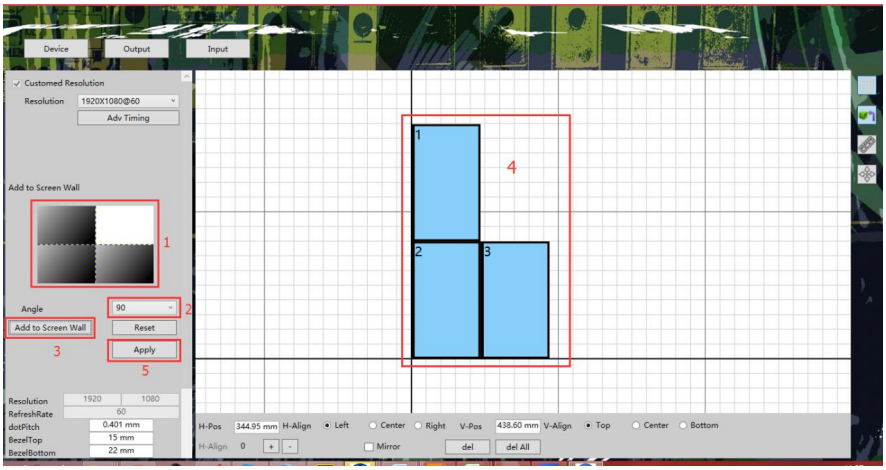
Allows the user to customize Active Pixel, Sync Width, Total Pixel, etc.



C) Display Arrangement

Allows the user to setup the Screen Wall configuration.

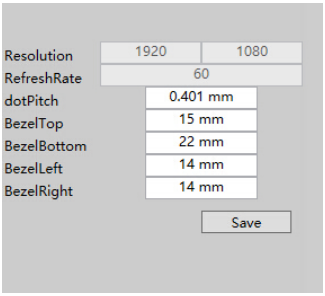




1. Click on any of the white spaces representing a screen. The selected screen will turn black indicating it is selected.
2. Select the desired rotating angle in the drop-down menu (four angles available).
3. Click “Add to Screen Wall”. The screen configuration will be displayed on the "working area" on the right.
4. “Reset” will delete previous setting.
5. After all screen wall configuration is done. Click "Apply" to save settings.

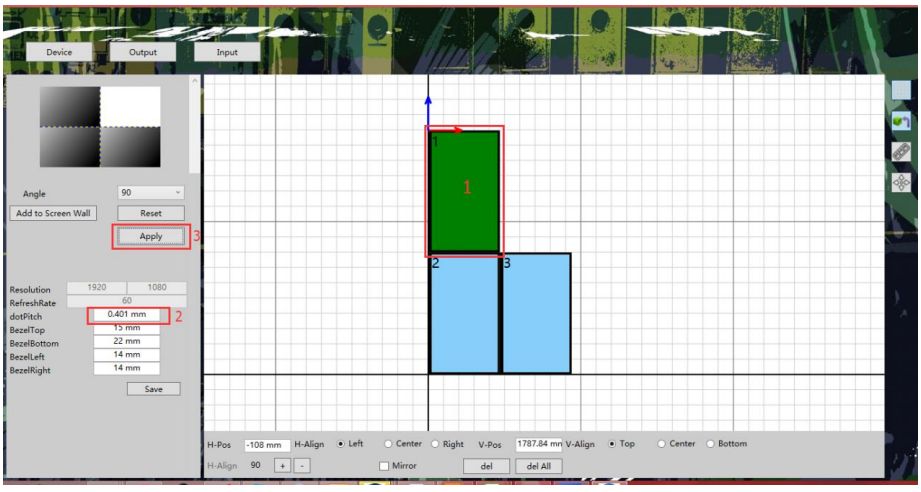
D) Screen Pixel Pitch

Allows the user to customize Bezel and Dot Pitch.



Method 1:

1. Select the desired screen to be modified from the working area (the coressponding screen will be highlighted green.)
2. Modify the “dot pitch” and the “Bezel”.
3. Press “Enter” for changes to take effect (Enter should be pressed after each changed parameters).
4. Click "Apply".



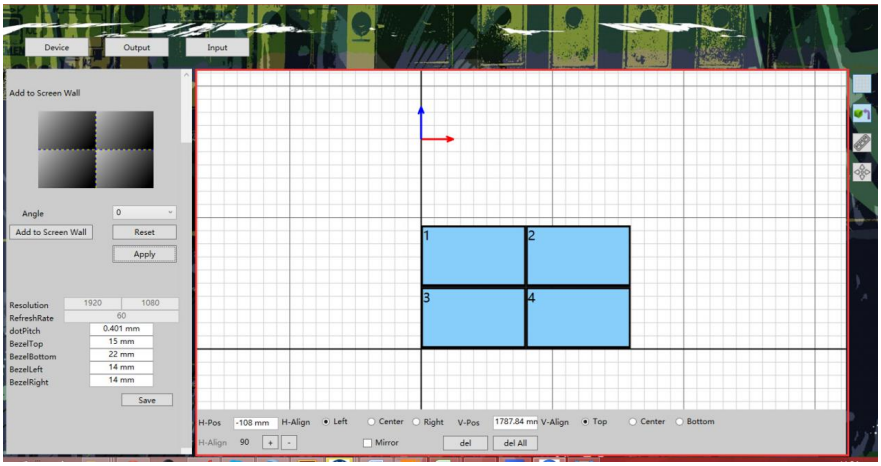
Method 2:

Using this method will apply changes to all screens at the same time. This method can not modify “dot pitch”

1. Fill in the desired parameters for each corresponding position, then click “Save”.
2. Reconnect the device.

2) Screen Adjustment Area

The left gray area is the screen adjustment area.



A) Setting Screen Position

1. Selecting any of the screens will show up blue and red coordinate axis at the edge of the screen. This coordinate axis is used for screen positioning. Select the position of the coordinate axis below the screen adjustment area.
2. The mouse can be used to drag the screen.
3. Each screen can be individually rotated 0°、90°、180°、270°.
4. Each screen can be individually mirror flipped.

Method 1:

- Use the mouse to drag the screen, Vertical and Horizontal positioning parameters will be displayed below.

Method 2:

- Select a screen and fill in the Vertical and Horizontal positioning parameters of the coordinate axis.

B) Screen Rotation

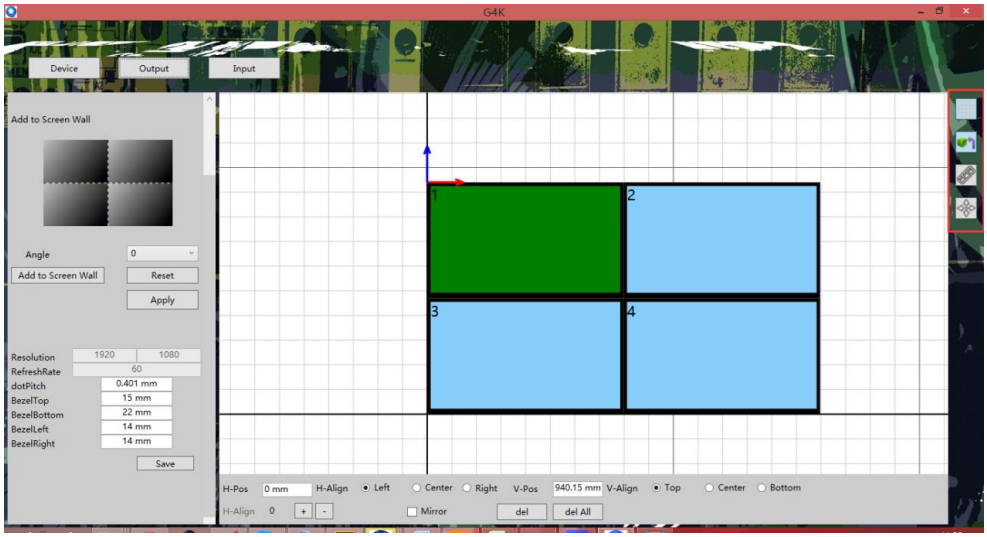
Click "+" or "-" buttons on the lower task. 4 angles can be selected, i.e., 0°, 90°, 180°, 270°.

C) Mirror Image

Mirror flip the video content. auxillairy

D) Auxiliary Tools Area

A list of added functions can be performed using the Auxiliary Tools Area found on the top right side of the "output" interface.



The Auxiliary Tool Area buttons are arranged in order form top to bottom as follows:

Button 1: Selecting this button will allow the left margin of the selected screen to align with the background grid vertical lines. Click the button again to cancel this function. The screen can be moved freely now.

Button 2: Selecting this button will allow auto alignment of screen edges. Click the button again to cancel this function.

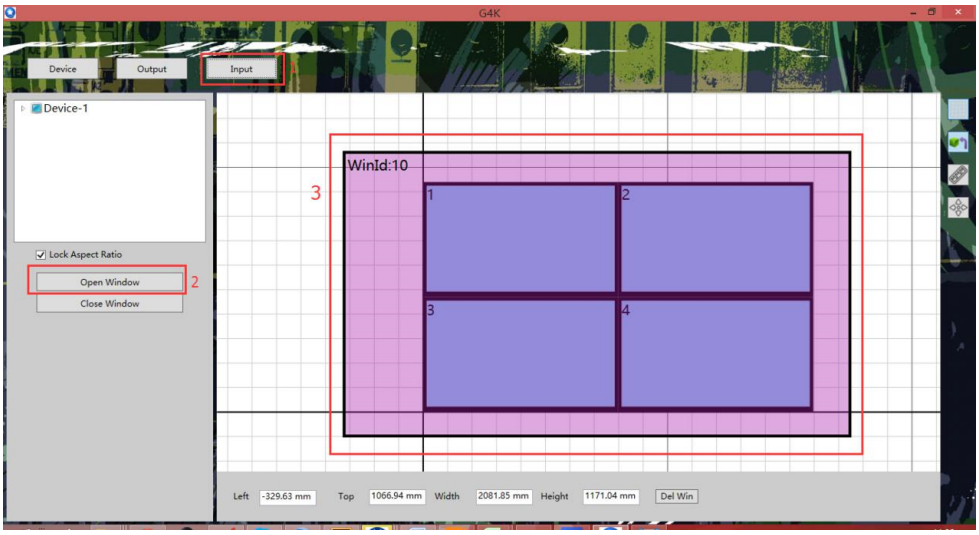
Button 3: Shows the overall height and length of the screen.

Button 4: Centers the screen displays for quick view of screen arrangement.

E) Window Operation

1) Opening Window:

Method 1: Click “Open Window” button in the “input” interface.



Method 2: Place the mouse on any screen, click the left mouse button and drag to open window.

Note:

（1）If “Keep Aspect Ratio” is ticked in the “input” interface, the window is enlarged according to the aspect ratio.

（2）To close an exisiting window, click “Open Window” button, this will close the opened window and opens a new window.

2) Closing Window:

Method 1: Click “Close window” in the “Input” interface.

Method 2: Click “Close window” below “Device” interfcae.

3) Zoom Window

Method 1: Place the mouse pointer on the window edge of the non “output” interface. The pointer will change, drag the mouse to change the size of the window.

Method 2: Fill in the corresponding length and width at the bottom of “device” interface. Press ENTER button to take effect.

4) Scroll Window

Method 1: Click to select a certain window on the non “output” interface, press on the left button to move the window to the target place.

Method 2: Fill in the corresponding the left value and upper value at the bottom of the “device” interface. After filling in every times, press the ENTER button to take effect.

6. SPECIFICATIONS

Item	Description
MODEL	HDM-AVXPRO-4K
UNIT DESCRIPTION	4K Video Wall Processor
SUPPORTED RESOLUTIONS	SD Up to 1080p, 4K (3840X2400 @30Hz)
AUDIO SUPPORT	No
SYSTEM CONTROL	RS-232 & TCP/IP
INPUT	1x DVI/HDMI 1.4/DisplayPort
OUTPUT	4x DVI/VGA
DVI CONNECTOR	DVI-I (212-pin female, digital only)
RJ45 CONNECTOR	WE/SS 8p8C with 2 1 ED indicators
RS232 CONNECTOR	DE-12 (12-pin D-sub f emale)
DIMENSIONS (L X W X H)	8.8" X 7.8" X 1.8"
POWER SUPPLY	12V/DC - AC 110-250V
ESD PROTECTION	- Human body model — ±15kV (air-gap discharge) & ±8kV (contact discharge) - Core chipset — ±8kV
Environmental	
OPERATING TEMPERATURE	32° ~ 104°F (0° to 40°C)
STORAGE TEMPERATURE	-4° ~ 140°F (-20° ~ 60°C)
RELATIVE HUMIDITY	20~120% RH (no condensation)

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.

Avenview
275 Woodward Avenue, Kenmore, NY 14217
1.866.508.0269

Avenview

Control Your Video..

TECHNICAL SUPPORT

CONTACT US

Phone: 1 (866) 508 0269

Email: support@avenview.com

USA Head Office Avenview Corp. 275 Woodward Avenue Kenmore, NY 14217

USA Head Office
Office Avenview Corp.
275 Woodward Avenue
Kenmore, NY14217
Phone: +1.716.218.4100
Fax: +1.866.387-8764
Email: info@avenview.com

Canada Sales
Avenview
151 Esna Park Drive, Units 11 & 12
Markham, Ontario, L3R3B1
Phone: 1.905.907.0525
Fax: 1.866.387.8764
Email: info@avenview.com

Avenview Europe
Avenview Europe
Demkaweg 11
3555 HW Utrecht
Netherlands
Phone: +31(0)85 2100 613
Email: info@avenview.eu

Avenview Hong Kong
Unit 8, 6/f., Kwai Cheong Centre,
50 Kwai Cheong Road,
Kwai Chung, N.T.
Hong kong
Phone: 852.3575.9585
Email: wenxi@avenview.com

Disclaimer

While every precaution has been taken in the preparation of this document, Avenview Inc. assumes no liability with respect to the operation or use of Avenview hardware, software or other products and documentation described herein, for any act or omission of Avenview concerning such products or this documentation, for any interruption of service, loss or interruption of business, loss of anticipatory profits, or for punitive, incidental or consequential damages in connection with the furnishing, performance, or use of the Avenview hardware, software, or other products and documentation provided herein.

Avenview Inc. reserves the right to make changes without further notice to a product or system described herein to improve reliability, function or design. With respect to Avenview products which this document relates, Avenview disclaims all express or implied warranties regarding such products, including but not limited to, the implied warranties of merchantability, fitness for a particular purpose, and non-infringement.