



**NETWORK
TECHNOLOGIES
INCORPORATED**

1275 Danner Dr Tel:330-562-7070
Aurora, OH 44202 Fax:330-562-1999
www.networktechinc.com

PCI-E3-4K18GB-6VW

**4K DisplayPort/HDMI PCIe Graphics Card
6 Output**

User's Manual



Table of Contents

1. Introduction

1.0. Features

1.1. Minimum System Requirements

2. Hardware Installation

3. Software Installation

3.1. Driver Installation

3.2. Position the displays

3.3. Setup Eyefinity Video Wall

3.4. Clone the Video Output

1. Introduction

1.0 Features:

- Based on PCI Express 3.0, ATI Radeon™ R7 360 GCN Architecture GPU.
- 128-bit memory bandwidth 4GB GDDR5 @900Mhz clock speed.
- Supports 6x DisplayPort monitors @ 4096x2160 resolution @60Hz per monitor.
- Fully DirectX® 12 compliant. OpenGL 4.3 support and Linux O/S supported.
- Image quality enhancement technology supports 24x multi-sample, super-sample anti-aliasing modes, adaptive anti-aliasing (MLAA), 16x angle independent anisotropic texture filtering and 128-bit floating point HDR rendering.
- Supports AMD Eyefinity multi-display technology up to 6x displays supported.
- Supports up to 6x displays in Windows extend or clone mode.
- With Independent resolutions, refresh rates, color controls, and video overlays
- Display grouping combine multiple displays to behave like a single large display.
- Supports AMD TrueAudio technology for up to 6x DDMAs.
- AMD App Acceleration is a set of technologies designed to improve video quality and enhance application performance. Full enablement of some features requires support for OpenCL™, DirectCompute™ or DirectX® Video Acceleration (DXVA).
- AMD Catalyst™ graphics and HD video configuration software
- Software support for Windows 7/8 /10 Windows Vista and Linux
- AMD Catalyst™ Control Center - AMD Catalyst™ software application and user interface for setup, configuration, and accessing features of AMD Radeon products.

Description

The **PCIE3-4K18GB-6VW** ATX design is based on the performance AMD R7360 GPU, with 4GB GDDR5, 6x mini DisplayPorts 1.2 output (card DP locking), features AMD project FreeSync maximally reduce input latency and reduce or fully eliminate stuttering/juddering/tearing during gaming and video playback, is best recommended for the commercial 8K/12K UHD requirement multi-displaying. Compact & Ideal for work productivity, entertainment and infotainment small systems such as Advertising, Point-of-Sale Entertainment, Conference Events, Casino gaming, 8K digital signage, kiosks, Data Analysis, Virtual Driving/Tour and Simulation Training Education.

Please read this guide before attempting to install your card.

Before You Begin

Before you start your installation:

- Select a location for the system that has unrestricted airflow so that the maximum temperature of 35°C (95°F) is not exceeded.
- Make sure the installation includes all connected monitors are of the same native resolution and model. Minimum monitors resolution should be above 1600x900 resolution. Best Recommend to connect with all monitors of the same 1920x1080 resolution. Lower resolution monitors below may causes functionality of wrong displaying mode.
- Ensure that your network provides Internet access for the installed system.
- Cable length via external dongles : The maximum length recommended for DVI/HDMI cables connectivity is not included in the specification, since it is dependent on the pixel clock frequency. In general, cable lengths up to 15 feet (4.6 m) will work for display resolutions up to 1920 × 1200. Note that longer cables up to 10m in length can be used with display resolutions 1280 × 1024 or lower. For greater distances, the use of a DVI booster – a signal repeater which may use an external power supply – is recommended to help mitigate signal degradation.

1.1 Minimum System Requirements

• Hardware

- Intel® Core™ i5 or i7 / AMD Opteron / Athlon / AMD FX / Intel Xeon or Latest Intel or AMD CPUs
- 16 GB or more of system memory recommended.
- Optical drive for software installation (CD-ROM or DVD-ROM drive required)
- 500 watts (or greater) power supply recommended.
- Use of 2 or more 4K DP displays of same resolution with AMD Eyefinity Technology is required.
- Recommend to install 6 sets of same native 3840x2160 or 4096x2160 60Hz resolution DisplayPort 1.2 monitors for correct detection for display
- PCI Express® based PC is required with one X16 lane graphics slot available on the motherboard
- Ubuntu Linux, Windows Vista® or Windows® 7/8 operating system 64-bit operating system highly recommended. Windows® XP not currently supported.
 - Installation software requires a keyboard, a mouse and Display monitor.

Operating System Support

- Microsoft Windows® 7, Windows® 8 / 10
- Windows® Vista
- Linux (REDHAT/Ubuntu Linux/SUSE Multi-Displays O/S)

2. Hardware Installation

Caution : Expansion cards contain very delicate Integrated Circuit (IC) chips. To protect them against damage from static electricity, before dismantling your PC or handling the new graphics card, be sure to touch something that is properly grounded.

Step 1.

Make sure that the AC power input is disconnected to prevent power surge remains in the capacitors components on the system which may damage the graphics card when inserting in the system board expansion slot. Locate the PCI Express x16 slot. (Refer to your motherboard manual to see if it is supported.) If necessary, remove the metal cover from this slot; then align your graphics card with the PCI Express x16 slot, and press it in firmly until the card is fully-seated.

Step 2.

Replace the screw to fasten the card in place, and replace the computer cover. Make sure that the gold edge connector of the graphics card is securely inserted.

Step 3.

Plug the display cable into your card; then turn on the computer and monitor.

Connect a Display Port (DP) monitor to your graphics card using a Mini Display Port adapter, or, connect an HDMI monitor to your graphics card using a HD-xx-MM cable and DPMM-HD4K18GBF Mini Display Port to HDMI adapter (sold separately). You are now ready to proceed with the installation of the graphics card driver. Please refer to next chapter for detailed instructions.

Caution : In order to ensure that your graphics card can work correctly, please use official Display Drivers only. Using non-official display drivers might cause problem(s) on the graphics card. Your graphics card came with instruction for downloading current drivers compatible with your PC. **Before proceeding, download the appropriate drivers and make note of where they are located on your PC.**

Uninstall Old Graphics Drivers

To ensure successful installation of the graphics card driver, uninstall the graphic drivers for the existing graphics card before removing the graphics card from the computer.

1. With the current graphics card still in the computer, close all open applications.
2. From Control Panel, double-click **Programs and Features**, and select the graphics card driver from the list of software programs.
3. Click **Uninstall**.
4. If the **Programs and Features** uninstall confirmation dialog appears, click **Yes**.

Note: If the previously installed graphics card has any additional software installed, it may also be removed at this point.

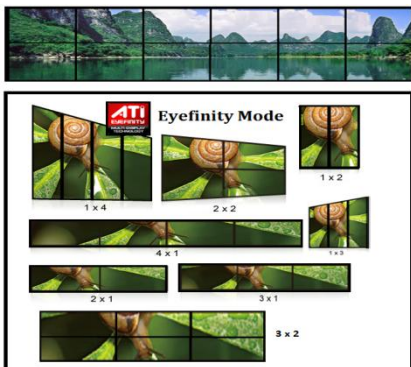
5. Turn off the system after removing the drivers and unplug the PC from power.

Front view of the display card reference



AMD Eyefinity Technology Usage Scenarios (Max 6x Displays supported)

AMD Eyefinity technology is defined as two or more display outputs operating simultaneously and independently from each other. Support is available for Duplicated (Clone) and Extend- multiple-monitor modes, with new support for the capability to group displays into a massive single large surface spanning across multiple displays for use with your desktop workspace, video playback, with support for both windowed and full screen 3D applications. AMD Eyefinity technology provides the user with new levels of functionality across a range of different segments improving productivity and efficiency.



Flexible Display Monitors Formation Supported

*Configurable Setting @ Eyefinity Resolution mode

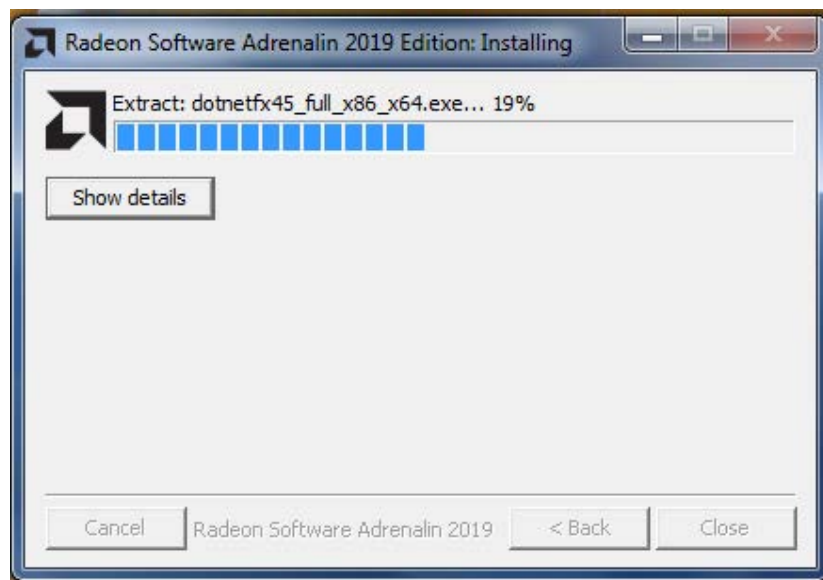
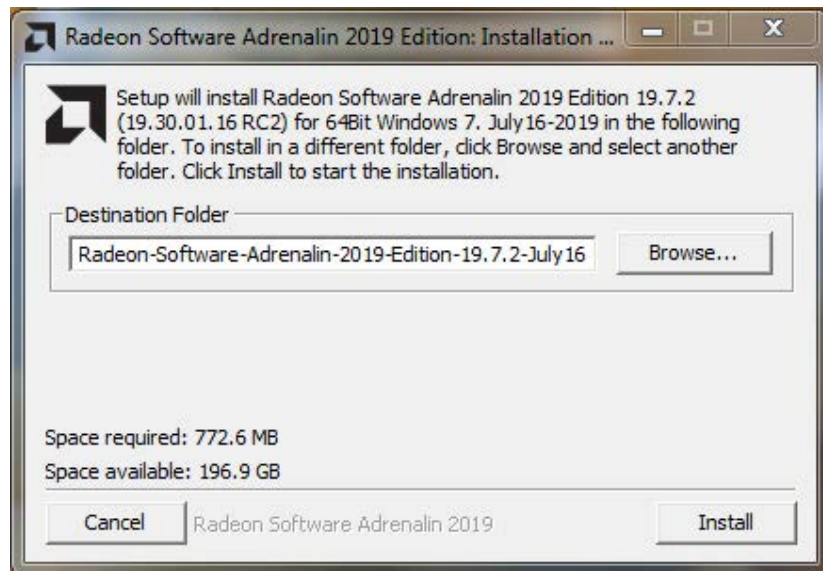
3. Software Installation

Notice the following guidelines before installing the drivers:

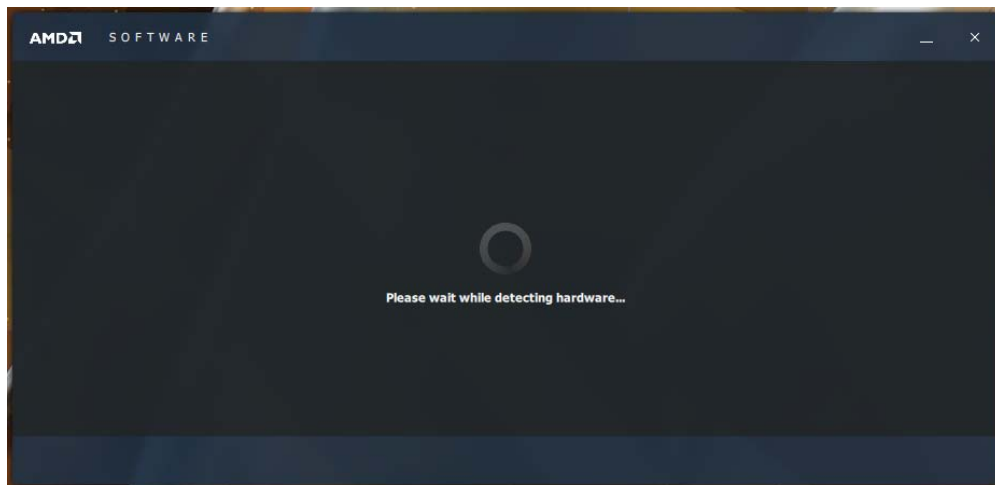
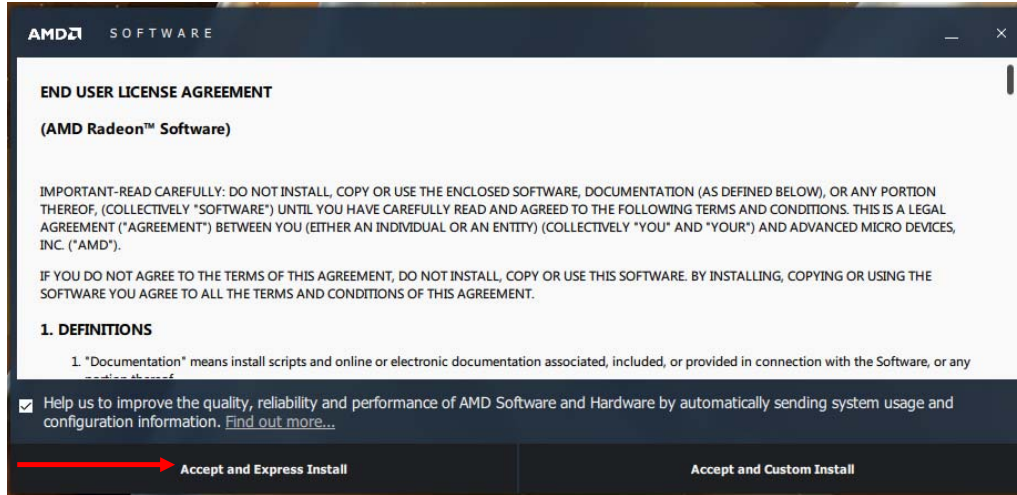
1. First make sure your system has installed DirectX 9 or later version.
2. Make sure your system has installed the appropriate motherboard drivers (for the motherboard drivers, please contact the motherboard manufacturer.)

3.1. Install the Drivers

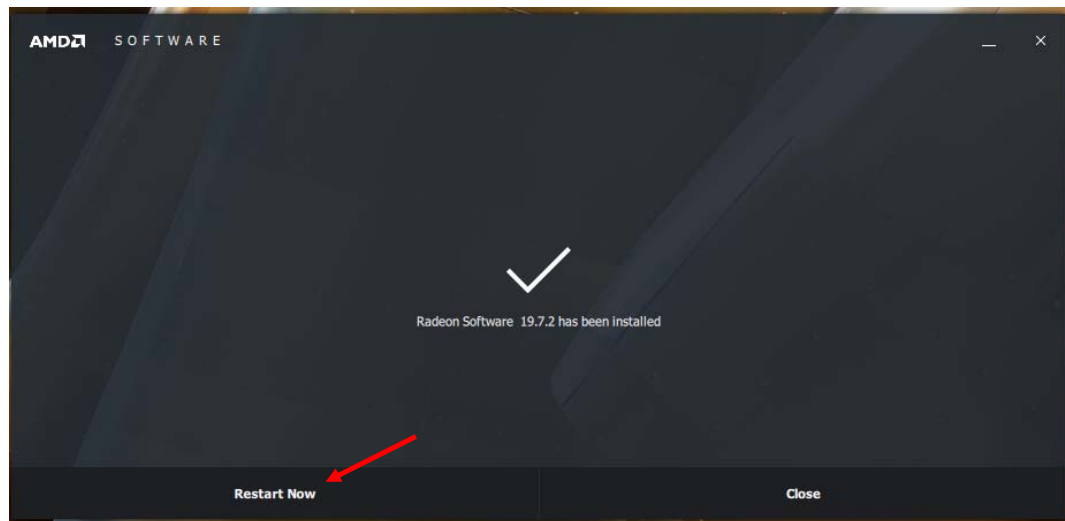
Download the file compatible with your PC. Then double-click on it to begin the installation. Follow the prompts until it is complete.



Click on "Accept and Express Install."

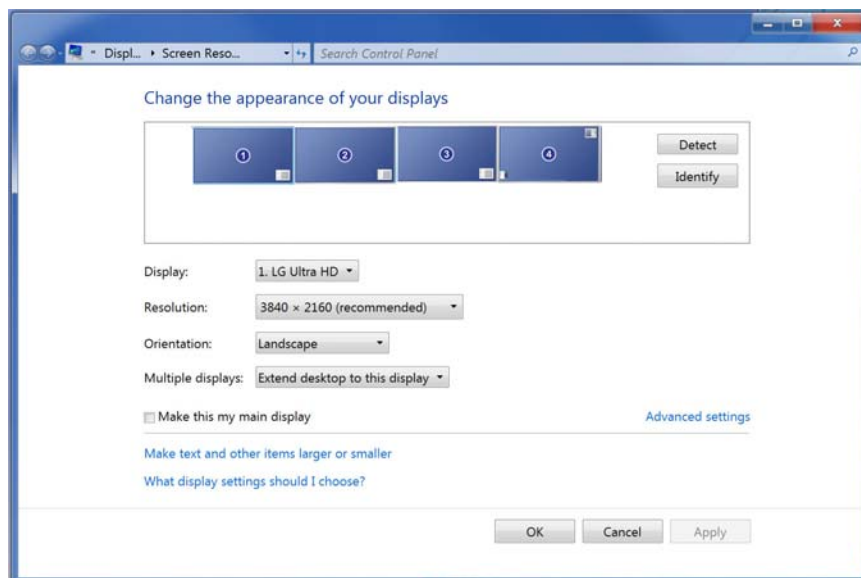


Once the installation is complete, click "Restart Now".

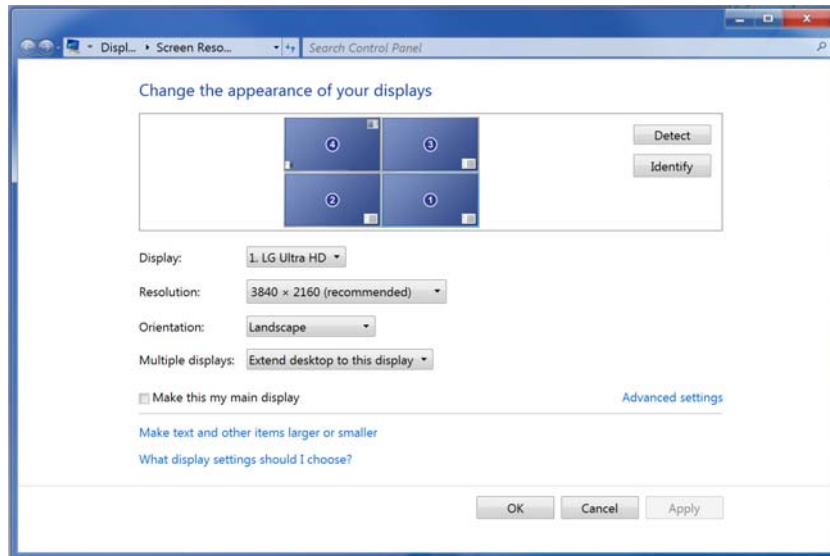


3.2. Position the Displays

To position the way the images will be displayed on your monitors, first open your display settings page.



Images of your connected monitors will be lined up in their default format. To change the position of the monitors, first drag them to the positions you want to view them in.



To make a custom configuration, you can rotate one or more displays. Select the **Display** to be rotated (either from the drop down box or just click on the monitor image itself), and then select the **Orientation** you want that to be viewed in.

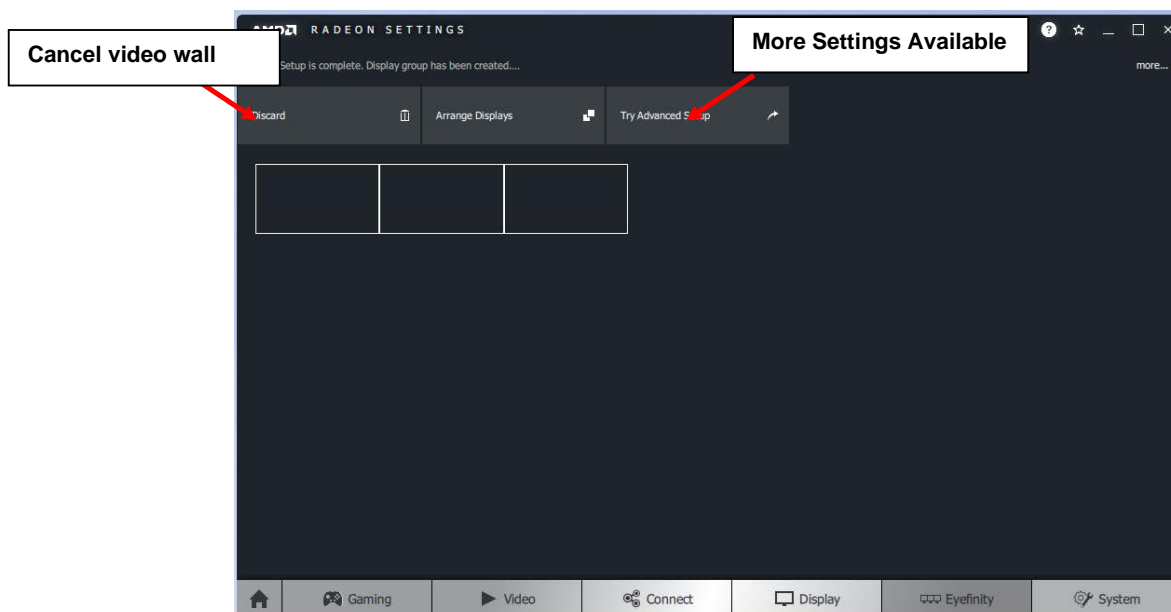
TIP: With your configuration set for "Extend desktop to this display" (above) for each of the displays connected, you can view multiple feeds or broadcasts at the same time, one on each display, provided the application you are using supports this. Simply open a window (like an additional tab in your browser) with the desired broadcast playing and drag the window to the monitor you wish to view it on. Watch multiple YouTube videos or view multiple streams at the same time.

3.3. Setup Eyefinity Video Wall

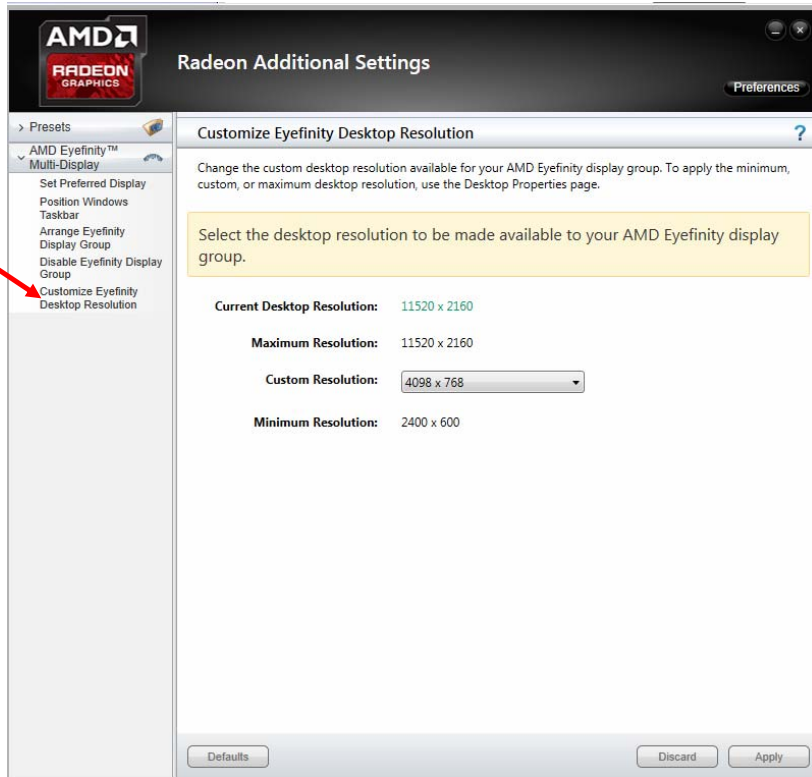
Once the monitors have been positioned the way you want them (above), right click on the Windows Desktop → Choose AMD Radeon Settings → Choose Eyefinity → Click "Quick Setup". Your configuration will be auto-sensed by the software and your display settings will be automatically updated based on the monitors you have connected.



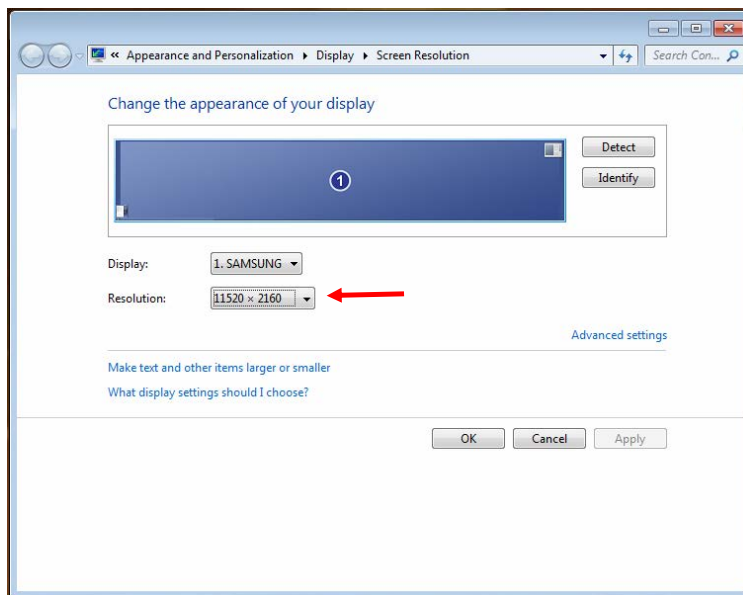
Quick Setup will take you to this screen, displaying your configuration, and providing other options. To change your mind on setting up the video wall, click on "Discard" below.



To adjust your total maximum resolution, you can either click on "Try Advanced Setup" (above), and in the resulting window, select "Customize Eyefinity Desktop Resolution",



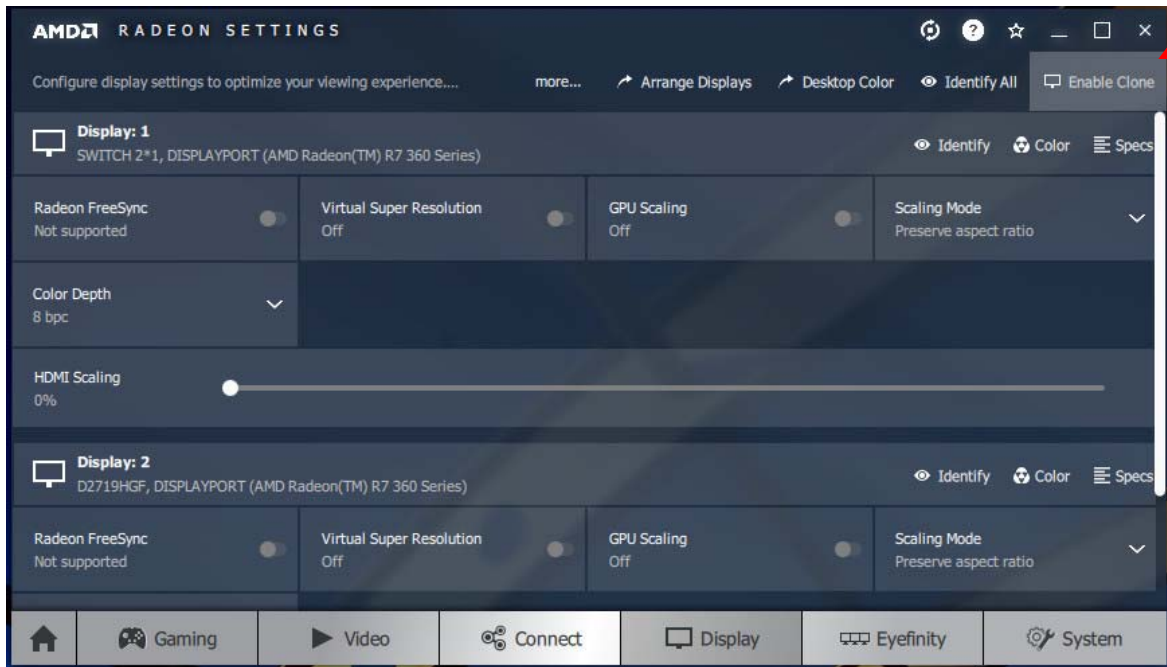
.....or you can go back to your Windows display settings and change the resolution setting there.



Notice that the group of monitors is now recognized as one big monitor, at the total resolution available.

3.4. Clone the Video Output

To instead clone the video output to up to six monitors: Right Click on the desktop → Choose AMD Radeon Settings → Choose Display → Click "Enable Clone" on the top right corner.



Specifications

GPU	AMD Radeon R7 360
GPU Core Clock	900Mhz
Memory	4GB GDDR5
Bus Type	PCIe 3.0 x16
Video Output	6 female mini DisplayPort 1.2
Maximum Resolution (per monitor)	4096x2160@60Hz
Video Bandwidth	21.6 Gbps
HDCP	Compliant
Audio Support	LPCM, AC-3, AAC, Dolby TrueHD and DTS Master Audio DDM audio, 7.1-channel audio bitstreaming via HDMI or DisplayPort
API Support	DirectX 12, OpenGL 4.5, Vulkan, Mantle, Open CL 1.2
System Requirements	<ul style="list-style-type: none"> • PCIe-based PC with one X16 lane graphics slot available on the motherboard • 500W Minimum
Operating Systems	<ul style="list-style-type: none"> • Windows 10 32/64 bit • Windows 8.1 32/64 bit • Windows 7 32/64 bit • Windows Embedded Standard 32/64 bit • Windows Server 2012 R2 64 bit • Windows Server 2008 R2 64 bit • Linux
Dimensions (WxDxH)	4.98x8.67x0.76 In. (126x220x19 mm)
Form Factor	ATX
Regulatory Approval	RoHS