

**4K MULTICAMERA  
PROCESSOR  
KMU-100**

**Instruction manual**

[www.datavideo.com](http://www.datavideo.com)

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### **Disclaimer of Product & Services**

The information offered in this instruction manual is intended as a guide only. At all times, Datavideo Technologies will try to give correct, complete and suitable information. However, Datavideo Technologies cannot exclude that some information in this manual, from time to time, may not be correct or may be incomplete. This manual may contain typing errors, omissions or incorrect information. Datavideo Technologies always recommend that you double check the information in this document for accuracy before making any purchase decision or using the product. Datavideo Technologies is not responsible for any omissions or errors, or for any subsequent loss or damage caused by using the information contained within this manual. Further advice on the content of this manual or on the product can be obtained by contacting your local Datavideo Office or dealer.

# FCC Compliance Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

## Warnings and Precautions

1. Read all of these warnings and save them for later reference.
2. Follow all warnings and instructions marked on this unit.
3. Unplug this unit from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this unit in or near water.
5. Do not place this unit on an unstable cart, stand, or table. The unit may fall, causing serious damage.
6. Slots and openings on the cabinet top, back, and bottom are provided for ventilation. To ensure safe and reliable operation of this unit, and to protect it from overheating, do not block or cover these openings. Do not place this unit on a bed, sofa, rug, or similar surface, as the ventilation openings on the bottom of the cabinet will be blocked. This unit should never be placed near or over a heat register or radiator. This unit should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should only be operated from the type of power source indicated on the marking label of the AC adapter. If you are not sure of the type of power available, consult your Datavideo dealer or your local power company.
8. Do not allow anything to rest on the power cord. Do not locate this unit where the power cord will be walked on, rolled over, or otherwise stressed.
9. If an extension cord must be used with this unit, make sure that the total of the ampere ratings on the products plugged into the extension cord do not exceed the extension cord rating.
10. Make sure that the total amperes of all the units that are plugged into a single wall outlet do not exceed 15 amperes.
11. Never push objects of any kind into this unit through the cabinet ventilation slots, as they may touch dangerous voltage points or short out parts that could result in risk of fire or electric shock. Never spill liquid of any kind onto or into this unit.
12. Except as specifically explained elsewhere in this manual, do not attempt to service this product yourself. Opening or removing covers that are marked "Do Not Remove" may expose you to dangerous voltage points or other risks, and will void your warranty. Refer all service issues to qualified service personnel.
13. Unplug this product from the wall outlet and refer to qualified service personnel under the following conditions:
  - a. When the power cord is damaged or frayed;
  - b. When liquid has spilled into the unit;
  - c. When the product has been exposed to rain or water;
  - d. When the product does not operate normally under normal operating conditions. Adjust only those controls that are covered by the operating instructions in this manual; improper adjustment of other controls may result in damage to the unit and



may often require extensive work by a qualified technician to restore the unit to normal operation;

- e. When the product has been dropped or the cabinet has been damaged;
- f. When the product exhibits a distinct change in performance, indicating a need for service.

## **Warranty**

### ***Standard Warranty***

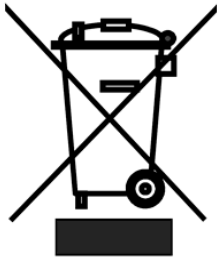
- Datavideo equipment are guaranteed against any manufacturing defects for one year from the date of purchase.
- The original purchase invoice or other documentary evidence should be supplied at the time of any request for repair under warranty.
- The product warranty period begins on the purchase date. If the purchase date is unknown, the product warranty period begins on the thirtieth day after shipment from a Datavideo office.
- All non-Datavideo manufactured products (product without Datavideo logo) have only one year warranty from the date of purchase.
- Damage caused by accident, misuse, unauthorized repairs, sand, grit or water is not covered under warranty.
- Viruses and malware infections on the computer systems are not covered under warranty.
- Any errors that are caused by unauthorized third-party software installations, which are not required by our computer systems, are not covered under warranty.
- All mail or transportation costs including insurance are at the expense of the owner.
- All other claims of any nature are not covered.
- All accessories including headphones, cables, and batteries are not covered under warranty.
- Warranty only valid in the country or region of purchase.
- Your statutory rights are not affected.

### ***Three Year Warranty***

- All Datavideo products purchased after July 1st, 2017 are qualified for a free two years extension to the standard warranty, providing the product is registered with Datavideo within 30 days of purchase.
- Certain parts with limited lifetime expectancy such as LCD panels, DVD drives, Hard Drive, Solid State Drive, SD Card, USB Thumb Drive, Lighting, Camera module, PCIe Card are covered for 1 year.
- The three-year warranty must be registered on Datavideo's official website or with your local Datavideo office or one of its authorized distributors within 30 days of purchase.



## Disposal



### **For EU Customers only - WEEE Marking**

This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.



**CE Marking** is the symbol as shown on the left of this page. The letters "CE" are the abbreviation of French phrase "Conformité Européene" which literally means "European Conformity". The term initially used was "EC Mark" and it was officially replaced by "CE Marking" in the Directive 93/68/EEC in 1993. "CE Marking" is now used in all EU official documents.

# 1. Introduction

**KMU-100** is an advanced video converter allowing conversion of **UHD** input signals into 4 different streams with resolution up to **Full HD**. Each device has two **UHD** inputs which work simultaneously and interchangeably.



You can define 4 output windows (Frame 1/2/3/4/) for each **UHD** source signal. The resolution of the **Frame 1 window** can be up to **3860x2160**, while **Frames 2, 3 and 4** support resolution of up to **1920x1080 pixels**. Every frame window can be animated. Animation is created by defining the Start and End positions of the frame window, along with their motion mode (**single, loop, ping-pong**). The frame window can change its size while it is animated, featuring the virtual **digital zoom**.

## 1.1 Functions and Features

The **KMU-100** is an advanced video converter that allows processing and conversion of **UHD signals** with the resolution of 3840x2160 (**12G SDI** or **HDMI 2.0**) into four or eight different high-quality streams at resolutions up to **Full HD**.

The KMU-100 offers the user two independent conversion channels. The device allows simultaneous and parallel processing of two **UHD** signal sources (**3840x2160**). The input signals are converted into **8 3G SDI outputs**, which can be additionally synchronized to a **Genlock** input.

This solution is ideal for professionals who deal with production and broadcasting of video materials adopting a variety of sources and signal types. It is a perfect solution for various program scenes and live coverage of events.

In addition, the **KMU-100 converter** is really easy to use. The device comes with a complete software package, and the control over all of its functions and parameters is exercised on a LAN connected computer on which the application is installed. The device portability due to its small size, a user-friendly interface, and the **DV Link platform** will give the user a very pleasant experience with the **KMU-100**.

## 1.2 KMU-100 Operations

**KMU-100** is able to simultaneously convert signals from two video inputs with resolutions up to **UHD (3840x2160)** into eight different output video streams. It supports a variety of video formats and allows the connection of **SDI and HDMI** signal sources including **12G SDI** and **HDMI 2.0** technologies.

As many as **8 channels** of output signals can be generated. Each channel outputs an active area of the input signals defined by the user. To define these areas, a software application is installed on a computer which is connected to the **KMU-100** via a LAN interface.

The definition of the area, which will determine the output content, is nothing more than a simple positioning of a frame rectangle in the MultiViewer preview for a given channel. Each of the frame rectangles is marked with a different border color. For one of the frames you can scale the signal from full **4K** resolution to **Full HD**, and there is also up and down scaling (**zoom**) possible for all other outputs. The output area (position of each frame rectangle) may be a function of a variable, which means the output can be in constant motion. For each frame rectangle, there are simple animations available. The user just needs to select one of the available **Motion** modes. The start and end positions of the frame rectangle as well as all other related settings are configured on a user friendly interface of the application software installed.

The areas defined by the frame rectangles create **8 SDI outputs (2 x 4 or 1 x 8)**.

Two **multiviewer (HDMI)** outputs are used for preview and device configuration.

The **KMU-100** can be used in different various applications for multiple purposes as this device is capable of generating a variety of effects that will satisfy every professional engaged in production, TV broadcast and event live coverage with the use of audiovisual materials.

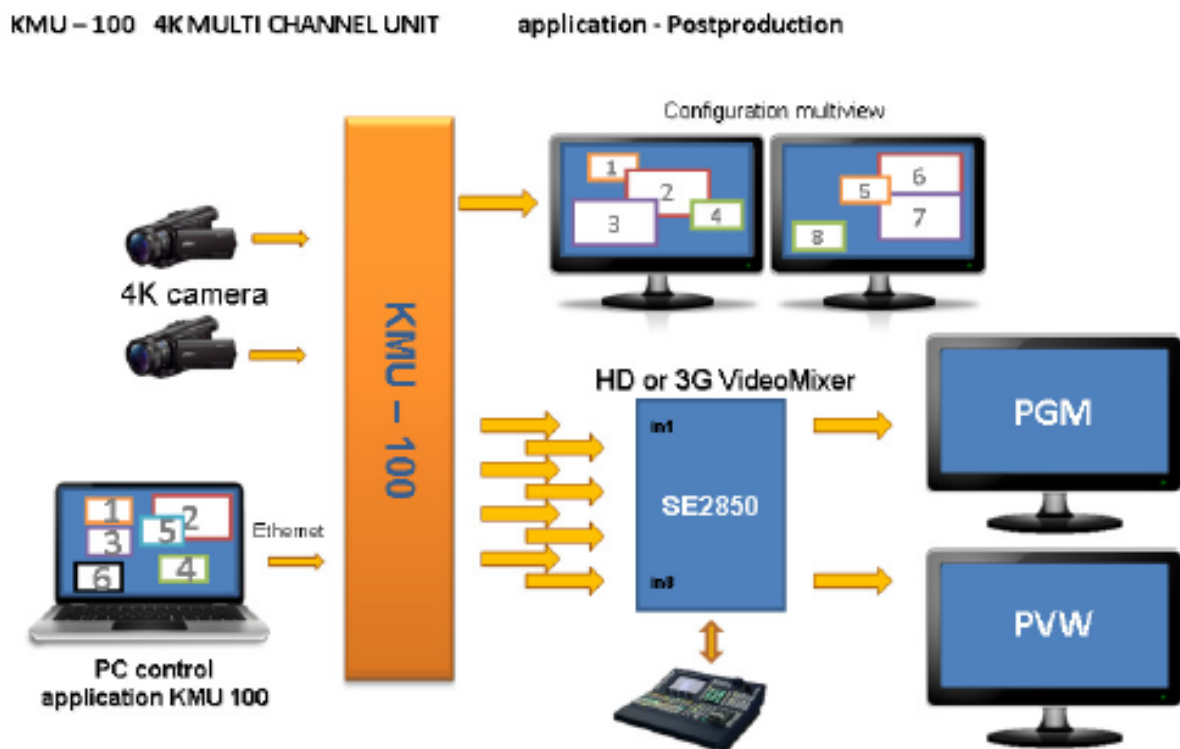


## 2. Product Applications

The **KMU-100** is basically a bridge interfacing **4K** technologies with current video systems solutions. This device has a very wide range of applications in virtually every area where the high quality image viewing is required such as sporting events, industrial automation, visual effects used during all kinds of live events or in postproduction.

You can find several applications shown in the diagrams below. These are examples of possible uses of our device.

### 2.1 Video Production and Postproduction



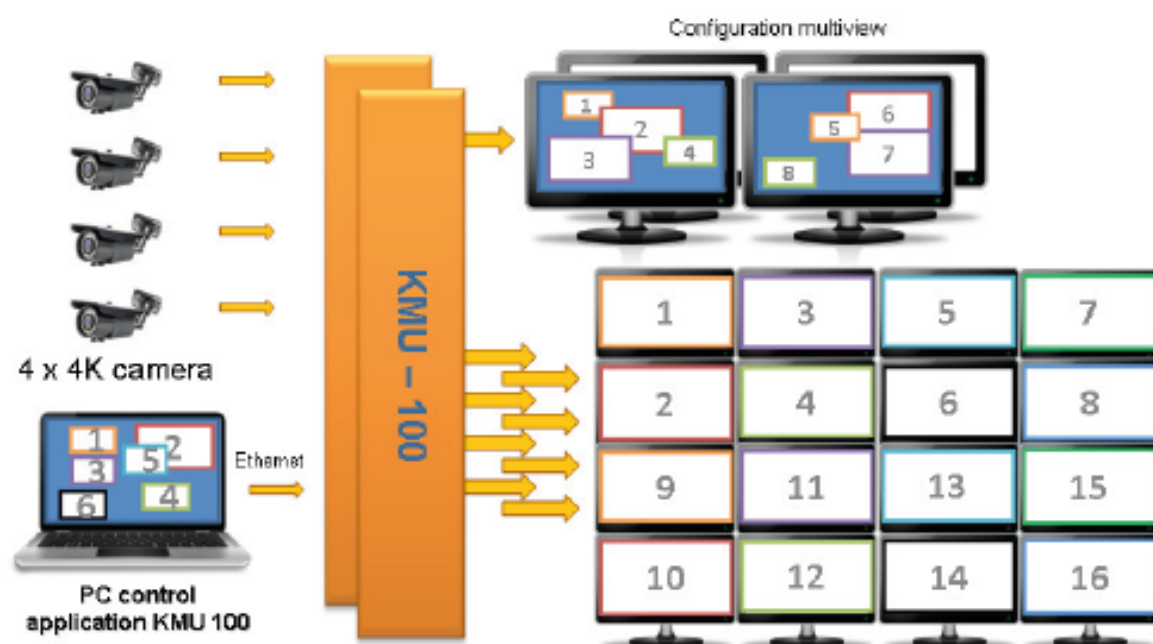
The **KMU-100** capabilities are perfect for video postproduction compared to other similar products on the market. The video material is recorded with one or two video cameras at **4k** resolution.

With the **KMU-100**, you can not only change the composition, but also the shots. The end result will resemble the use of several cameras. With the switcher connected, the transitions between the output images will then be smooth and natural. At the same time, this solution allows the material to be realized by a single camera operator, thus reducing the production cost while keeping the resulting material at a high quality and **Full HD** resolution. The final effect will be as if it were realized by several operators.

## 2.2 High Quality Security Systems

KMU – 100 4K MULTI CHANNEL UNIT

application - 8K Hi security system



The **KMU-100** is an invaluable tool in creating a top-notch security system. It allows you to receive **3G HD** outputs from a single **4K** camera.

As the **KMU-100** processes the signal in real time, you obtain the effect of **8 high-quality mobile video cameras** but without their actual movement.

In this way, the converter provides new opportunities and possibilities to cut down the costs by reducing the number of video cameras and the cables used, and at the same time increases precision and quality in capturing all important details.

### 3. Connection to the KMU-100 – DV Link

A platform that unites all!

The **DV Link** platform is a very simple and useful software developed for configuration, diagnostics and control of multiple devices (for example four **KMU-100** converters) communicating through a common **DVIP** protocol.

A camera operator or operators can easily change the functions of each of the visible devices or a group by triggering the pre-defined presets, without the need to use the main **KMU-100** management application. **DV Link** application thus allows quick reconfiguration of the equipment for a specific task.

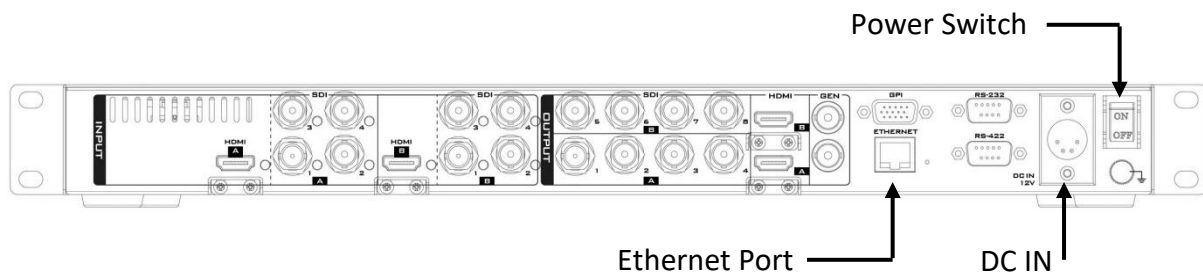
The **DV Link** platform connects multiple devices to control them on a single application.

We invite all the **KMU-100** users to download the **DV Link** application for free.

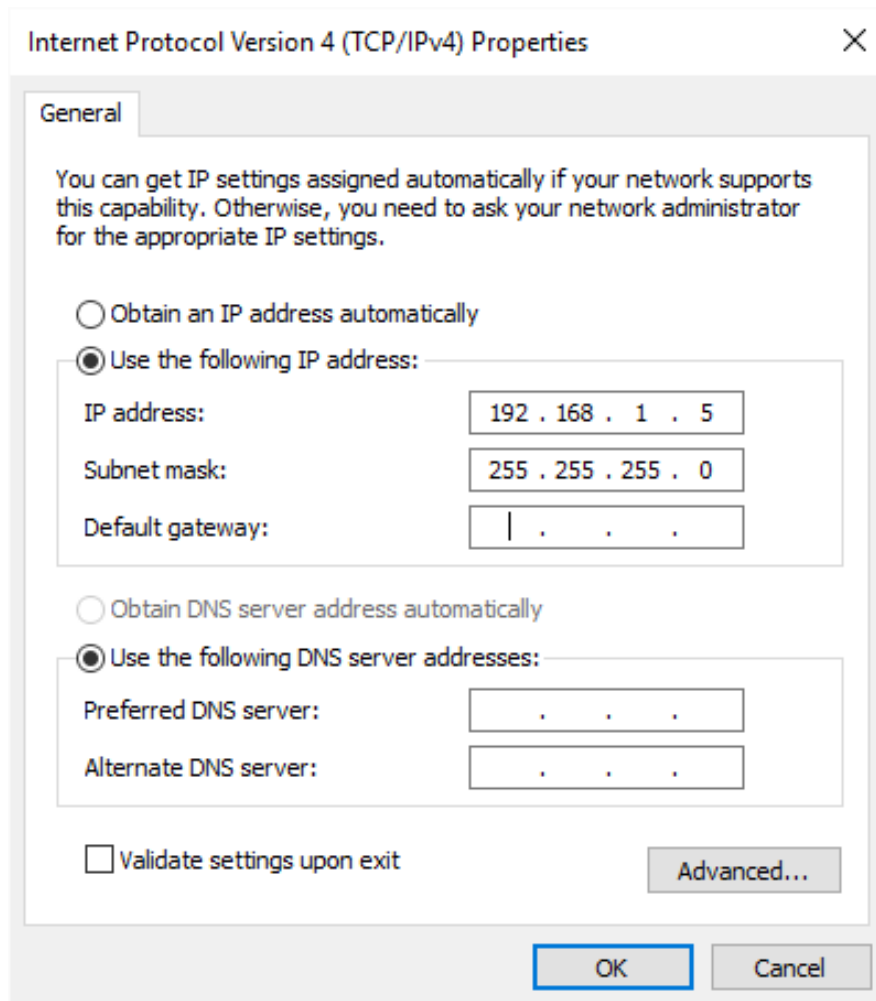
The technical specifications, manual and the download link can be found on the product page.

#### 3.1 Hardware Connection

Prior to the use of the KMU-100, you must first set up the hardware system and configure the IP settings between the PC and the KMU-100. The subsections below will guide you through the connection process step by step.



1. First of all, connect the DC 12V power to the KMU-100 device.
2. Turn ON the power switch to enter the device into standby mode.
3. Connect the PC to the KMU-100 device via an Ethernet cable.
4. Lightly touch the power switch button on the front panel for 2-3 seconds to switch ON the KMU-100 device.
5. The default IP address of the KMU-100 device is 192.168.1.10.
6. The PC IP address and the subnet mask are respectively configured to 192.168.1.5 and 255.255.255.0.



7. After the network connection is configured, you can then start the DV Link application to establish the connection between the KMU-100 and the PC.

## 3.2 Launching DV Link application



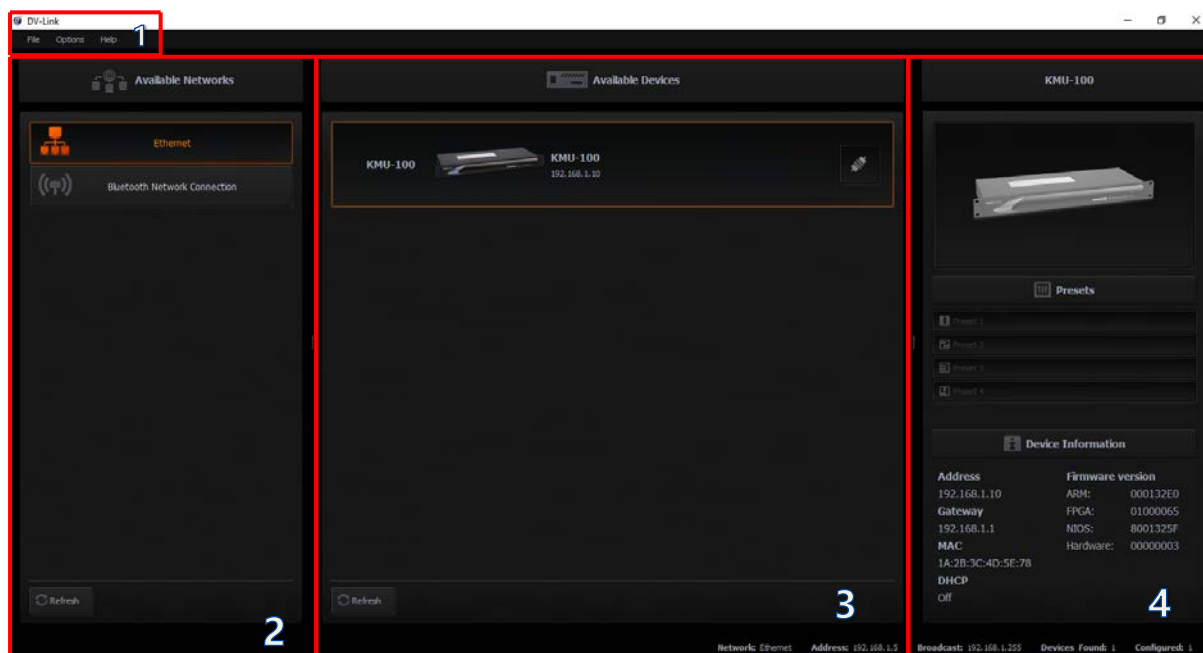
After the **DV Link** application is downloaded and installed on your computer, simply click the **DV Link** desktop icon to open the application.

While **DV Link** application is loading, a screen with a progress bar at the bottom will be displayed as shown in the diagram below.



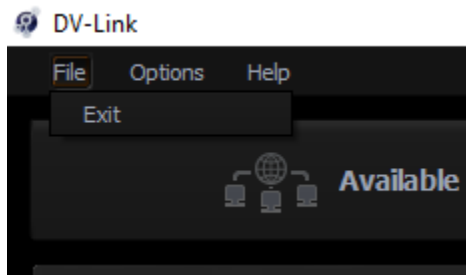
After the **DV Link** application is loaded, you can see the **DV Link start screen** as shown in the diagram below. The **DV Link** application window can be divided into 4 areas listed as follows:

1. **Tool Bar**
2. **Available Networks**
3. **Available Devices**
4. Single device **Control Area (KMU-100)**

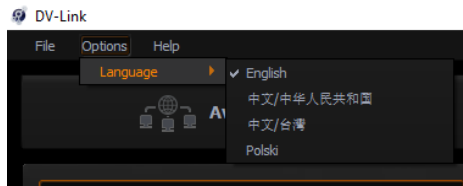


## Tool Bar

A **Tool Bar** is located at the upper left corner of the screen where you will be able to find three main options, **File**, **Options** and **Help**.



**File** – Click **Exit** to quit the application;



**Options** – this option contains the following sub-options:

**Language** – allows you to select the language of the application.

- **English**
- **Chinese / PRC**
- **Chinese / Taiwan**
- **Polski**



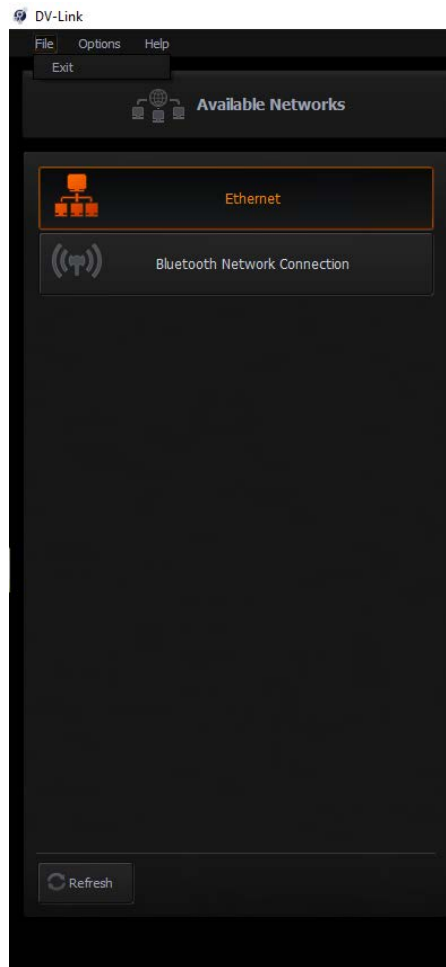
**Help** – this option contains the following sub-options:

**About** – End User License Agreement (EULA), Version.

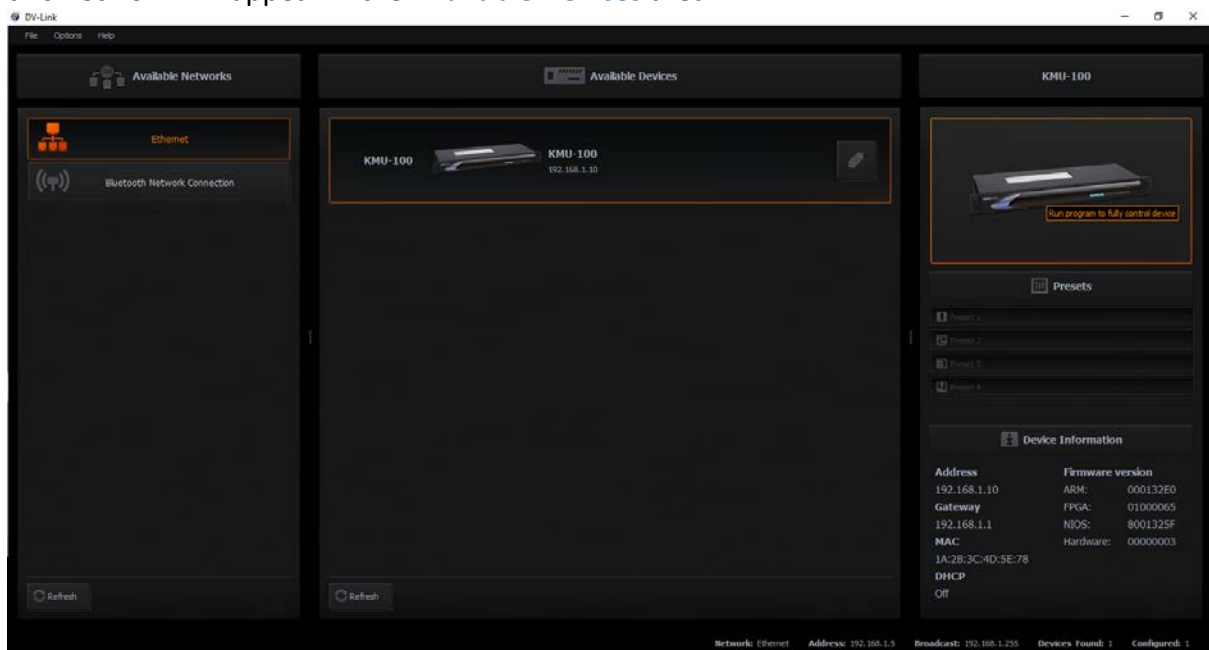
**QR Code** – Provides the link to the KMU-100 product page.

## Available Networks area

In this area, the available networks are displayed as shown in the diagram below.

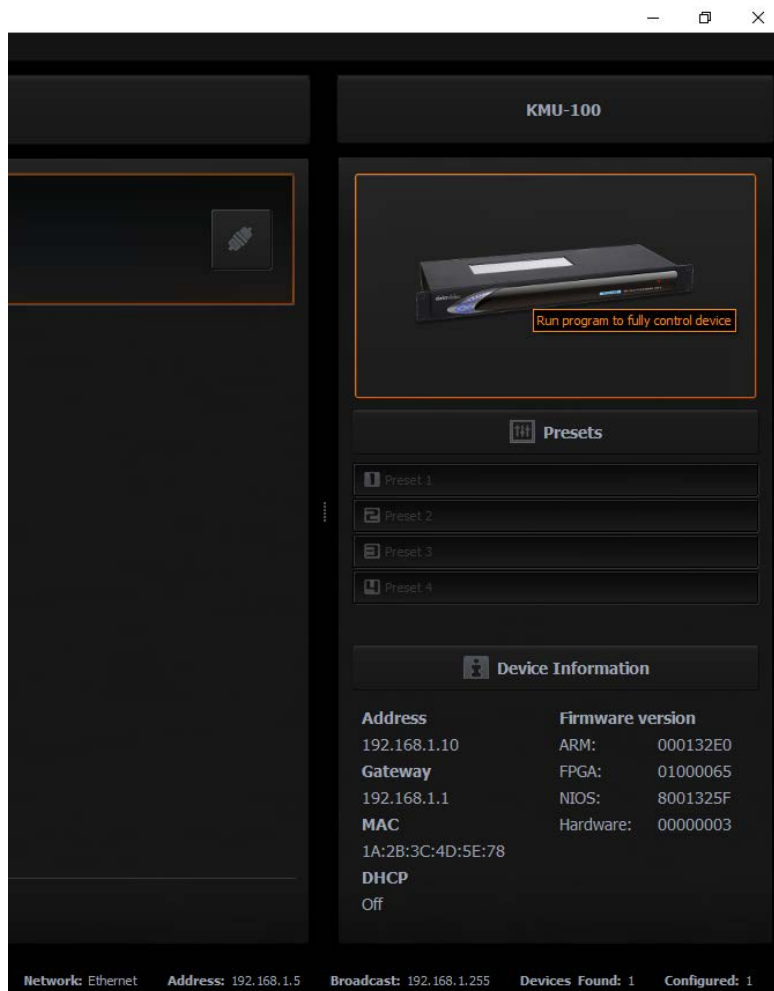


After moving the cursor over and clicking on a given network icon, the available devices in this network will appear in the **Available Devices** area.



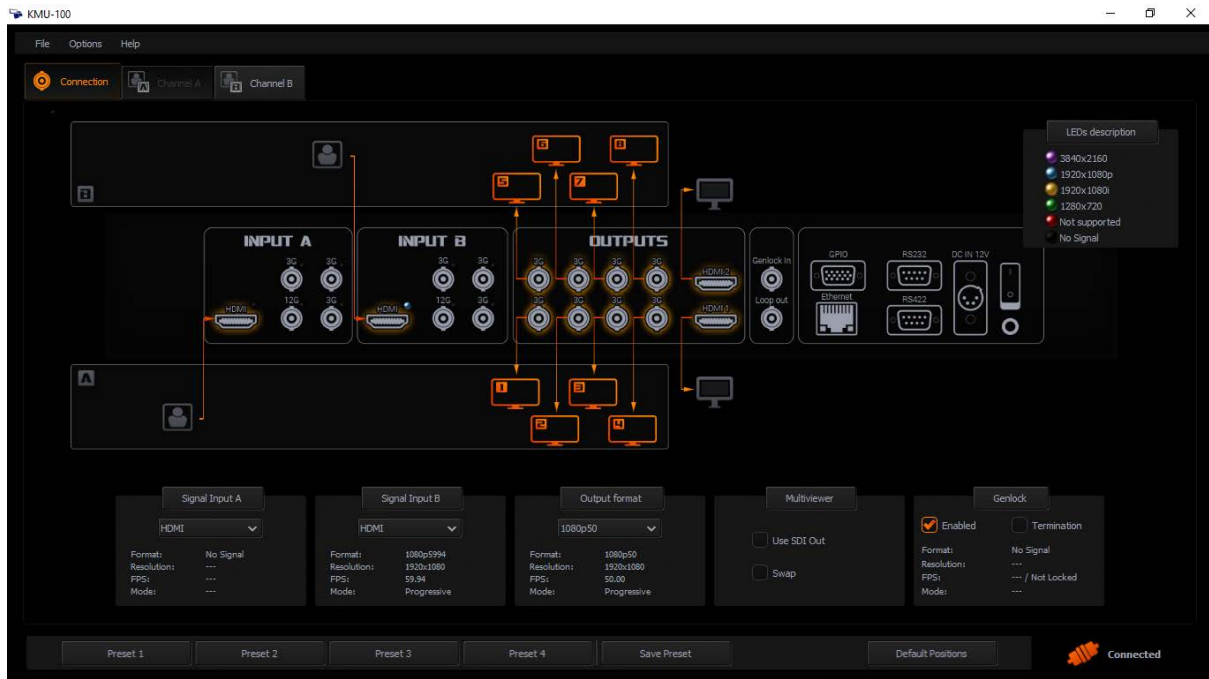
After adding a couple of devices, you can easily switch between them in the **Available Devices** area. In order to better identify the devices, you can also rename the connected KMU-100 devices.

After moving the cursor over and click the **KMU-100** device icon in the **Available Devices** area and the device will appear as visible in the **control area**, along with its IP address as shown in the diagram below.



For the selected **KMU-100** device, you can load the presets with user settings from one of **four Preset slots**. You can double click the **KMU-100** device icon in the **control area** (the rightmost KMU-100 column) to open the **KMU-100 Control Interface** as shown in the diagram below.





**In summary**, at the **DV Link** application level, you will be able to search for **KMU-100** devices in the network, establish connection with them, select the presets and finally launch the **KMU-100 Control Interface** and operate thereon.

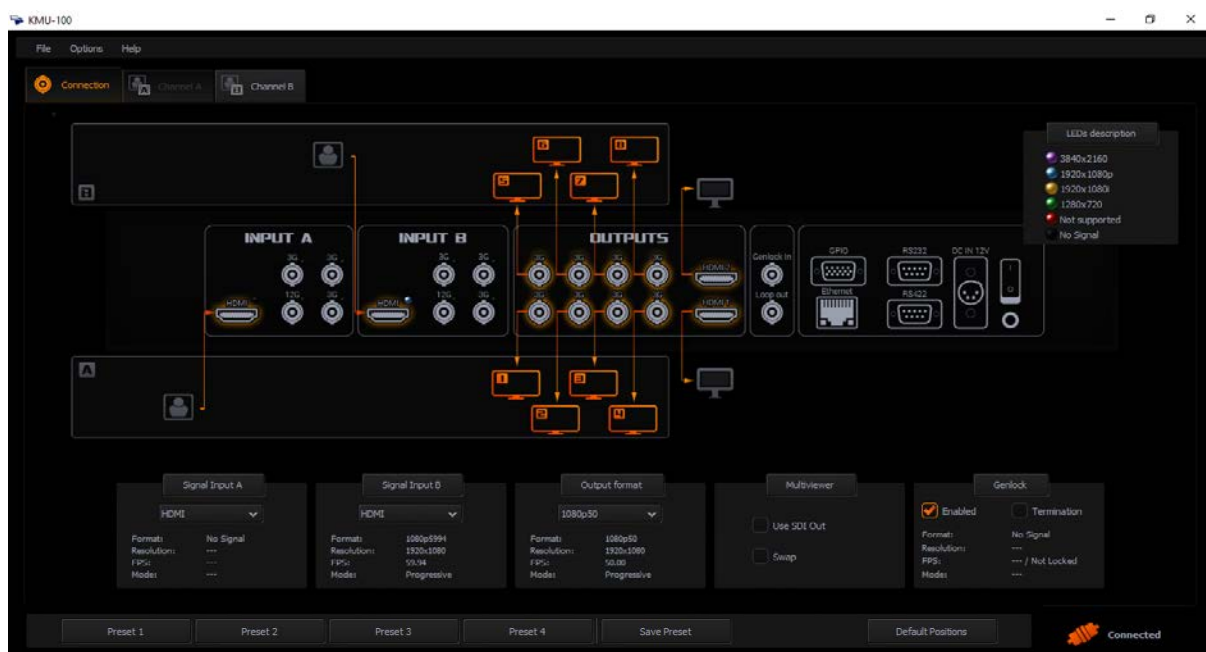
**Good luck!**

## 4. Control Application

The Control Application allows you to configure the device and saves presets in the device internal memory. While the **KMU-100** control application is loading, a screen with a progress bar at the bottom will be displayed.



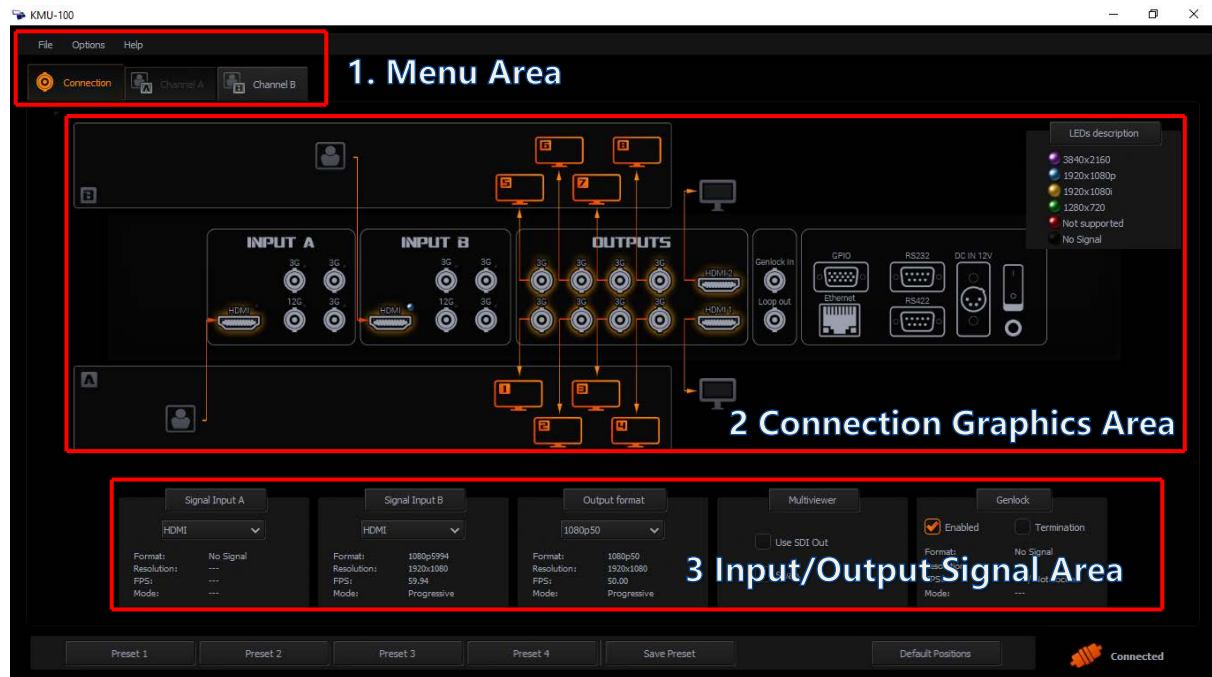
### 4.1 App Window Descriptions: Connection Tab



The Connection tab allows you to define input signals connected to **Channel A** and **Channel B**. It is also possible to use the signal from **Input A** to process in **Channel B**, and vice versa, i.e. processing of **Input B** in **Channel A**.

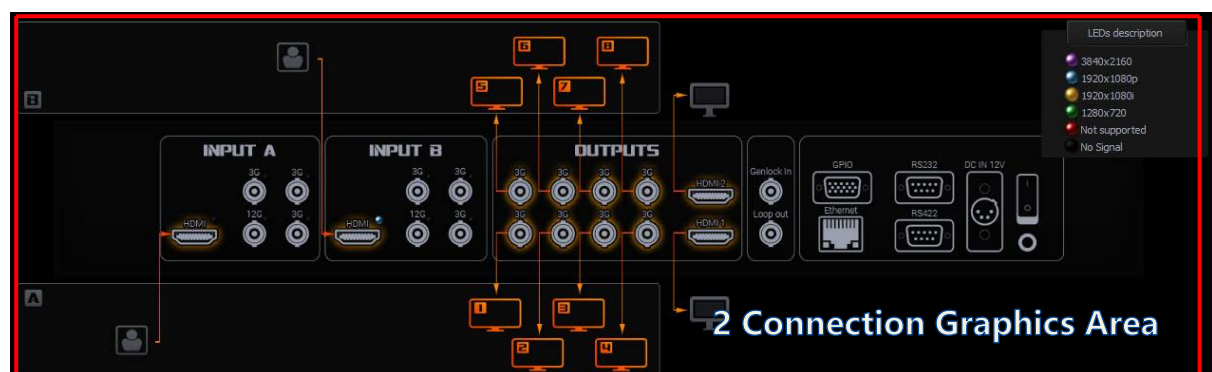
After clicking the Connection tab, you will see a diagram with visualization of necessary cable connections. The **Connection screen** window can be divided into 3 areas as shown in the diagram below.

1. Menu area
2. Connection Graphics area
3. Input/Output Signals area



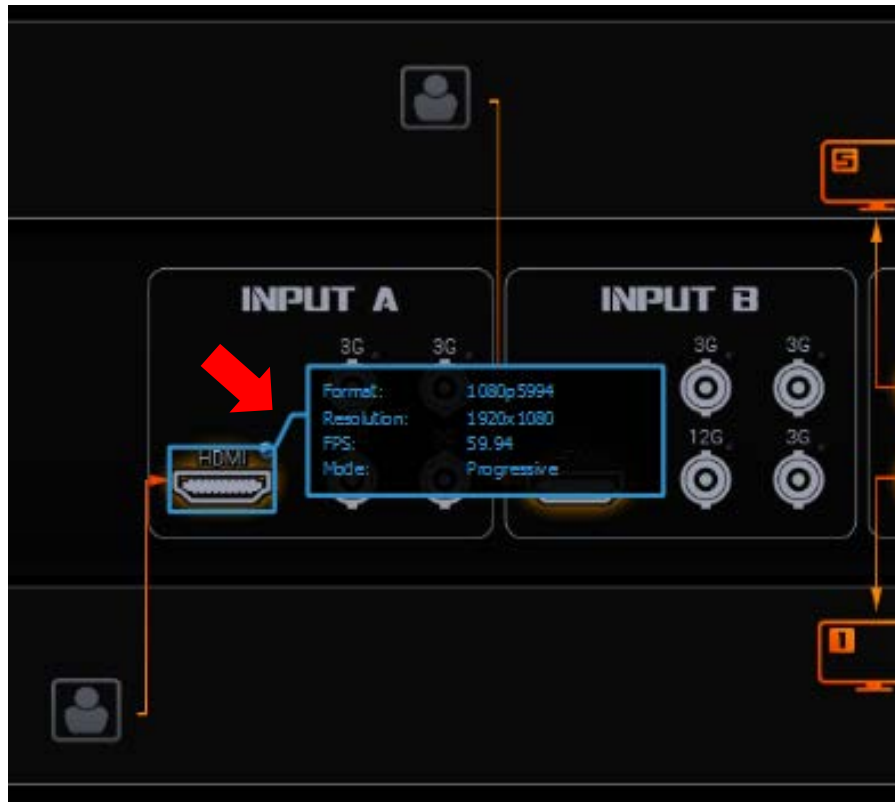
1. **Menu area** – When the **Connection** tab turns orange, it indicates that you are working on this particular screen. Pressing the **Channel A** or **Channel B** tabs will switch your display from **Connection** mode to **Channel A** or **Channel B** setting (processing) mode. Detailed explanations of the **Menu area** is in later parts of the manual.

2. **Connection Graphics area** – The Connection Graphics Area is basically a graphical visualization of the rear panel of the **KMU-100** device with all its available **inputs and outputs**. The active status and the introduced changes to the inputs and outputs are graphically shown on the screen in the form of arrows / orange icons.

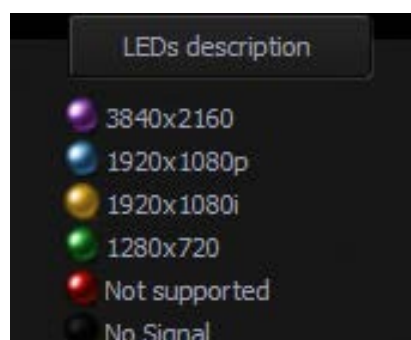


In fact, the active **inputs / outputs** on the rear panel of the **KMU-100** device are indicated by glowing **LEDs** at each **input / output port**. Color of the diode represents the signal resolution. The LED lights up when a signal is detected at the input.

You can see the **screenshot of the KMU-100 rear panel** as shown in the diagram below. **One of the LED locations is indicated by a red arrow.**



The **LED** colors indicating current signal format are displayed on the screen in the top right corner of the **graphics area**. **The diagram below depicts the LEDs description.**

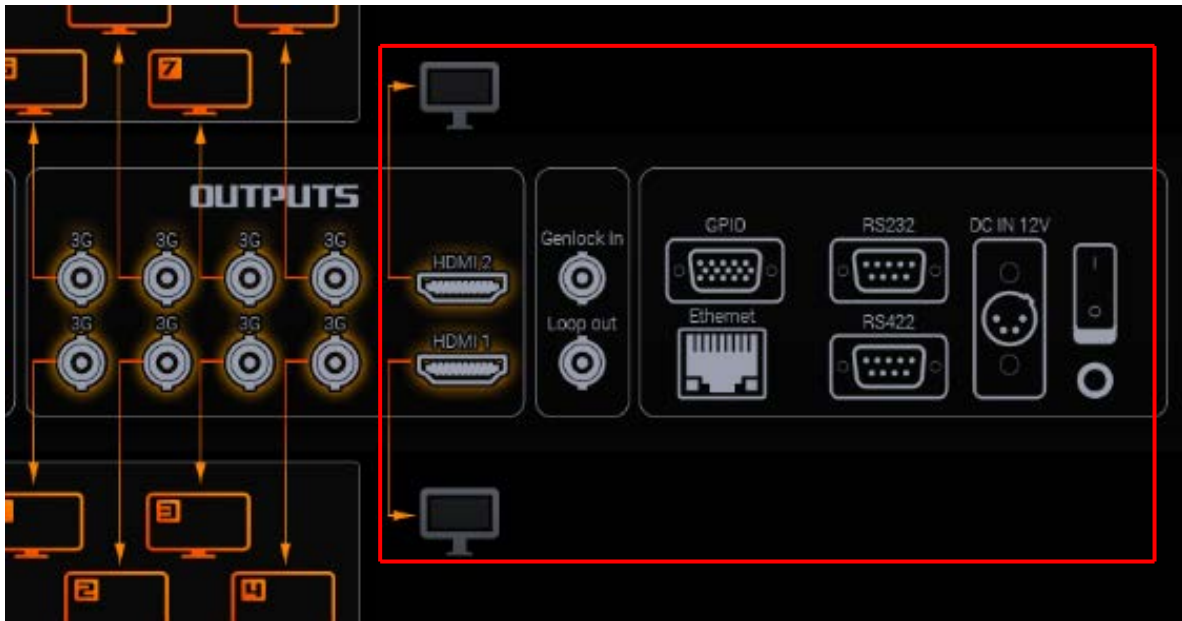


When you move the cursor over the **input port icon**, a preview of the detected format is displayed in a nearby window. In this window, properties such as **Format**, **Resolution**, **FPS** and **Mode** are displayed as illustrated in the diagram above.

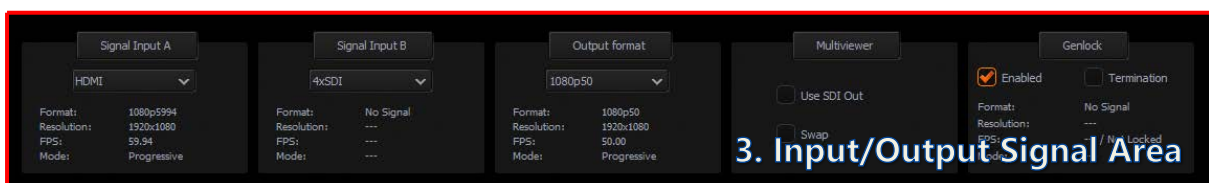
The other ports shown in the **Connection Graphics Area** are listed as follows:

- **Port: 2 x HDMI Video Output (HDMI type A) supporting 1080p60** allows connection of two monitors displaying Channel A and Channel B images as MultiViewer.

- **Port: Sync Input (Genlock)** allows the specification of the reference signal for synchronization of output channels.
- **Port: Ethernet RJ45** for control, configuration and firmware updates.
- **Port: RS-422** input connects the RMC-185 keyboard controller designed specifically for the KMU-100. The RS-422 port also allows you to control the KMU-100 via the VISCA Control Protocol. Please see [Section 5](#) for details.
- **Port: RS-232** input is currently unused.
- **DC power supply socket.**

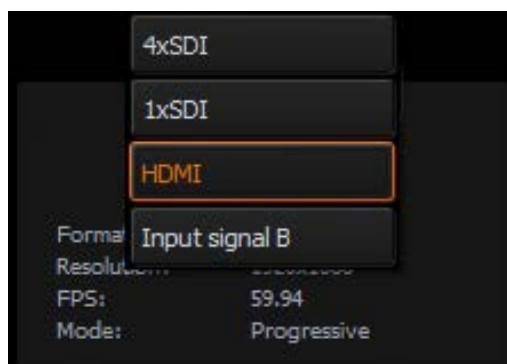


3. **Input/Output Signals area** allows you to configure the **KMU-100** device I/O.



## Input Signal Configuration

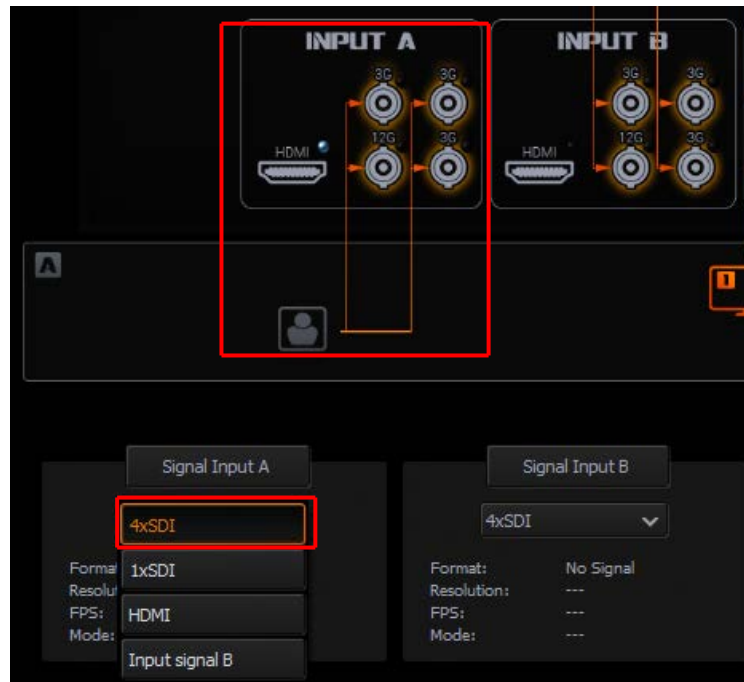
You can select an input signal option from the **Signal Input A** drop-down list as shown below as well as the **Signal Input B** drop-down list.



There are 4 input signal options in the **Signal Input A** drop-down list:

- **4xSDI**
- **1xSDI**
- **HDMI**
- **Input Signal B**

When you select the **4xSDI** option, the four SDI ports in the Input A area will then be highlighted by four orange arrows as illustrated in the diagram below.

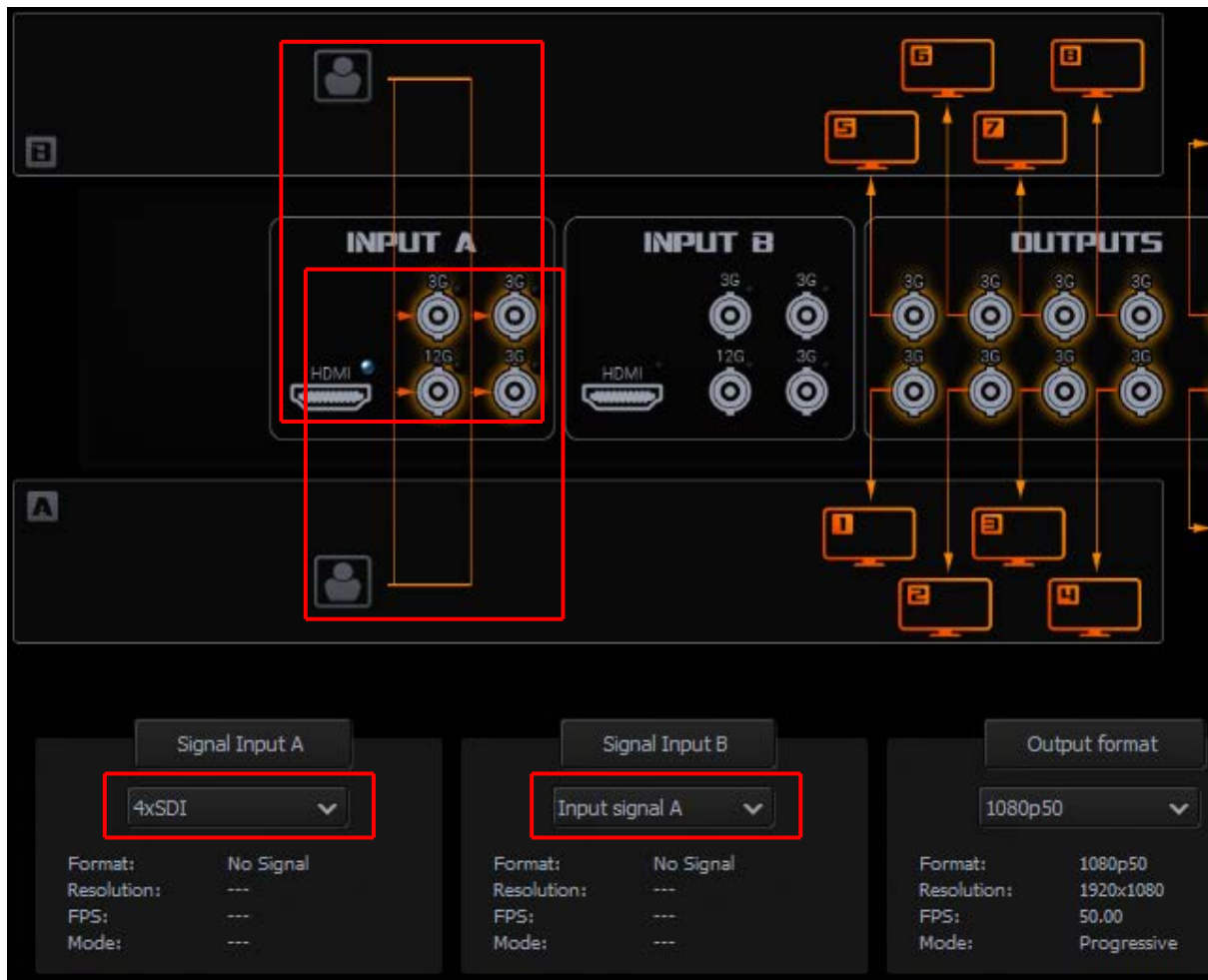


After configuring **Signal Input A**, you can do the same with **Signal Input B**. There are **4 options in the Signal Input B drop-down list**:

- **4xSDI**
- **1xSDI**
- **HDMI**
- **Input Signal A**

It is also possible that **Input B** is not connected any signals, however, rather connecting **Input Signal A** to **Input B**, and then reconfigure the whole device, you can use a copy of the signal from **Input A** as **Signal Input B**. This option of setting the signal from the other input is also available for **Input A**. With this feature, you will thus be able to double the number of frame windows on the same image, i.e. 8 frame windows instead of 4.





## Output Signal Configuration

There are several output signal format options in the **Output Format** drop-down list. The available formats are:

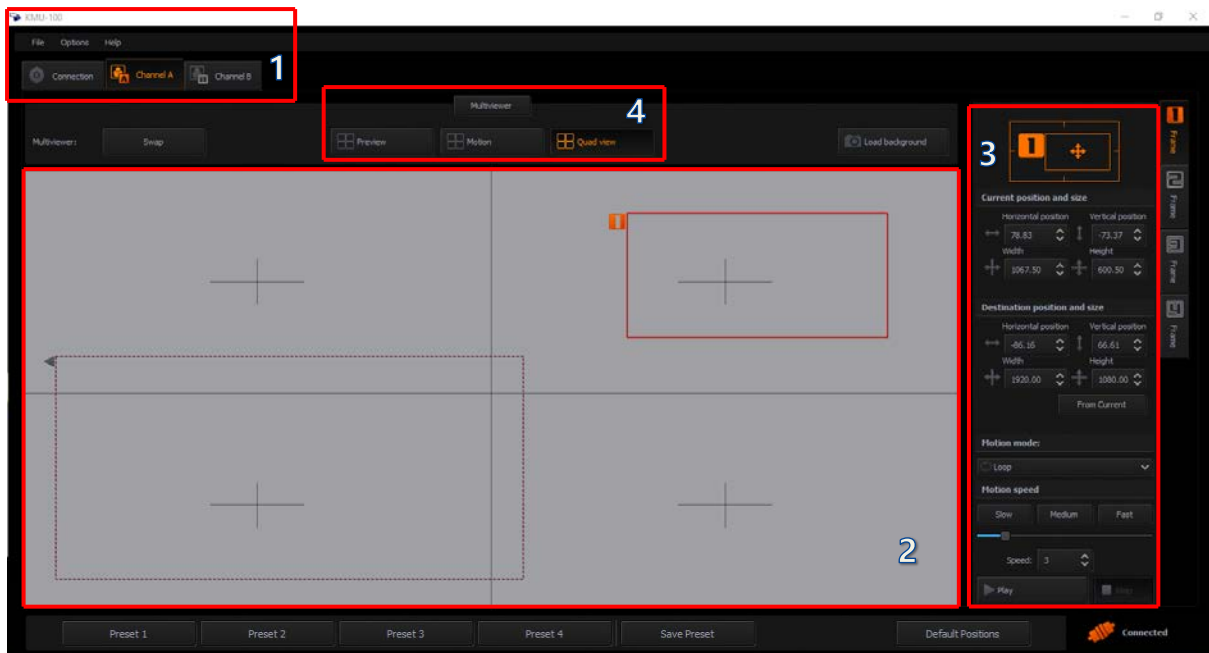
- SD PAL/NTSC
- SD 16:9 PAL/NTSC
- 720p 50/59.94/60
- 1080i 50/59.94/60
- 1080p 25/29.97/60
- 1080p 50/50.94/60

## 4.2 App Window Descriptions: Channel A and Channel B

The **Channel A** and **Channel B** tabs are used for defining the way the input signal is divided into 4 different outputs. It is done by placing 4 different **frame windows (1, 2, 3 and 4)**. Content of the area bordered by each frame rectangle will be send to a corresponding output channel.

The **Channel A (B)** screen window can be divided into 4 areas as illustrated in the diagram below:

1. Menu Area
2. Central Work Area
3. Frame 1, 2, 3 and 4 Setting (Control) Area
4. Multiviewer – Preview on the Monitor

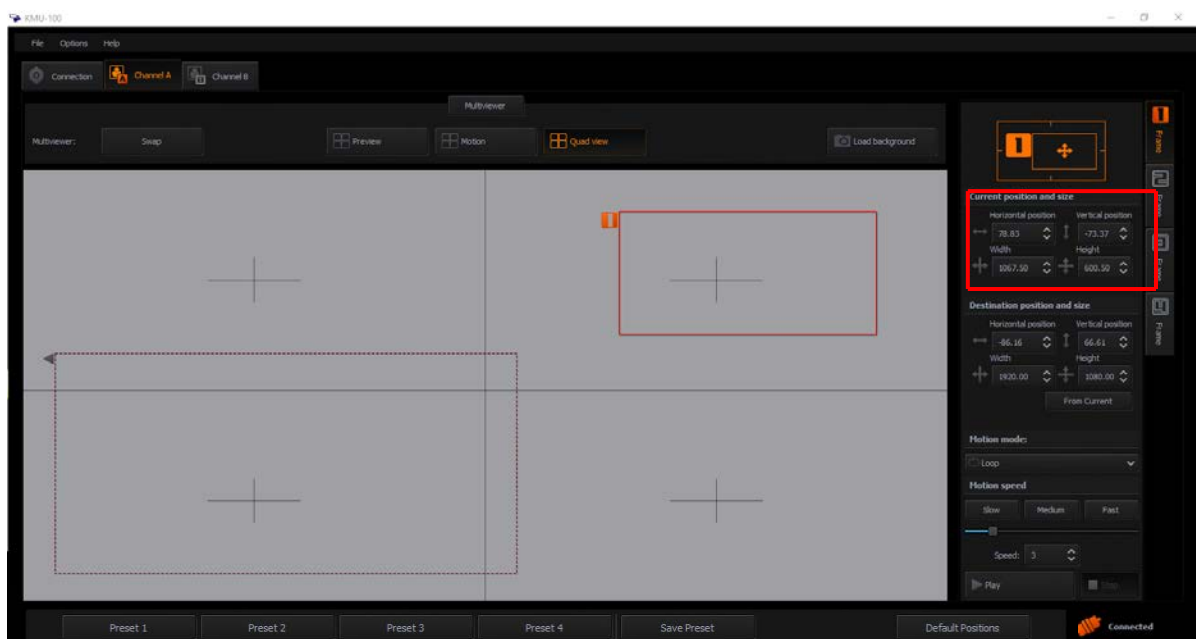


1. **Menu Area – Channel A (B)** tab turns orange, indicating that the work is being done on this screen window. Clicking the **Channel B** tab will switch to the **Channel B** screen window.

2. **Central Work Area** – In this area, the frame windows are defined and sent to the corresponding outputs.

To improve UI clarity, every output is configured in a separate tab, **Frames 1/2/3/4**. **Frame window size and position** can be set with mouse clicks (**on central work area**) or by entering the exact **size/position values** in the **Frame Setting Area** on the right of the **Channel A (B)** screen window.

**Frame Window Size** – This can be configured on the **central work area** by clicking on any corner or edge of the frame window with the mouse cursor. The window proportions are always retained as the rectangle is in **16:9** aspect ratio. Size of **Frame Window 1** is unrestricted as you can configure it up to the input format, **even 4K**. See the diagram below (current position and size).





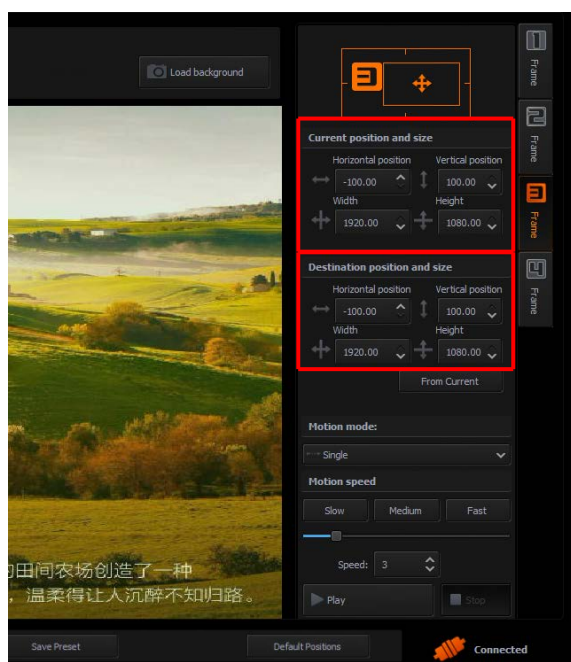
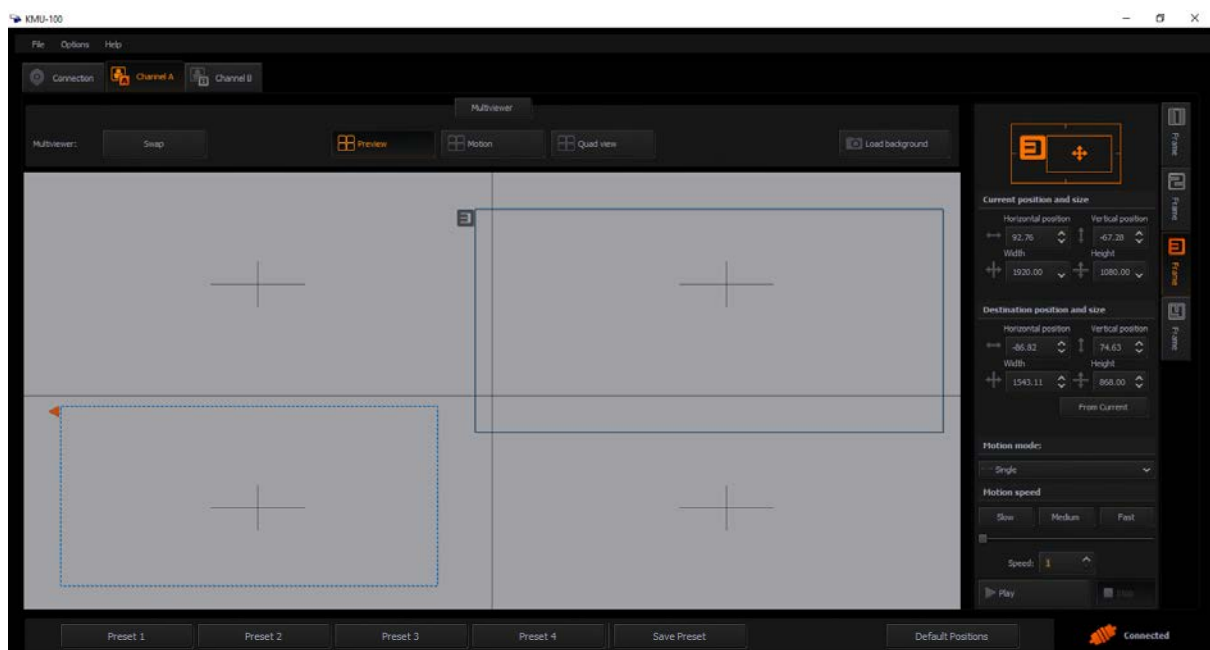
**Frame Windows 2, 3 and 4** support resolution up to **1080p** and the application restricts them from extending further.

A double click on the edited window will switch it to the max available size and the second double click will restore it to its previous size. Aspect ratio is defined by the output resolution and automatically applied to frame window definition.

You can set a graphical background for the gray workspace of the **Central Work Area**, and the graphical background should help you better position the frame windows. The graphics file (**JPG, PNG**) can be loaded by selecting an image file from the hard drive.

### 3. Frame 1, 2, 3 and 4 Setting (Control) Area

**Frame Window selection** – Click the appropriate **Frame 1, 2, 3 or 4** tab on the rightmost side of the work space to start configuring selected **Frame Window**. The selected **Frame** is indicated by an orange tab **as shown in the diagram below**.



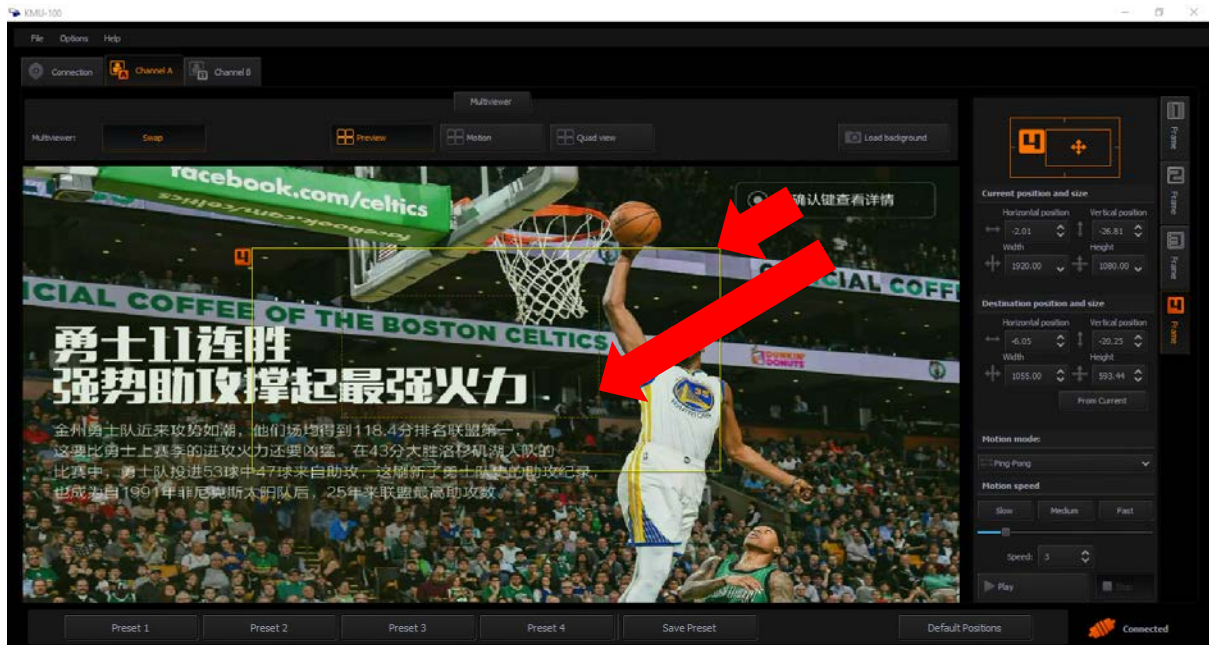
So far we've covered **frame windows 1, 2, 3 and 4** defined as **fixed (stationary)** in their **Start** positions. However, every **frame window** can be animated.

To animate the **Frame Window**, all you need to do is to select the size and position of the **Start rectangle** and **Stop rectangle**. The position and the size of the Start and Stop rectangles can be defined using the mouse cursor or by entering the position coordinates in the **Frame Setting Area (Current position and size and Destination position and size)**.

If you want to set the **final window** position exactly in the place where the **start window** is,

you can simply click the **From Current** button. After the **From Current** button is clicked, you should be able to see **the Start window overlapping the Stop window** (in identical positions).

**Stop rectangle** is drawn in dash mode. In the picture below, you can see that the **Start rectangle** is indicated by a short arrow and the **Stop rectangle** is indicated by a longer arrow.



**Motion Mode** – You can select the motion mode in the **Frame Setting Area**. The available options are:



**Off** – No animation (default).

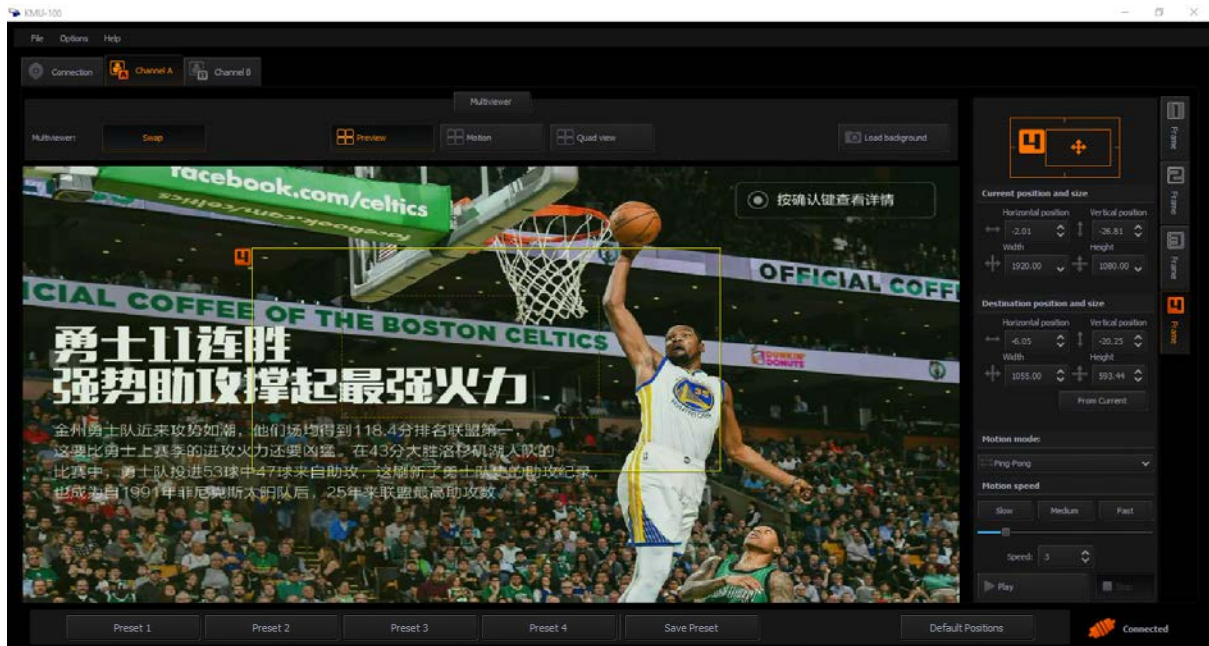
**Single** – Single movement from Start to Stop.

**Ping-Pong** – Swing cyclical movement, i.e. Start-Stop, Stop-Start, Start-Stop and so on (pendulum swing motion).

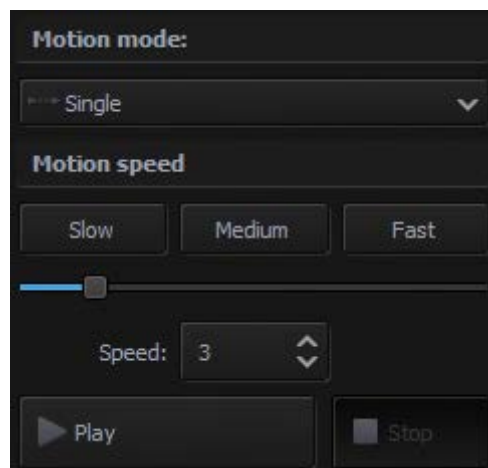
**Loop** – Cyclical movement, i.e. Start-Stop, Start-Stop and so on.

You will see the animation as virtual movement of the camera shot.

In addition to changing the window position, you can define its size as well, thereby effectively realizing a **virtual zoom function**. As shown in the diagram below, the **Stop window** is much smaller size than the **Start window**.



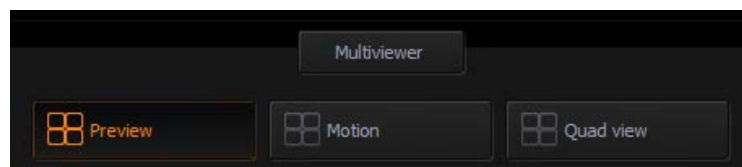
After selection of the motion mode, you are then allowed to select one of the three speed modes (**slow**, **medium**, or **fast**) as shown in the diagram below.



After the size and position of **start and stop windows**, **motion** type and **speed mode** are configured, you can start the animation by clicking **Play** button.

#### 4. Multiviewer – Preview on the Monitor

You are allowed to select a Multiviewer mode to preview on the monitor. The three available modes are **Preview**, **Motion**, and **Quad View**.



**Preview** of the live input is only possible on the **Multiviewer** out. The three modes of the **Multiviewer** output are described as follows.



**Preview** – Four rectangles at their respective **Start positions** are visible on the live input. In the diagram below, frame window 1 covers the entire screen.



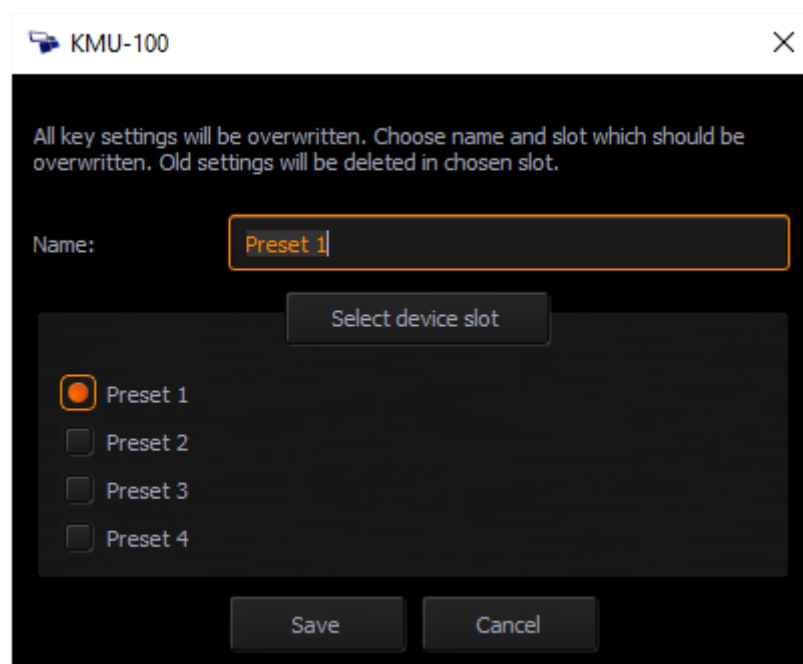
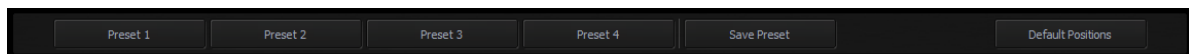
**Motion** preview – The **Start**, **Current** and **Stop** rectangles of the selected Frame tab are visible on the live input. The diagram below depicts the **rectangles of frame window 1**.



**Quad view** – In the Quad View mode, preview of contents of the four outputs is displayed on the monitor as shown in the diagram below.




After configuring the properties of frame windows such as position, motion mode, and etc., they can be saved directly to one of the **4 preset slots**. Clicking the “**Default Positions**” button will restore all frames to their respective default positions.



## 4.3 Tool Bar

There is a **Menu bar** in the top left corner of your screen. You can find three main options which are **File**, **Options**, and **Help**. The table below shows the sub-options that pop up when you click on the respective main options.

<b>File</b>	<b>Exit</b>	Quit the application
<b>Options</b>	<b>Language</b>	Select the language English Chinese/PRC Chinese/Taiwan Polski
	<b>Configuration</b>	Additional application settings Information about the device SDI 3G output type Firmware Network configuration Triggers Temperatures
<b>Help</b>	<b>About</b>	About KMU-100: End User License Agreement (EULA), Device, Version.
		A link to the KMU-100 product page.

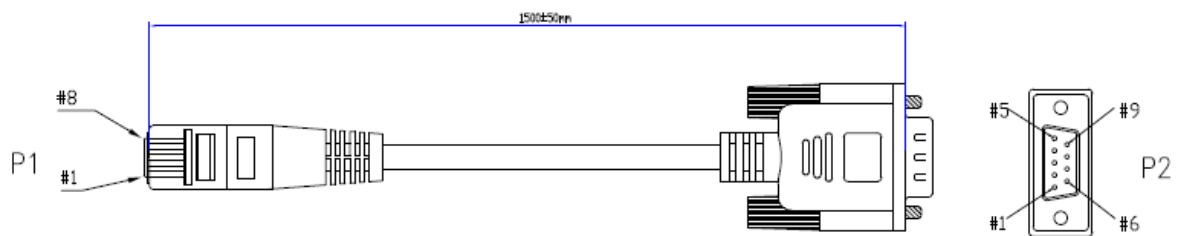
# 5. RMC-185 KMU Controller

The RMC-185 KMU Controller is designed to control the KMU-100 via the RS-422 interface using the VISCA Command Protocol.

The RMC-185 panel style design allows easy control of the KMU-100 with the hard keys giving the user quick access to main functions of the KMU-100.

## 5.1 Direct Connection to KMU-100

To use the RMC-185 KMU Controller to directly control the KMU-100 4K Multi-Camera Processor, connect the RS-422 port (9 PIN D-Sub) on the KMU-100’s rear panel to the RJ-45 port of the RMC-185 using any RJ-45 cable. The RJ-45 to 9 PIN D-Sub cable wiring scheme is shown below.



	P1 (RJ45)		P2 (DB9M)
Green/White	1	-----	1/6/4/9/5
Green	2	-----	X
Orange/White	3	-----	8
Blue	4	-----	2
Blue/White	5	-----	7
Orange	6	-----	3
Brown/White	7	-----	X
Brown	8	-----	X

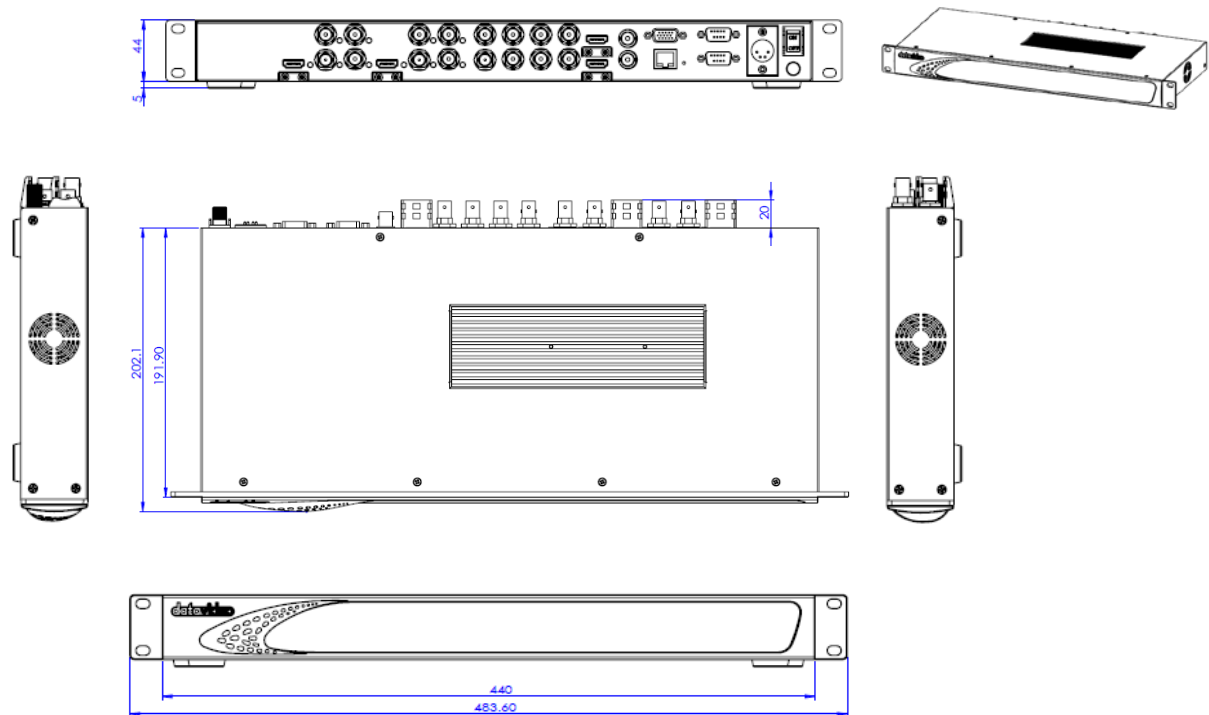
## 6. Frequently-Asked Questions

This section describes problems that you may encounter while using the KMU-100. If you have any questions, please refer to related sections and follow all suggested solutions. If problem still exists, please contact your distributor or the service center.

No.	Problems	Solutions
1.	The DV LINK APP fails to connect.	Sometimes the DV LINK APP will be disconnected.
2.	The PC fails to communicate with the KMU-100	You might be using non-compliant cables which will cause signal failure after connected to the KMU-100.



## 7. Dimensions



All measurements in millimeters (mm)

## 8. Specifications

KMU-100 is an advanced video converter which allows the conversion of 2 independent UHD input signals into 2 x 4 or 1 x 8 different streams with resolutions up to FullHD.

Connections	
<b>SDI Video Input</b>	<p>2 sets of SDI Input: each set of 4x SDI 1 x 3Gb/s or 12Gb/s SD/HD/4K. Supports single link 4:2:2 3 x 3Gb/s SD/HD/4K. Supports single link, dual link, and quad link 4:2:2</p> <p>2 x (1) - 10 bit HD, 3G levels A and B, 12G UHD switchable 6 x (2,3,4) - 10 bit HD, 3G levels A and B switchable; Usable as Quad SDI; 4x3G SDI input for UHD</p>
<b>HDMI Video Input</b>	<p>2 x HDMI Input: Each of HDMI support for Ultra HD 4K 60p in 4:2:0/4:2:2</p>
<b>SDI Video Output</b>	<p>2 sets of SDI output: each set of 4x SDI 1 x 3Gb/s or 12Gb/s SD/HD/4K. Supports single link 4:2:2 3 x 3Gb/s SD/HD/4K. Supports single link, dual link, and quad link 4:2:2</p> <p>8 x – 10 bit SD, HD, 3G levels A and B switchable</p>
<b>HDMI Multiviewer Video Output</b>	2x HDMI type A connector with support for 1080p50/59.94/60
<b>SDI Audio Input</b>	16 channels in HD, 3G HD, and UHD
<b>SDI Audio Output</b>	16 channels in HD, 3G HD, and UHD
<b>Multi Rate Support</b>	SDI connections are switchable between standard definition, high definition and UltraHD
<b>Sync Input (Genlock)</b>	Blackburst or TriSync
<b>Computer Interface</b>	Ethernet RJ45 for control, configuration and updates RS-232 x 1 input for controlling configuration
Software	
<b>Software Control</b>	A dedicated software control utility application for changing settings via Windows 7, Windows 8, and Windows 10 is included free of charge.
Power Requirements	
<b>Power Supply</b>	Included external 12V / 5A power supply
Environmental Specifications	
<b>Operating Temperature</b>	5° to 50 ° C (41° to 122° F)
<b>Storage Temperature</b>	-20° to 45°C (-4° to 113°F)
<b>Relative Humidity</b>	0% to 90% non-condensing
Processing – Two independent channels	
<b>Outputs Definition</b>	Each channel has a definition of four rectangles indicating the way the input signal is divided into 4 different outputs.

	The content bordered by each frame window will be sent to a corresponding output.
<b>Windows Animation</b>	<p>Animation is possible for every frame window. User selects the size and position of Start and Stop rectangles.</p> <p>Motion modes available:</p> <p><b>Single</b> – Single movement from Start to Stop.</p> <p><b>Ping-Pong</b> – Swing cyclical movement, i.e. Start-Stop, Stop-Start, Start-Stop and so on (pendulum swing motion).</p> <p><b>Loop</b> – Cyclical movement, i.e. Start-Stop, Start-Stop and so on.</p>
<b>Multiview Output</b>	<p>Preview of the outputs:</p> <p><b>Preview</b> – Four rectangles at their respective <b>Start positions</b> are visible on the live input.</p> <p><b>Motion preview</b> – The <b>Start</b>, <b>Current</b> and <b>Stop</b> rectangles of the selected Frame tab are visible on the live input.</p> <p><b>Quad view</b> – Preview of the content of four outputs.</p>
<b>Standards</b>	
<b>SD Format</b>	Support
<b>1.5 Gb/s HD Format Support</b>	720p50 720p59.94 1080p25 1080p29.97 1080i50 1080i59.94
<b>3 Gb/s HD Format Support</b>	1080p50, 1080p59.94 and 1080p60 levels A and B
<b>Ultra HD Format Support</b>	2160p25, 2160p29.97, 2160p50, 2160p59.94
<b>SDI Compliance</b>	SMPTE 259M, SMPTE 292M, SMPTE 296M, SMPTE 372M, SMPTE 425M, SMPTE2082-1
<b>Audio Sampling</b>	Television standard sample rate of 48kHz and 24-bit HD, 20-bit SD
<b>Video Sampling</b>	4:2:2
<b>Color Precision</b>	10-bit
<b>Color Space</b>	REC 601, REC 709

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