

KM-4

USB KM Control Switch

User's Guide

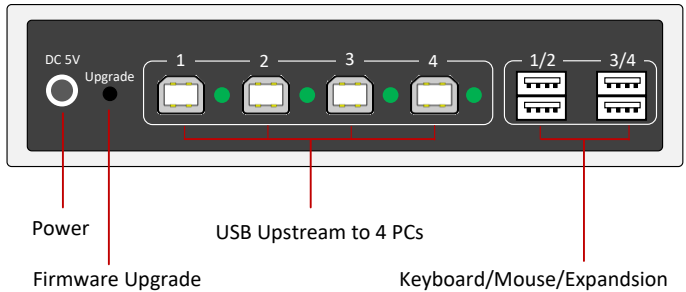
(For Firmware: v3.0.0.0, November 10, 2020)

What's in the box

The package should contain:

- 1 x KM-4, 4 x USB A-to-B cables, 2 x DB9F-to-3-pin Terminal cable
- 1 x DC 5V 2A Power adapter.

Front Panel



Rear Panel



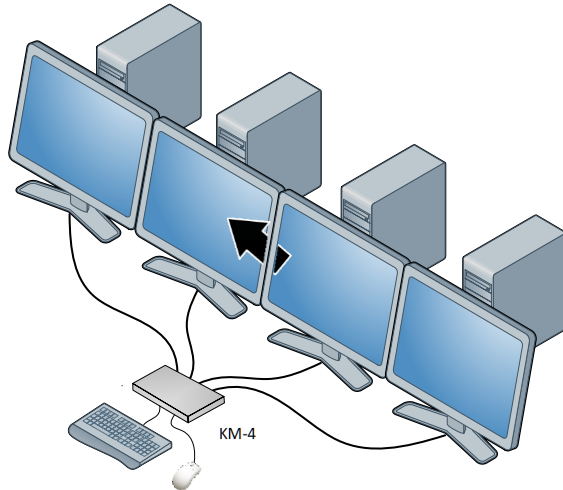
■ Mounting

Before the PC and keyboard/mouse installation, it is advised to mount the KM-4 unit in place by the supplied 2 mounting brackets.

■ Installing one single KM-4

1. Attach the leads from USB keyboard and mouse to the KM-4 USB-A ports (marked 1/2, 3/4).
2. Use supplied USB-A to USB-B cable to link USB port from PC to the KM-4 USB-B ports (marked 1, 2, 3, 4).

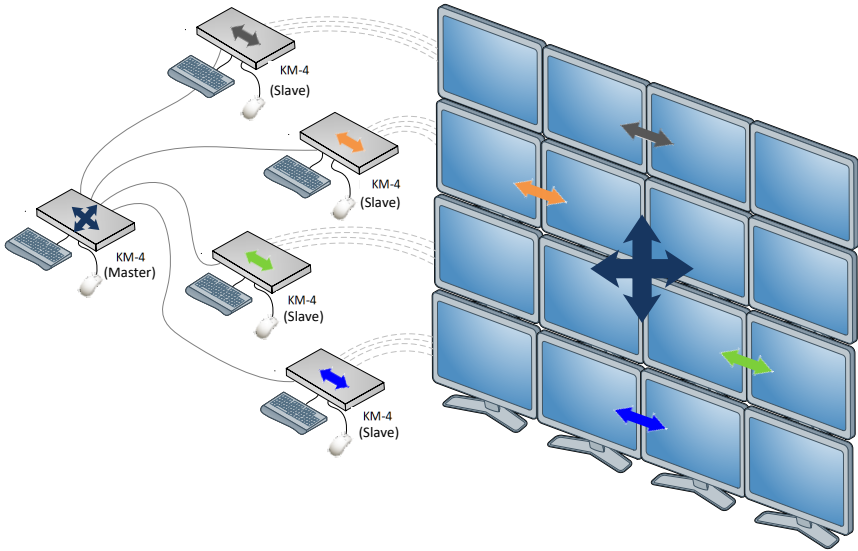
3. Power ON KM-4.
4. The KM-4 factory default setting for the Free-Flow screen layout is **4*1** (H x V), each resolution in 1920x1080 **landscape** mode, Free-Flow Mouse **disabled**, port 1 (**PC1**) is selected, Hotkey default <Ctrl>, as the below diagram:



Please note the LED indicator of port 1 (PC1) is On.
You can use hotkey to switch to another PC: <Ctrl><Ctrl>[Port #]
For example, <Ctrl><Ctrl>2 to switch to PC2, the port 2 LED will turn On.

■ Installing multiple KM-4

The KM-4 is expandable by cascading multiple units. Any KM-4 unit can be used for Master or Slave unit. One Master + four Slaves can be cascaded for controlling maximum of 16 PCs as the below diagram:



The Slave user can only control the 4 PCs attached to the Slave unit. The Master user can control all of 16 PCs.

Perform the following steps to cascade multiple KM-4 units:

1. Use a USB B-to-A cable to connect Master USB-B port 1 (marked 1) to Slave1 USB-A port (any one of 4).
2. Perform the step 1 for Slave2, Slave3, and Slave4.
3. Use USB B-to-A cables to connect Slave1 ~ Slave4 USB-B ports (marked 1, 2, 3, 4) to 16 PC's USB port.
4. Attach keyboard/mouse to Master USB-A ports (marked 1/2, 3/4), the Master keyboard/mouse can control all of 16 PCs.
5. You can also attach slave keyboard/mouse to Slave USB-A ports (marked 1/2, 3/4), the slave keyboard/mouse can control only 4

PCs.

■ How to switch PC

The KM-4 provides Free-Flow and KVM mode for switching PC. In Free-Flow mode, allows user to automatically switch between target PC simply by moving the mouse pointer from screen to screen. In KVM mode, user can press hotkey combination to manually switch target PC.

Note 1: In Free-Flow mode, the mouse will not flow across the screens while any mouse buttons are pressed down - this prevents undesired behavior when dragging windows around or group-selecting items.

■ Hotkeys

<Ctrl><Ctrl> F ---> To enable Free-Flow mode.

<Ctrl><Ctrl> K ---> To enable KVM mode (disable Free-Flow).

(These 2 hotkeys can be entered on Master and Slave)

The Slave's 4 USB-B ports are identified by 1 ~ 4.

<Ctrl><Ctrl> n ---> n = 1 ~ 4, switch to 1 ~ 4 (for Slave unit)

The Master unit will check if 4 USB-B ports are attached with PC or Slave, call "PC port" or "Slave port". The PC port is identified by single number digit of 1 ~ 4. The Slave port is identified by 2 number digits of ps, where p is the port # in Master, s is the port # in Slave.

For Master unit, PC port:

<Ctrl><Ctrl> n ---> n = 1 ~ 4, switch to 1 ~ 4 (for Master PC port)

For Master unit, Slave port:

<Ctrl><Ctrl> ps ---> p = 1 ~ 4 of Master, s = 1 ~ 4 of Slave.

Example 1: Master port 1, 3 connects to Slave, port 2, 4 connects to PC:

<Ctrl><Ctrl> 2 ---> Switch to PC port 2

<Ctrl><Ctrl> 11 ---> Switch to Slave on Master port 1, and PC on Slave port 1.

<Ctrl><Ctrl> 32 ---> Switch to Slave on Master port 3, and PC on Slave port 2.

<Ctrl><Ctrl> 4 ---> Switch to PC on port 4.

<Ctrl><Ctrl> 3 ---> Invalid (because port 3 is Slave)

<Ctrl><Ctrl> 1 ---> Invalid (because port 1 is Slave)

<Ctrl><Ctrl> 35 ---> Invalid (because there is no port 5 in Slave)

<Ctrl><Ctrl> U <Enter> ---> To enter firmware upgrade mode.

■ LED Indicators

There are 4 LED indicators (LED 1, 2, 3, 4) on the KM-4 Front Panel with the following indication:

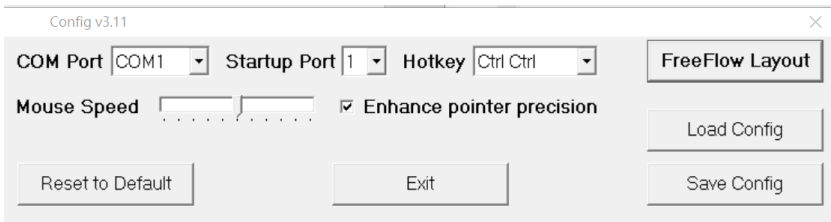
- ★ The LED will luminate when switch to the corresponding port.
- ★ <Ctrl><Ctrl> F ---> the 4 LED will blink sequentially from LED 1 ~ 4 and then luminate on the currently selected port.
- ★ <Ctrl><Ctrl> K ---> the 4 LED will blink simultaneously and then luminate on the currently selected port.

■ Multi-Monitor Free-Flow Configuration

A Windows based configuration software (Config.exe) is provided to declare and setup the multi-monitor positions relative to each other. You can define and configure each monitor resolution, starting position, Portrait or Landscape, so that the Free-Flow mouse will cross monitors within the layout.

■ Run the Config.exe program to make Multi-Monitor Free-Flow Layout

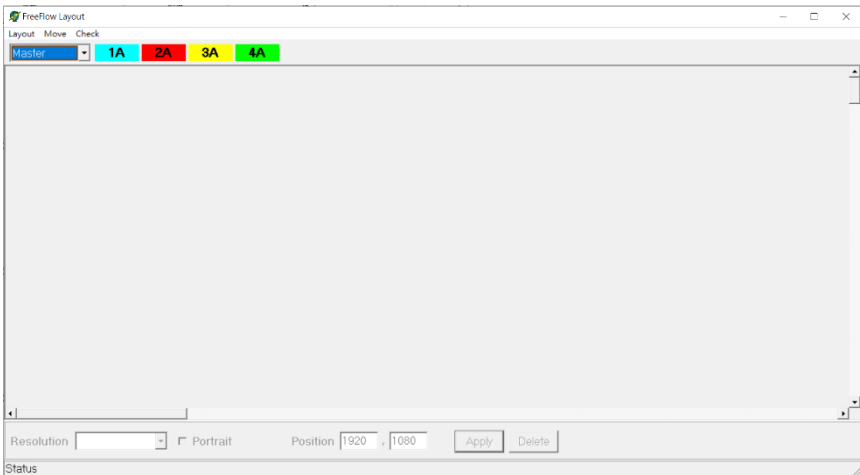
1. Use supplied DB9F-to-RS2323 cable (3-pin Terminal connector) to link PC COM port to the KM-4 RS-232 port 1 (3-pin).
2. Run the Config.exe program, it will pop up the main menu as below:



3. Select the PC COM port# from the [COM Port] pull down menu that connected with the KM-4.
4. Select the port# (1 ~ 4) from the [Startup Port] pull down menu for the start-up focusing port when powered On.
5. The KM-4 supports Hotkey commands, you can select the hotkey from the [Hotkey] pull down menu (<Ctrl><Ctrl>, <Alt><Alt>, <Shift><Shift>, or <Scroll><Scroll>).
6. You can adjust the [Mouse Speed] for the mouse pointer moving speed. You can also click the [Enhance pointer precision] to enable KM-4 mouse acceleration, KM-4 will monitor how fast the mouse is moving and essentially adjusts DPI on the fly. When you

move the mouse faster, the DPI increases and the mouse cursor moves a longer distance.

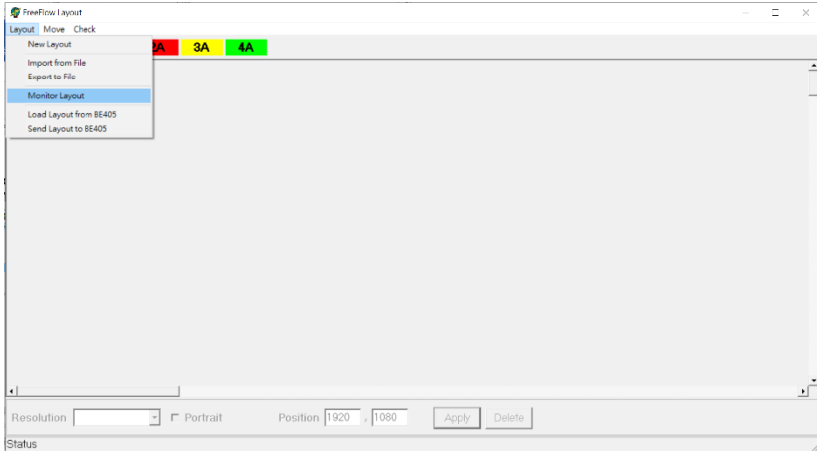
7. Click [Reset to Default] button to reset the KM-4 to factory default setting.
8. You can use the current settings in the KM-4 by pressing [Load Config] button.
9. You can save the current settings into the KM-4 by pressing [Save Config] button.
10. Press the **[FreeFlow Layout]** button to start Multi-Monitor Free-Flow layout configuration as the below interface:



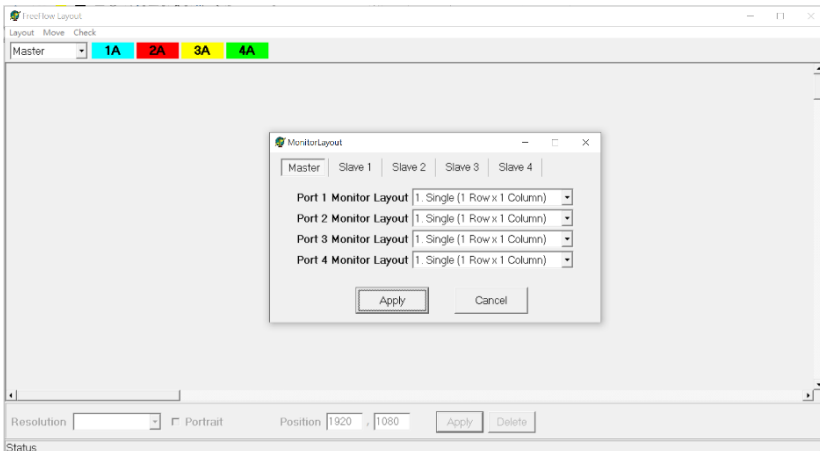
11. Setup Monitor Layouts according to PC Graphic Card layout.

The KM-4 supports Multi-Monitor Free-Flow feature **without** necessary to install software driver in each controlled PC.

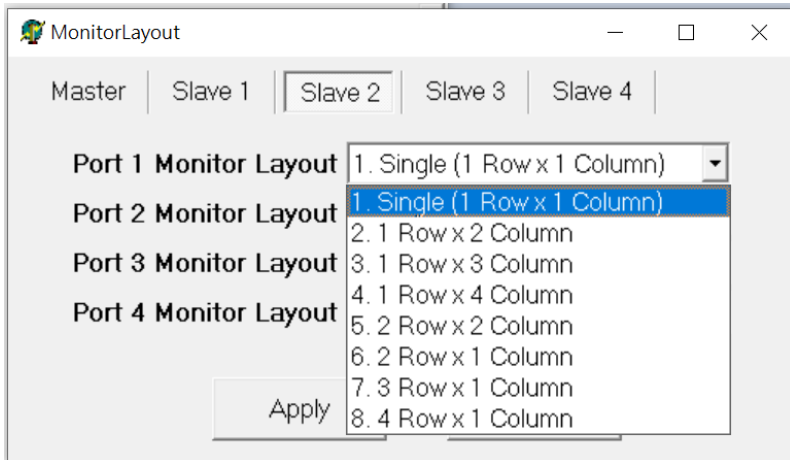
However, you will need to setup KM-4 Monitor Layout according to PC Graphic Card layout configuration. To do this, click **[Layout]** tab on the Main Menu then select the **[Monitor Layout]** as below screenshot:



The Monitor Layout configuration menu contains 5 tabs: **Master**, **Slave 1**, **Slave 2**, **Slave 3**, **Slave 4** as below:



There are 4 USB-B upstream ports on each KM-4 device. For a single KM-4 installation, you just need to configure the Port 1 ~ 4 of Master. For multiple KM-4 installation, you will need to configure all ports of Master and Slaves. Each upstream port can be connected to a Slave or a PC which may have maximum four monitors. You can select the Monitor Layout from the Port # Monitor Layout pull-down menu as below.



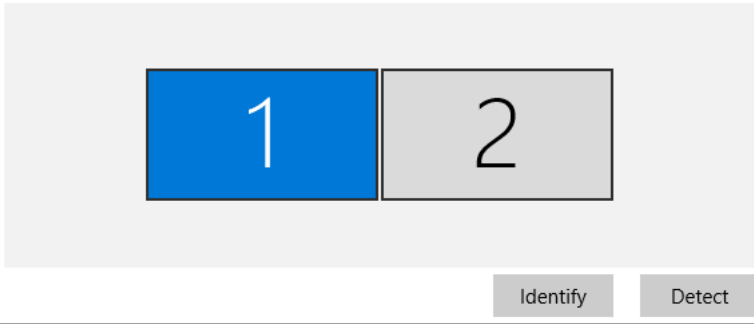
There are 8 supported Monitor Layouts: Single (1 Row x 1 Column), 1 Row x 2 Column, 1 Row x 3 Column, 1 Row x 4 Column, 2 Row x 2 Column, 2 Row x 1 Column, 3 Row x 1 Column, 4 Row x 1 Column. You **MUST select the correct Layout that same as** the PC Graphic Card layout. If the PC Graphic Card layout is out of these 8 layouts, the Multi-Monitor Free-Flow will not work.

For example, you **MUST select 1 Row x 2 Column** for the Port # if its connected PC with Graphic Card layout as below:

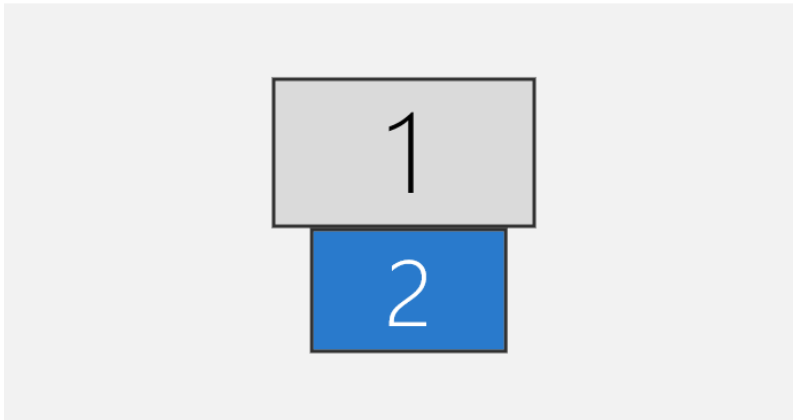
Display

Select and rearrange displays

Select a display below to change its settings. Some settings are applied to all displays.



You should select **2 Row x 1 Column** for the Port # if its connected PC with Graphic Card layout as below:

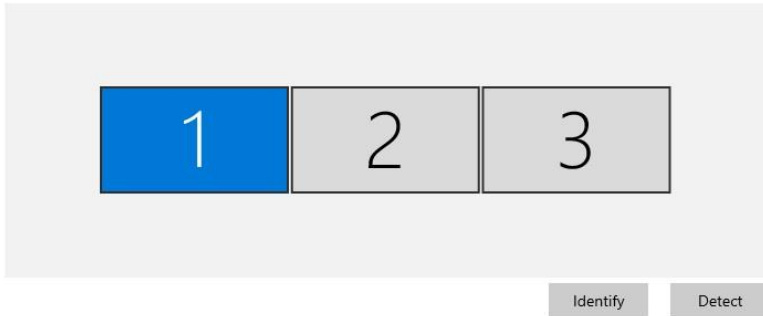


Select **1 Row x 3 Column** for the Port # if its connected PC with Graphic Card layout as below:

Display

Rearrange your displays

Select a display below to change the settings for it. Press and hold (or select) a display, then drag to rearrange it.

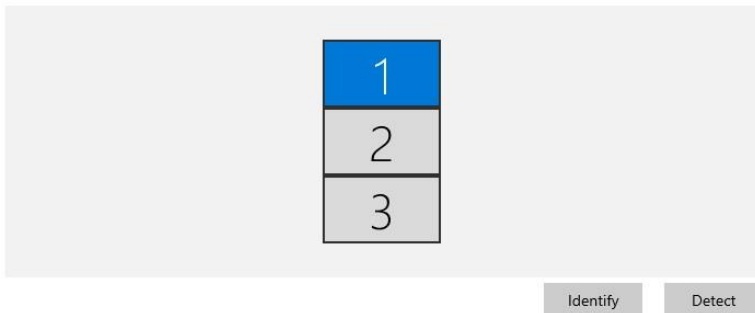


Select 3 **Row x 1 Column** for the Port # if its connected PC with Graphic Card layout as below:

Display

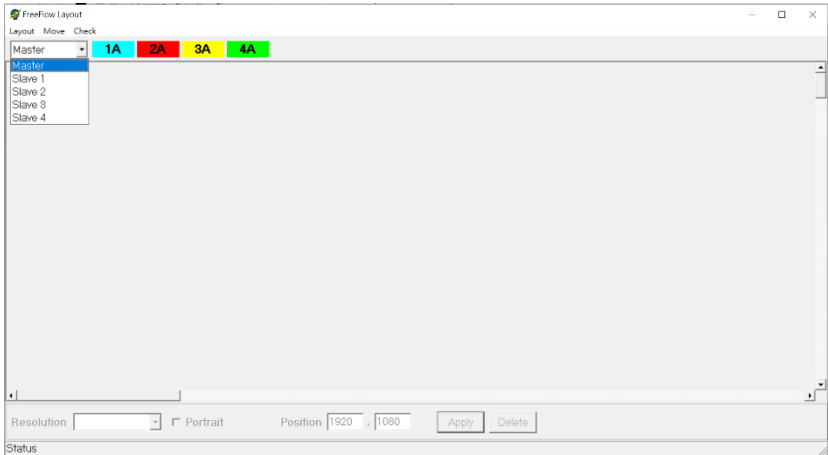
Rearrange your displays

Select a display below to change the settings for it. Press and hold (or select) a display, then drag to rearrange it.



Proceed to configure all Multi-Monitor Layouts for each Port of Master and Slave KM-4 device(s). Then Press **[Apply]** button when done.

12. **To draw Multi-Monitor Free-Flow Layout**, select the device from the [Master, Slave 1 ~ 4] pull-down menu as below:



Depending on the Monitor Layout for the selected device been configured in above step 11, it will display the corresponding screen icons in blue, red, yellow and green.

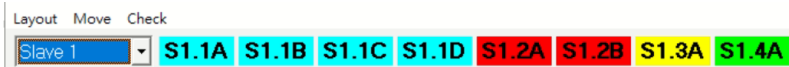
For example, the following diagram shows the Master unit has all 4 ports connected with 4 single monitor:



The following diagram shows the Master unit has Port 1 connected with 2 monitors, Port 2 connected with 3 monitors, Port 3 & 4 connected with single monitor:

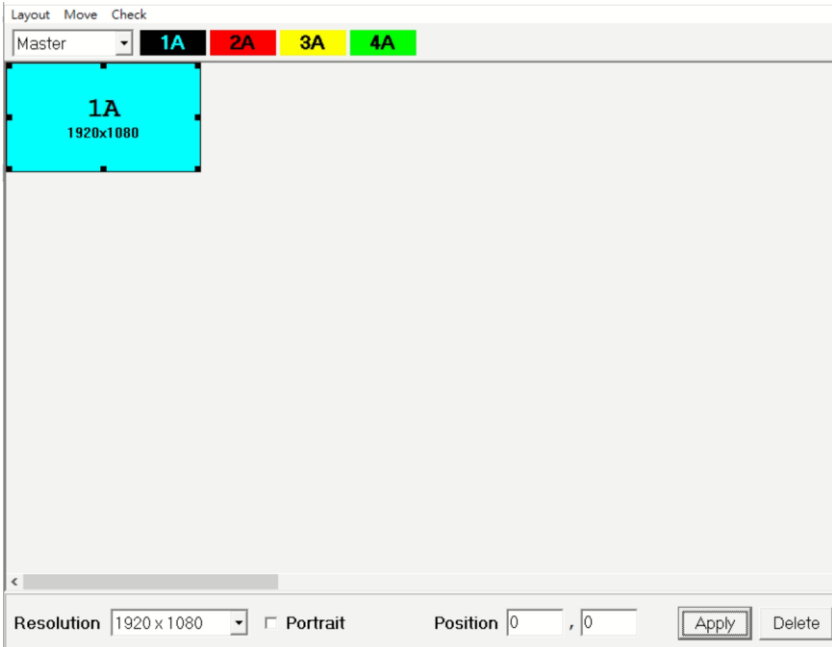


The following diagram shows the Slave 1 unit has Port 1 connected with 4 monitors, Port 2 connected with 2 monitors, Port 3 & 4 connected with single monitor:

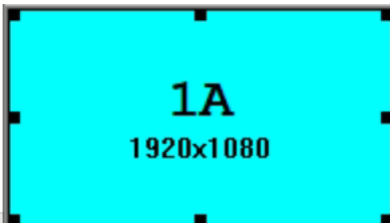


Note: The numbers of the screen representations relate directly to the four ports on the Master KM-4, the “S” with numbers to represent the Slave unit, while the letters relate to the screen hierarchy attached to a computer (A is primary, B is secondary, etc.).

Click the screen icon to select the one that you want to add to the Free-Flow Layout, for example, click 1A for Master unit:

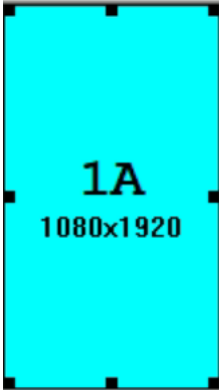


The rectangular screen representation 1A with Resolution setting will be shown on the map area as below:



Most of DVI/HDMI resolutions are supported and listed on the [Resolution] pull-down menu from 640x480 to 4096x2160, select the correct resolution for the screen.

The system also support portrait mode screen, click the [Portrait] t enable the screen in Portrait mode as below:



Click and drag the rectangular screen or manually type in the X,Y value to move this screen to the correct position within the Free-Flow Layout, click [Apply] when done or click [Delete] if you want to ignore this screen.

13. Free-Flow Layout Scenarios

The following diagram gives an example of a single KM-4 (Master) with 4 USB-B upstream ports attached to 4 PC, each PC has one monitor, and the 4 monitors are arranged in 1 row x 4 columns layout:



The following diagram gives an example of a single KM-4 (Master) with port 1 and 2 attached to PC, each PC has 2 monitors, and the 4 monitors are arranged in 1 row x 4 columns layout:



The following diagram gives an example of a single KM-4 (Master) with port 1 and 2 attached to PC, the two monitors of PC1 side by side, the two monitors of PC2 are below them:

