CLAIMS

1. An image processing device comprising:

a plurality of input interfaces, each input interface of the plurality of input interfaces configured to provide pixel data for a predetermined area of a total display area;

a multiplexer configured to stitch the pixel data for the predetermined areas provided by each input interface into a display data, wherein the display data comprises a single stitched video;

an input circuit configured to receive the display data, wherein the display data is split into a plurality of outputs for display with different spatial resolutions;

a splitting circuit configured to split the display data into a first output and a second output, wherein the first output comprises a central area of the display data and the second output comprises a circumferential area of the display data;

wherein the plurality of outputs comprises:

a first output circuit configured to output the first output for displaying with a first spatial resolution, wherein the first output is connected to a downstream HDMI port; and

a second output circuit configured to output the second output for displaying with a second spatial resolution.

2. The image processing device of claim 1,

wherein the plurality of input interfaces comprises a first, a second and a third input interfaces; and

wherein the predetermined areas for each of the first, second and third input interfaces comprises, respectively, a left portion, a middle portion and a left portion of the total display area.

3. The image processing device of claim 1,

wherein each input interface is configured according to at least one of High-Definition Multimedia Interface, display port, or Video Graphics Array.

4. The image processing device of claim 1,

wherein at least one of the first output circuit and the second output circuit comprises an output interface.

5. The image processing device of claim 4,

wherein the output interface is configured according to at least one of High-Definition Multimedia Interface, display port, or Video Graphics Array.

6. The image processing device of claim 1,

wherein the second output circuit comprises a projector.

7. The image processing device of claim 1,

wherein the first spatial resolution is higher than the second spatial resolution.

8. The image processing device of claim 1,

wherein the first spatial resolution corresponds to a spatial resolution of at least one of a display panel and a projector.

9. The image processing device of claim 1,

wherein the first spatial resolution corresponds to a spatial resolution of between 0.787 pixels per millimeter to 19.685 pixels per millimeter, or a spatial resolution of less than 0.787 pixels per millimeter.

10. The image processing device of claim 1,

wherein the first spatial resolution corresponds to a spatial resolution of 7.87 pixels per millimeter.

11. The image processing device of claim 1, wherein the second output further comprises the central area of the display data being removed to form the circumferential area.

12. A method for controlling an image processing device, the method comprising:

stitching pixel data for predetermined areas provided by inputs to form a single stitched video for splitting into a plurality of outputs of display data with different spatial resolutions

using a plurality of input interfaces, wherein each input interface of the plurality of input interfaces provide pixel data for the predetermined area of a total display area;

receiving the display data;

wherein the plurality of outputs comprises:

splitting the display data into a first output and a second output, wherein the first output comprises a central area of the display data and the second output comprises a circumferential area of the display data;

outputting the first output for displaying with a first spatial resolution, wherein the first output is connected to a downstream HDMI port; and

outputting the second output for displaying with a second spatial resolution.

13. The method of claim 12, wherein the first spatial resolution is higher than the second spatial resolution.

14. The method of claim 12, wherein the second output further comprises the central area of the display data being removed to form the circumferential area.

15. A non-transitory computer-readable medium comprising instructions which, when executed by a computer, make the computer perform a method for controlling an image processing device, the method comprising:

stitching pixel data for predetermined areas provided by inputs to form a single stitched video for splitting into a plurality of outputs of display data with different spatial resolutions using a plurality of input interfaces, wherein each input interface of the plurality of input interfaces provide pixel data for the predetermined area of a total display area;

receiving the display data;

wherein the plurality of outputs comprises:

splitting the display data into a first output and a second output, wherein the first output comprises a central area of the display data and the second output comprises a circumferential area of the display data;

outputting the first output for displaying with a first spatial resolution, wherein the first output is connected to a downstream HDMI port; and

outputting the second output for displaying with a second spatial resolution.

16. The non-transitory computer-readable medium of claim 15, wherein the first spatial resolution is higher than the second spatial resolution.

17. The non-transitory computer-readable medium image processing device of claim 15, wherein the second output further comprises the central area of the display data being removed to form the circumferential area.