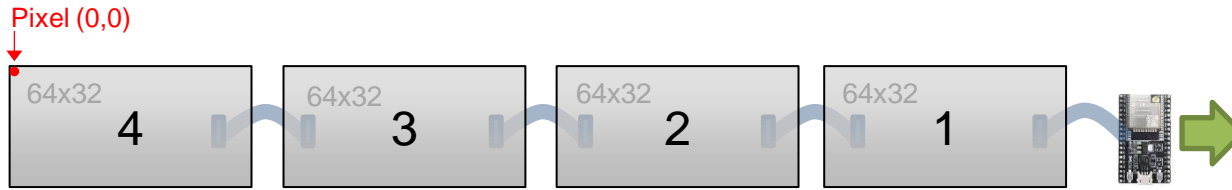


# Standard Use – Horizontal ‘chained’ LED matrix panels

(example with 4 x (64w x 32h px) LED matrix panels chained in series)



Note: ‘VirtualMatrixPanel’ usage is **not** required for a simple horizontal chain!

In your code / sketch:

```
#define PANEL_RES_X 64
#define PANEL_RES_X 32
#define PANEL_CHAIN 4

HUB75_I2S_CFG mxconfig (PANEL_RES_X,
PANEL_RES_Y, PANEL_CHAIN);
```

# Non-Standard Use - Using the ‘VirtualMatrixPanel’ to combine panels into a larger display

(refer to the ‘ChainedPanels’ example sketch in the examples folder)

## Example 1) Top-right DOWN serpentine ‘S’ chain



```
#define NUM_ROWS 2
#define NUM_COLS 2
#define PANEL_RES_X 64
#define PANEL_RES_Y 32

#define SERPENT true
#define TOPDOWN false

/* Create physical dma output class AND virtual (chained) display class. */
#include <ESP32-VirtualMatrixPanel-I2S-DMA.h>
RGB64x32MatrixPanel_I2S_DMA dma_display;
VirtualMatrixPanel virtualDisp(dma_display, NUM_ROWS, NUM_COLS, PANEL_RES_X, PANEL_RES_Y, SERPENT, TOPDOWN);
```

# Non-Standard Use - Using the 'VirtualMatrixPanel' to combine panels into a larger display

(refer to the 'ChainedPanels' example sketch in the examples folder)

## Example 2) Bottom-left UP serpentine 'S' chain



```
#define NUM_ROWS 2
#define NUM_COLS 2
#define PANEL_RES_X 64
#define PANEL_RES_Y 32

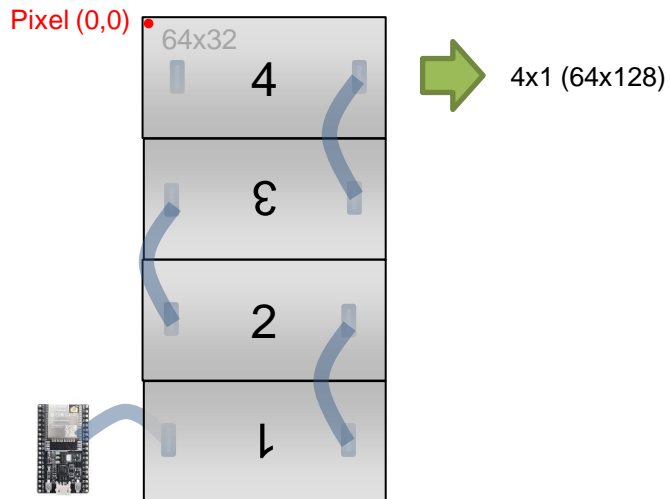
#define SERPENT true
#define TOPDOWN false

/* Create physical dma output class AND virtual (chained) display class. */
#include <ESP32-VirtualMatrixPanel-I2S-DMA.h>
RGB64x32MatrixPanel_I2S_DMA dma_display;
VirtualMatrixPanel virtualDisp(dma_display, NUM_ROWS, NUM_COLS, PANEL_RES_X, PANEL_RES_Y, SERPENT, TOPDOWN);
```

# Non-Standard Use - Using the 'VirtualMatrixPanel' to combine panels into a larger display

(refer to the 'ChainedPanels' example sketch in the examples folder)

## Example 3) Vertical serpentine 'S' chain / stack



```
#define NUM_ROWS 4
#define NUM_COLS 1
#define PANEL_RES_X 64
#define PANEL_RES_Y 32

#define SERPENT true

/* Create physical dma output class AND virtual (chained) display class. */
#include <ESP32-VirtualMatrixPanel-I2S-DMA.h>
RGB64x32MatrixPanel_I2S_DMA dma_display;
VirtualMatrixPanel virtualDisp(dma_display, NUM_ROWS, NUM_COLS, PANEL_RES_X, PANEL_RES_Y, SERPENT);
```

