Using the 'VirtualMatrixPanel' to combine panels into a larger display

Refer to the 'VirtualMatrixPanel' sketch in the 'examples' directory.

The example code below applies only to standard scan-type panels (i.e. Two Scan, or 1/16, 1/32 scan) panels.

Example 1) Top-right DOWN serpentine 'S' chain


```
#include <ESP32-VirtualMatrixPanel-I2S-DMA.h>

#define NUM_ROWS   2
#define NUM_COLS   2
#define PANEL_RES_X      64
#define PANEL_RES_Y      32
#define PANEL_CHAIN_LEN NUM_ROWS*NUM_COLS

#define VIRTUAL_MATRIX_CHAIN_TYPE    CHAIN_TOP_RIGHT_DOWN
```

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

2 x 2 (128x64)

```
#include <ESP32-VirtualMatrixPanel-I2S-DMA.h>

#define NUM_ROWS  2
#define NUM_COLS  2
#define PANEL_RES_X    64
#define PANEL_RES_Y    32
#define PANEL_CHAIN_LEN NUM_ROWS*NUM_COLS

#define VIRTUAL_MATRIX_CHAIN_TYPE    CHAIN_BOTTOM_LEFT_UP
```
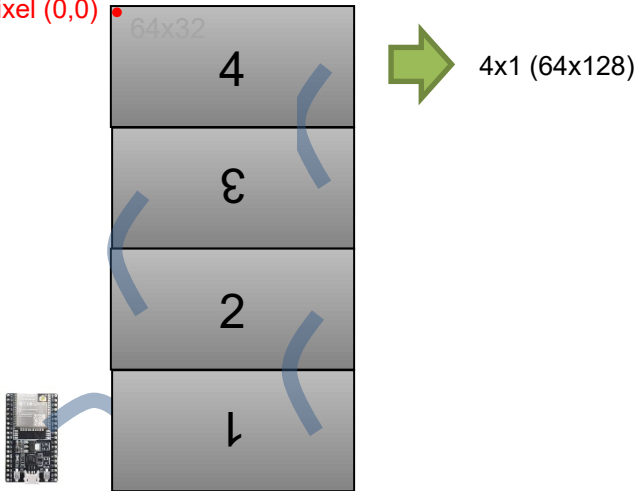
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Example 3) Vertical serpentine 'S' chain / stack

Pixel (0,0)

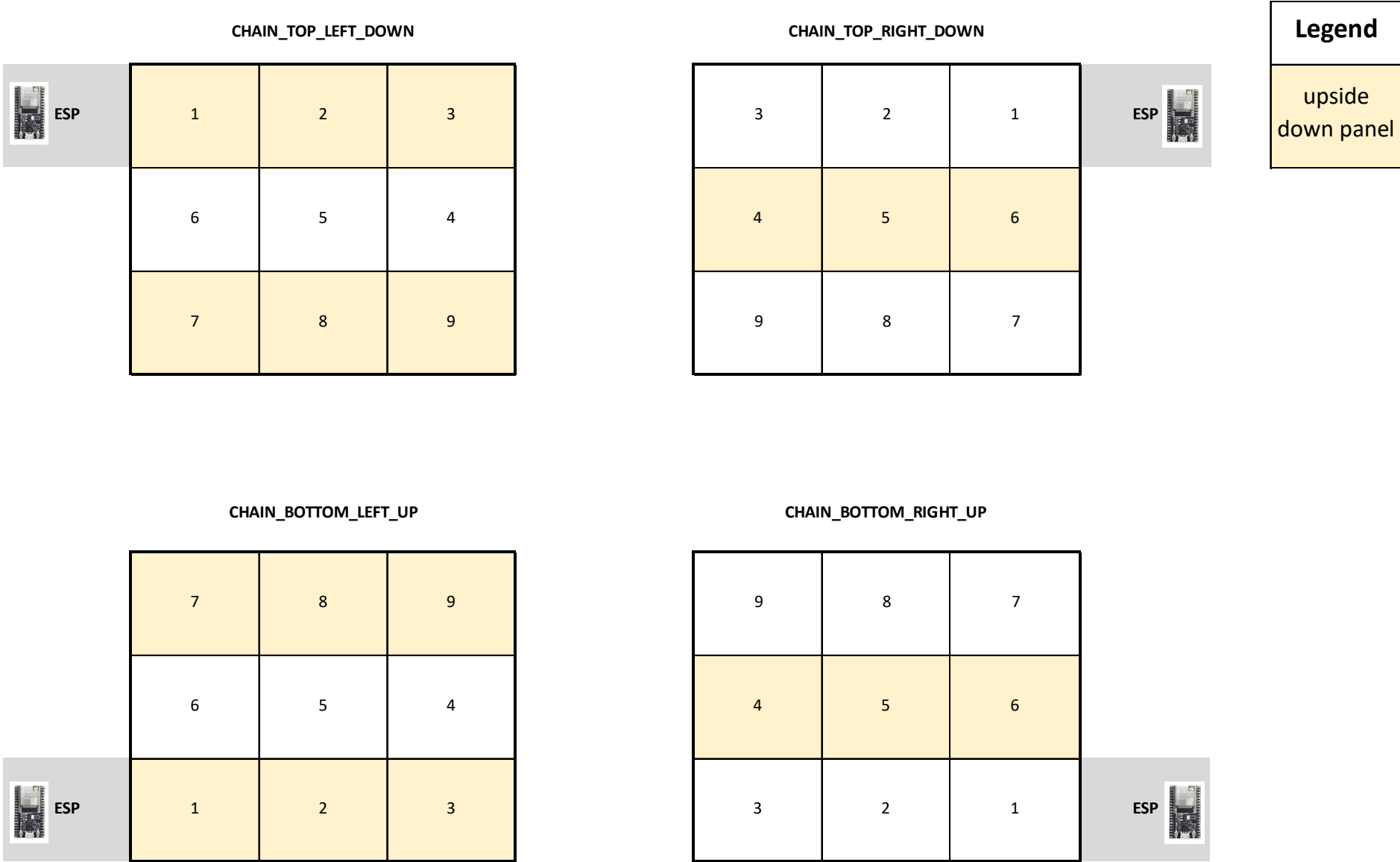4x1 (64x128)

```
#include <ESP32-VirtualMatrixPanel-I2S-DMA.h>

#define NUM_ROWS 4
#define NUM_COLS 1
#define PANEL_RES_X 64
#define PANEL_RES_Y 32
#define PANEL_CHAIN_LEN NUM_ROWS*NUM_COLS

#define VIRTUAL_MATRIX_CHAIN_TYPE    CHAIN_BOTTOM_LEFT_UP
```

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Serpentine 'S' chaining types supported. Examples based on 3x3 grid of chained panels.

CHAIN_TOP_LEFT_DOWN

1	2	3
6	5	4
7	8	9

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CHAIN_TOP_RIGHT_DOWN

3	2	1
4	5	6
9	8	7

ESP

Legend

upside down panel

CHAIN_BOTTOM_LEFT_UP

7	8	9
6	5	4
1	2	3

ESP

CHAIN_BOTTOM_RIGHT_UP

9	8	7
4	5	6
3	2	1

ESP

Standard Use – Horizontal 'chain' of LED matrix panels

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

Pixel (0,0)

Note: 'VirtualMatrixPanel' class usage is not required for a horizontal chain!

```
#define PANEL_RES_X 64
#define PANEL_RES_X 32
#define PANEL_CHAIN_LEN 4

 HUB75_I2S_CFG mxconfig(
                PANEL_RES_X,        // module width
                PANEL_RES_Y,     // module height
                PANEL_CHAIN_LEN    // chain length
   );
```