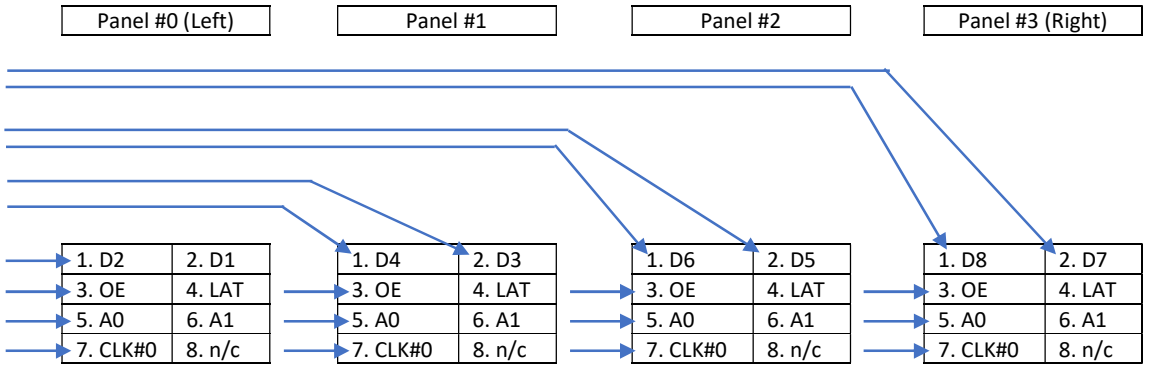
HH LED Panels Ribbon Cable for 4 to 16 Panels

ESP32-DevKitC	
23. GPIO15	24. GPIO2
25. GPIO0	26. GPIO4
27. GPIO16	28. GPIO17
29. GPIO5	30. GPIO18
31. GPIO19	33. GPIO21
29. GPIO5	30. GPIO18
36. GPIO22	9. GPIO25
10. GPIO26	11. GPIO27

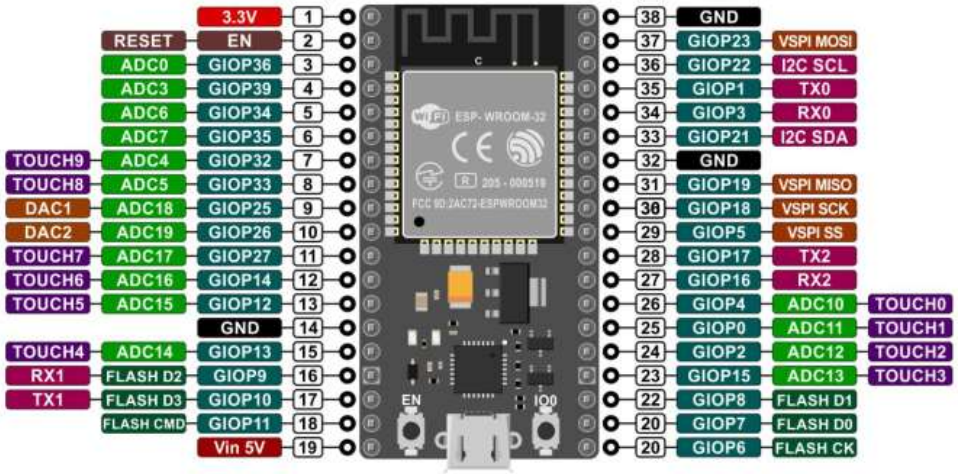
Ribbon Cable	
1. GND	2. GND
3. D8	4. D7
5. GND	6. GND
7. D6	8. D5
9. GND	10. GND
11. D4	12. D3
13 GND	14. GND
15. D2	16. D1
17. OE	18. LAT
19. A0	20. A1
21. CLK#0	22. CLK#1
23. CLK#2	24. CLK#3
25. GND	26. GND



Cascade connector is 1:1 except it rotates the CLK pins, i.e. CLK#1 -> pin 21, CLK#2 -> pin 22 etc., to drive subsequent sets of 4 panels.

A suitable GND connection must additionally be made to each of the panels. Although the ribbon can be used for this, it is easier to use a separate cable as part of the power distribution.

Where more than 4 panels are being connected, then additional drivers/level shifters will be required for all the GPIO lines, e.g. using two 74ACT244 octal drivers. In this case, all lines must then be terminated to GND at the far end of the cables, e.g. with a 100Ω resister, to avoid cross-talk noise issues.



GPIO lines above are for an ESP32 DevKitC or NodeMCU module (38-pin with WROOM-32 chip) for convenience of wiring. For other boards, the GPIO lines can be adjusted.

GPIO19 (OE) should be pulled high with a 10kΩ resistor.