

## recommended pinout mapping

Function	Arduino Mega2560 Pin	Inland ESP32 Pin (Recommended)	STM32 Bluepill Pin	Notes
<b>LCD Shield</b>				
LCD_RESET	8	GPIO4	PA8	General digital I/O
LCD_ENABLE	9	GPIO5	PA9	
LCD_D4	4	GPIO16	PB0	
LCD_D5	5	GPIO17	PB1	
LCD_D6	6	GPIO18	PB10	
LCD_D7	7	GPIO19	PB11	
<b>Storage</b>				
SD_CS	10	GPIO21	PB12	SPI Chip Select
EEPROM_CS	3	GPIO22	PB13	SPI Chip Select (or GPIO)
<b>Parallel Port Control</b>				
LPT_STROBE	18	GPIO23	PB14	Digital output
LPT_AUTO_FEED	22	GPIO25	PB15	
LPT_INITIALIZE	26	GPIO26	PA0	
LPT_SELECT_IN	28	GPIO27	PA1	
<b>Parallel Port Status (inputs)</b>				
LPT_ACK	41	GPIO32	PA4	ADC1 input on ESP32
LPT_BUSY	43	GPIO33	PA5	
LPT_PAPER_OUT	45	GPIO34	PA6	Input-only pin on ESP32
LPT_SELECT	47	GPIO35	PA7	
LPT_ERROR	24	GPIO36 (VP)	PB3	Input-only pin on ESP32
<b>Parallel Port Data (inputs)</b>				Use input-capable pins on ESP32 and Bluepill
LPT_D0	25	GPIO39 (VN)	PB4	

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LPT_D1	27	GPIO14	PB5	
LPT_D2	29	GPIO12	PB6	
LPT_D3	31	GPIO13	PB7	
LPT_D4	33	GPIO15	PB8	
LPT_D5	35	GPIO2	PB9	
LPT_D6	37	GPIO0	PC13	Avoid GPIO0 on ESP32 if used for boot mode
LPT_D7	39	GPIO34	PC14	Input only on ESP32

## Notes:

- **ESP32 Inland:**
  - Avoid GPIO6–11 (used by flash).
  - GPIO0 and GPIO2 can affect boot mode, so avoid critical outputs there if possible (GPIO0 is assigned to D6 above but you may swap).
  - GPIO34–39 are input-only pins (great for parallel port inputs).
  - GPIO25 and 26 are ADC and DAC capable, useful for analog pins if needed.
- **STM32 Bluepill:**
  - Plenty of GPIOs, flexible alternate function pins.
  - I mapped pins mostly to general-purpose IOs on ports A and B for simplicity.
  - You can move pins based on your hardware layout.
- **Arduino Mega2560:**
  - Your original pins are kept as reference.

## Additional Recommendations:

- For **analog input**, use:
  - ESP32: GPIO32–39 ADC1 pins (e.g., GPIO36 or GPIO39).
  - STM32: PA0–PA7 are ADC-capable pins.
  - Mega2560: A0–A15 analog inputs.
- For SPI (SD and EEPROM):

- On ESP32, SPI pins are usually fixed:
  - VSPI: SCK (GPIO18), MISO (GPIO19), MOSI (GPIO23), CS on free GPIO.
- On STM32 Bluepill, SPI1 is on PA5 (SCK), PA6 (MISO), PA7 (MOSI), with CS on any GPIO.