Configuration.h

#define T-Dispaly //esp32 display module by lillygo
#define 103012 //hyrel smart head based on esp32-S3

```
//pick the hardware and pinassignments
//lillygo T-Dispaly
ifDef BoardType T-Display
INCLUDE PinOut_T_Display.h
INCLUDE Display_Parallel_ST7789.h
endIf

//Hyrel smart head controller 103012 esp32-S3 based
ifDef BoardType_Hyrel_103012
INCLUDE PinOut_103012.h
INCLUDE Display_Parallel_ST7789.h
endIf
```

Pinout_T_DIsplay.h

```
#define PIN_POWER_ON            GPIO_NUM_15
#define PIN_HEARTBEAT           GPIO_NUM_38//GPIO_NUM_30 //LCD_BL

#define HEARTBEAT_SET  gpio_set_level(PIN_HEARTBEAT, 1);
#define HEARTBEAT_CLR  gpio_set_level(PIN_HEARTBEAT, 0);

#define PIN_LCD_RES             GPIO_NUM_5
#define PIN_LCD_CS              GPIO_NUM_6
#define PIN_LCD_DC              GPIO_NUM_7
#define PIN_LCD_WR              GPIO_NUM_8
#define PIN_LCD_RD              GPIO_NUM_9

#define PIN_LCD_BL              GPIO_NUM_38

#define PIN_LCD_D0              GPIO_NUM_39
#define PIN_LCD_D1              GPIO_NUM_40
#define PIN_LCD_D2              GPIO_NUM_41
#define PIN_LCD_D3              GPIO_NUM_42
#define PIN_LCD_D4              GPIO_NUM_45
#define PIN_LCD_D5              GPIO_NUM_46
#define PIN_LCD_D6              GPIO_NUM_47
#define PIN_LCD_D7              GPIO_NUM_48

#define PIN_TOUCH_INT           16
#define PIN_TOUCH_RES           21
```
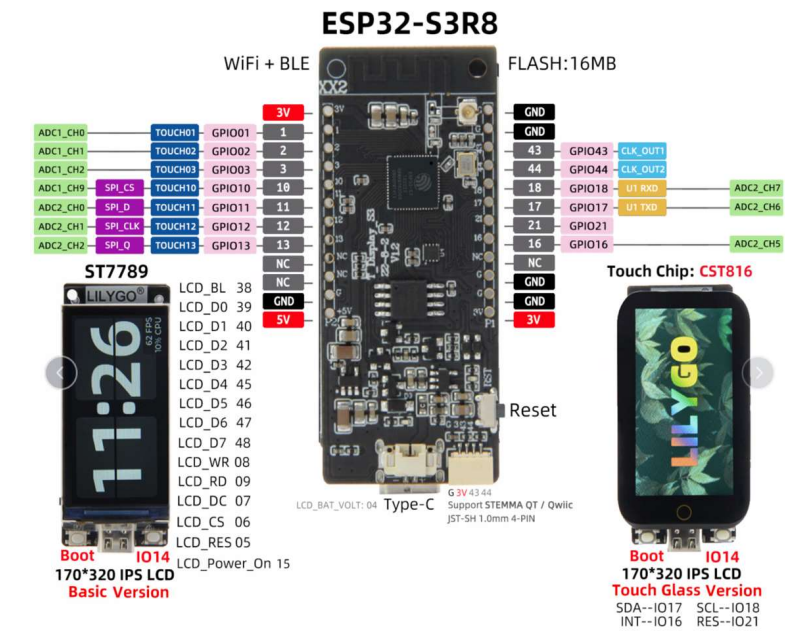
Pinout_103012.h

```
#define LED1  45 //Heater Status
#define LED2  48 //Fan Status
#define LED3  47 //Motor Dir
#define LED4  21 //Motor Step
#define LED5  15
#define LED6  7
#define LED7  14 //Connection Status
#define LED8  13 // LCD RS
#define LED_BL 38
#define Power_ON 15
```

ESP32-S3R8

WiFi + BLE   FLASH:16MB

ST7789

```
LCD_BL   38
LCD_D0   39
LCD_D1   40
LCD_D2   41
LCD_D3   42
LCD_D4   45
LCD_D5   46
LCD_D6   47
LCD_D7   48
LCD_WR   08
LCD_RD   09
LCD_DC   07
LCD_CS   06
LCD_RES  05
LCD_Power_On 15
```

Touch Chip: CST816

Boot   IO14
170*320 IPS LCD
Basic Version

Boot   IO14
170*320 IPS LCD
Touch Glass Version
SDA--IO17   SCL--IO18
INT--IO16   RES--IO21

LILYGO T-Display ESP32-S3
1.9 inch ST7789 170*320 IPS LCD (Basic & Touch)