

Title: Power_Path			Author:	Alcatraz	DHNLAB PVT LTD DHANBAD JHARKHAND INDIA ASIA	
size: A4			Prj: ESP8266-Desktop_Power	Approved:		Alcatraz
				PUBLIC		
Date: 26-12-2024	18:28:29	Sheet 1 of 10	Edited:	18-12-2024		
Git Hash: 12			Variant:	[No Variations]		
File:			C:\Users\desktop\Documents\Project Files\Altium\Projects\Project - Development\ESP266-Desktop_Power\1_Power_Path.SchDoc			
			SW Version:	25.1.2.22		



SGM2019-ADJ
Populate R0L, R1L and R2L

SGM2019-3.3
Only Populate R2L With 100nF Cap
DNP - R0L, R1L

HT7833
DNP - R0L, R1L and R2L

SGM2019-ADJYN5G/TR
Vout = 3.3V
Register Values For
R0L, R1L and R2L
 $R1L = R0B + R1L$

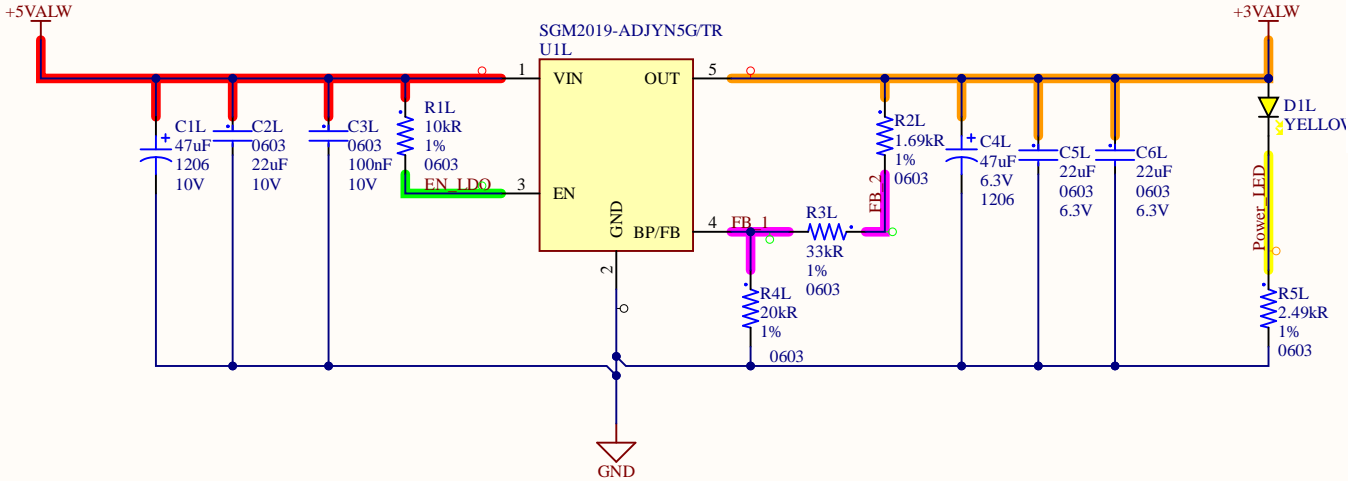
Values From Datasheet

Standard 1% Resistor Values for Common Output Voltages of Adjustable Voltage Version

V _{out} (V)	R ₁ (kΩ)	R ₂ (kΩ)
1.2	0	63.4
1.5	10.5	42.2
1.8	34	63.4
2.8	84.5	63.4
3.0	63.4	42.2
3.3	73.2	42.2
3.6	84.5	42.2
4.2	105	42.2

NOTE: $V_{out} = (R_1 + R_2) / R_2 \times 1.207$

Here are the calculated values of R1L (in kΩ) for VOUT= 3.3 V with different R2L values:
IF R0L= 0Ω
R2L=10kΩ: R1L≈17.34kΩ
R2L=20kΩ: R1L≈34.68kΩ
R2L=30kΩ: R1L≈52.02kΩ
R2L=40kΩ: R1L≈69.36kΩ
R2L=50kΩ: R1L≈86.70kΩ
R2L=60kΩ: R1L≈104.04kΩ
R2L=70kΩ: R1L≈121.38kΩ
R2L=80kΩ: R1L≈138.72kΩ
R2L=90kΩ: R1L≈156.06kΩ
R2L=100kΩ: R1L≈173.41kΩ



Title: LDO			Author: Alcatraz	DHNLAB PVT LTD DHANBAD JHARKHAND INDIA ASIA
Size: A4	Prj: ESP8266-Desktop_Power		Approved: Alcatraz	
Date: 26-12-2024	18:28:29	Sheet 2 of 10	Edited: 06-12-2024	
Git Hash: 12			Variant: [No Variations]	
File: C:\Users\desktop\Documents\Project Files\Altium\Projects\Project - Development\ESP8266-Desktop_Power\2_LDO.SchDoc				
			SW Version: 25.1.2.22	



PIN NAMES

GPIO16(D0)
GPIO5(D1)=I2C=SCL=_N
GPIO4(D2)=I2C=SDA=_P
GPIO0(D3)
GPIO2(D4)
GPIO14(D5)
GPIO12(D6)
GPIO13(D7)
GPIO15(D8)
GPIO3(RX)= UART0
GPIO1(TX)= UART0
GPIO9(SD2)
GPIO10(SD3)

PIN IS HIGH ON BOOT

D0 = GPIO16
D2 = GPIO4
RX = GPIO3
TX = GPIO1
SD2 = GPIO9
SD3 = GPIO10

BOOT FAILURE
IF PULLED LOW

D3 = GPIO0
D2 = GPIO4
TX = GPIO1

BOOT FAILURE
IF PULLED HIGH

D8 = GPIO15

BEST PINS FOR
INPUT (BEST TO WORST)

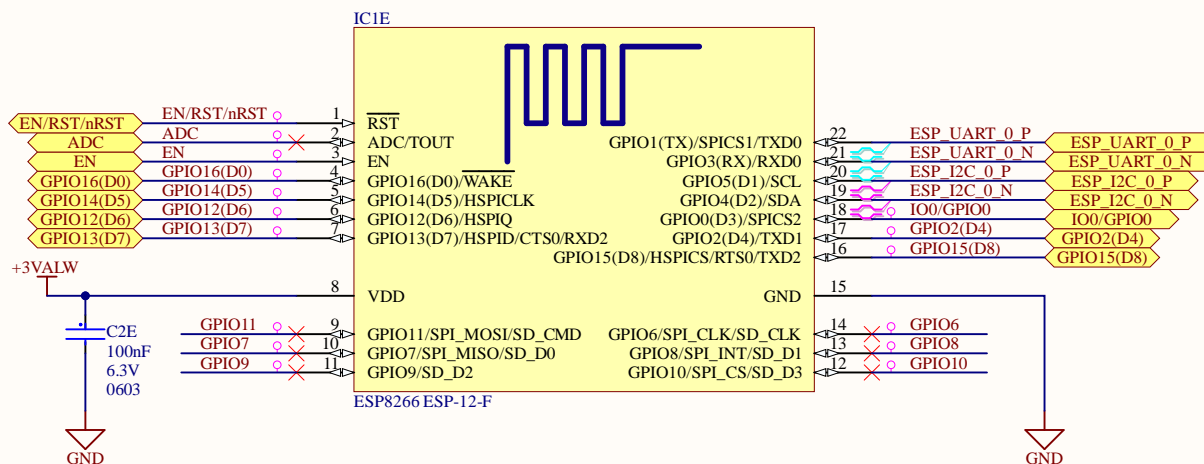
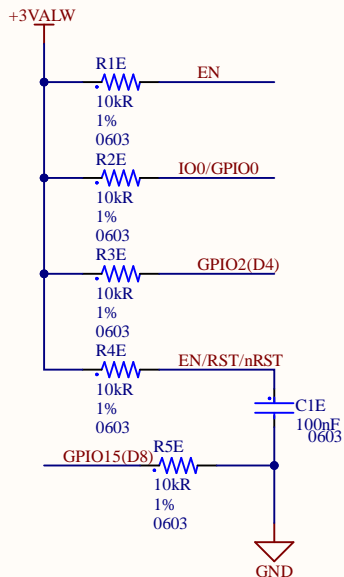
D1 = GPIO5
D2 = GPIO4
D5 = GPIO14
D6 = GPIO12
D7 = GPIO13
*HIGH ON BOOT
D0 = GPIO16
SD2 = GPIO9
SD3 = GPIO10

BEST PINS FOR
OUTPUT (BEST TO WORST)

D1 = GPIO5
D2 = GPIO4
D5 = GPIO14
D6 = GPIO12
D7 = GPIO13
*BOOT FAILURE
IF PULLED HIGH
D8 = GPIO15

BESP Pins For Smart LED(Pixel)

ESP8266_UART0 = GPIO1(TX)
ESP8266_UART1 = GPIO2(D4)
ESP8266_DMA = GPIO3(RX)
ESP8266_ASYNC_UART0 = GPIO1(TX)
ESP8266_ASYNC_UART1 = GPIO2(D4)
ESP8266_SPI_DATA = GPIO13(D7)
ESP8266_SPI_CLOCK = GPIO14(D5)



Title: **ESP8266_Core**

Size: A4

Prj: ESP8266-Desktop_Power

Date: 26-12-2024

18:28:29

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Git Hash: 28

File: C:\Users\desktop\Documents\Project Files\Altium\Projects\Project - Development\ESP8266-Desktop_Power\3_ESP8266_Core.SchDoc

Author: Alcatraz

Approved: Alcatraz

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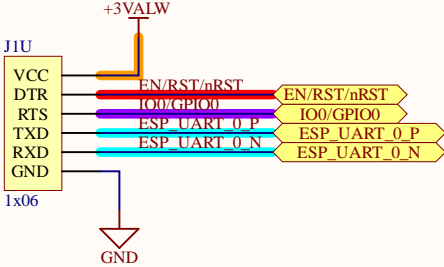
Edited: 26-12-2024

Variant: [No Variations]

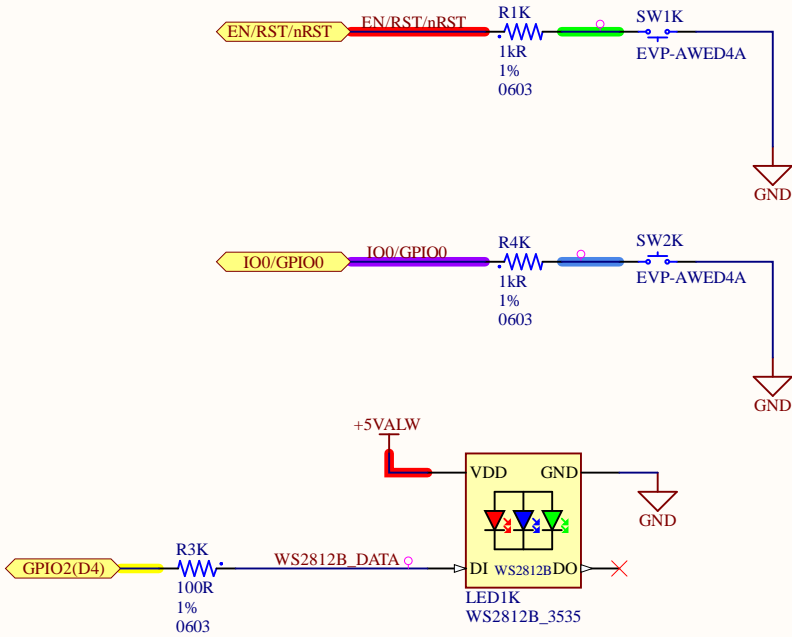
SW Version: 25.1.2.22

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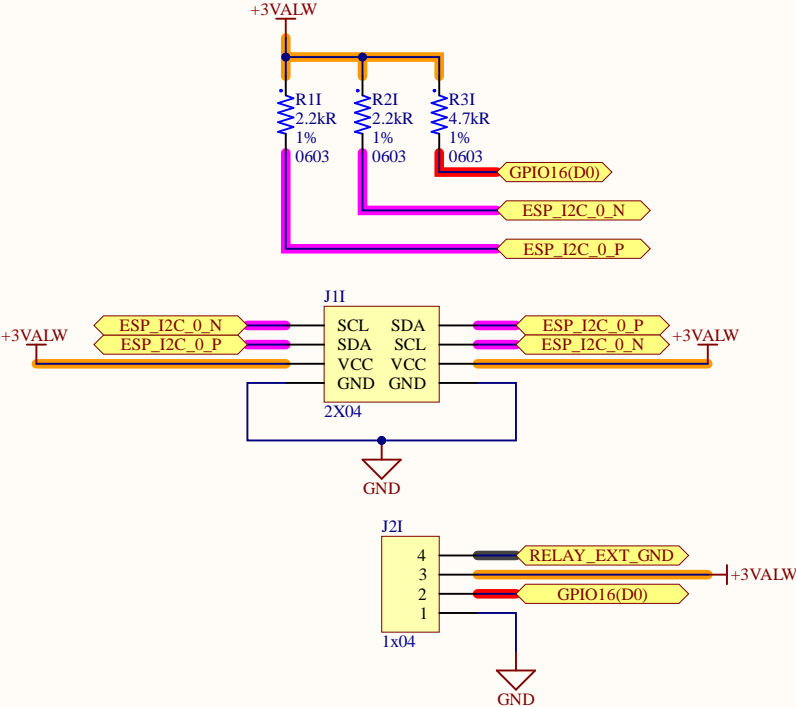


Title: UART			Author: Alcatraz	<div>DHNLAB PVT LTD DHANBAD JHARKHAND INDIA ASIA</div>
Prj: ESP8266-Desktop_Power			Approved: Alcatraz	
Size: A4			PUBLIC	
Date: 26-12-2024 18:28:29 Sheet 4 of 10			Edited: 17-12-2024	
Git Hash: 12			Variant: [No Variations]	
File: C:\Users\desktop\Documents\Project Files\Altium\Projects\Project - Development\ESP8266-Desktop_Power\4_UART.SchDoc			SW Version: 25.1.2.22	



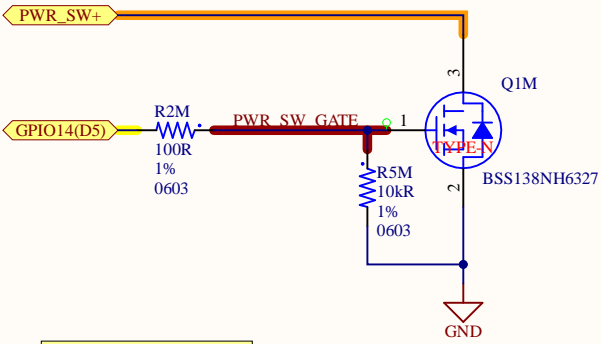
Title: KEYS AND STATUS			Author:	Alcatraz	DHNLAB PVT LTD DHANBAD JHARKHAND INDIA ASIA
Size: A4			Approved:	Alcatraz	
Prj: ESP8266-Desktop_Power			PUBLIC		
Date: 26-12-2024	18:28:29	Sheet 5 of 10	Edited:	18-12-2024	
Git Hash: 12			Variant:	[No Variations]	
File:		C:\Users\desktop\Documents\Project Files\Altium\Projects\Project - Development\ESP8266-Desktop_Power\5_Keys_And_Status.schDoc			
			SW Version:	25.1.2.22	



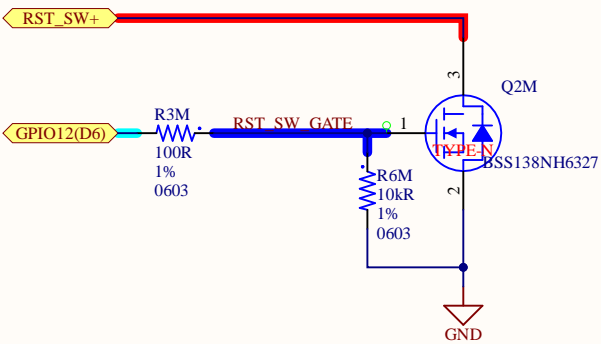


Title: <i>I2C_Sensors</i>			Author:	Alcatraz	<div>DHNLAB PVT LTD DHANBAD JHARKHAND INDIA ASIA</div> 
Size: A4	Prj: ESP8266-Desktop_Power		Approved:	Alcatraz	
Date: 26-12-2024	18:28:29	Sheet 6 of 10	Edited:	18-12-2024	
Git Hash: 12			Variant:	[No Variations]	
File:		C:\Users\desktop\Documents\Project Files\Altium\Projects\Project - Development\ESP8266-Desktop_Power\6_I2C_Sensors.SchDoc	SW Version:	25.1.2.22	

Signal Going To Super IO(Motherboard)

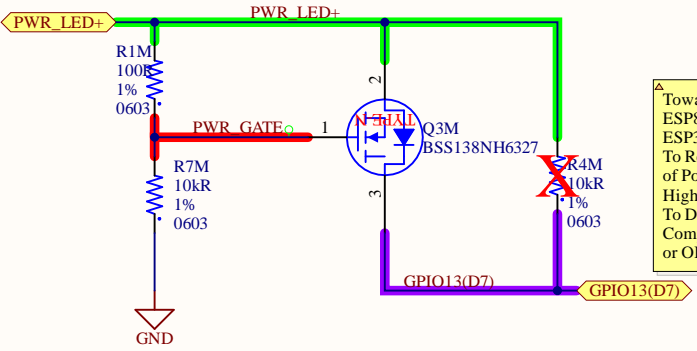


Signal Going To Super IO(Motherboard)



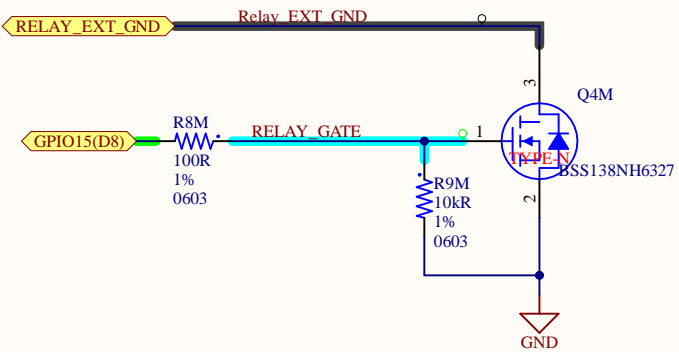
Power LED
High Or Low
V= +3V3, I= 10mA(Max)
Or 20mA Depends on
motherboard brand

Signal Comming Form
Super IO(Motherboard)



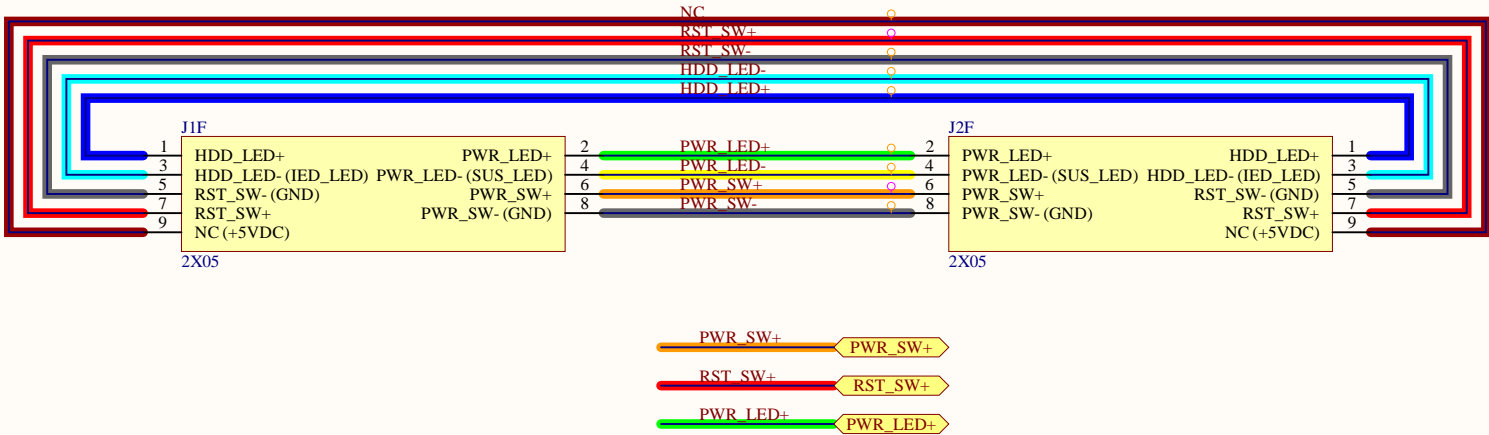
Towards
ESP8266 or
ESP32
To Read Status
of Power LED
High Or Low
To Determine
Computer is ON
or OFF

EXTERNAL Relay GND (-VE)

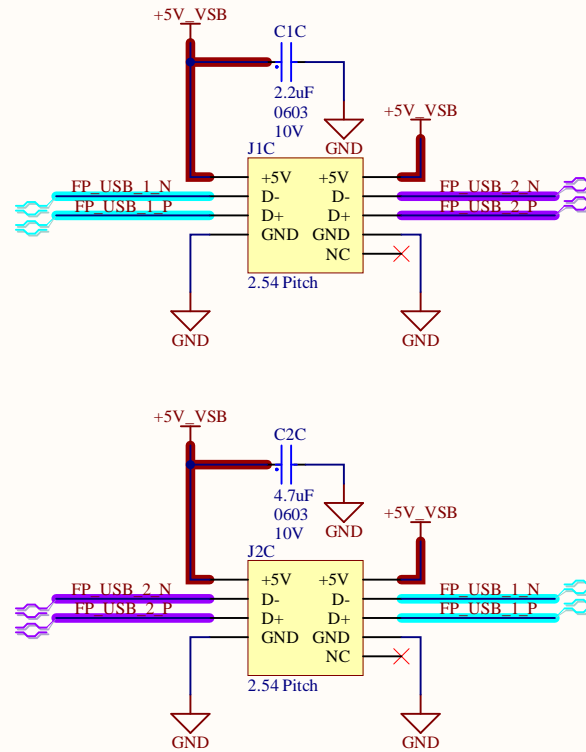
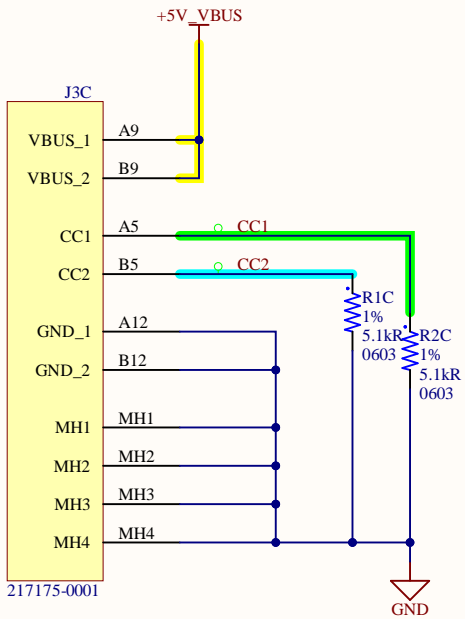


Title: Mosfets			Author: Alcatraz	DHNLAB PVT LTD DHANBAD JHARKHAND INDIA ASIA
Prj: ESP8266-Desktop_Power			Approved: PUBLIC Alcatraz	
size: A4			Edited: 19-12-2024	
Date: 26-12-2024	18:28:29	Sheet 7 of 10	Variant: [No Variations]	
Git Hash: 12			SW Version: 25.1.2.22	
File: C:\Users\desktop\Documents\Project Files\Altium\Projects\Project - Development\ESP8266-Desktop_Power\7_Mosfets.SchDoc				





Title: <i>Front Pannel Con</i>			Author: Alcatraz	<div>DHNLAB PVT LTD DHANBAD JHARKHAND INDIA ASIA</div>	
Size: A4		Prj: ESP8266-Desktop_Power	Approved: Alcatraz		
Date: 26-12-2024		18:28:29	Sheet 8 of 10		Edited: 17-12-2024
Git Hash: 12					Variant: [No Variations]
File: C:\Users\desktop\Documents\Project Files\Altium\Projects\Project - Development\ESP8266-Desktop_Power\8_Front_Panel_Con					SW Version: 25.1.2.22
			SchDoc		



Title: **Front Pannel USB Con**

Size: A4 Prj: ESP8266-Desktop_Power

Date: 26-12-2024 18:28:29 Sheet 9 of 10

Git Hash: 12

File: C:\Users\desktop\Documents\Project Files\Altium\Projects\Project - Development\ESP8266-Desktop_Power\9_Front_Pannel_USB_Con.SchDoc

Author: Alcatraz
Approved: Alcatraz
Public
Edited: 17-12-2024
Variant: [No Variations]
SW Version: 25.1.2.22

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