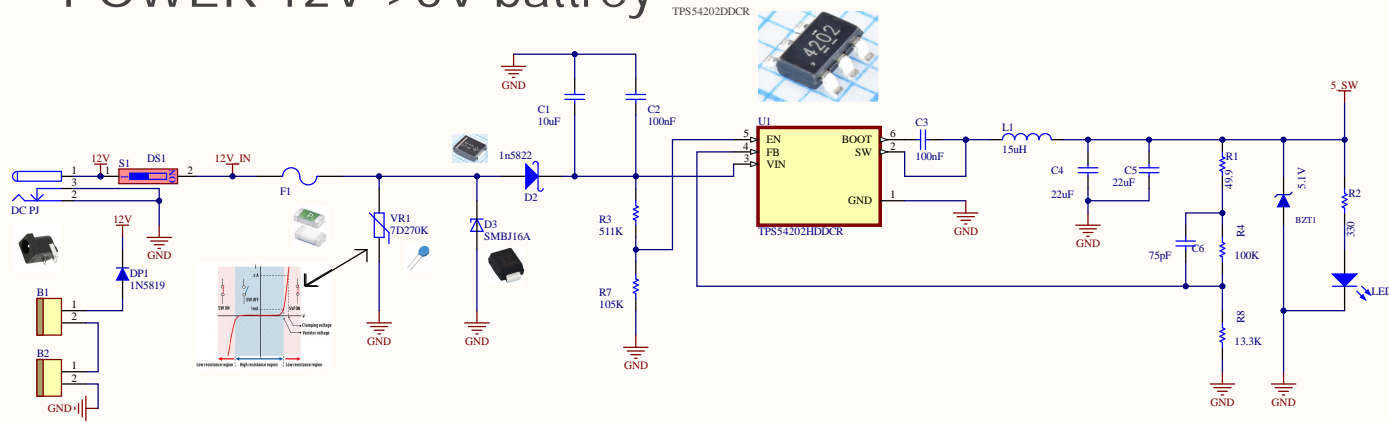
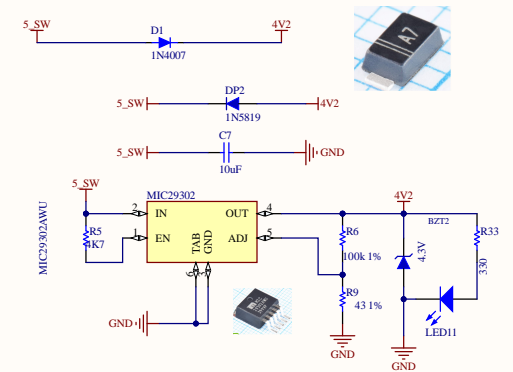


# POWER

## POWER 12V->5V battrey

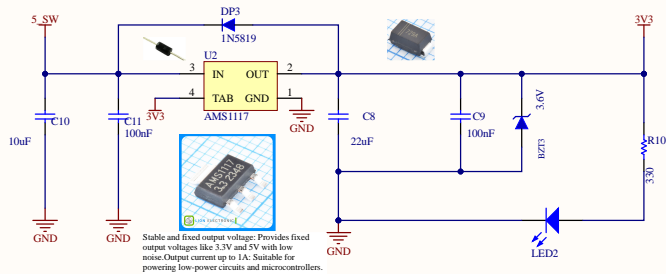


## POWER 5V->4V2



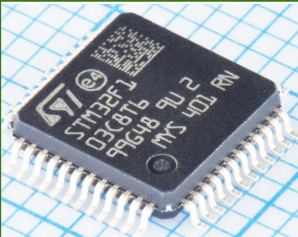
## POWER 5V->3V3

AMS1117

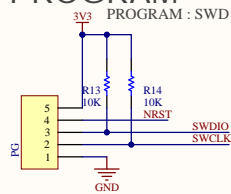


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File:	D:\Git\...\Power.SchDoc	Drawn By:

# MCU STM32F103C8T6 Arshia Madadi

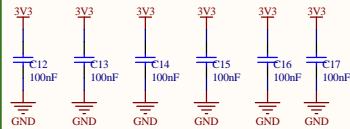


## PROGRAM

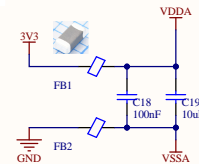


## ByPass Cap

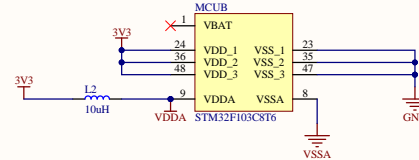
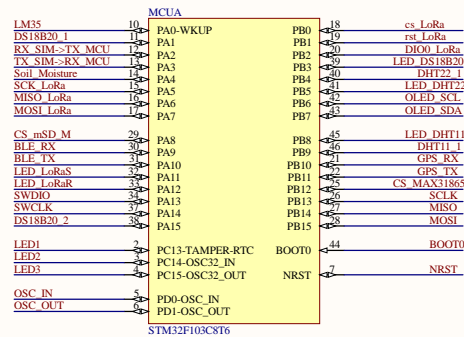
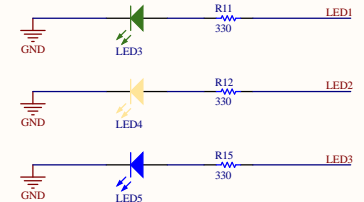
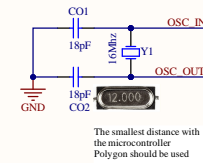
The shortest distance to micro



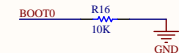
## VDDA



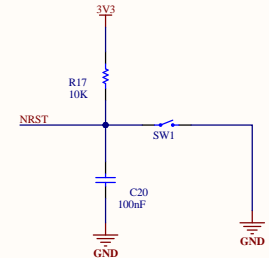
## Oscillator



## BOOT



## Rest



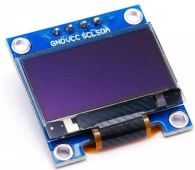
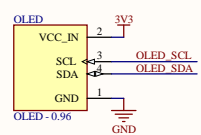
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Tabloid		
Date:	12/11/2024	Sheet of
File:	D:\Git\Bahram\Bahram Project\MCU_Sch\Down By:	

# Output

## OLED

SSD1306

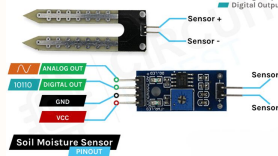
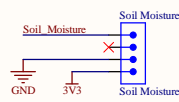
Protocol : I2C



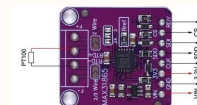
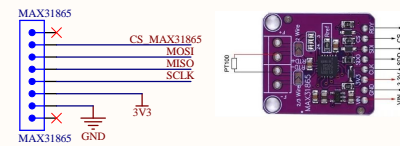
## Soil Moisture

ADC

Temperature sensor

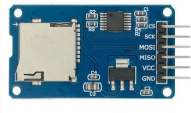
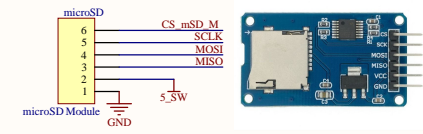


## MAX31865



## SD CARD

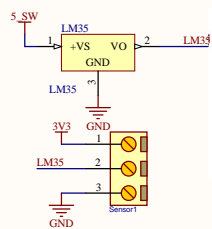
microSD Module



## LM35

ADC

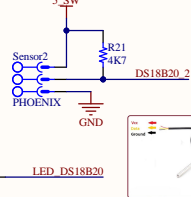
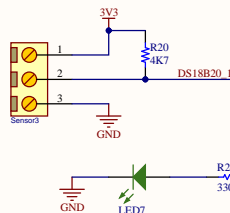
Temperature sensor



## DS18B20

OneWire

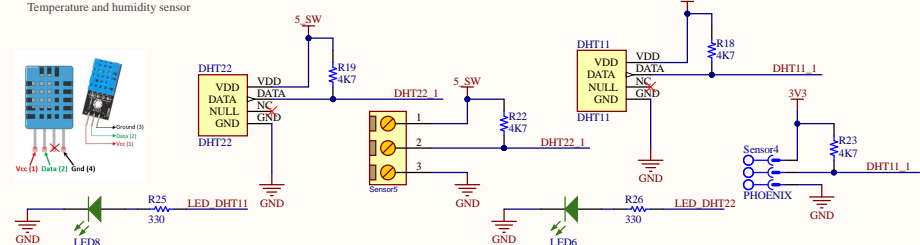
Temperature sensor



## DHT11 & 22

OneWire

Temperature and humidity sensor



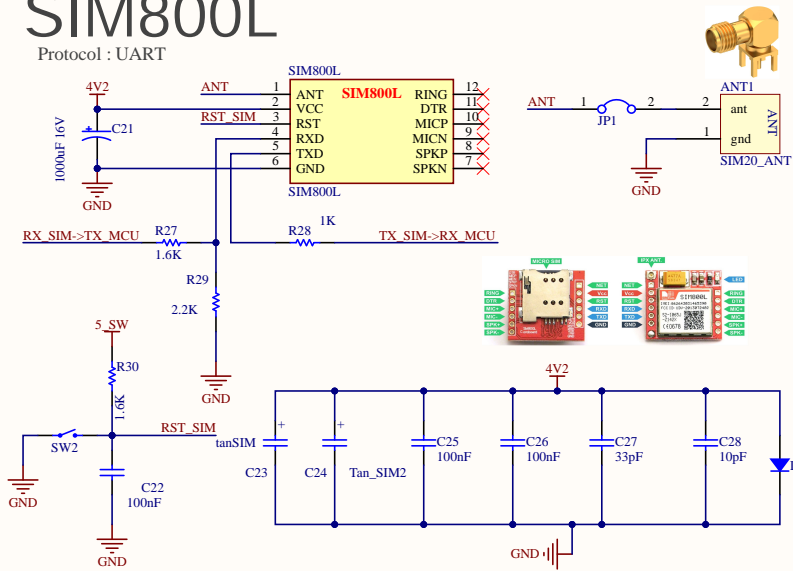
# Output & UI

Arshia Madadi

Title			
Output & UI			
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Date:	12/11/2024	Sheet of	
File:	D:\Git\...Output.SchDoc	Drawn By:	

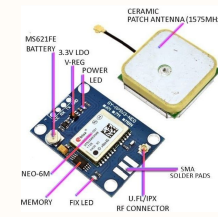
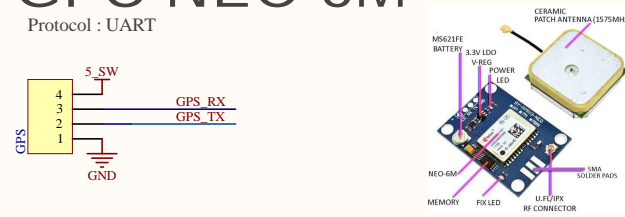
## SIM800L

Protocol : UART



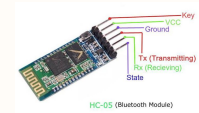
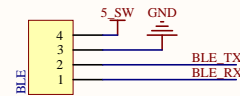
## GPS NEO 6M

Protocol : UART



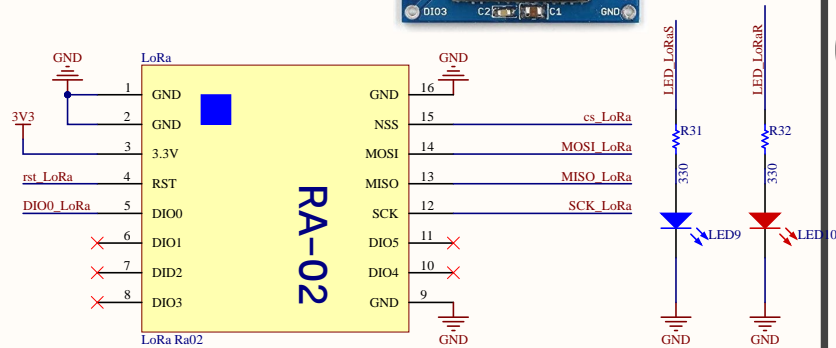
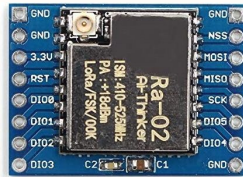
## Bluetooth

Protocol : UART



## LoRa -RA-02

Protocol : SPI SX 1278



# Comm Chip

Arshia Madadi

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File:	D:\Git\Comm.SchDoc	Drawn By:

The image shows a complex PCB layout for a smart agriculture system. Key components and features include:

- Microcontroller (MCU):** The central processing unit, surrounded by various passive components like capacitors and resistors.
- Memory:** A microSD card slot for data storage.
- Sensors:** Multiple sensors for environmental monitoring, including DHT11, DHT22, Soil Moisture, and LoRa modules.
- Actuators:** LEDs (LED1-LED10) and a relay (R1) for controlling irrigation.
- Connectivity:** A SIM card slot (SIM800L) for cellular communication and a GPS module for location tracking.
- Headers:** Various headers for I2C, SPI, and other protocols, as well as a 5V power header.
- Logo and Text:** The logo for 'www.winiapp.com' and 'Bahram v1 - Arshia Madadi' is visible on the board.

Comment	Description	Designator	Footprint	LibRef	Quantity
SM20 ANT	ANT	ANT1	MY_SM20_ANT	SM20_ANT	1
JSTB6-PHK.2Pin	Connector Header Through Hole 0.079" (2.00mm)	B1, B2	JSTB6-PHK	JSTB6-PHK.2Pin	2
Header 4	Header, 4-Pin	BLE_GPS	My_1X04	Header 4	2
5.1V	DIODE,ZENER GENERAL	B2T1	SCD123	ZENERGENERAL DIODE	1
4.3V	DIODE,ZENER GENERAL	B2T2	SCD123	ZENERGENERAL DIODE	1
3.6V	DIODE,ZENER GENERAL	B2T3	SCD123	ZENERGENERAL DIODE	1
10uF	CAP_SMD_0603, 1.6 mm x 0.8 mm	C1, C7, C10, C19	MY_CAP_SMD_0603	CAP_SMD_0603	4
100nF	CAP_SMD_0603, 1.6 mm x 0.8 mm	C2, C3, C8, C11, C12, C13, C14, C15, C16, C17, C18, C20, C22	MY_CAP_SMD_0603	CAP_SMD_0603	13
22uF	CAP_SMD_0603	C4, C5, C8	MY_CAP_SMD_0603	CAP_SMD_0603	3
75pF	CAP_SMD_0603	C6	MY_CAP_SMD_0603	CAP_SMD_0603	1
1000uF 16V	Electrolytic Capacitor	C21	SMD_1000uF_16V	Capacitor	1
tanSM	6X3.2MM	C23	MY_CAP_SMD-C	CAP_TANTAL_C	1
Tan_SM2	6X3.2MM	C24	MY_CAP_SMD-C	CAP_TANTAL_C	1
100nF	Capacitor	C25, C26	1206-cap	Cap	2
33pF	Capacitor	C27	1206-cap	Cap	1
10pF	Capacitor	C28	1206-cap	Cap	1
18uF	2.0 mm x 1.25 mm	CD1, CD2	MY_CAP_SMD_0805	CAP_SMD_0805	2
1N4007	1N4007 smd diode	D1	DO-214AC	1N4007-1	1
1n5822	Schottky Rectifiers	D2	DO-214AB(SMD)	1N5822 SMD	1
SM1616A	600W, 18.8V, 5%, Unidirectional, TVS	D8	DIOM4336265N	SM1616A	1
19MA4732A	Diode Standard 1000V 1A Surface Mount SMA	D4	DO-214AC SMA	US1M(SMD SMA)	1
DC Power Jack	DC Power Jack, Center Pin 2.5mm, Diameter: 5.7mm	DCPJ	DC Power Jack 1	DC Power Jack	1
DHT11	Capacitive-type humidity and temperature module/sensor	DHT11	DHT22	DHT22	1
DHT22	Capacitive-type humidity and temperature module/sensor	DHT22	DHT22	DHT22	1
1N5819	Schottky Rectifiers	DP1	1n5800DO-201AD	1N5819	1
1N5819	Schottky Rectifiers	DP2, DP3	430X27UD	1N5819	2
F=3.0 A	SMD Fuses 1206	F1	1206 FUSE	Fuse SMD1206	1
Ferrite Bead SMD	Ferrite Bead SMD	FB1, FB2	FB1206	Ferrite Bead SMD Package	2
Jumper	Jumper	JP1	Jumper Small - 2.54-GRAY	Jumper	1
15uH	INDUCTOR_SMD_3A	L1	INDUCTOR_SMD_3A	INDUCTOR_SMD_3A	1
10uH	SMT Inductor	L2	IND 1206_3216	Ind 1206	1
LED_SMD0603 BLUE		LED1, LED2, LED11	LED_0603_RED	LED_SMD0603 BLUE	3
LED_SMD0605 GREEN		LED3, LED6, LED7, LED8	LED_0605_GREEN	LED_SMD0605 GREEN	4
LED_SMD0605 WHITE		LED4	LED_0605_WHITE	LED_SMD0605 WHITE	1
LED_SMD0605 BLUE		LED5, LED9	LED_0605_RED	LED_SMD0605 BLUE	2
LED_SMD0605 RED		LED10	LED_0605_RED	LED_SMD0605 RED	1
LM35	Precision Centigrade Temperature Sensor	LM35	Z3A	LM35CAZ	1
LoRe Rad2		LoRe	LoRe - Re-02	LoRe	1
MAX31865	Male Header 1X08	MAX31865	MH-DRI1X08-254P	MH-DRI_1X08	1
STM32F103C8T6	ARM Cortex-M3 32-bit MCU, 64 KB Flash, 20 KB Internal RAM, 37 I/Os, 48-pin LQFP, -40 to 85 degC, Tray	MCU	OFF50P0004600X160-48N	STM32F103C8T6	1
MIC29302AWU	Linear Voltage Regulator IC Positive Adjustable 1 Output 3A TO-263-5	MIC29302	TO263-5	MIC29302AWU	1
microSD Module	Header, 6-Pin	microSD	MH-DRI1X6-1	Header 6	1
OLED- 0.96	0.96" 128 X 64 MONOCHROME GRAPHIC OLED DISPLAY MODULE - I2C	OLED	MODULE DMA-OLED096-636	DMA-OLED096-636	1
Header 5	Header, 5-Pin	PG	My_1X05	Header 5	1
40.9	RES0805	R1	RES33413X04N	RES0805 0.125W	1
330	RES0805	R2, R10, R11, R12, R15, R24, R25, R26, R31, R32, R33	RES33413X04N	RES0805 0.125W	11
511K	RES0805	R3	RES33413X04N	RES0805 0.125W	1
100K	RES0805	R4	RES33413X04N	RES0805 0.125W	1
40K	RES0805	R5	RES33413X04N	RES0805 0.125W	1
100k 1%	RES0805	R6	RES33413X04N	RES0805 0.125W	1
100K	RES0805	R7	RES33413X04N	RES0805 0.125W	1
13.3K	RES0805	R8	RES33413X04N	RES0805 0.125W	1
43.1K	RES0805	R9	RES33413X04N	RES0805 0.125W	1
10K	RES0805	R13, R14, R16, R17	RES33413X04N	RES0805 0.125W	4
40K	RES0603	R18, R19, R20, R21, R22, R23	RES0603_1608	Res 0603	6
1.6K	RES0805	R27, R30	RES33413X04N	RES0805 0.125W	2
1K	RES0805	R28	RES33413X04N	RES0805 0.125W	1
2.2K	RES0805	R29	RES33413X04N	RES0805 0.125W	1
DS1	1 BIT DIP Switch	S1	DIP Switch x1	DIP Switch 1	1
CONN_PHOENIX	CONN_PHOENIX	Sensor1, Sensor3, Sensor5	PHOENIX_MSTBVF_3	Phoenix_MSTBVF 3Pin	3
PHOENIX	3 Pitch: 5.08 mm Color: green Contact surface: Tin Assembly	Sensor2, Sensor4	MSTB 2.5/3-G-5.08	CONN_Phoenix_MSTB_03	2
SM800L		SM800L	SM800L	SM800L	1
Soil Moisture	Male Header 1X04	Soil Moisture	MH-DRI1X04-254P	MH-DRI_1X04	1
Tactile 2Pin 6X3.5mm H4.57mm (SMD)	Tactile Switch SPST-NO Top Actuated Surface Mount 4.5V to 28V Input, 2A Output, Synchronous Step-Down Voltage Converter 6-SOT-23 THIN-40 to 125 xx Volt, 800mA Low-Dropout Linear Regulator, 4-pin SOT-23	SV1, SV2	SMFPS_SPST_6X3X5	Tactile 2Pin 6X3.5mm H4.57mm (SMD)	2
TPS54202HDCR		U1	SOT89P280X10-6N	TPS54202HDCR	1
AMS1117		U2	SOT223_M	AMS1117-xx	1
70270K	VARIABLE RESISTORS	VR1	07D-XXX	VARIABLE RESISTOR (VDR)	1
16Mhz	Crystal Oscillator	Y1	Crystal	XTAL	1