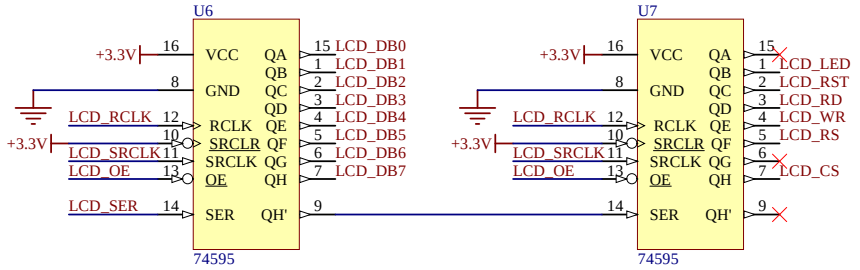
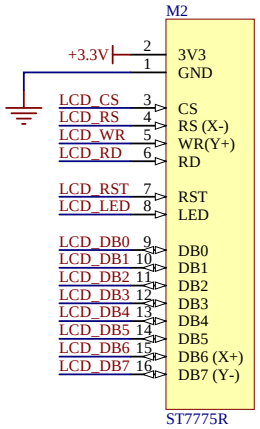
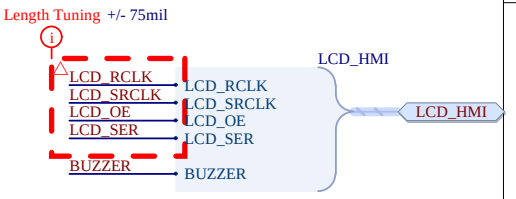
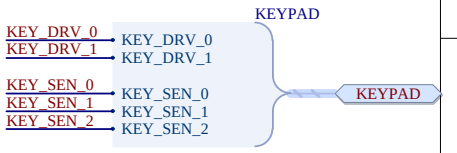
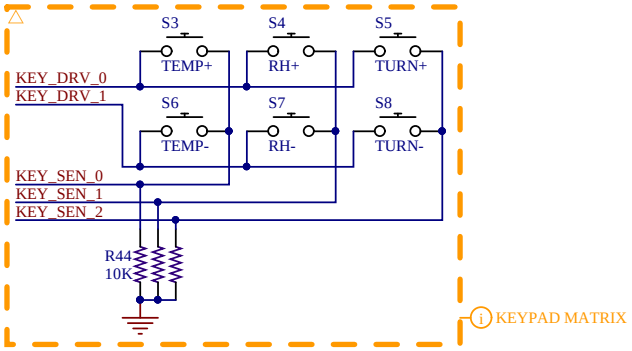
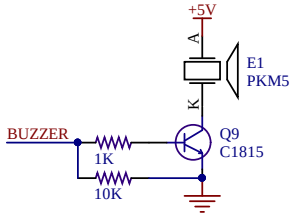




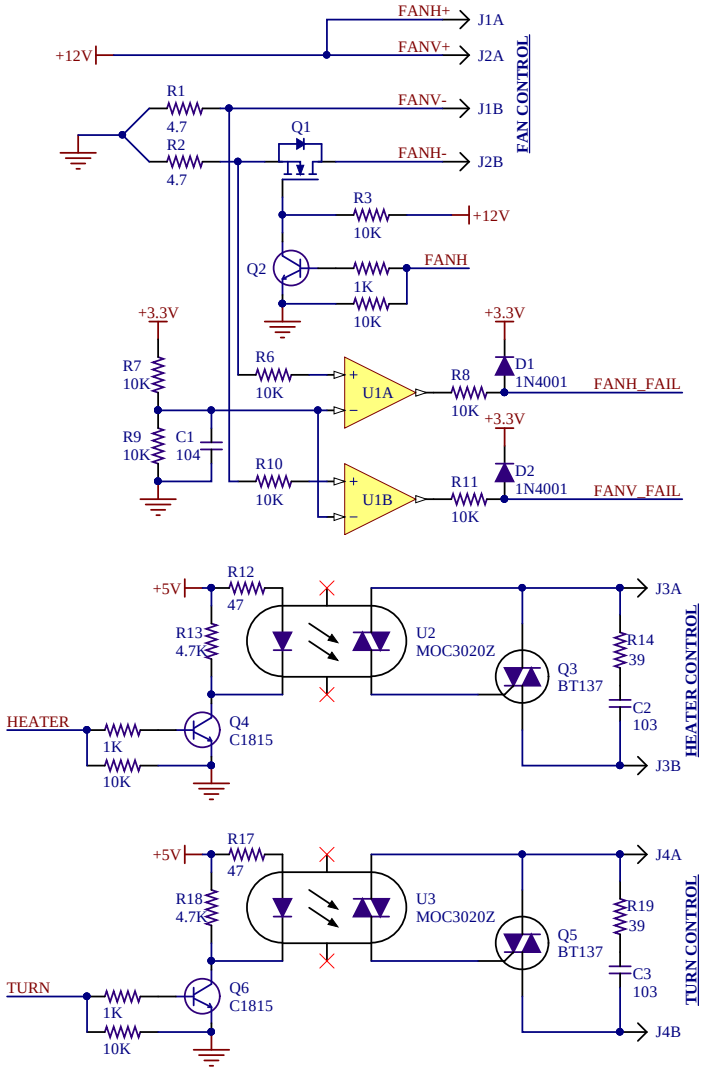


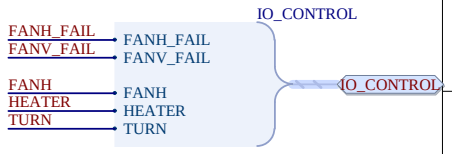




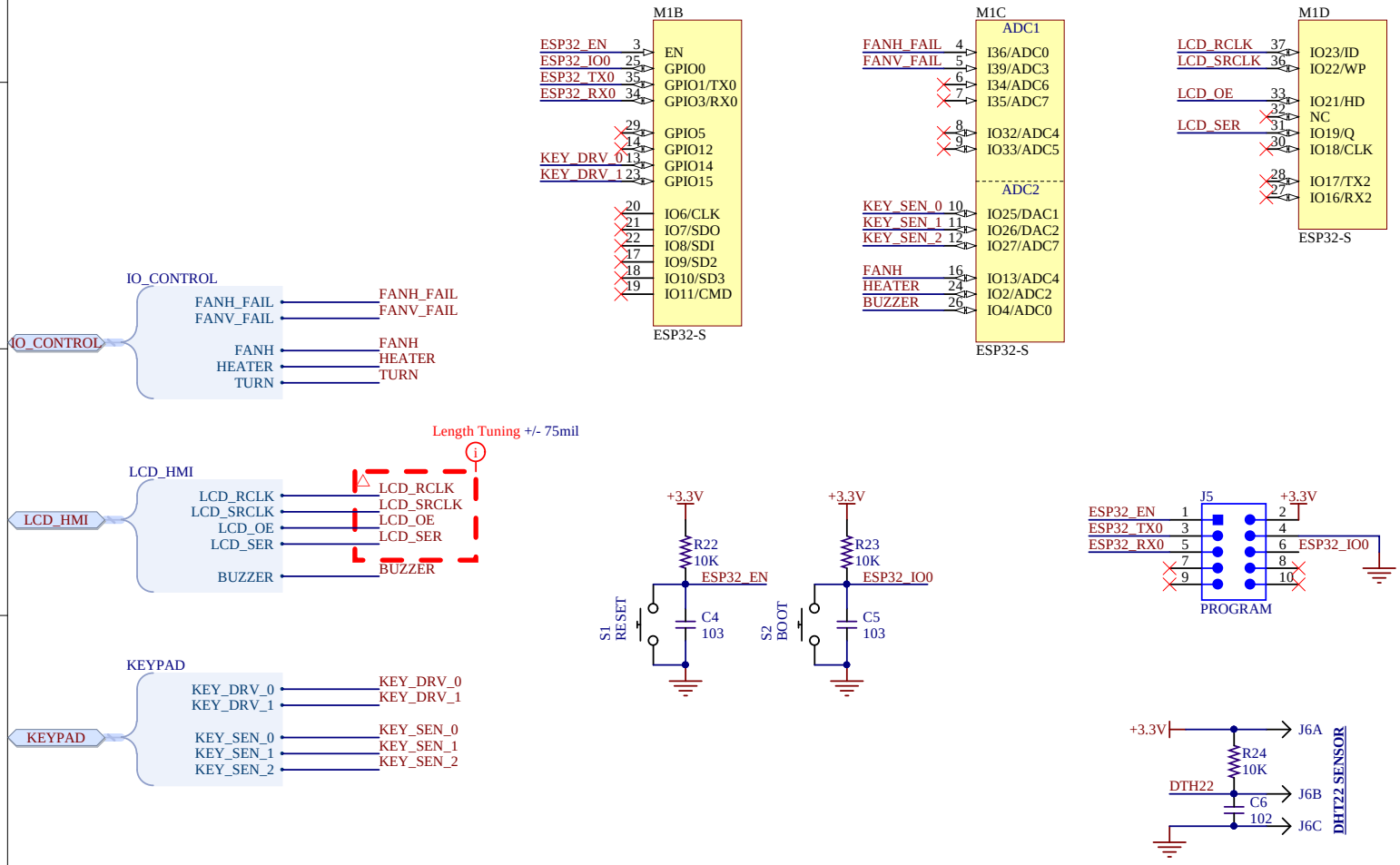


Project/Equipment	EGG INCUBATION (PC-BASED MEASUREMENT AND CONTROL SYSTEMS)		
Document	**MOTHERBOARD INPUT/OUTPUT**	Designer Vo Hao Hao	
TGM		Drawn by Vo Hao Hao	XX/XX/XXXX
		Check.by *	-
		Last Mod. -	11/8/2022
		File [SCH]_HMI.SchDoc	
		Print Date 11/8/2022 12:16:34 AM	Sheet * of *
TEAM GA MO Limited 30, Nhat Hamet, Thanh Hoa, Phung Hiep, HG	TGA-00005-04-1	Size A4	Rev *





Project/Equipment	EGG INCUBATION (PC-BASED MEASUREMENT AND CONTROL SYSTEMS)		
Document	**MOTHERBOARD INPUT/OUTPUT**	Designer	Vo Hao Hao
		Drawn by	Vo Hao Hao XX/XX/XXXX
		Check.by	* -
		Last Mod.	- 11/7/2022
		File	[SCH]_IO.SchDoc
		Print Date	11/8/2022 12:16:35 AM Sheet * of *
TGM	*TEAM GA MO Limited* *30, Nhat Hamet, Thanh Hoa, Phung Hiep, HG*	TGA-00005-03-1	Size A4 Rev *

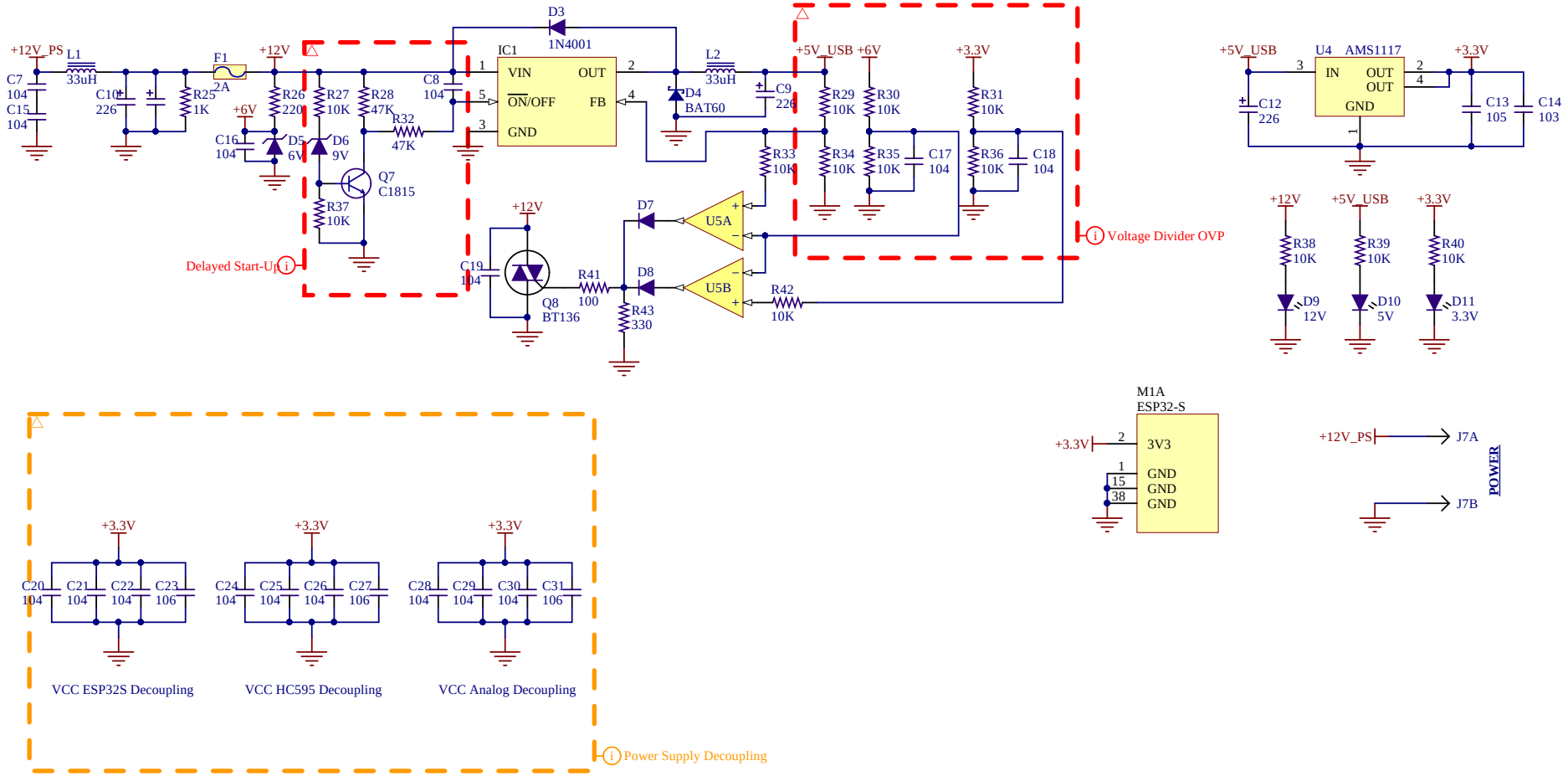


Project/Equipment	EGG INCUBATION (PC-BASED MEASUREMENT AND CONTROL SYSTEMS)
Document	**MOTHERBOARD MAIN PROCESSOR ESP32**
Designer	Vo Hao Hao
Drawn by	Vo Hao Hao
Check.by	*
Last Mod.	-
File	[SCH]_MainProcessor.SchDoc
Print Date	11/8/2022 12:16:35 AM
Sheet	* of *
Size	A4
Rev	*
	XX/XX/XXXX
	-
	11/8/2022

TGM

TEAM GA MO Limited
30, Nhat Hamet, Thanh Hoa, Phung Hiep, HG

TGA-00005-02-1



Project/Equipment	EGG INCUBATION (PC-BASED MEASUREMENT AND CONTROL SYSTEMS)		
Document	**MOTHERBOARD POWER SUPPLY LV**	Designer	Vo Hao Hao
		Drawn by	Vo Hao Hao XX/XX/XXXX
		Check.by	* -
		Last Mod.	- 11/7/2022
		File	[SCH]_Power.SchDoc
		Print Date	11/8/2022 12:16:35 AM Sheet * of *
TGM	TEAM GA MO Limited 30, Nhat Hamet, Thanh Hoa, Phung Hiep, HG	TGA-00005-01-1	Size A4 Rev *

Comment	Description	Designator	Footprint	LibRef	Quantity
104	Non-polar capacitor	C1, C7, C8, C15, C16, C17, C18, C19, C20, C21, C22, C24, C25, C26, C28, C29, C30	CAP-SMD-0805	Cap-Non-SMD	17
103	Non-polar capacitor	C2, C3, C4, C5, C14	CAP-SMD-0805	Cap-Non-SMD	5
102	Non-polar capacitor	C6	CAP-SMD-0805	Cap-Non-SMD	1
226	Non-polar capacitor	C9, C10, C11, C12	CAP-SMD-2512	Cap-Pol-SMD	4
105	Non-polar capacitor	C13	CAP-SMD-0805	Cap-Non-SMD	1
106	Non-polar capacitor	C23, C27, C31	CAP-SMD-0805	Cap-Non-SMD	3
1N4001	1.0A RECTIFIER	D1, D2, D3, D7, D8	DIO-SMD-106	1N4001	5
BAT60	DIODE SCHOTTKY 10V 3A SOD323-2	D4	SOD-323	BAT60	1
6V	DIODE-ZNR 5.1V 5% PD=1W IR=10uA	D5	DIO-SMD-106	ZENER	1
9V	DIODE-ZNR 5.1V 5% PD=1W IR=10uA	D6	DIO-SMD-106	ZENER	1
12V	LED RED CLEAR 0603 SMD	D9	LED0603-IPC	LED 0603 Red	1
5V	LED YELLOW CLEAR 0603 SMD	D10	LED0603-IPC	LED 0603 Yellow	1
3.3V	LED GREEN CLEAR 0603 SMD	D11	LED0603-IPC	LED 0603 Green	1
PKM5	ALARM-AUDIBLE PIEZO ALARM PIN TYPE; 5V	E1	BUZZER	BUZZER	1
2A		F1	Fuse-SMD 2920	Fuse SMD	1
LM2596	Power IC	IC1	TO263	LM2596	1
FAN-VENT		J1, J2, J3, J4	KF2/5.08	JP2	4
PROGRAM	Male Box Header WR-BHD, THT, Vertical, pitch 2.54 mm, 10 pins	J5	IDC10	IDE_5X2	1
DHT22		J6	KF3/5.08T	JP3	1
JUMPER		J7	KF2/5.08	JP2	1
482R2SC	2.2µH Shielded Wirewound Inductor 8.2A 10mOhm Max Nonstandard, 4 Lead	L1, L2	5026_INDUCTOR	INDUCTOR_FE	2
ESP32-S	Tensilica Xtensa LX6 microprocessor @ 160 or 240 MHz · 320 KiB SRAM	M1	ESP32-S-Footprint	ESP32-S	1
ST7775R		M2	LCD_176X220_MODULE	LCD_176x220	1
IRFR3910	N-Channel 16A (Tc) 79W (Tc) Surface Mount D-Pak	Q1	TO228P970X238-3N	IRFR3910TRLPBF	1
NPN	Transistor, NPN, RF, 50mA, 12V	Q2	SOT23(123)	NPN	1
BT137	THYRISTOR-TRIAC TO-220AB VRRM=600	Q3, Q5	TO252AA	SCR	2
C1815	Transistor, NPN, RF, 50mA, 12V	Q4, Q6, Q7, Q9	SOT23(123)	NPN	4
BT136	THYRISTOR-TRIAC TO-220AB VRRM=600	Q8	TO252AA	SCR	1
RES-2512-4.7R	Chip Resistor, 0805, 1%, 1/8 W	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R15, R16, R17, R18, R20, R21, R44, R45, R46, R47, R48	RES-SMD-0805	RES	24
RES	Chip Resistor, 0805, 1%, 1/8 W	R14, R19	RES-SMD-0805	RES	2
R0805	Chip Resistor, 0805, 1%, 1/8 W	R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40, R41, R42, R43	RES-SMD-0805	RES	22
RESET	SWITCH TACTILE SPST-NO 0.05A 12V	S1	TL3342F260QG	SWITCH TACTILE SPST	1
BOOT	SWITCH TACTILE SPST-NO 0.05A 12V	S2	TL3342F260QG	SWITCH TACTILE SPST	1
TEMP+	SWITCH TACTILE SPST-NO 0.05A 12V	S3	TL3342F260QG	SWITCH TACTILE SPST	1
RH+	SWITCH TACTILE SPST-NO 0.05A 12V	S4	TL3342F260QG	SWITCH TACTILE SPST	1
TURN+	SWITCH TACTILE SPST-NO 0.05A 12V	S5	TL3342F260QG	SWITCH TACTILE SPST	1
TEMP-	SWITCH TACTILE SPST-NO 0.05A 12V	S6	TL3342F260QG	SWITCH TACTILE SPST	1
RH-	SWITCH TACTILE SPST-NO 0.05A 12V	S7	TL3342F260QG	SWITCH TACTILE SPST	1
TURN-	SWITCH TACTILE SPST-NO 0.05A 12V	S8	TL3342F260QG	SWITCH TACTILE SPST	1
LM358	7mV 250nA 7uV/C 1MHz 0.6V/uS 0.8mA 3-32V	U1, U5	SOIC-8S	LM358	2
MOC3020Z	OPTO-ISOLATOR LED-PTRIAC IF=50mA-max	U2, U3	DIP6	MOC3020Z	2
AMS1117	1A Bipolar Linear Regulator	U4	SOT223(1234)	AMS1117	1
74595	CD74HC595 8-Bit Shift Registers With 3-State Output Registers	U6, U7	SOIC-16S	74595	2