

# C:\Users\Dada\Desktop\PSU\_Control\PSU\_Control.sch

01/02/2020 15:08:37

Eeschema (5.1.2)-2

Component Count:132

Ref	Qty	Value	Part	Footprint	Description	Vendor
A1, A2, A3	3	SJ	Jumper:SolderJumper_2_Bridged	Jumper:SolderJumper-2_P1.3mm_Open_Pad1.0x1.5mm	Solder Jumper, 2-pole, closed/bridged	
BZ1	1	Buzzer	Device:Buzzer	Buzzers_Beepers:Buzzer_12x9.5RM7.6	Buzzer, polarized	
BZ_D1, BZ_G1, BZ_V1	3	SJ	Jumper:SolderJumper_3_Bridged12	Jumper:SolderJumper-3_P1.3mm_Open_Pad1.0x1.5mm_NumberLabels	3-pole Solder Jumper, pins 1+2 closed/bridged	
C1, C2, C4, C6, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, Cb1, Cb2, Cb3, Cb4, Cb5, Cb6, Cb7, Cb8, Cb9, Cb10, Cb11, Cb12, Cb13, Cb15, Cb16, Cb17, Co1, Co2	32	100n	Device:C_Small	Capacitors_SMD:C_0603_HandSoldering	Unpolarized capacitor, small symbol	
C3	1	4700u	Device:CP_Small	Capacitor_THT:CP_Radial_D22.0mm_P10.00mm_SnapIn	Polarized capacitor, small symbol	
C5	1	330u	Device:CP_Small	Capacitor_THT:CP_Radial_D10.0mm_P5.00mm	Polarized capacitor, small symbol	
C7	1	100u	Device:CP_Small	Capacitor_THT:CP_Radial_D10.0mm_P5.00mm	Polarized capacitor, small symbol	
C8, C9	2	22p	Device:C_Small	Capacitors_SMD:C_0603_HandSoldering	Unpolarized capacitor, small symbol	
Cb14	1	4.7u	Device:CP_Small	Capacitor_THT:CP_Radial_D5.0mm_P2.00mm	Polarized capacitor, small symbol	

D1, D2, D3, D4	4	PMEG6030	Device:D_Schottky	Diode_SMD:D_SOD-128	Schottky diode
D5, Dp1	2	1N4148W	Diode:1N4148W	Diode_SMD:D_SOD-123	75V 0.15A Fast Switching Diode, SOD-123
D6, D7	2	LED	Device:LED	LEDs:LED_0805_HandSoldering	Light emitting diode
EXP1	1	MCP23S17-E_SP	Custom:MCP23S17-E_SP	digikey-footprints:DIP-28_W7.62mm	IC I/O EXPANDER I2C 16B 28SDIP
FAN1, FAN2	2	Conn_01x02	Connector_Generic:Conn_01x02	Connector_JST:JST_EH_B2B-EH-A_1x02_P2.50mm_Vertical	Generic connector, single row, 01x02, script generated (kicad-library-utils/schlib/autogen/connector/)
Fan1	1	SolderJumper_2_Bridged	Jumper:SolderJumper_2_Bridged	Jumper:SolderJumper-2_P1.3mm_Open_Pad1.0x1.5mm	Solder Jumper, 2-pole, closed/bridged
HS1, HS2	2	Heatsink_Pad	Mechanical:Heatsink_Pad	Heatsinks:Heatsink_Fischer_SK104-STC-STIC_35x13mm_2xDrill2.5mm	Heatsink with electrical connection
ICSP1	1	AVR-ISP-6	Connector:AVR-ISP-6	Connector_PinHeader_2.54mm:PinHeader_2x03_P2.54mm_Vertical	Atmel 6-pin ISP connector
J1	1	USB_B	Connector:USB_B	Custom_DB:USB_B_OST_USB-B1HSxx_Horizontal	USB Type B connector
J_KP1	1	Conn_01x08	Connector_Generic:Conn_01x08	Pin_Headers:Pin_Header_Straight_1x08_Pitch2.54mm	Generic connector, single row, 01x08, script generated (kicad-library-utils/schlib/autogen/connector/)
J_LCD1, ROT1, Rele1, Rele2, SPI1_1, SPI1_2, SPI2_1, SPI2_2	8	Conn_01x04	Connector_Generic:Conn_01x04	Connector_JST:JST_EH_B04B-EH-A_1x04_P2.50mm_Vertical	Generic connector, single row, 01x04, script generated (kicad-library-utils/schlib/autogen/connector/)
MCU1	1	ATmega1284P-AU	MCU_Microchip_ATmega:ATmega1284P-AU	Package_QFP:TQFP-44_10x10mm_P0.8mm	20MHz, 128kB Flash, 16kB SRAM, 4kB EEPROM, JTAG, TQFP-44
MH1, MH2, MH3, MH4, MH5	5	MountingHole_Pad	Mechanical:MountingHole_Pad	Mounting_Holes:MountingHole_3.2mm_M3_ISO14580_Pad	Mounting Hole with connection
Pwr1, Spare3	2	Conn_01x02	Connector_Generic:Conn_01x02	Pin_Headers:Pin_Header_Straight_1x02_Pitch2.54mm	Generic connector, single row, 01x02, script generated (kicad-library-utils/schlib/autogen/connector/)
Q1	1	MMBT2222A-TP	dk_Transistors-Bipolar-BJT-Single:MMBT2222A-TP	digikey-footprints:SOT-23-3	TRANS NPN 40V 0.6A SOT23
R1, R3	2	100k	Device:R	Resistors_SMD:R_0603_HandSoldering	Resistor
R2, R9	2	4k7	Device:R_Small	Resistors_SMD:R_0603_HandSoldering	Resistor, small symbol
R4	1	10k	Device:R	Resistors_SMD:R_0603_HandSoldering	Resistor
R5	1	12k	Device:R	Resistors_SMD:R_0603_HandSoldering	Resistor

R6, R7, R10	3	10k	Device:R_Small	Resistors_SMD:R_0603_HandSoldering	Resistor, small symbol
R8, Rp1	2	1k	Device:R_Small	Resistors_SMD:R_0603_HandSoldering	Resistor, small symbol
R11, R12, R13, R14	4	470	Device:R_Small	Resistors_SMD:R_0603_HandSoldering	Resistor, small symbol
RA1, RA4, RA5, RA6, RA7, RA8, RA9, RA12, RA13	9	100R	Device:R_Pack04	Resistor_SMD:R_Array_Convex_4x0603	4 resistor network, parallel topology, DIP package
RA2, RA3, RA10, RA11, RA14, RA15	6	10k	Device:R_Pack04	Resistor_SMD:R_Array_Convex_4x0603	4 resistor network, parallel topology, DIP package
R_BZ1	1	1k	Device:R	Resistors_SMD:R_0603_HandSoldering	Resistor
SW_both1, SW_lim1, SW_lock1, SW_menu1, SW_out1, SW_out2	6	SW_Push	Switch:SW_Push	Connector_Wire:SolderWirePad_1x02_P3.81mm_Drill1mm	Push button switch, generic, two pins
S_I2C1, Spare1, Spare2	3	Conn_01x04	Connector_Generic:Conn_01x04	Pin_Headers:Pin_Header_Straight_1x04_Pitch2.54mm	Generic connector, single row, 01x04, script generated (kicad-library-utils/schlib/autogen/connector/)
U1	1	LM358DR	dk_Linear-Amplifiers-Instrumentation-OP-Amps-Buffer-Amps:LM358DR	digikey-footprints:SOIC-8_W3.9mm	IC OPAMP GP 700KHZ 8SOIC
U2, U3	2	CD40106BE	dk_Logic-Gates-and-Inverters:CD40106BE	Package_SO:SOIC-14_3.9x8.7mm_P1.27mm	IC INVERTER 6CH 6-INP 14DIP
U4	1	FT232RL	Interface_USB:FT232RL	Package_SO:SSOP-28_5.3x10.2mm_P0.65mm	USB to Serial Interface, SSOP-28
UI1, UI2	2	ISO7762DW	Custom:ISO7762DW	Package_SO:SOIC-16W_7.5x10.3mm_P1.27mm	Low Power Six-Channel 4/2 Digital Isolator, 100Mbps 11ns, WSOIC16
UT1, UT2, UT3	3	DS18B20	Sensor_Temperature:DS18B20	Pin_Headers:Pin_Header_Straight_1x03_Pitch2.54mm	Programmable Resolution 1-Wire Digital Thermometer TO-92
U_FAN1	1	LM317T	dk_PMIC-Voltage-Regulators-Linear:LM317T	digikey-footprints:TO-220-3	IC REG LIN POS ADJ 1.5A TO220AB
U_5V1	1	L7805	Regulator_Linear:L7805	digikey-footprints:TO-220-3	Positive 1.5A 35V Linear Regulator, Fixed Output 5V, TO-220/TO-263/TO-252
Vin1	1	Screw_Terminal_01x02	Connector:Screw_Terminal_01x02	TerminalBlock_RND:TerminalBlock_RND_205-00012_1x02_P5.00mm_Horizontal	Generic screw terminal, single row, 01x02, script generated

Y1	1	16Mhz	Device:Crystal_Small	Crystals:Crystal_HC49-U_Vertical
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(kicad-library-  
utils/schlib/autogen/connector/)  
Two pin crystal, small symbol