J32 IN 1 DAT 2 CLK 3 LAT 4 GND
J33 OUT 1 OUT 2 CLK 3 LAT 4 GND

U2 74HC595D
14 SDA / 11 SCK / 12 LAT / 13 OE / 10 MR / 9 SQH
QA 15 / QB 1 / QC 2 / QD 3 / QE 4 / QF 5 / QG 6 / QH 7
VCC

C4 104 XT1
C5 104 XT2
Y1 8MHz
GND

VCC J34 SWD
5 / ICE_DAT 4 / ICE_CLK 3 / RESET 2 / 1
GND

R27 10k
VCC
R26 10k
D26 STATUS
GND

MCU1 Mini58FDE
1 PWM0_CH0/UART0_RXD/ADC_CH2/P1.2
2 PWM0_CH1/UART0_TXD/ADC_CH3/P1.3 DAT
3 PWM0_CH4/UART1_RXD/ADC_CH4/P1.4 CLK
4 UART1_TXD/ADC_CH5/P1.5 LAT
5 nRESET RESET
6 STADC/TM0_EXT/INT0/P3.2
7 I2C0_SDA/TM0_CNT_OUT/P3.4
8 I2C0_SCL/TM1_CNT_OUT/P3.5
9 UART0_RXD/I2C1_SCL/XT1_OUT/P5.1 XT2
10 UART0_TXD/I2C1_SDA/XT1_IN/P5.0 XT1
VDD 20 / P0.4/SPI0_SS/PWM0_CH5 19 / P0.5/SPI0_MOSI/PWM0_CH4 18 / P0.6/SPI0_MISO/PWM0_CH1 17 / P0.7/SPI0_CLK/PWM0_CH0 16 / P4.7/ICE_DAT/UART1_TXD 15 / P4.6/ICE_CLK/UART1_RXD 14 / P2.5/UART1_TXD/PWM0_CH3 13 / P2.4/UART1_RXD/PWM0_CH2 12 / VSS 11
VCC CS / SI / SO / SCK / ICE_DAT / ICE_CLK / GND
C6 104

R28 10k VCC
Q9 2N3906
R29 10k
D27 STATUS
GND

U1 3.3V Vin Vout GND
U4 ENC28J60
1 CLKOUT / WOL / SI / CS / 3V3
INT / SO / SCK / RESET / GND
SI / CS / SO / SCK
C2 10uF C3 104
GND
VCC J35 UART0
4 / 3 / 2 / 1
GND

U3 5.0V Vin Vout GND
+12 C7 104 C1 10uF C8 104 D25 LED0805 R25 10k
GND

J1 / J2 / J3 / J4 +12
D1 D2 D3 D4 LED0805
R5 R6 R7 R8 10k
RL1 RL2 RL3 RL4
J9 J10 J11 J12 +12
J13 J14 J15 J16 KF306
R9 R10 R11 R12 10k
D9 D10 D11 D12 LED0805
R1 R2 R3 R4 10k
Q1 Q2 Q3 Q4 D5 D6 D7 D8
J5 J6 J7 J8
GND

J17 / J18 / J19 / J20 +12
D13 D14 D15 D16 LED0805
R17 R18 R19 R20 10k
RL5 RL6 RL7 RL8
J24 J25 J26 J27 +12
J28 J29 J30 J31 KF306
R21 R22 R23 R24 10k
D21 D22 D23 D24 LED0805
R13 R14 R15 R16 10k
Q5 Q6 Q7 Q8 D17 D18 D19 D20
J21 J22 J23
GND

Comment	Description	Designator	Footprint	LibRef	Quantity
10uF		C1, C2	CAP_RAD_D05x11	Capacitor(Radian)	2
104		C3, C4, C5, C6, C7, C8	C0805	Capacitors(SMD)	6
LED0805		D1, D2, D3, D4, D9, D10, D11, D12, D13, D14, D15, D16, D21, D22, D23, D24, D25	L0805RED	LED0805	17
1N4148	The fast switching diode	D5, D6, D7, D8, D17, D18, D19, D20	SOD-80	Diode-1N4148	8
STATUS		D26, D27	L0805RED	LED0805	2
Connector		J1, J2, J3, J4, J17, J18, J19, J20	DC_K375A_Power	JackDC	8
HEADER-MALE-2.54MM		J5, J6, J7, J8, J9, J10, J11, J12, J21, J22, J23, J24, J25, J26, J27	HEADER-MALE-03PINS-2.54MM	HEADER-MALE-03PINS-2.54MM	15
KF306		J13, J14, J15, J16, J28, J29, J30, J31	DG306-5.0-02P-12-00AH	DG306-5.0-02P-12-00AH	8
IN		J32	HEADER-MALE-04PINS-2.54MM	HEADER-MALE-04PINS-2.54MM	1
OUT		J33	HEADER-MALE-04PINS-2.54MM	HEADER-MALE-04PINS-2.54MM	1
SWD		J34	HEADER-MALE-05PINS-2.54MM	HEADER-MALE-05PINS-2.54MM	1
UART0		J35	HEADER-MALE-04PINS-2.54MM	HEADER-MALE-04PINS-2.54MM	1
Mini58FDE	Novoton 4Kb-RAM 32Kb-Flash	MCU1	TSSOP20_0.65_4.4	Mcu-Mini58FDE	1
2N3904		Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8	SOT23-3	Transistor-2N3904	8
2N3906		Q9	SOT23-3	Transistor-2N3906	1
10k		R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29	R0805	Resistors-SMD	29
Relay-SONGLE-SRD-05VDC		RL1, RL2, RL3, RL4, RL5, RL6, RL7, RL8	RELAY-SONGLE-SRD-05VDC_BLUE	Relay-SONGLE-SRD-05VDC	8
3.3V		U1	SOT223-3	Ic-AMS1117(SOT-223)	1
74HC595D		U2	SO16	Ic-74HC595D	1
5.0V		U3	SOT223-3	Ic-AMS1117(SOT-223)	1
ENC28J60		U4	ENC28J60	ENC28J60	1
8MHz		Y1	SMD5032	Crystal	1