



Component list (reichelt)

- C1, C2, C3, C4, C5 100nF X7R-G0805 100N
C6, C7 22pF NPO-G0805 22P
C8 470uF/10V NHG-A 470U 10
C9* 1uF Z5U-5 1,0u (RM adjust to .1")
CON1 Box Header 6-pol. WSL 6G
CON2, CON3 Box Header 10-pol. WSL 10G
CON4 Ext. Pwr. RM 3,81 AKL 382-03
CON5, RJ12 AiIExpress - 32874855770
CON6 DCC RM 5,08 AKL 230-02
D1, D2 1N4148 1N 4148 SMD
D3 2,5A AiIExpress - 33048094198 (+ Holder)
IC1 ATmega328p ARD ATMEGA 328 / IC-Sockel GS 28-S
IC2 6N137 6N137S EVL
IC3 LM393 LM 393 D SMD
J2, J3 Header 2-pol. MPE 087-1-002
L1 Heartbeat EVL 17-21/R6C-A (rot)
L2 LocoNet Act. EVL 17-21/S2C-A (orange)
L3 LED EVL 17-21/UVC/S5 (gelb)
L4 Sim EVL 17-21/T1D-C (weiß)
L5 Inp EVL 17-21/BHC-A (blau)
L6, L7 WS2812 5050 WH AiIExpress - 32623583544
Q1 16MHz 16,0000-HC49-SMD
R1 10K SMD-0805 10,0K
R2, R10, R17 470 SMD-0805 470
R3, R18, R19 1K SMD-0805 1,00K
R4 27K SMD-0805 27,0K
R5 39K SMD-0805 39,0K
R6 150K SMD-0805 150K
R7 4K7 SMD-0805 4,70K
R8 220K SMD-0805 220K
R9 47K SMD-0805 47,0K
R11 820 SMD-0805 820
R12 1K SMD-0805 1,00K
R13 47 SMD-0805 47,0
R14* see Table
R15, R16 75 RND 1550805 AT
R20*
R21* 10K SMD-0805 10,0K (input sensitivity dependent)
T1 BC817 BC 817-16 SMD
S1, S2, S3 Switch AiIExpress - 1005001265569844 (weiß)
S4 Switch AiIExpress - 1005001265569844 (rot)
X1, X4 Header 8-pol. MPE 087-1-008
X2 Header 6-pol. MPE-087-1-008
X3 Header 10-pol. MPE-1-010

R14* see Table

R15, R16 75 RND 1550805 AT

R20*

R21* 10K SMD-0805 10,0K (input sensitivity dependent)

T1 BC817 BC 817-16 SMD

S1, S2, S3 Switch AiIExpress - 1005001265569844 (weiß)

S4 Switch AiIExpress - 1005001265569844 (rot)

X1, X4 Header 8-pol. MPE 087-1-008

X2 Header 6-pol. MPE-087-1-008

X3 Header 10-pol. MPE-1-010

Version:

v1.1 - 01-02-2023: IC2 package change from SO-8 to SOP-8 (SMD DIL size)

v1.2 - 29-04-2023: J1 Removed, C9* changed from SMD to TH, R21* repositioning, F1 added, reroute tracks

Note

J2: When this jumper is installed, nothing may be connected to the Neopixel Bus
Could be used for test purposes, it connects Out L6 with In L7

Table

Day / Night Sensor

LDR R14* (C9* N/A)	
5506	1%, 0.6W, 4K7 (Metal)
5516	1%, 0.6W, 8K2 (Metal)
5526	1%, 0.6W, 15K (Metal)
5528	1%, 0.6W, 15K (Metal)
5537	1%, 0.6W, 33K (Metal)

Modifications			Date	Name	Description	Page no.
Date	Name	1.0	14-01-2023	TMaa	MobaLedLib UNO Shield DCC + LocoNet™ Interface	1
1.1	TMaa					Pages
1.2	TMaa	https://www.stummiforum.de			Schematic no.	1
		(c) 2018 Hardi - Design HW & SW			JLCPCB Y24-34443978A	