



- 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 KEM X5R0805 1.0U
CON1 Box Header 6-pol. WSL 8G
CON2, CON3 Box Header 10-pol. WSL 10G
CON4 Ext. Pwr. RM 3.81 AKL 382-03
CON5, RJ12 AliExpress - 32874855770
CON6 DCC RM 5,08 AKL 230-02
D1, D2 1N4148 1N 4148 SMD
IC1 ATmega328p ARD ATMEGA 328
IC-Socket GS 28-S
IC2 6N137 6N137S EVL
IC3 LM393 LM 393 D SMD
J1-J3 Header 2-pol. MPE 087-1-002
L1 Heartbeat EVL 17-21/R6C-A (rot)
L2 LocoNet Act. EVL 17-21/SYGC (orange)
L3 LED EVL 17-21UYC/S5 (gelb)
L4 Sim EVL 17-21/TD-C (weiß)
L5 Imp EVL 17-21/BHC-A (blau)
L6, L7 WS2812 5050 WH AliExpress - 32623583544
Q1 16MHz 16,000-HC49-SMD
R1 10K SMD-0805 10.0K
R2 470 SMD-0805 470
R3 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
R10 470 SMD-0805 470
R11 820 SMD-0805 820
R12 1K SMD-0805 1.00K
R13 47 SMD-0805 47.0
R15 75 RND 1550805 AT
R16 75 RND 1550805 AT
R17 470 SMD-0805 470
R18 1K SMD-0805 1.00K
R19 1K SMD-0805 1.00K
R20 N/A
R21 10K SMD-0805 10.0K
T1 BC817 BC 817-16 SMD
S1, S2, S3 Switch AliExpress - 1005001265569844 (weiß)
S4 Switch AliExpress - 1005001265569844 (rot)
X1, X4 Header 8-pol. MPE 087-1-008
X2 Header 6-pol. MPE-087-1-006
X3 Header 10-pol. MPE-1-010

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

J1: Place jumper only if L6 and L7 are NOT installed
(R15, R16, C14 and C5 are therefore unnecessary)
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%, 0.25W, 4K7 (Metal) |
| 5516 | 1%, 0.25W, 8K2 (Metal) |
| 5526 | 1%, 0.25W, 15K (Metal) |
| 5528 | 1%, 0.25W, 15K (Metal) |
| 5537 | 1%, 0.25W, 33K (Metal) |

| Modifications | | Date | Name | Description | Page no. |
|---------------|------|---|------------|---------------------|-----------------------|
| Date | Name | 1.0 | 14-01-2023 | Tmaa | MobaLedLib UNO Shield |
| | | 1.1 | 01-02-2023 | Tmaa | |
| | | https://www.stummiforum.de | | Schematic no. | 1 |
| | | (c) 2018 Hardi - Design HW & SW | | JLPCB Y24-34443978A | |