

Isolated USB to Serial Converter for UPS

The schematic illustrates the internal wiring of the VoltLink UPS Isolator. It shows the connection between a USB Type-B port (J2) and a USB-to-serial converter IC (U2, USBLC6-2P6). The IC is powered by a USB bus (VBUS) and a 3V3 regulator (U3, CP2102N-A01-GQFN28). The IC's TX and RX pins are connected to a 5KV isolation module (U1, CMT8121W0) which provides isolated TX and RX signals to the UPS (J1). The circuit includes various passive components like resistors (R1, R2, R3, R4, R5), capacitors (C1, C2, C3, C4, C5, C6, C7), and a shield (H1) for EMI protection. Grounding is split into GND1 (USB side) and GND2 (isolated target side).

5KV ISOLATION per UL1577
Data rate: up to 150 Mbps
Default output state: low

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 Isolated USB to Serial for UPS
Voltlog
 Sheet: /
 File: voltlink-iso.kicad_sch
Title: VoltLink UPS Isolator
 Size: A3 Date: 2025-04-04 Rev: A
 KiCad E.D.A. 8.0.2-1 Id: 1/1

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