



Revision history

2.0.0-1 (2022-04-21):

- complete re-design around the ESP32-PICO-D4 microcontroller,
- improve CCD-bus transceiver circuits,
- add PCI-bus transceiver circuits,
- improve SCI-bus routing switches,
- add switchable bootstrap and programming voltage sources (12.0V/20.0V) to SCI-bus.

2.1.0-1 (2022-05-26):

- remove feedforward capacitor from boost converter,
- adjust programming voltages slightly higher than nominal (D15-D22 diode voltage drop),
- make VPP boost converter permanently enabled,
- replace SCI-bus switches,
- change I2C port expander (U16) device address,
- increase some resistor values to lower power dissipation.

2.1.0-2 (2023-01-22):

- remove SMT assembly features.

2.1.0-3 (2023-07-17):

- change R8-R12 resistor values from 499Ω to 0Ω.

2.2.0-1 (2023-11-06):

- change JP1 solder jumper (OBD2 signal ground) to bridged variant,
- add programmable bias voltage switch to J1962-7 for OBD1 compatibility.

2.3.0-1 (2025-02-17):

- mirror J1962 data link connector,
- remove unused J3 SCI connector,
- remove unused R4 resistor,
- add D23 TVS diode for power input protection.

2.3.0-2 (2025-09-21):

- add D24 Schottky diode to protect USB from backpowering,
- move D1 battery protection diode before bulk capacitor,
- add C40-C45 signal conditioning capacitors,
- change D5-D6,D10 ESD diode values,
- change PCI-bus power supply voltage from 8.0V to 7.5V,
- change PCI-bus receiver reference voltage from 4.0V to 3.5V,
- remove PCI-bus transmitter inductor.