

# Mu3e Power DC/DC Controller

16.04.2024



Department  
NUM  
LTP  
3205

Project: Mu3e

Schematic: Top

Sheet: Title

DC/DC-board Controller 16 Channel

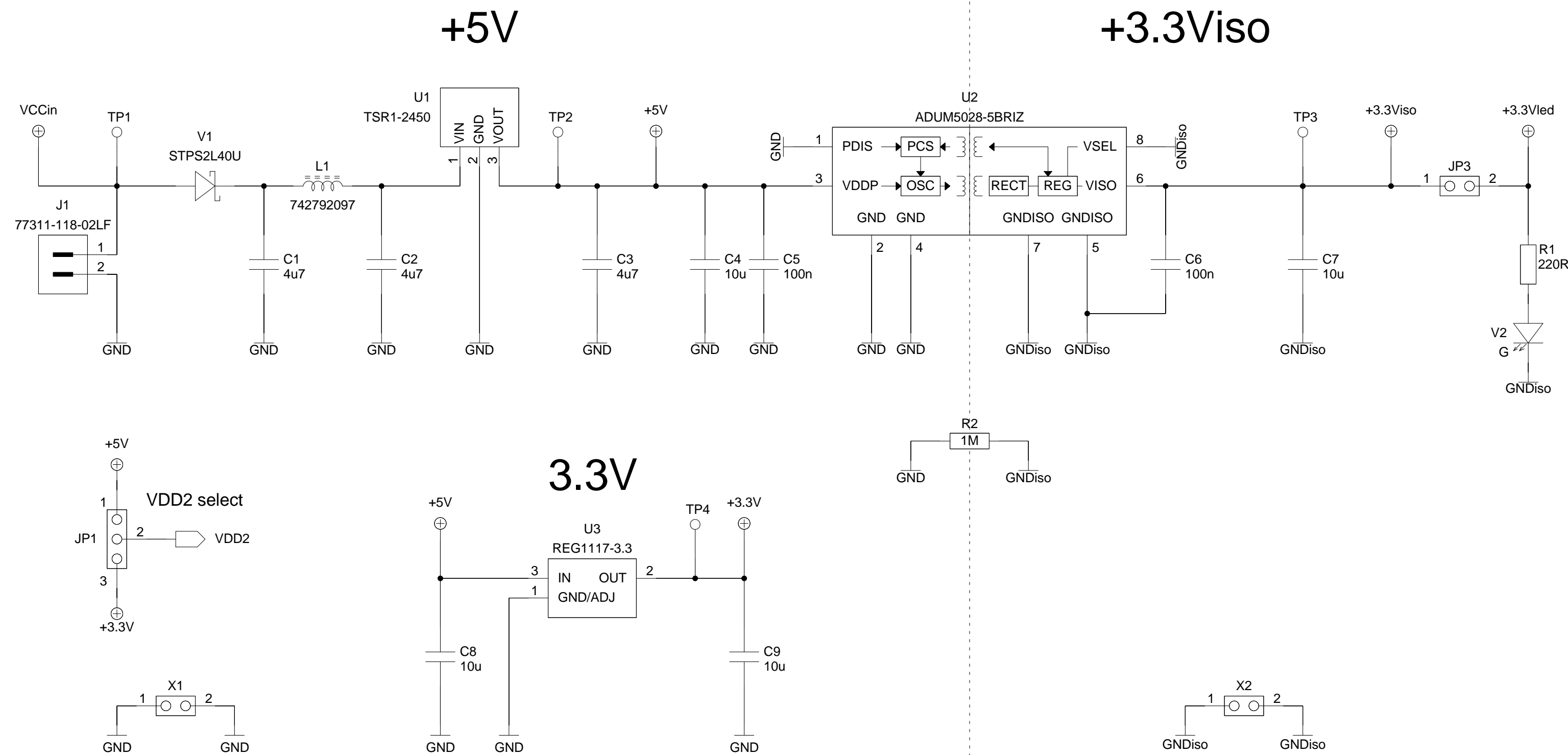
Developer: Schmid Elmar  
Drawn by: Schmid Elmar  
Checked by:  
Variant Name:

PCB No.: 223603  
PCB Name: Power\_DC/DC\_Controller\_(PDCC)  
Last Change: 02/05/2024:15:15  
Date of Production:

Rev: B  
Size: A3  
Located at:  
Block page:  
Sheet No.: 1 Total: 8

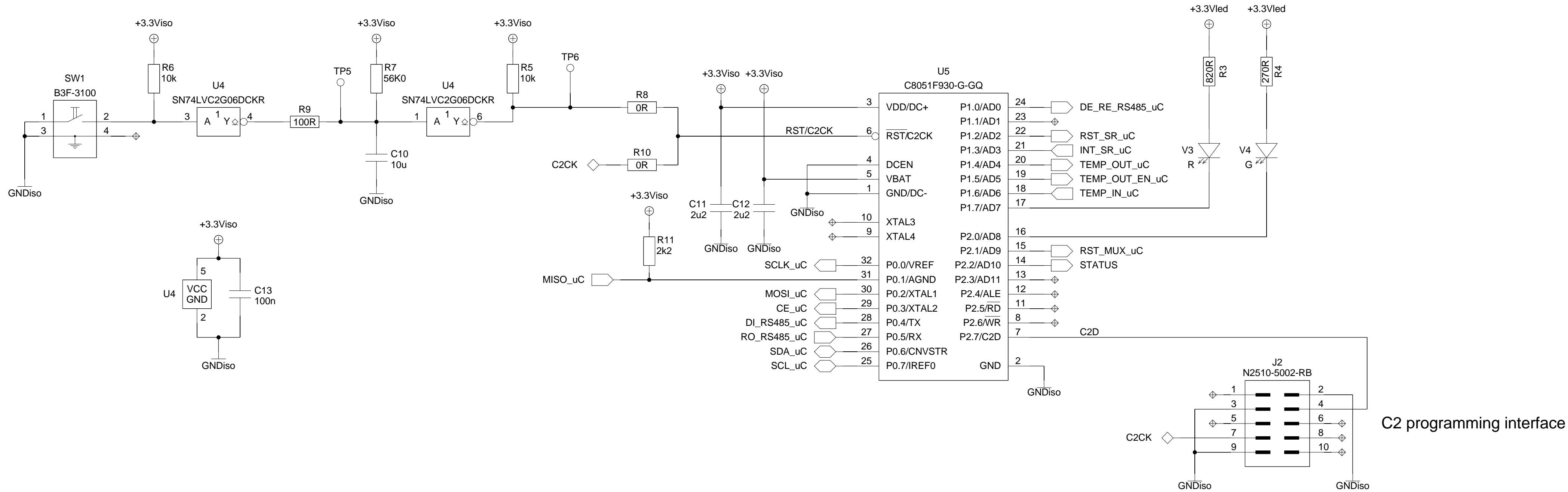
Power

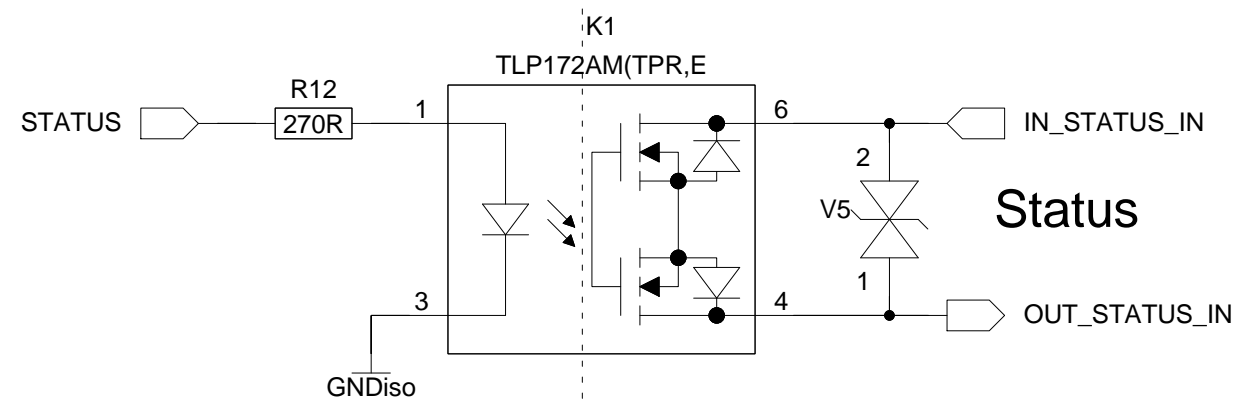
Power uC



# Reset Button

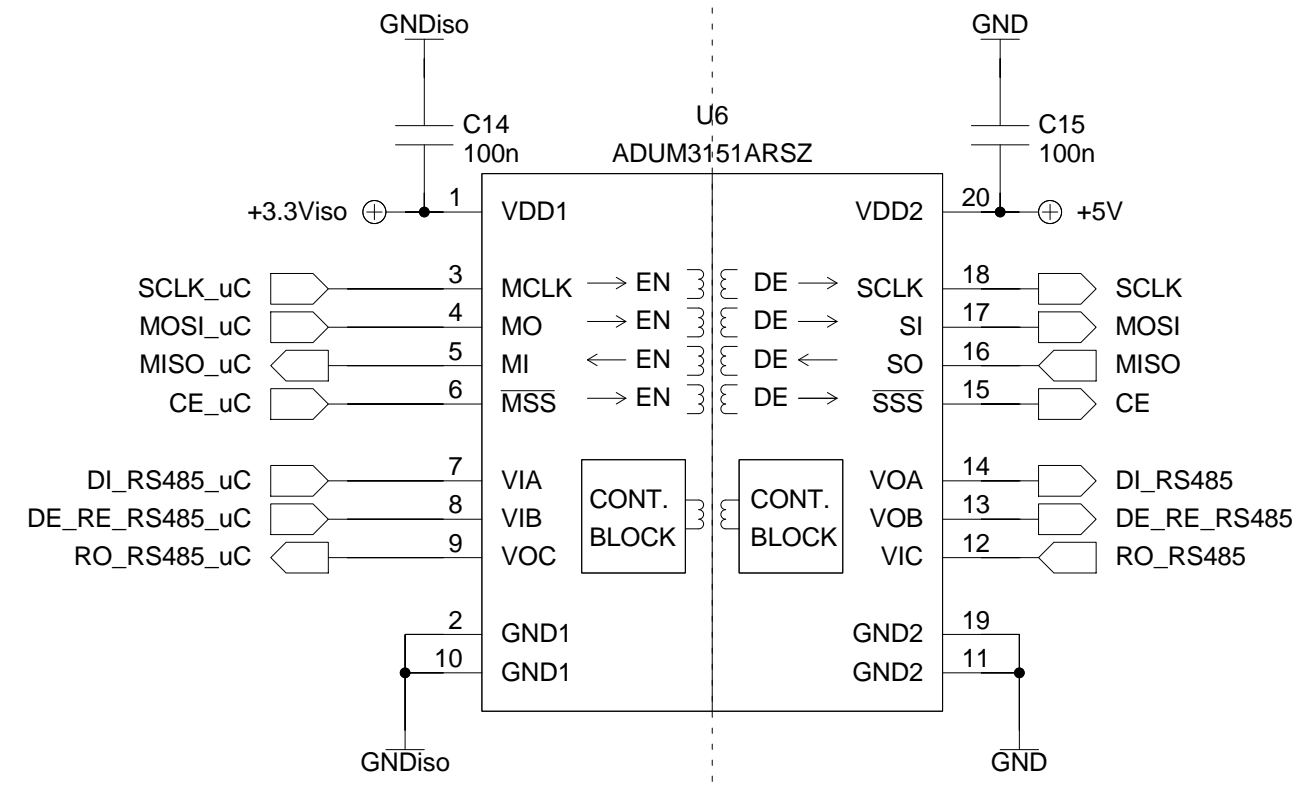
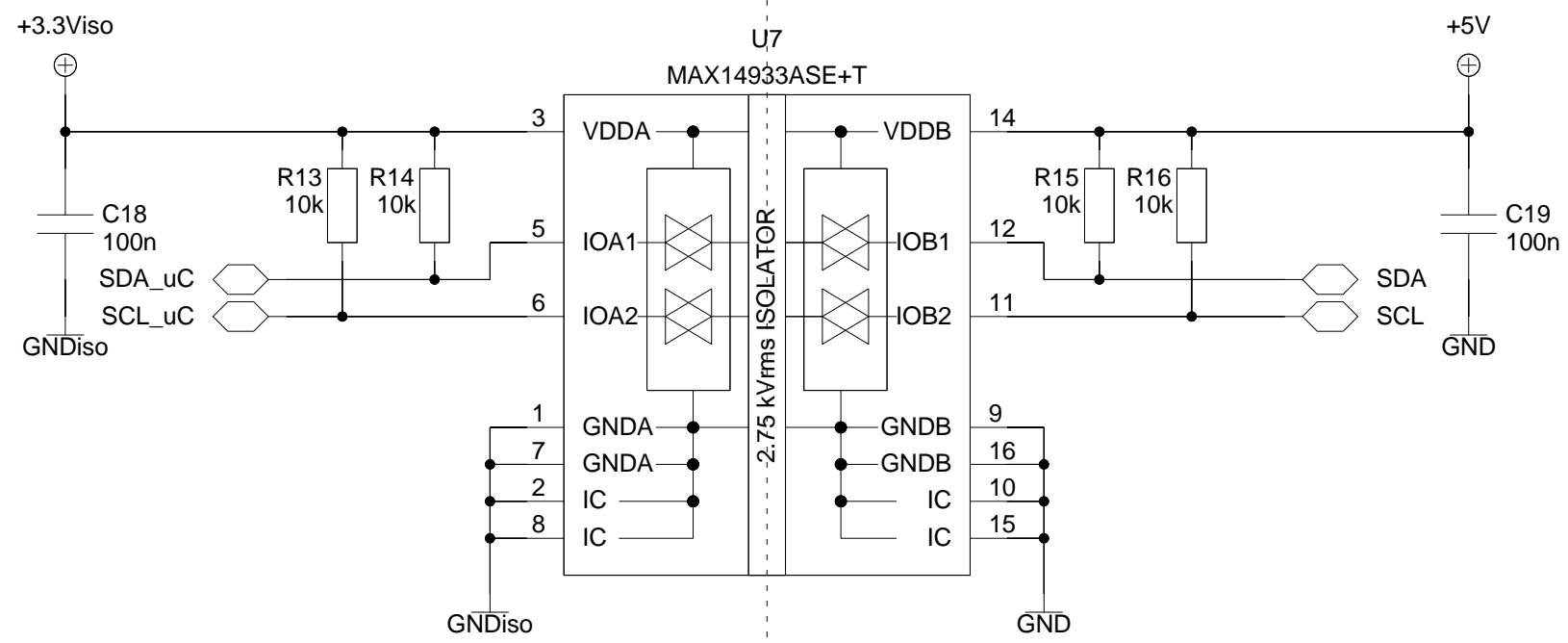
# Mikrocontroller





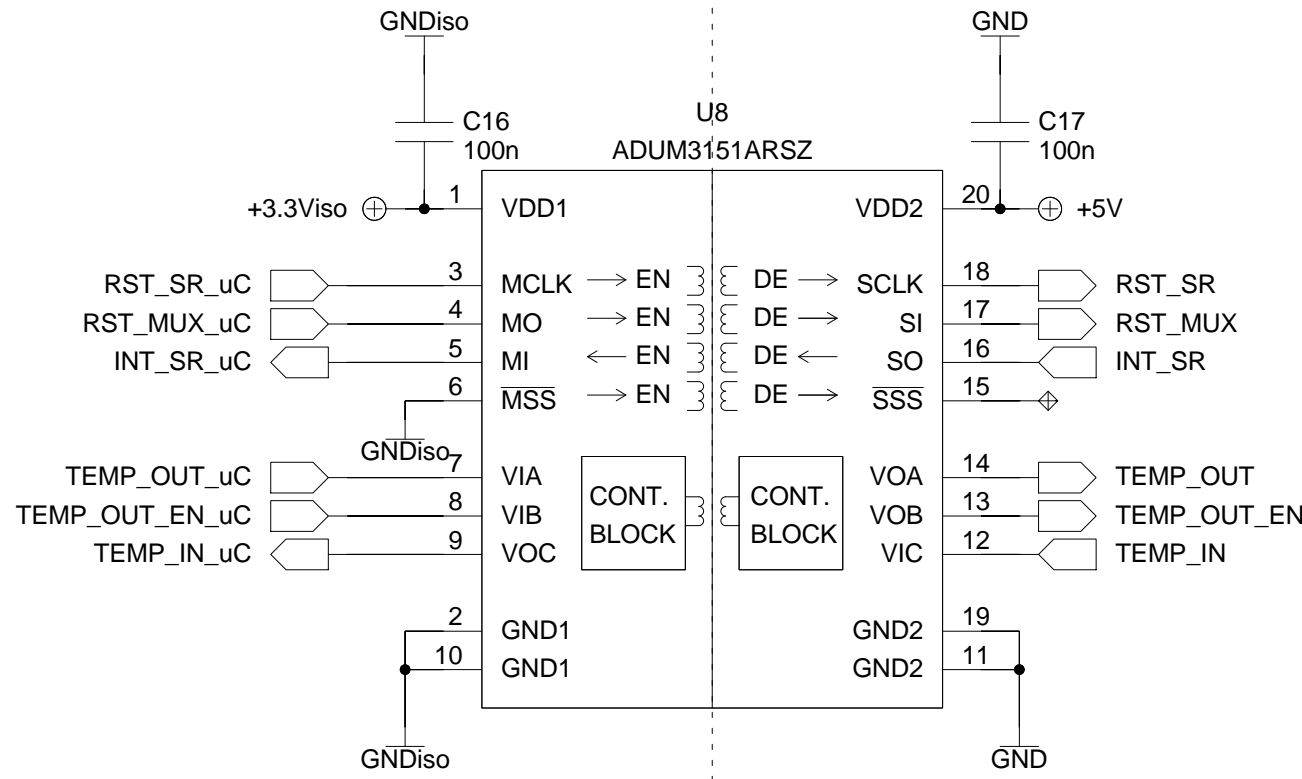
uC

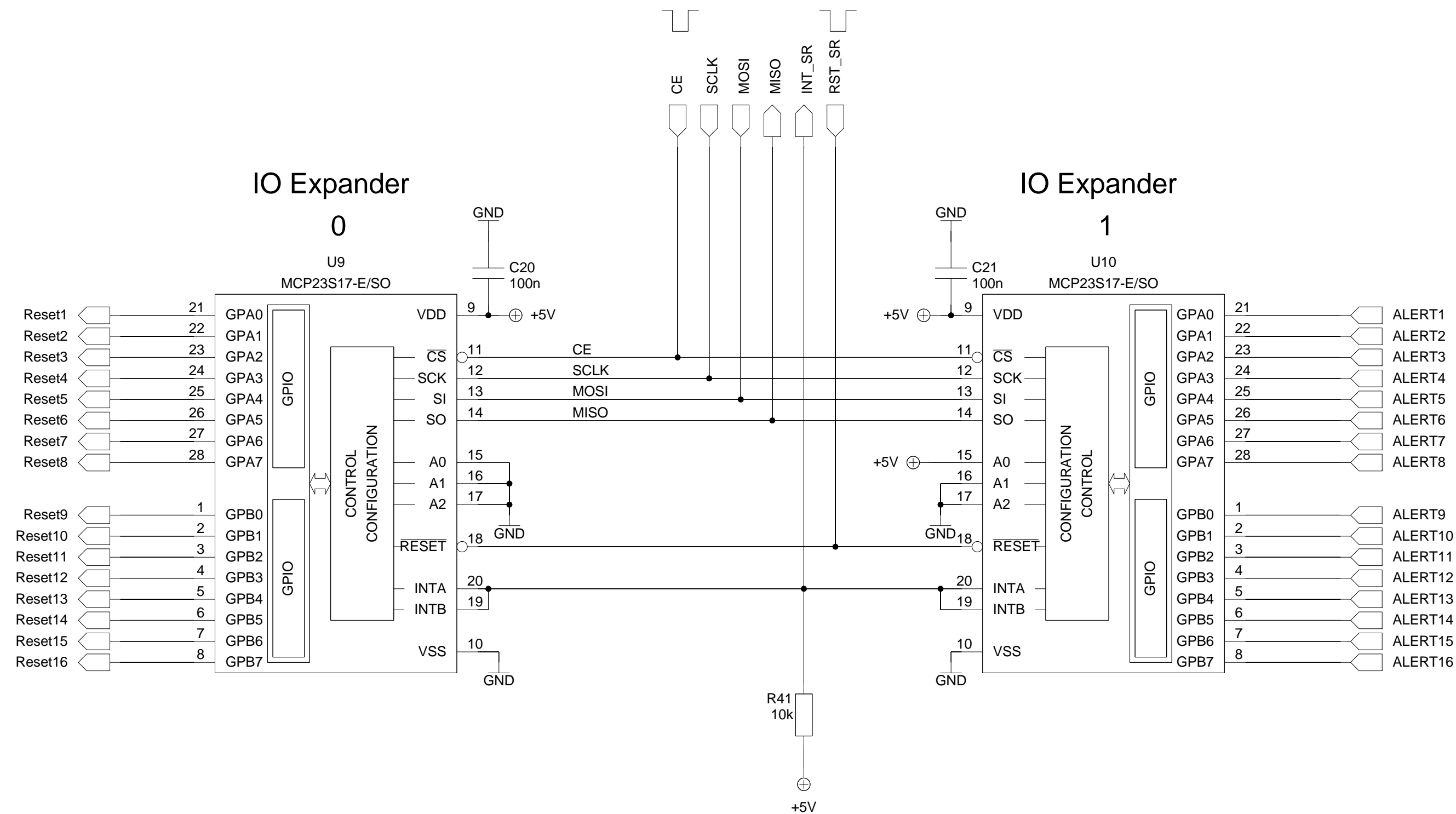
+5V

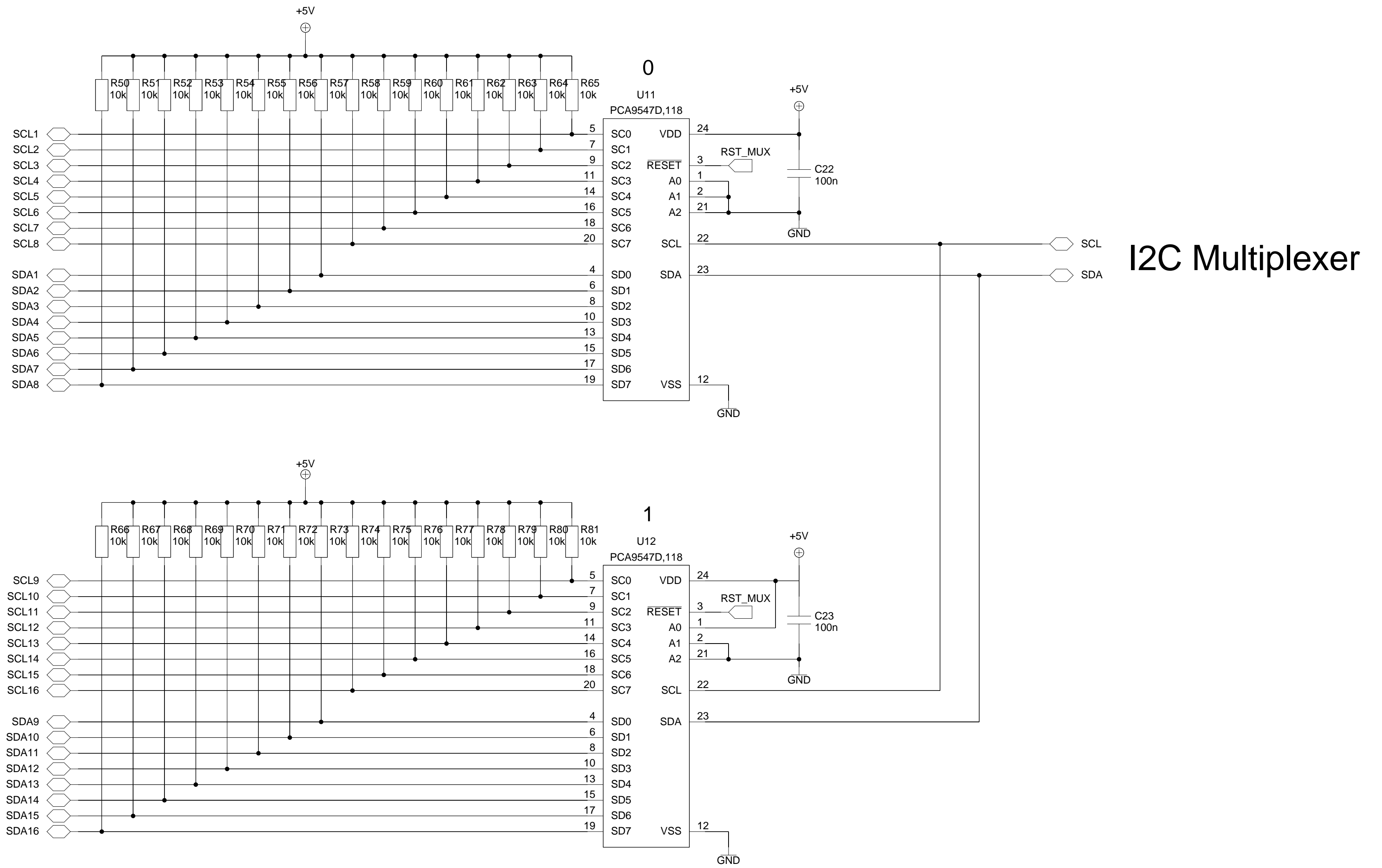


uC

+5V

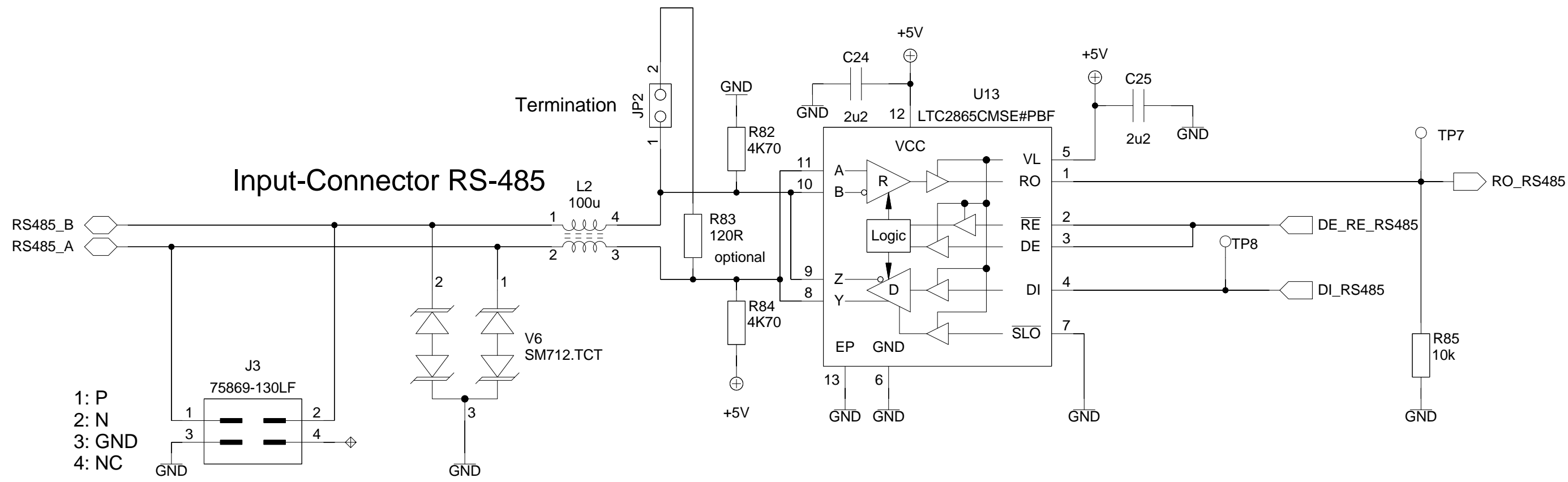




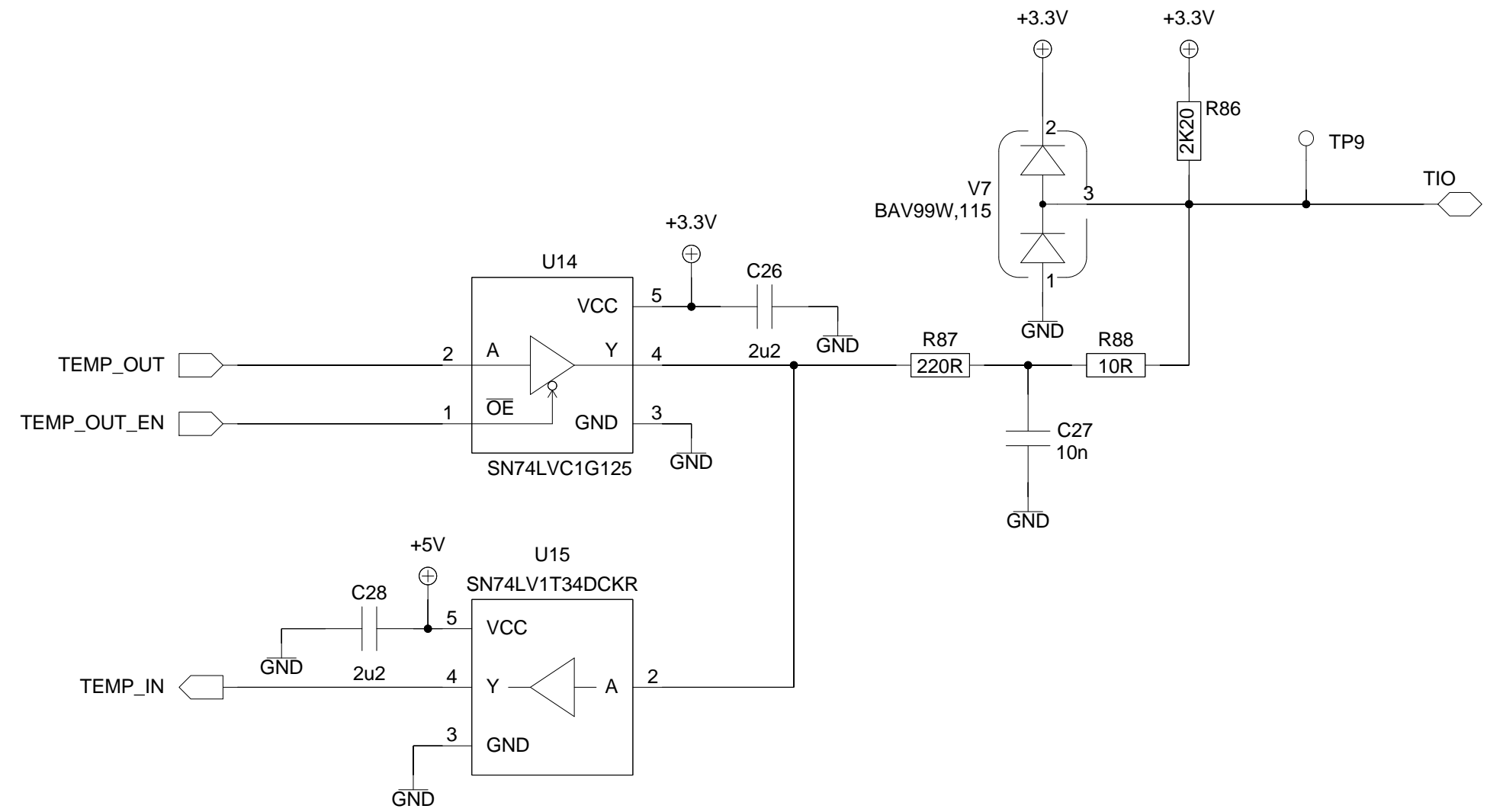


# I2C Multiplexer

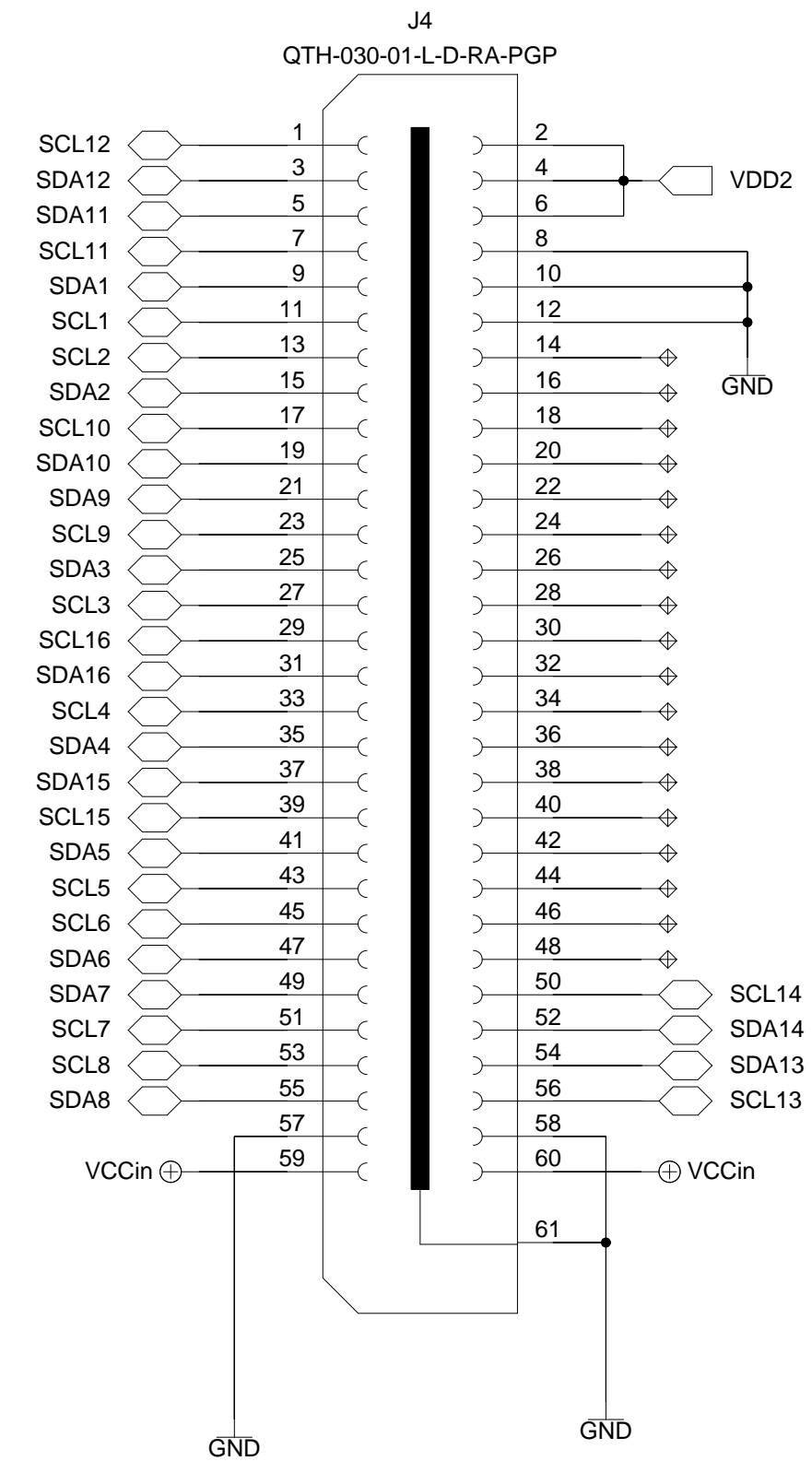
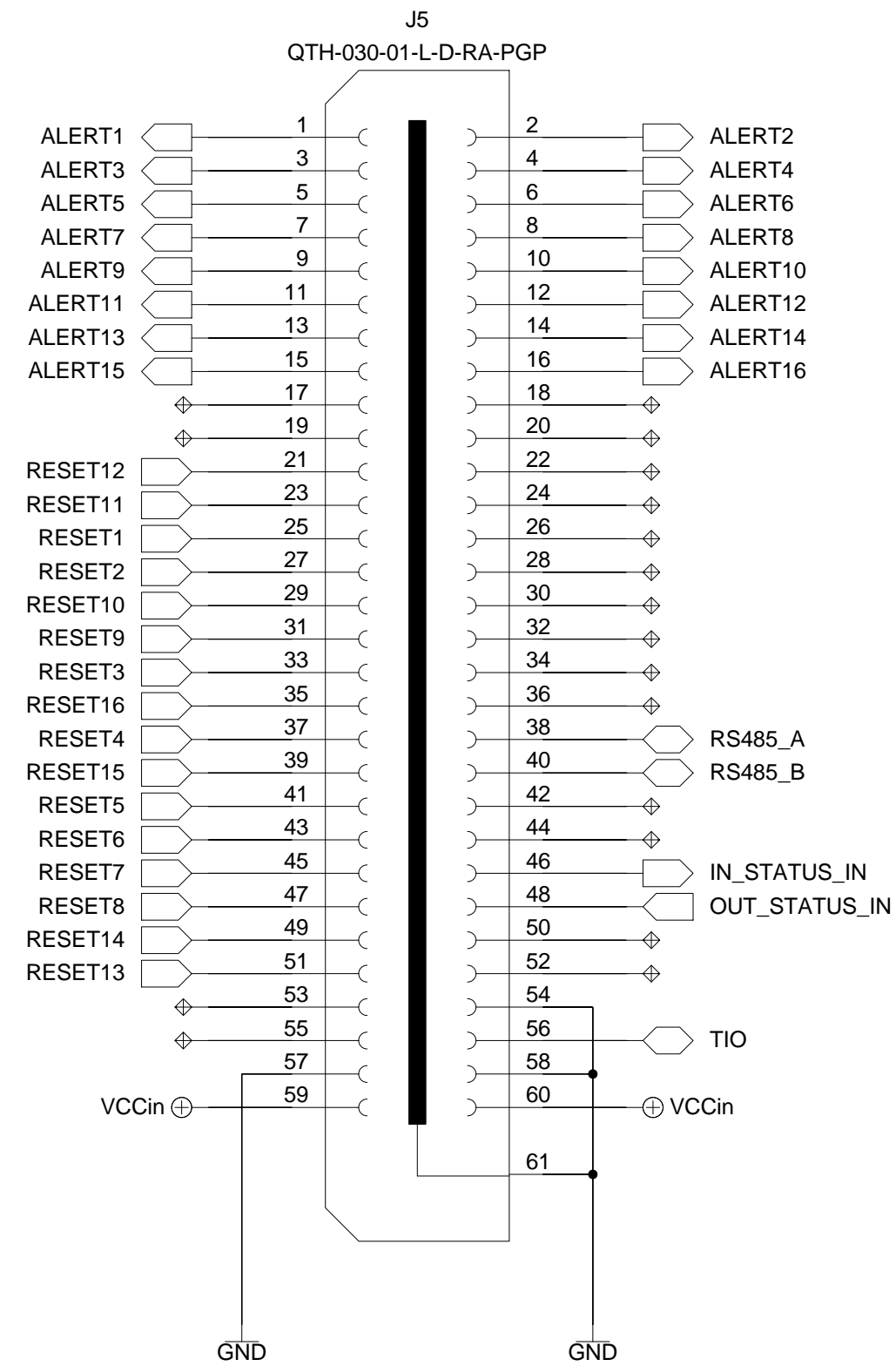
# RS-485 Transceiver



# Temperature sensor



# Samtec, QTH-030-01-L-D-RA-PGP





# Revision B Redesign Notes

1. Move I2C Interface Pins to P0.6 (Pin 26) and P0.7 (Pin 25) in Order to use Crossbar.
2. Swap Position of Backplane Connectors.
3. Remove Pulldown Resistors R17..R24 and R33..R40.
5. Rename Signal Fault1..16 by Reset1..16.
6. Select LEDs of the same series and adapt corresponding resistors.
7. Add Jumper for LED power to allow for enabling/disabling LEDs.
8. Optimize silkscreen
  - a. GND bails
  - b. V2 = "Power OK"
  - c. J2 = "PROG"
  - d. Vin range "6.5V - 32V"
  - e. Polarity of power connector
  - f. Jumper options
9. Add testpoint for 1-Wire temperature readout (net TIO).
10. Place 10 pin programming connector (J2) for direct attachment of programmer.