

I210-AS/IS REFERENCE DESIGN

SERDES-SFP

REFERENCE DESIGN

EXTERNAL INTERFACES PROVIDED:

- PCIE V2.1 (2.5GT/S) GEN1 X1
- SERIALIZER-DESERIALIZER (SERDES) TO SUPPORT 1000BASE-SX/LX (OPTICAL FIBER - IEEE802.3)
- SERIALIZER-DESERIALIZER (SERDES) TO SUPPORT 1000BASE-KX (802.3AP) AND 1000BASE-BX (PICMIG 3.1) FOR GIGABIT BACKPLANE APPLICATIONS
- SGMII (SERIAL-GMII SPECIFICATION) INTERFACE FOR SFP (SFP MSA INF-8074I)/EXTERNAL PHY CONNECTIONS
- NC-SI (DMTF NC-SI OVER RMII) OR LEGACY SMBUS OR NC-SI OVER MCTP OVER PCI-E OR SMBUS FOR MANAGEABILITY CONNECTION TO BMC
- IEEE 1149.1 JTAG

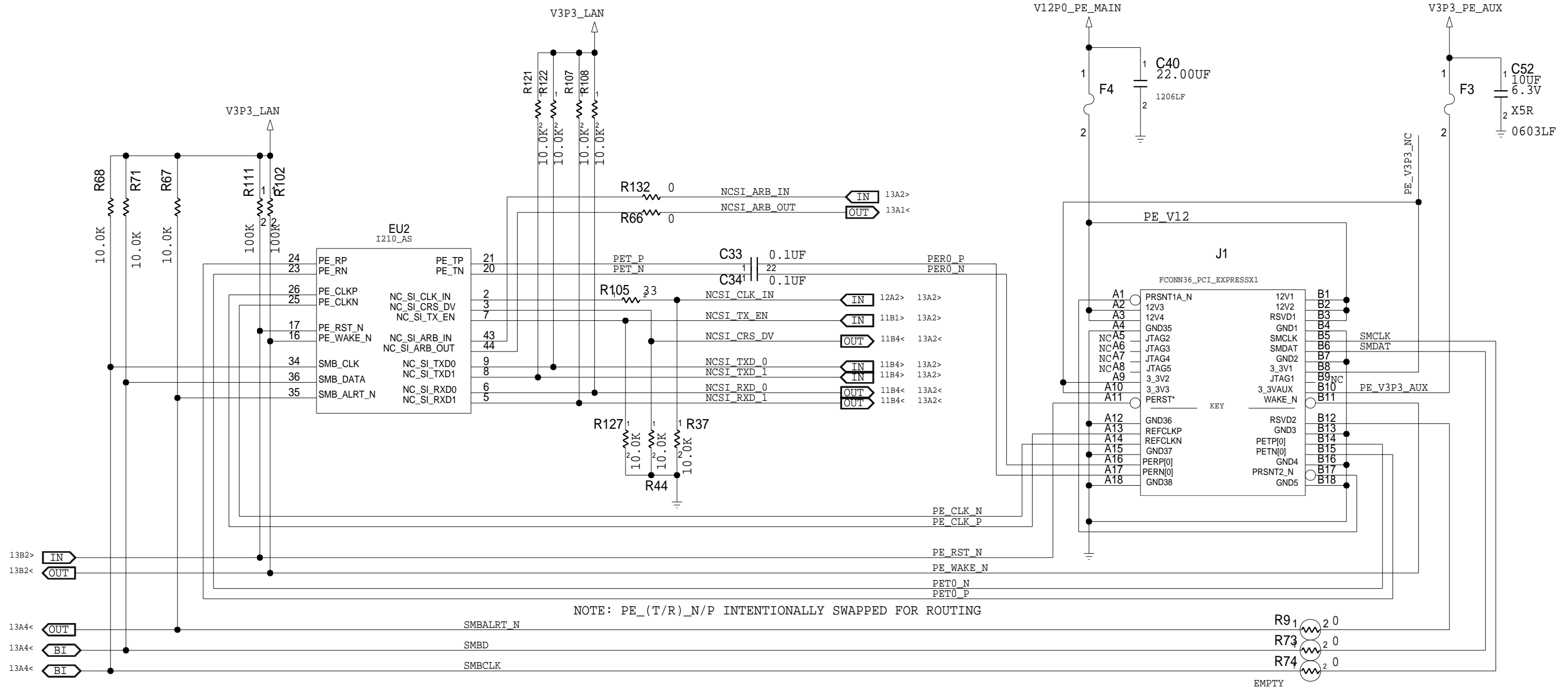
REVISION CONTROL

R1.90 INITIAL RELEASE (INTEL PUBLIC)

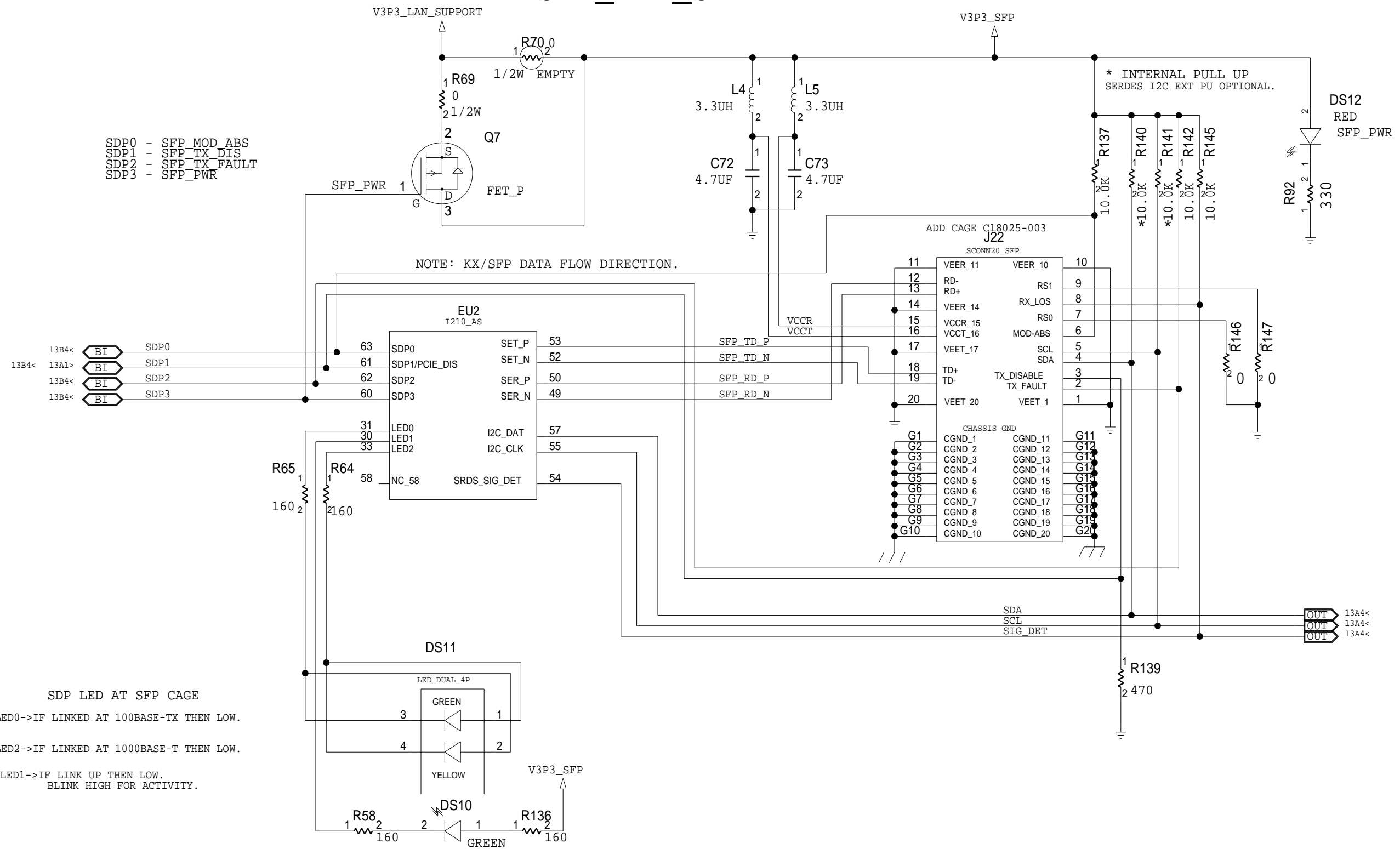
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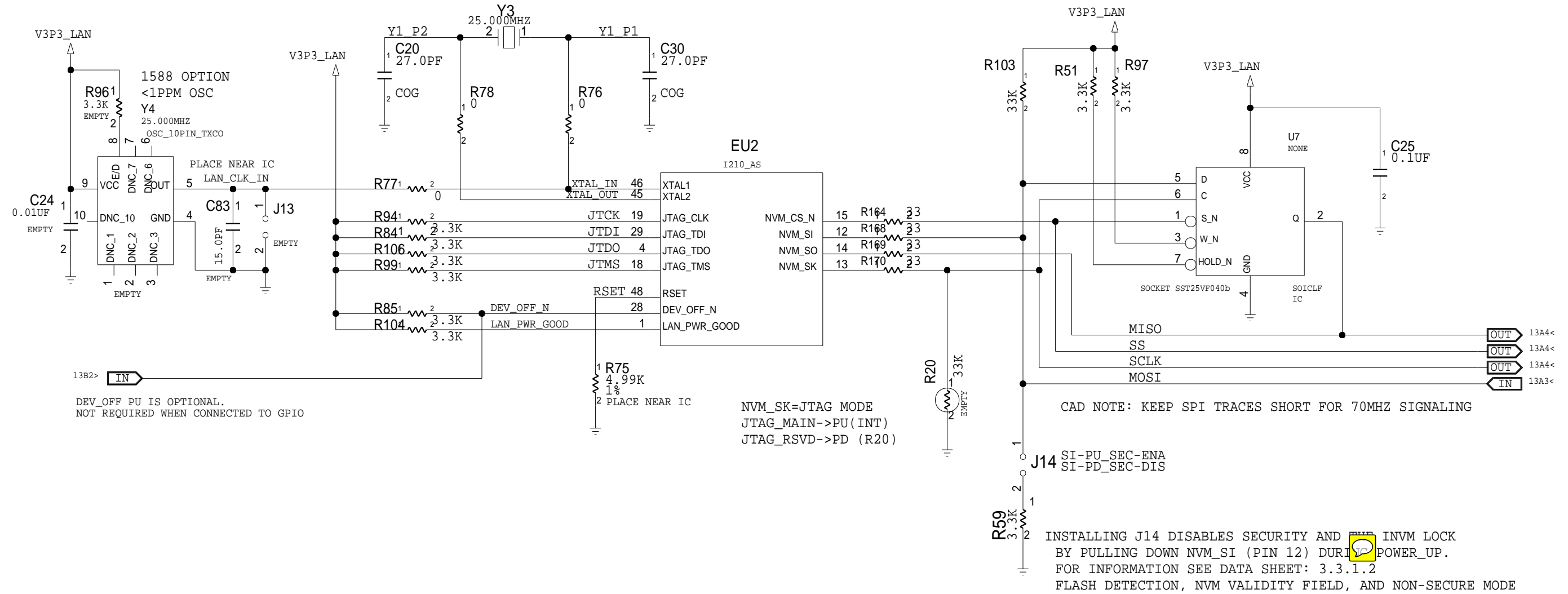
PCIE_NC-SI_SMB



SFP_LED_SDP

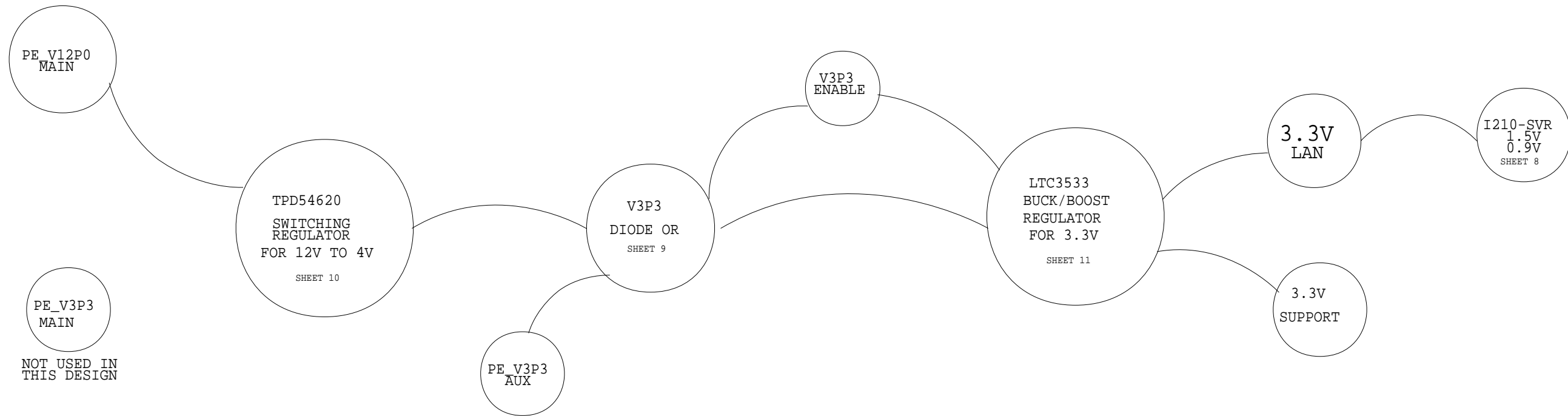


SUPPORT CIRCUITS

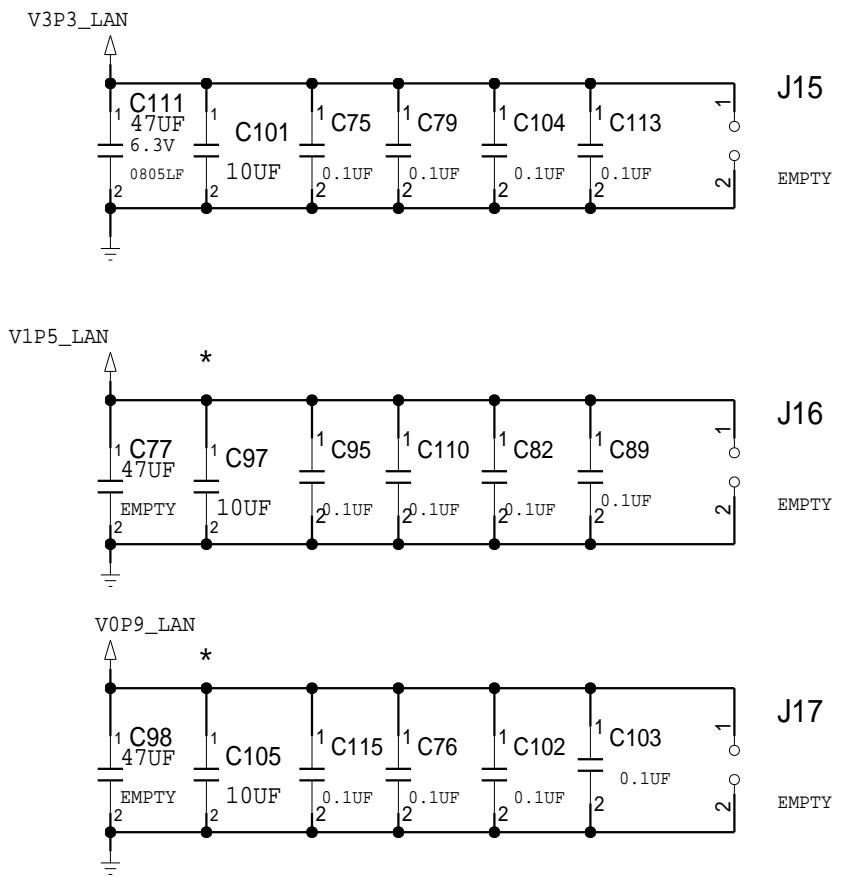
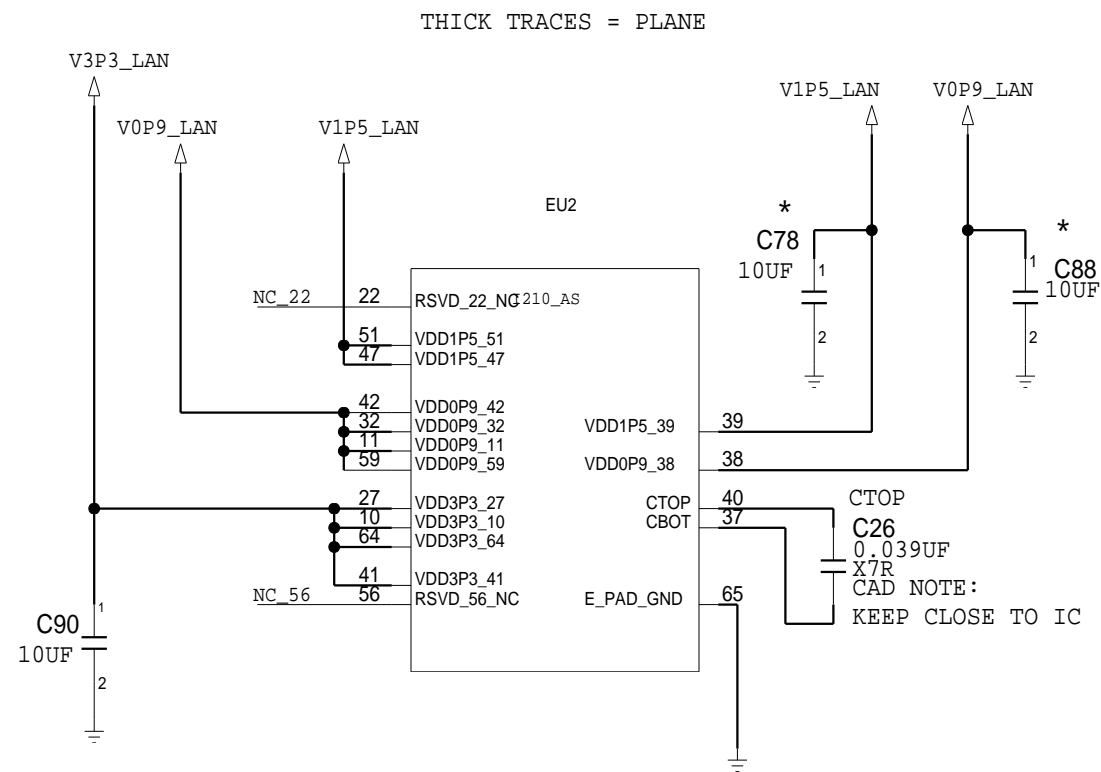


POWER SUPPLY TREE

THESE POWER SUPPLIES ARE EXAMPLES.
 POWER SUPPLIES SHOULD BE OPTIMIZED
 BY SYSTEM POWER DESIGNER FOR EACH PLATFORM.



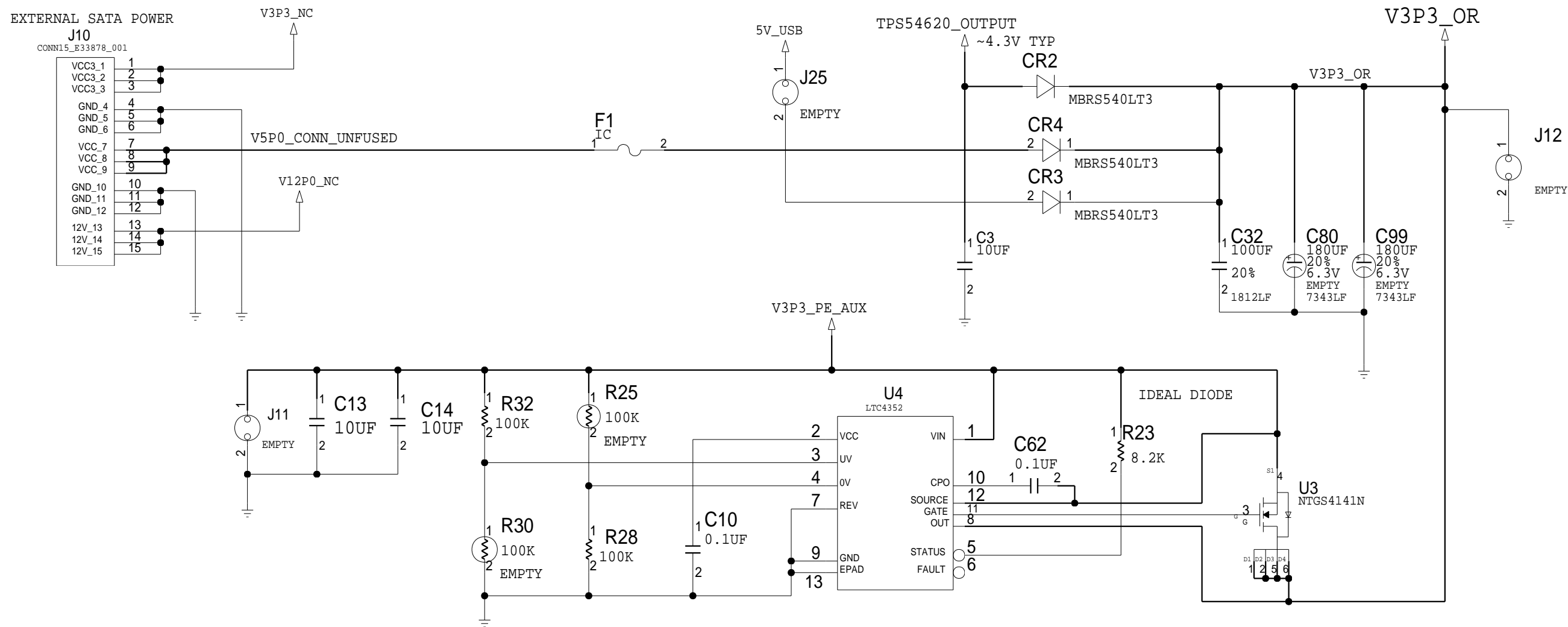
POWER SUPPLY & I210 REGULATOR



*LOCALIZED AND DISTRIBUTED BULK CAPACITANCE RANGE ~15UF

POWER MUX (AUX / MAIN SWITCH)

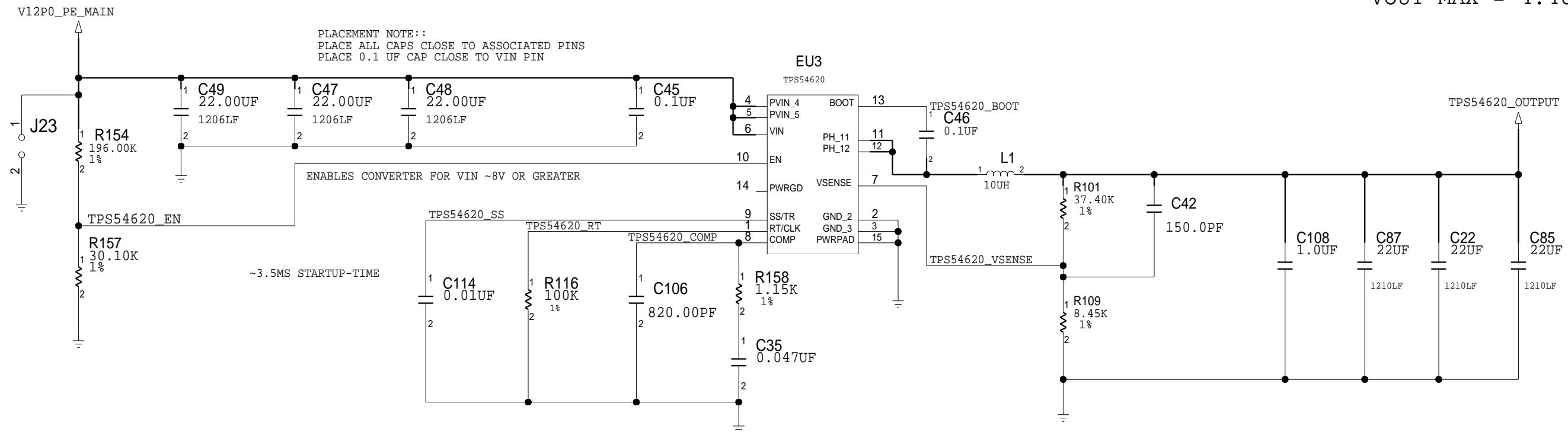
INPUTS TO V3P3 DIODE OR



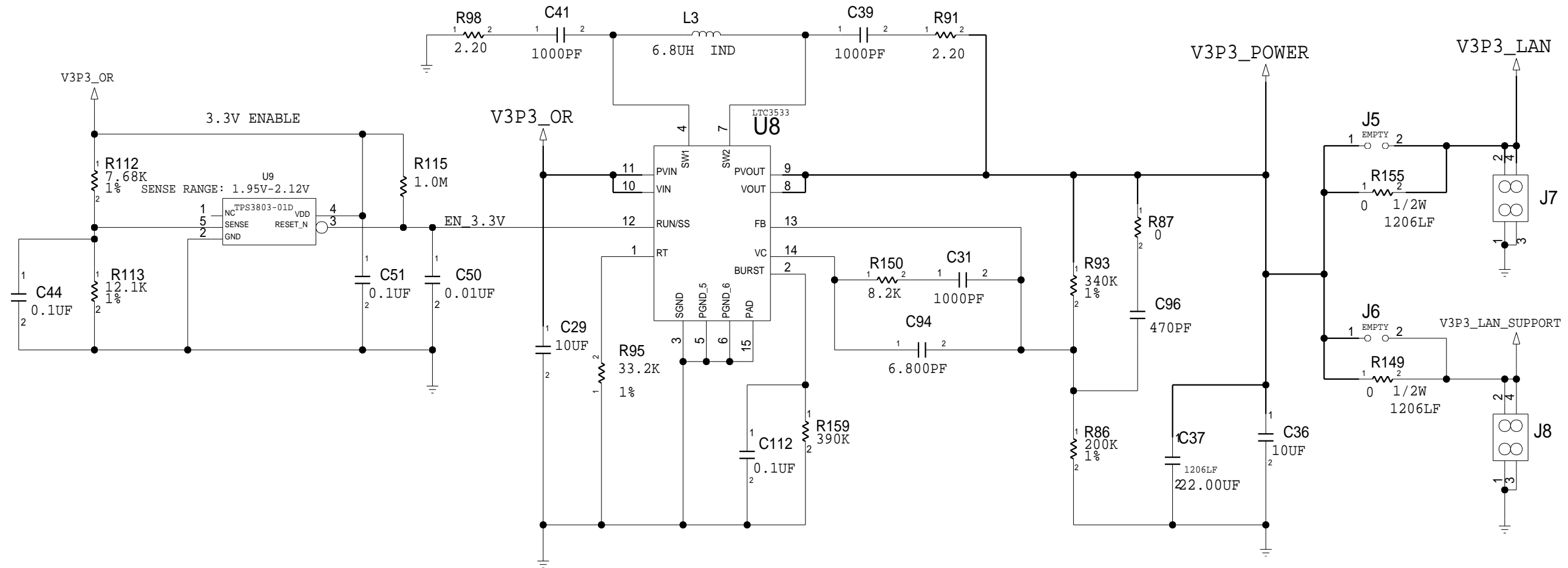
TPS54620 SWITCHING REGULATOR

VIN-MIN = 11.0V
VIN-MAX = 13.0V

VOUT-MIN = 4.22V
VOUT-MAX = 4.46V



LTC3533 BUCK/BOOST REGULATOR FOR 3.3V



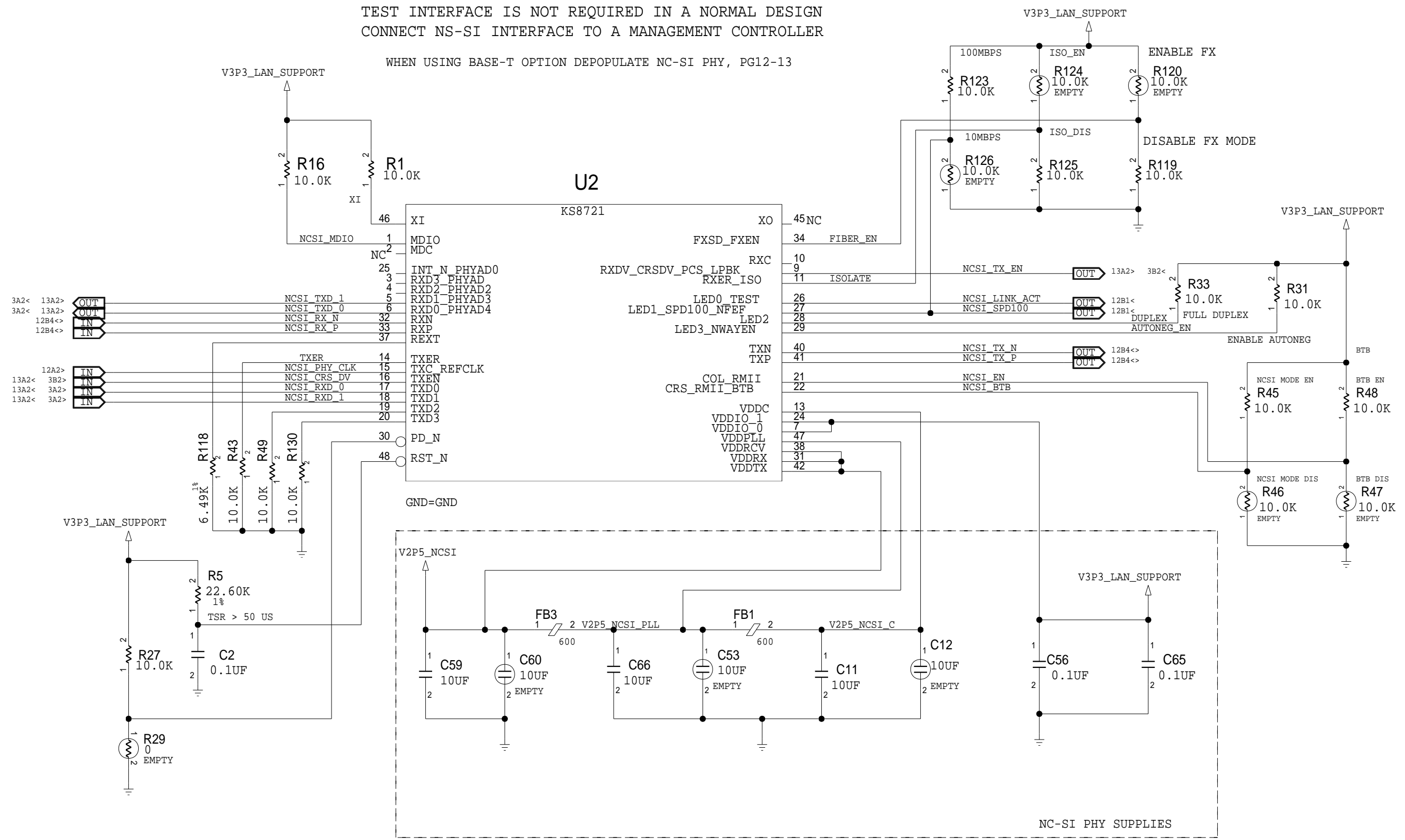
VOLTAGE BOOST REQUIRED TO COMPENSATE FOR
VOLTAGE DROP FROM DIODE OR CIRCUIT.
MANY DESIGNS MAY NOT REQUIRE A BOOST CIRCUIT.

VOUT_MIN = 3.18V
VOUT_MAX = 3.41V
I_{3533-MAX} = 1.5A

NC-SI TEST INTERFACE

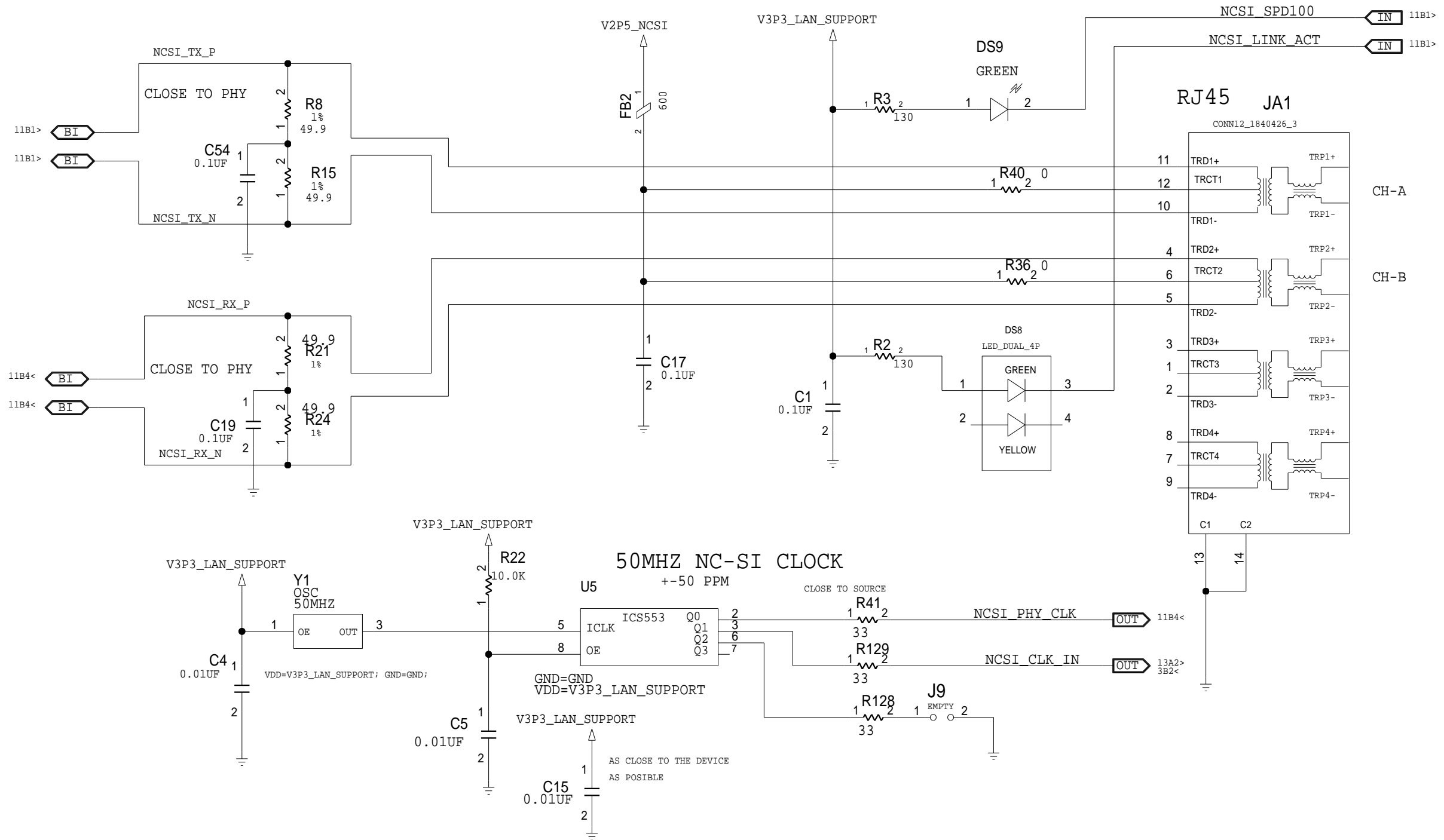
TEST INTERFACE IS NOT REQUIRED IN A NORMAL DESIGN
CONNECT NS-SI INTERFACE TO A MANAGEMENT CONTROLLER

WHEN USING BASE-T OPTION DEPOPULATE NC-SI PHY, PG12-13



NC-SI TEST INTERFACE

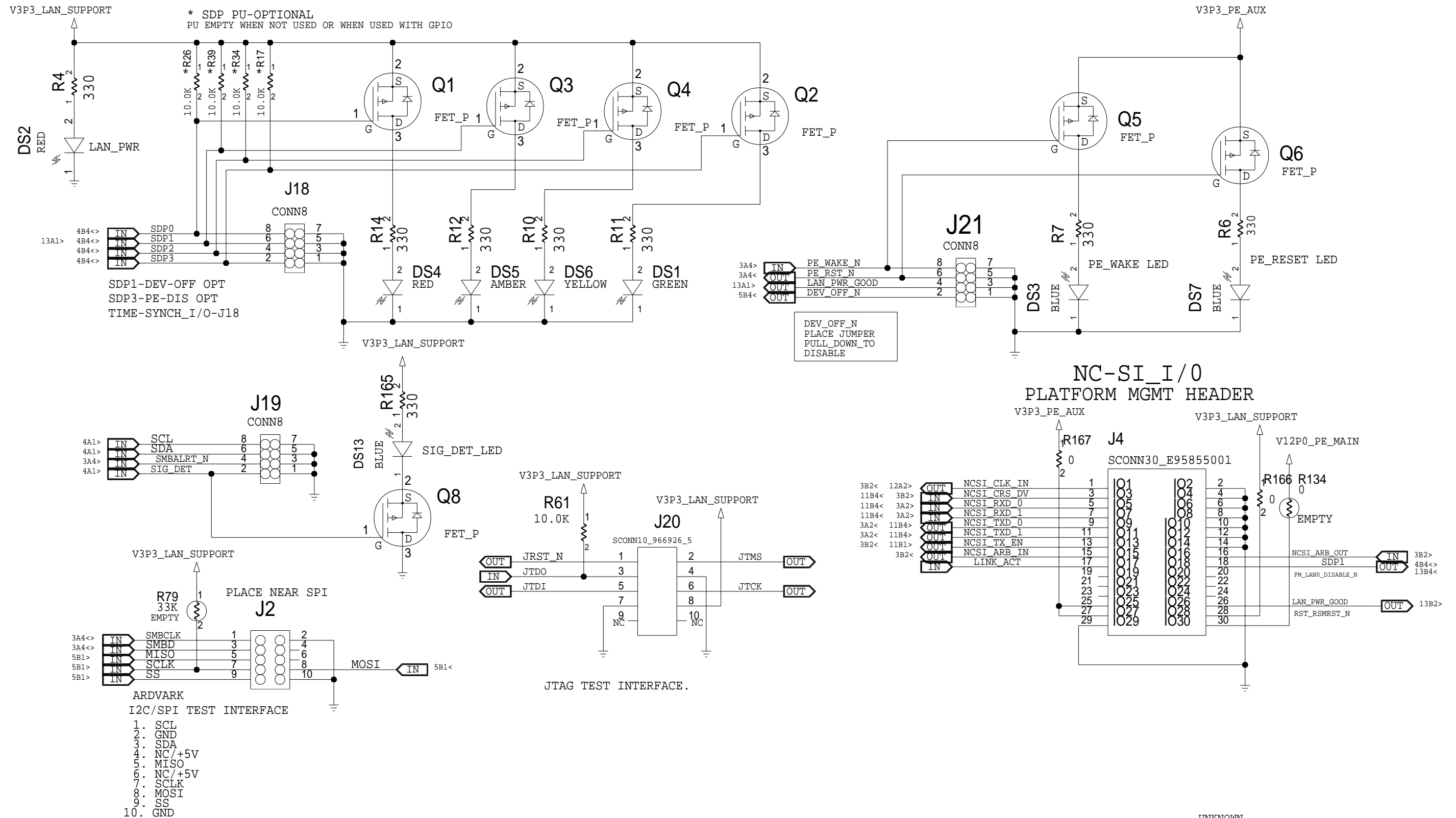
ELM BASE-T OPTION DEPOPULATE NC-SI PHY, PG12-13. USE NC-SI HEADER TO PLATFORM.
 TEST INTERFACE IS NOT REQUIRED IN A NORMAL DESIGN
 CONNECT NS-SI INTERFACE TO A MANAGEMENT CONTROLLER



TEST CONNECTORS I/O

TEST INTERFACE IS NOT REQUIRED IN A NORMAL DESIGN

LED FUNCTION INTENTIONALLY INVERTED (LED OFF - NORMAL)



UNKNOWN