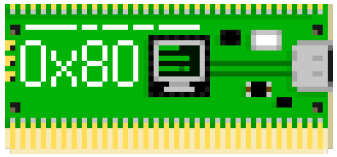

PicoPOST Pro

The Ultimate ISA PC Diagnostic Tool

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RP2350

RP2350 (Main Processor)

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Power and System Logic

Power and System Logic

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External Interfaces

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RP2040

RP2040 (Co-Processor + Ethernet)

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open source hardware

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Title: PicoPOST Pro

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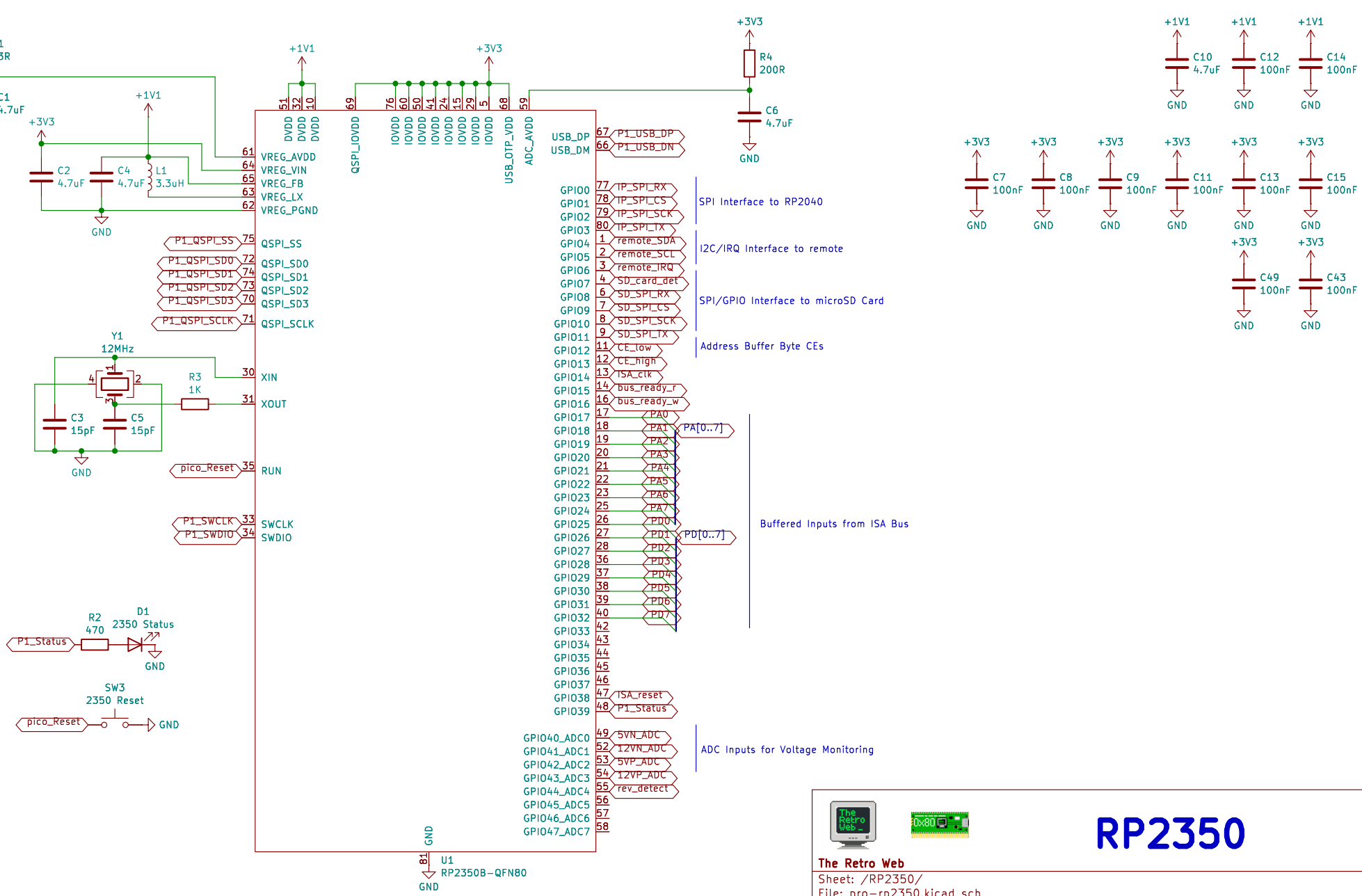
+3V3
R1
33R
C1
4.7uF
GND
+1V1
C2
4.7uF
C4
4.7uF
L1
3.3uH
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200R
C6
4.7uF
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USB_DM
P1_USB_DP
P1_USB_DN
C10
4.7uF
C12
100nF
C14
100nF
C7
100nF
C8
100nF
C9
100nF
C11
100nF
C13
100nF
C15
100nF
C49
100nF
C43
100nF
P1_QSPI_SS
QSPI_SS
P1_QSPI_SD0
P1_QSPI_SD1
P1_QSPI_SD2
P1_QSPI_SD3
QSPI_SD0
QSPI_SD1
QSPI_SD2
QSPI_SD3
P1_QSPI_SCLK
QSPI_SCLK
Y1
12MHz
R3
1K
C3
15pF
C5
15pF
XIN
XOUT
pico_Reset
RUN
P1_SWCLK
P1_SWDIO
SWCLK
SWDIO
R2
470
D1
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P1_Status
SW3
2350 Reset
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GPIO1
GPIO2
GPIO3
GPIO4
GPIO5
GPIO6
GPIO7
GPIO8
GPIO9
GPIO10
GPIO11
GPIO12
GPIO13
GPIO14
GPIO15
GPIO16
GPIO17
GPIO18
GPIO19
GPIO20
GPIO21
GPIO22
GPIO23
GPIO24
GPIO25
GPIO26
GPIO27
GPIO28
GPIO29
GPIO30
GPIO31
GPIO32
GPIO33
GPIO34
GPIO35
GPIO36
GPIO37
GPIO38
GPIO39
IP_SPI_RX
IP_SPI_CS
IP_SPI_SCK
IP_SPI_TX
remote_SDA
remote_SCL
remote_IRQ
SD_card_det
SD_SPI_RX
SD_SPI_CS
SD_SPI_SCK
SD_SPI_TX
CE_low
CE_high
ISA_clk
bus_ready_r
bus_ready_w
PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7
PD0
PD1
PD2
PD3
PD4
PD5
PD6
PD7
PA[0..7]
PD[0..7]
ISA_reset
P1_Status
SPI Interface to RP2040
I2C/IRQ Interface to remote
SPI/GPIO Interface to microSD Card
Address Buffer Byte CEs
Buffered Inputs from ISA Bus
GPIO40_ADC0
GPIO41_ADC1
GPIO42_ADC2
GPIO43_ADC3
GPIO44_ADC4
GPIO45_ADC5
GPIO46_ADC6
GPIO47_ADC7
5VN_ADC
12VN_ADC
5VP_ADC
12VP_ADC
rev_detect
ADC Inputs for Voltage Monitoring
U1
RP2350B-QFN80
RP2350
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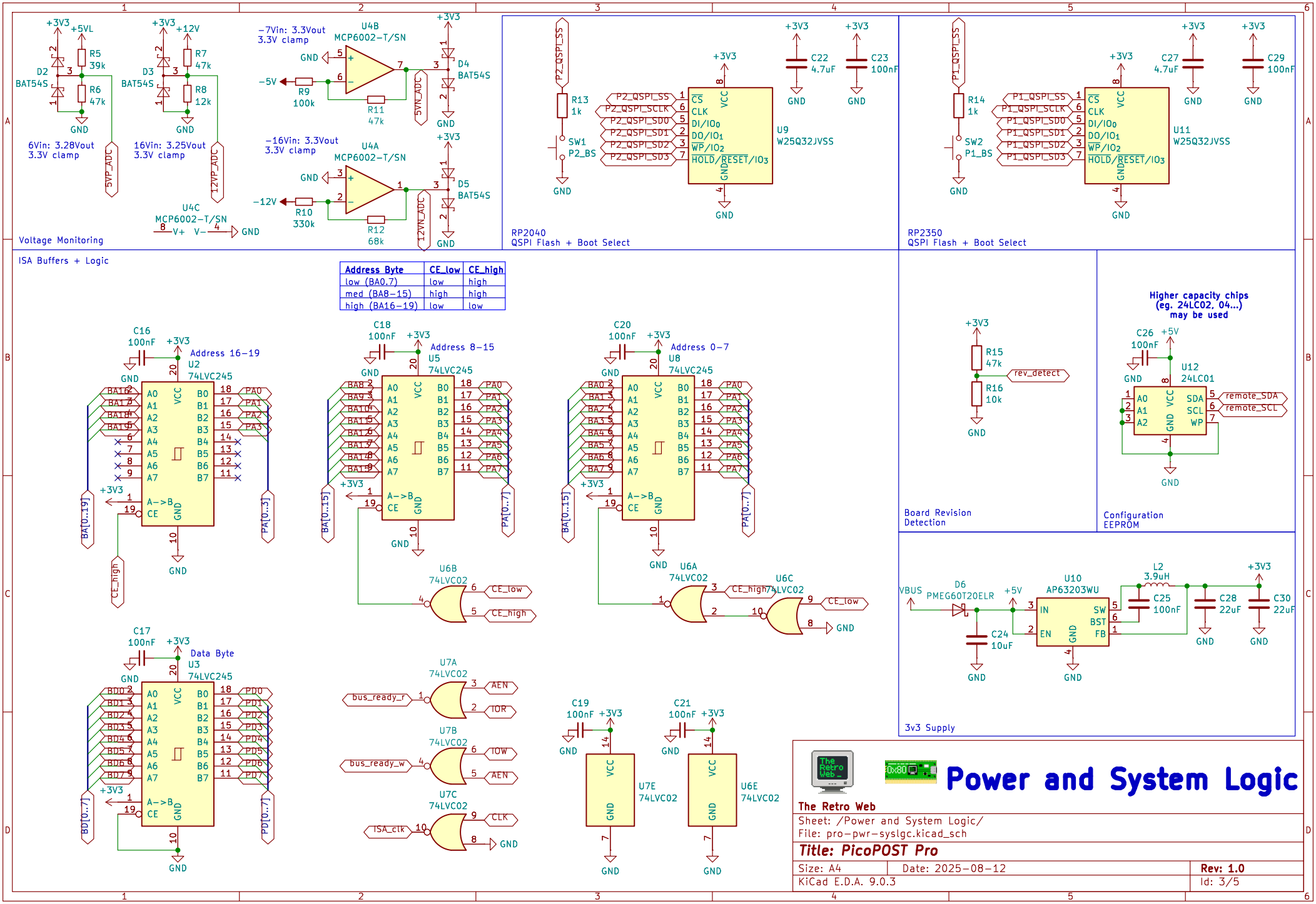
Voltage Monitoring
6Vin: 3.28Vout
3.3V clamp
16Vin: 3.25Vout
3.3V clamp
-7Vin: 3.3Vout
3.3V clamp
-16Vin: 3.3Vout
3.3V clamp
RP2040
QSPI Flash + Boot Select
RP2350
QSPI Flash + Boot Select
ISA Buffers + Logic
Address Byte | CE_low | CE_high
low (BA0.7) | low | high
med (BA8–15) | high | high
high (BA16–19) | low | low
Address 16–19
Address 8–15
Address 0–7
Data Byte
Board Revision
Detection
Higher capacity chips
(eg. 24LC02, 04...)
may be used
Configuration
EEPROM
3v3 Supply
Power and System Logic
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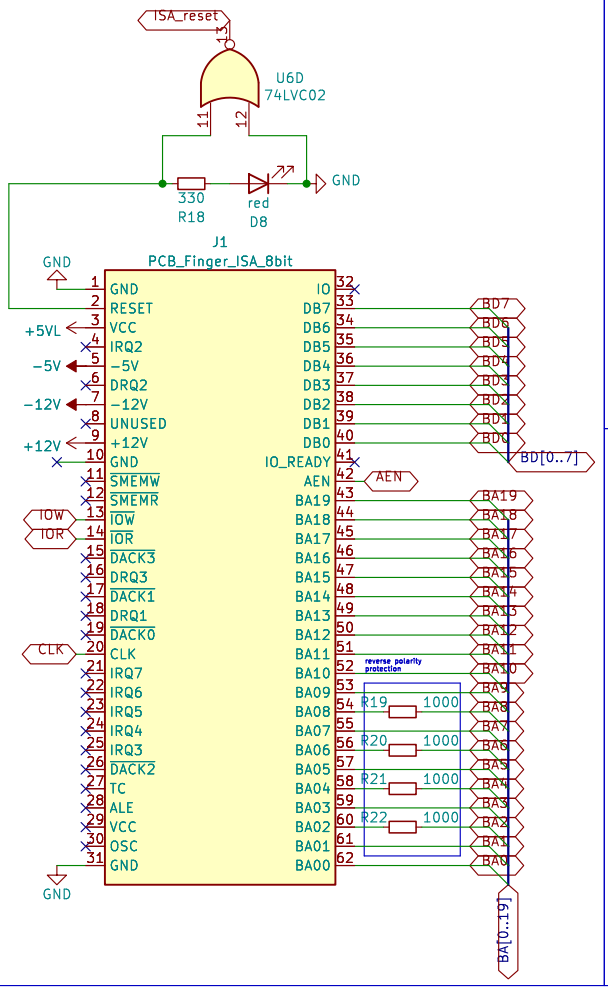
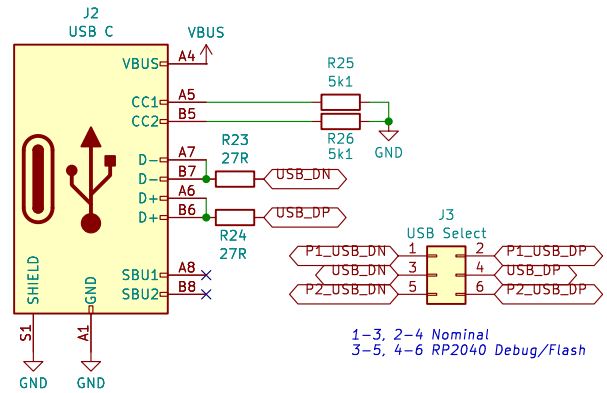
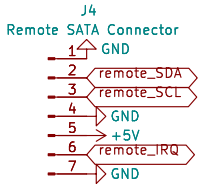


ISA Bus



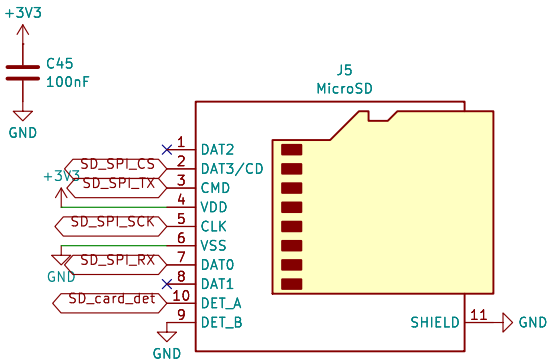
USB-C



Remote Connector
(SATA Receptacle)

SWD Debug

Ethernet on RP2040 Page



microSD Card

External Interfaces

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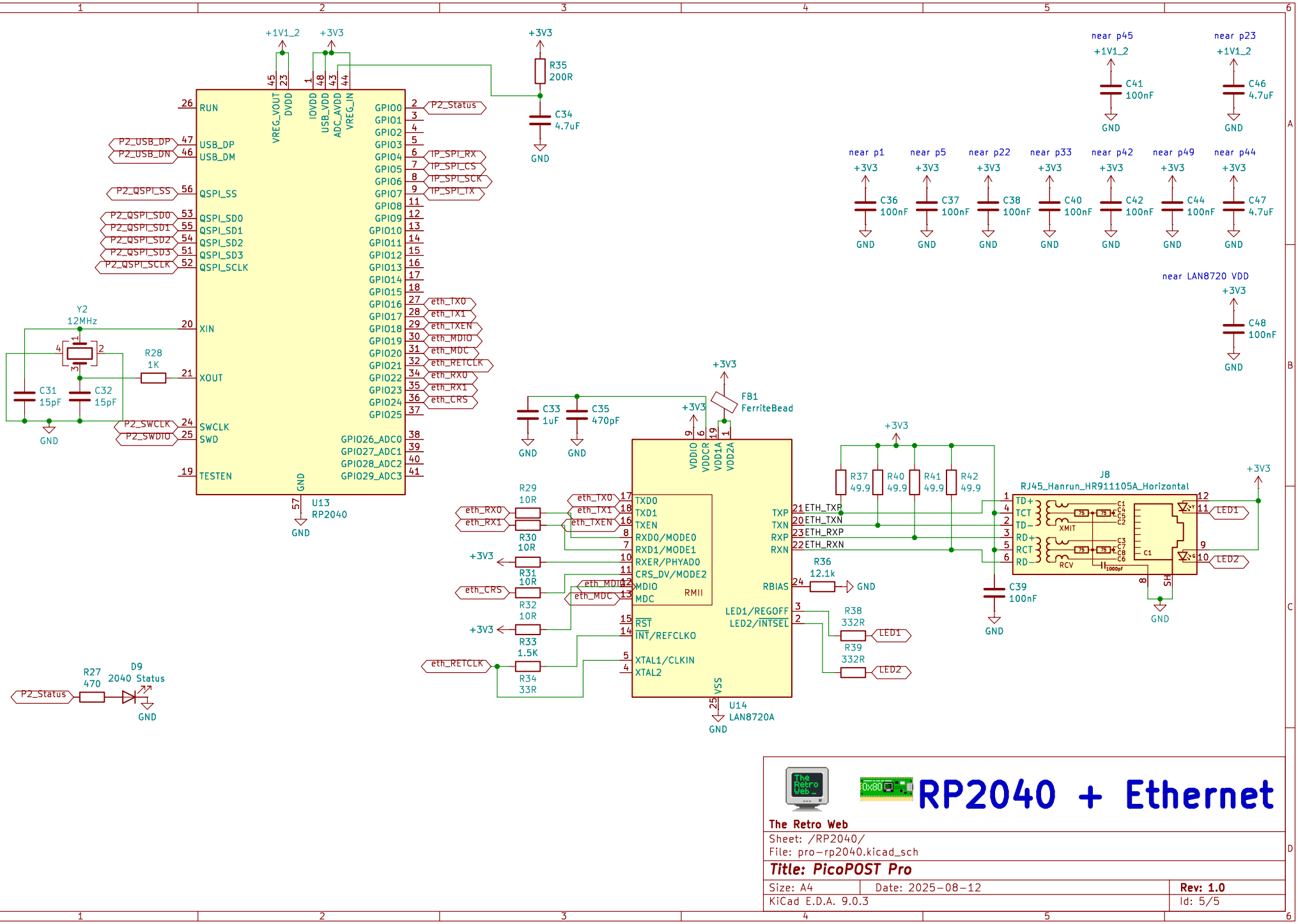
+1V1_2
+3V3
R35
200R
C34
4.7uF
GND
near p45
C41
100nF
near p23
C46
4.7uF
near p1
C36
100nF
near p5
C37
100nF
near p22
C38
100nF
near p33
C40
100nF
near p42
C42
100nF
near p49
C44
100nF
near p44
C47
4.7uF
near LAN8720 VDD
C48
100nF
U13
RP2040
RUN
USB_DP
USB_DM
QSPI_SS
QSPI_SD0
QSPI_SD1
QSPI_SD2
QSPI_SD3
QSPI_SCLK
XIN
XOUT
SWCLK
SWD
TESTEN
VREG_VOUT
DVDD
IOVDD
USB_VDD
ADC_AVDD
VREG_IN
GPIO0
GPIO1
GPIO2
GPIO3
GPIO4
GPIO5
GPIO6
GPIO7
GPIO8
GPIO9
GPIO10
GPIO11
GPIO12
GPIO13
GPIO14
GPIO15
GPIO16
GPIO17
GPIO18
GPIO19
GPIO20
GPIO21
GPIO22
GPIO23
GPIO24
GPIO25
GPIO26_ADC0
GPIO27_ADC1
GPIO28_ADC2
GPIO29_ADC3
P2_Status
TP_SPI_RX
TP_SPI_CS
TP_SPI_SCK
TP_SPI_TX
eth_TX0
eth_TX1
eth_TXEN
eth_MDIO
eth_MDC
eth_RETCLK
eth_RX0
eth_RX1
eth_CRS
P2_USB_DP
P2_USB_DN
P2_QSPI_SS
P2_QSPI_SD0
P2_QSPI_SD1
P2_QSPI_SD2
P2_QSPI_SD3
P2_QSPI_SCLK
P2_SWCLK
P2_SWDIO
Y2
12MHz
C31
15pF
C32
15pF
R28
1K
C33
1uF
C35
470pF
FB1
FerriteBead
U14
LAN8720A
TXD0
TXD1
TXEN
RXD0/MODE0
RXD1/MODE1
RXER/PHYAD0
CRS_DV/MODE2
MDIO
MDC
RMII
RST
INT/REFCLKO
XTAL1/CLKIN
XTAL2
VDDIO
VDDCR
VDD1A
VDD2A
VSS
TXP
TXN
RXP
RXN
RBIAS
LED1/REGOFF
LED2/INTSEL
R29
10R
R30
10R
R31
10R
R32
10R
R33
1.5K
R34
33R
R36
12.1k
R37
49.9
R40
49.9
R41
49.9
R42
49.9
R38
332R
R39
332R
C39
100nF
J8
RJ45_Hanrun_HR911105A_Horizontal
TD+
TCT
TD-
RD+
RCT
RD-
XMIT
RCV
SH
LED1
LED2
R27
470
D9
2040 Status
RP2040 + Ethernet
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