



AM4 LINUX USER INTERFACE Variant: LINUX\_AM4\_DUALCAN

Change Log:

- REV B
- Page 2
    - Move C200 to page 3 to become C368
    - Pin 6 of J3 is now HR\_METER\_OUT instead of NC
    - Add R203, R204, C208
    - C201 moved to page 14 to become C1403
    - Add page 14 and 15 sheet symbols
    - Add J18, J19, J20
  - Page 3
    - Change D301 to be bidirectional TVS diode
    - Change R310 and R313 100k and 52.3k, respectively values
  - Page 4
    - Added 70mA current mirror
  - Page 7
    - Added additional signals related to new inputs and outputs. No existing pins were changed
    - Added UART 5 to pins D16 and A15
    - Changed U703 to FSUSB30MUX
  - Page 8
    - Delete R802 and R803
    - GPIO\_SPARE\_1 moved to pin B7 to accommodate PWM signal on pin E10
    - Delete R808 and reduce HWD REV bits to 3 total instead of 4.
    - Added additional input signals Digin 4 through Digin 10
    - Add new Ain pins to AA16 and AB15
  - Page 11
    - Move Digin 3 circuit to page 14
    - Added U1105, C1108, C1109, C1110, C1111, C1112
  - Page 12
    - Add R1226 through R1257
  - Add Page 14
    - 7 new digins and 2 new Ains
  - Add Page 15
    - 8 new 0.5A LSDs
    - 4 new 2A LSDs
    - 1 new 5V HSD for HR meters

- REV C
- Page 7
    - Swap SPI Data lines. SPI\_0\_MISO now on Pin T22 and SPI\_0\_MOSI now on Pin T21
  - Page 10
    - added pins C1, A2, and N1 to ease breakout of the eMMC part

- REV D
- Page 3
    - Change R338, R339, and R340 to 2Meg ohm
  - Page 5
    - Add R504
    - Add B501
  - Page 7
    - Add R717 and R718
    - Net LED\_YEL\_CAN1 added to pin N23
    - Net GPIO\_SPARE\_1 moved to pin T24
  - Page 8
    - Change pin B7 connection to net name FSTN\_LCD\_A0
    - Add second Yellow LED for second CAN port
      - Add R818, R819, R820, Q802, D802.
  - Page 11
    - Add R1118
    - Add R1119
  - Page 13
    - Add connection to pin 3 of J14, FSTN\_LCD\_A0
    - Add Q1303, U1304, R1380 to control dot matrix LCD backlight
    - Add J21
    - Flipped J14 to fix connections to dot matrix LCD
  - page 15
    - D1505, D1503, D1512, D1509, D1519, D1516, D1523, and D1521 changed to 3A parts : SK310A-LTP
- Added U1506 and C1520

- REV F
- Page 2
    - Update PCB number to Q25098-005
  - Page 8
    - Populate R811 bringing HW REV to 3
    - Depop R820
    - Change Q802 to 2N7002-7-F
  - Layout Consideration
    - Update footprints of MS920T-FL27E and ML-1220/F1AN. Increase copper keepouts to include the entire bottom surface of the batteries

- REV G
- Page 8
    - Update D800 to be Q14001-007

- REV H
- Page 11
    - Depop R1105 and R1104 on AM4 BASIC Variant

- REV J
- Page 5
    - Depop R517 and BT500 on AM4 BASIC and AM4 DUAL CAN
    - Populate R504 and B501 on AM4 BASIC and AM4 DUAL CAN

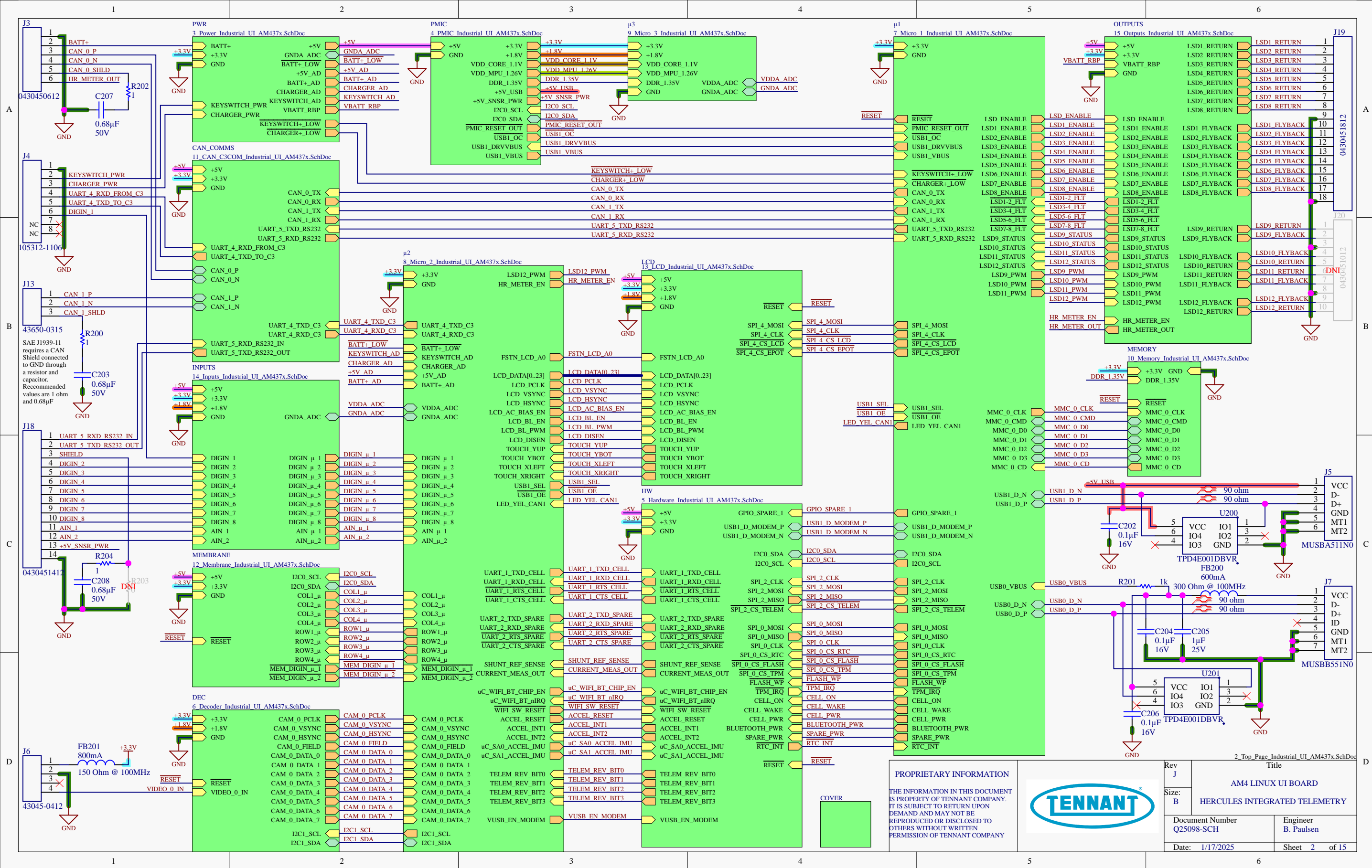
7-bit I2C addresses (12C0)				
SA0 for IMU/Accel	0	1	0	1
SA1 for IMU/Accel	0	0	1	1
BMI270	0x68	0x69		
LSM6DSMTR	0x6A	0x6B		
ISM330DLC	0x6A	0x6B		
ISM330DHC	0x6A	0x6B		
ISM330DHCX	0x6A	0x6B		
BNO055	0x29	0x28		
Accel - FXLS8471QR1	0x1E	0x1D	0x1C	0x1F
LED Driver 0 - TLC59116FIRHBR	0x61			
LED Driver 1 - TLC59116FIRHBR	0x62			
EEPOT - ISL90728WIE627Z	0x3E			
PMIC - TPS65218D0	0x24			
7-bit I2C addresses (I2C1)				
Video Decoder - TW9990	0x45			

BOM ITEMS:

PCB	
BOM	Q25098-005 PCB, AM4 LINUX
FW1	Q30124 Firmware-Application, U1001
FW2	Q30125 Firmware-Bootloader, U500

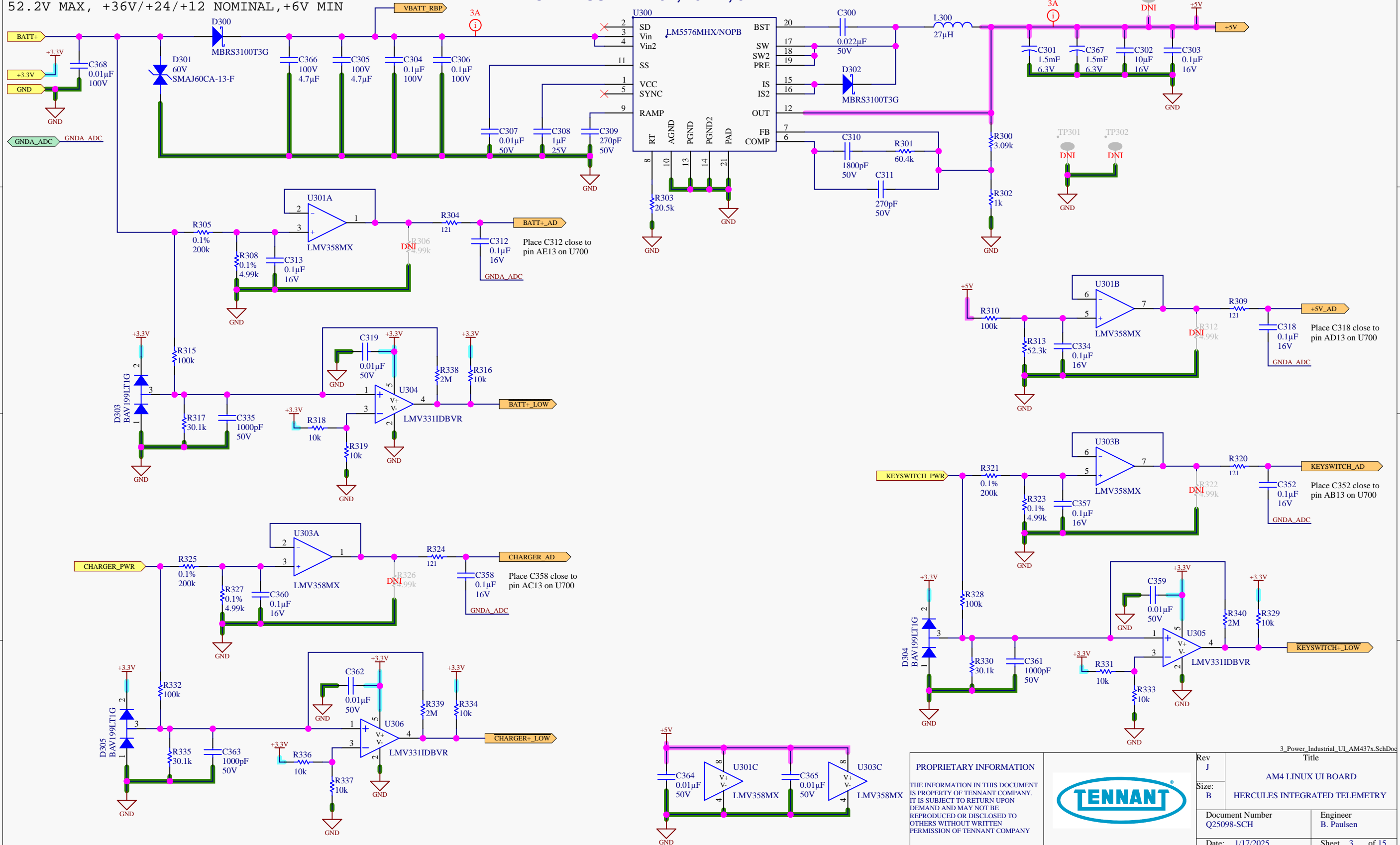
FID1	FID2	FID3
DNI	DNI	DNI
FID4	FID5	FID6
DNI	DNI	DNI


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		Size: B	AM4 LINUX UI BOARD HERCULES INTEGRATED TELEMETRY	
		Document Number Q25098-SCH		Engineer B. Paulsen
		Date: 1/17/2025		Sheet 1 of 15

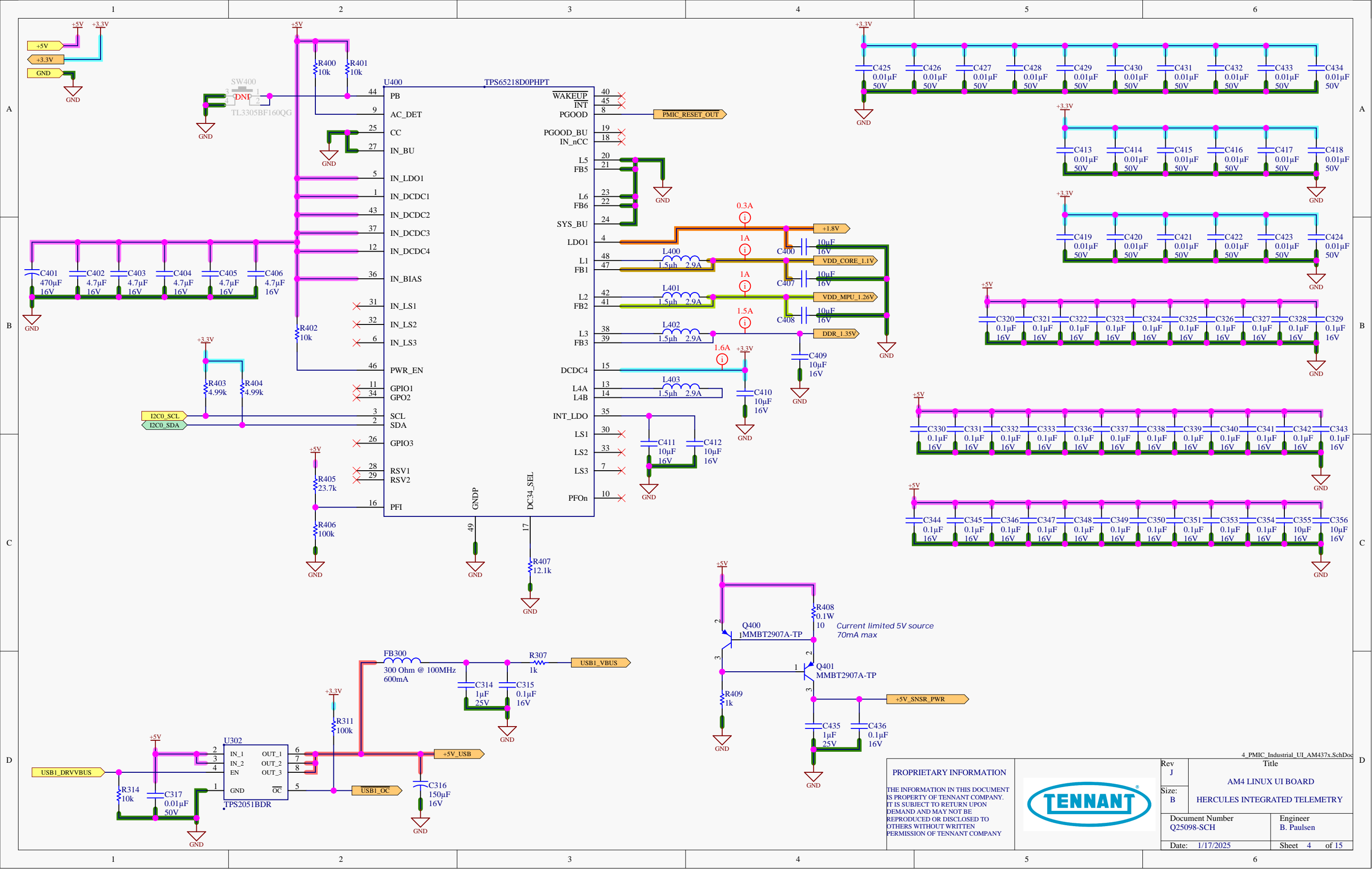


POWER INPUT
52.2V MAX, +36V/+24/+12 NOMINAL, +6V MIN

**POWER SUPPLY +5V, 75VIN, 3A**

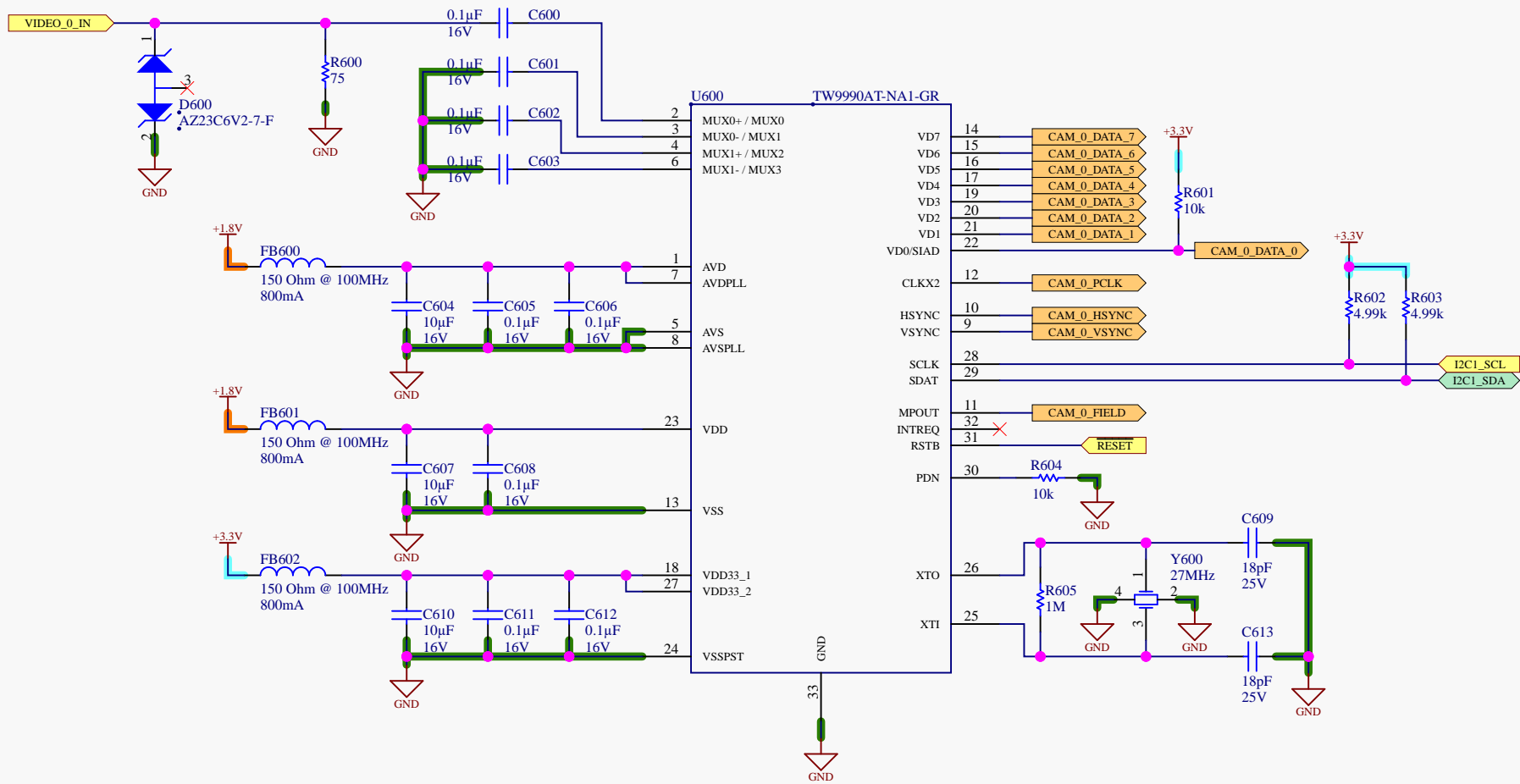
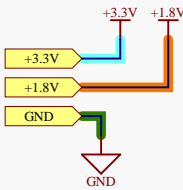


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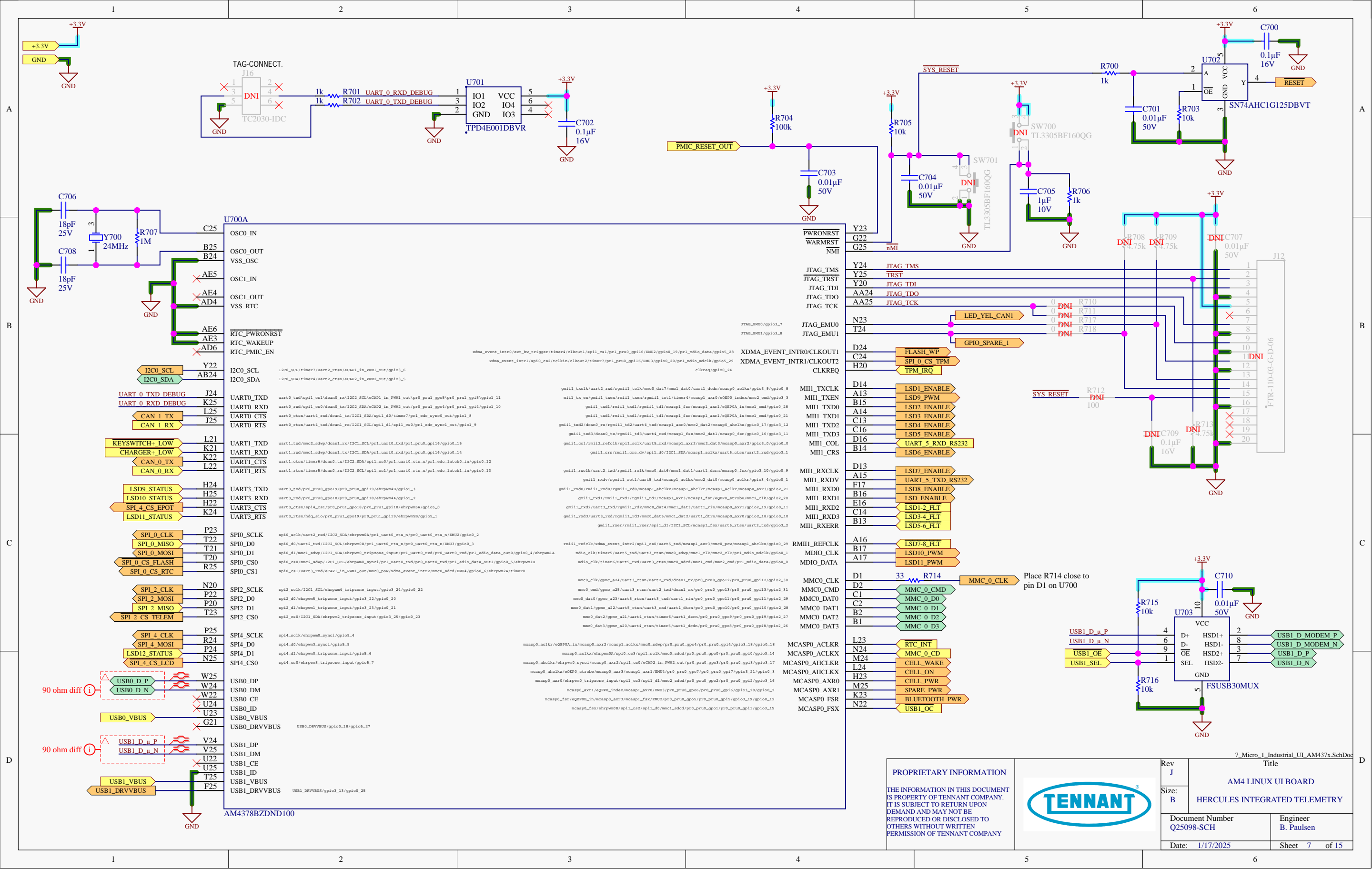


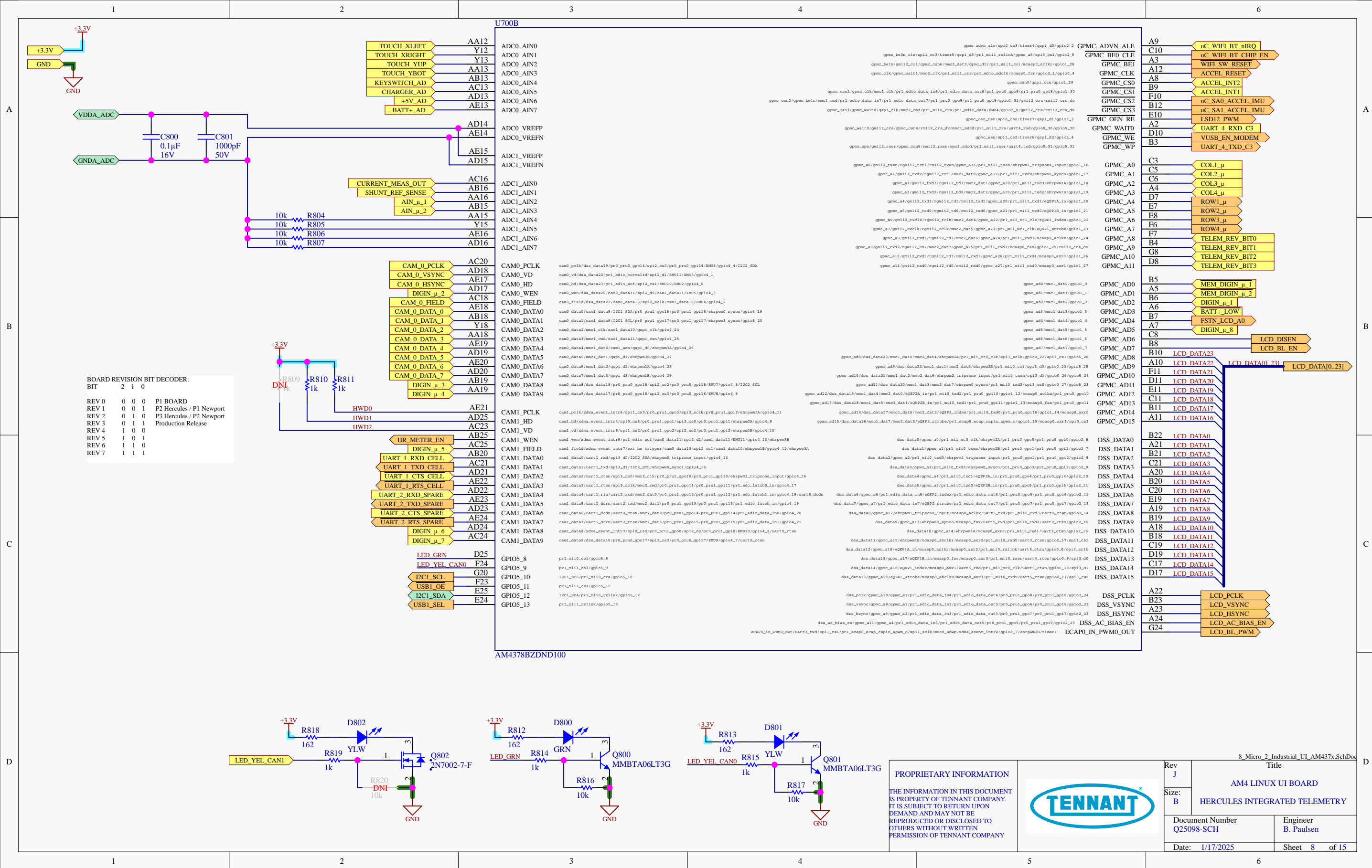
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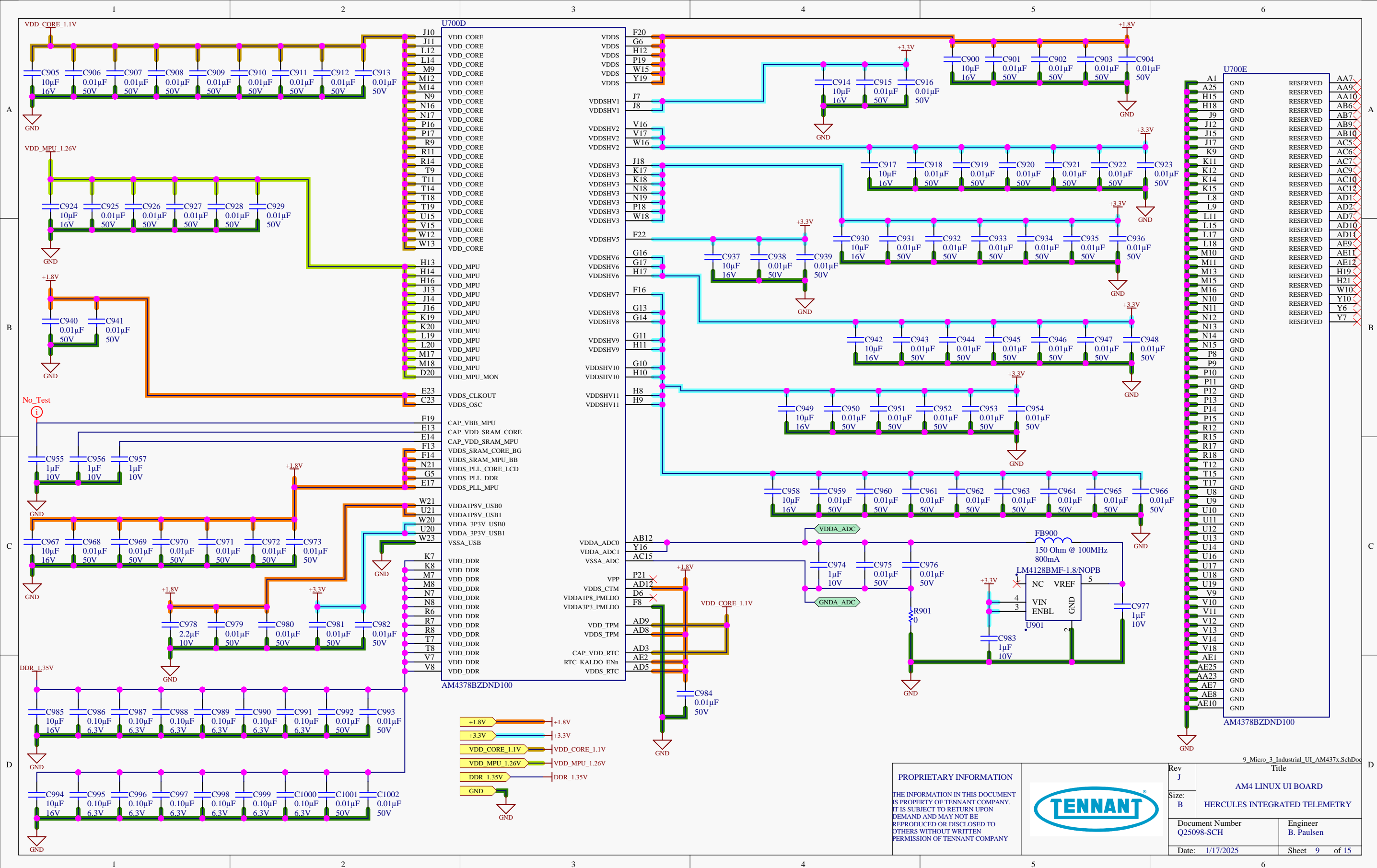
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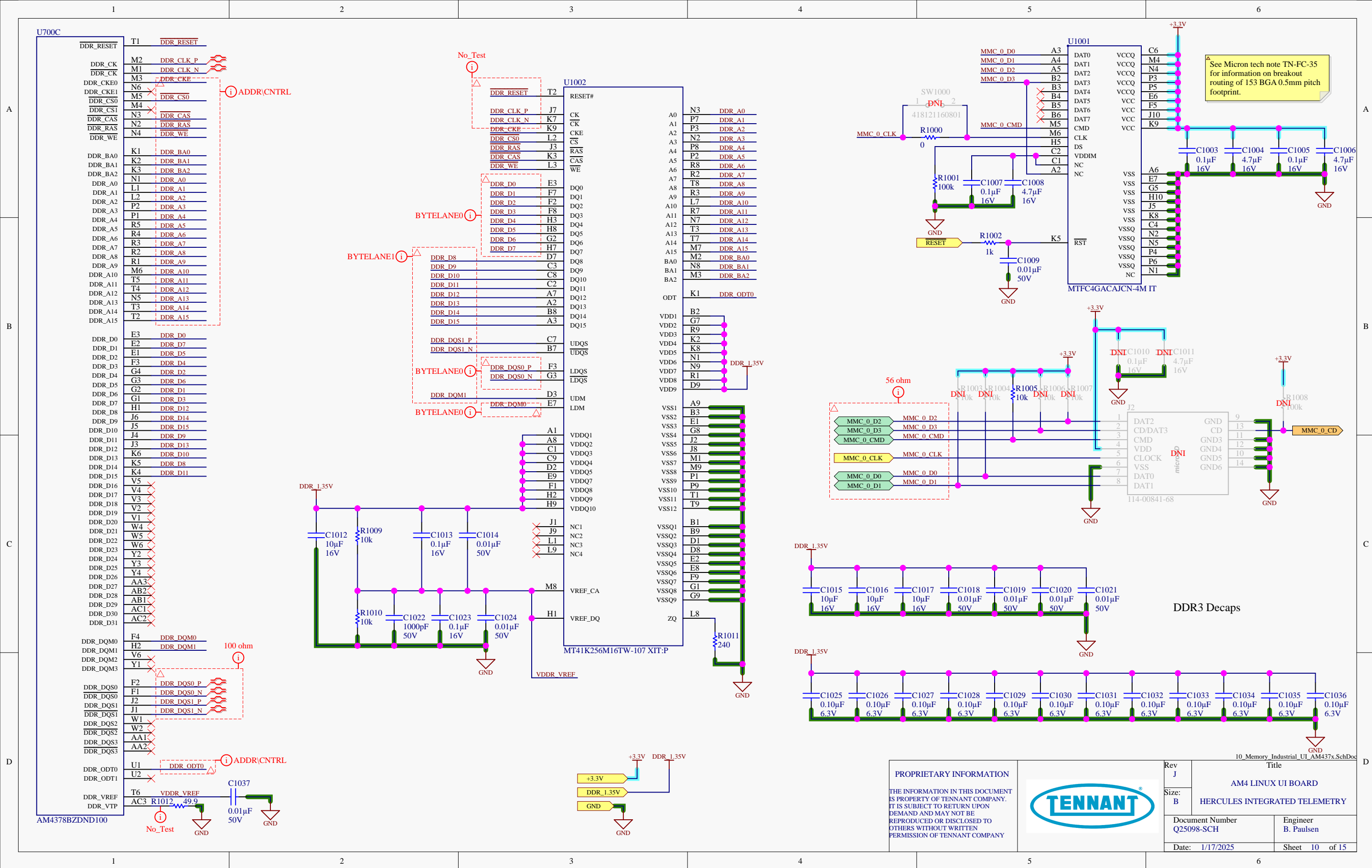
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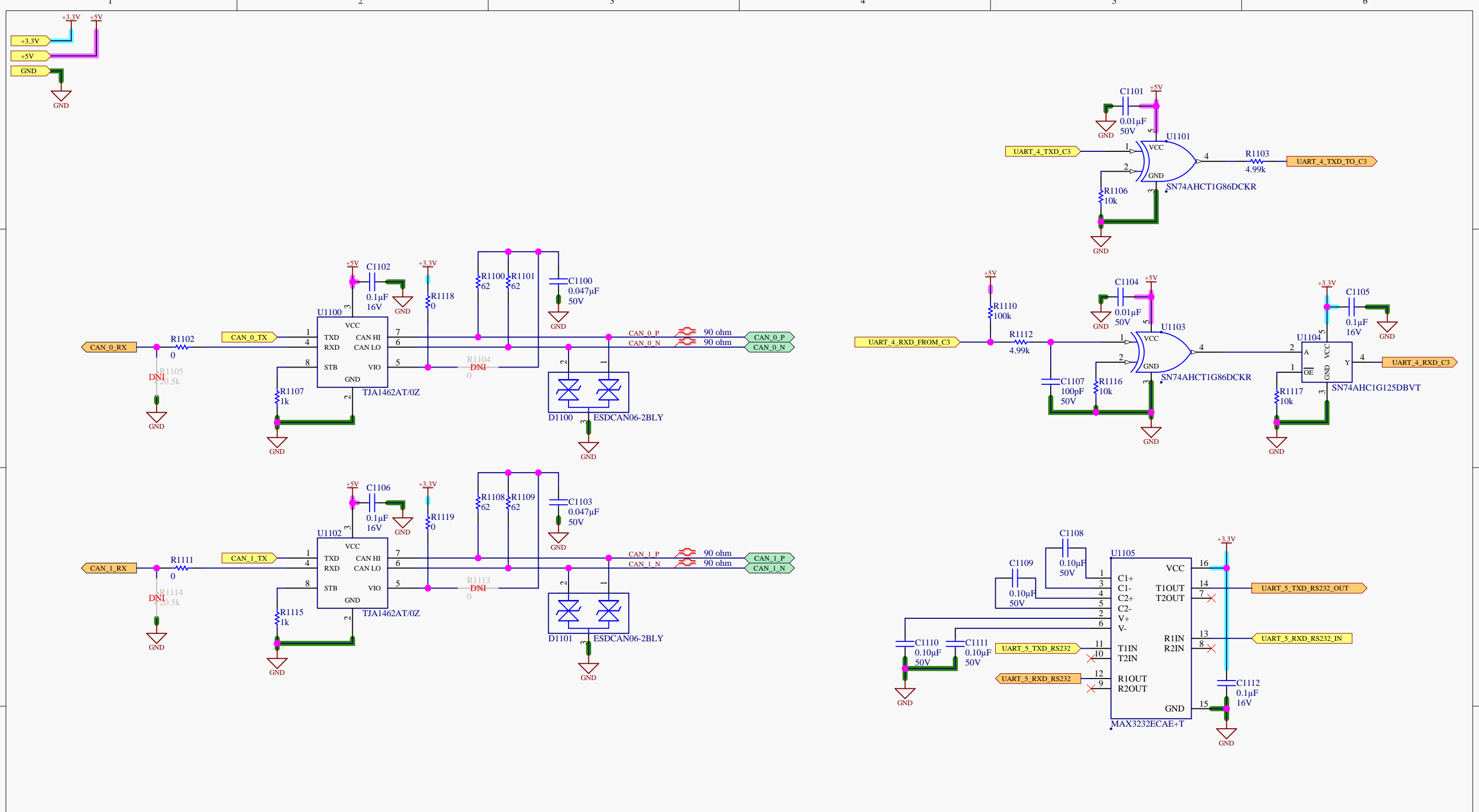


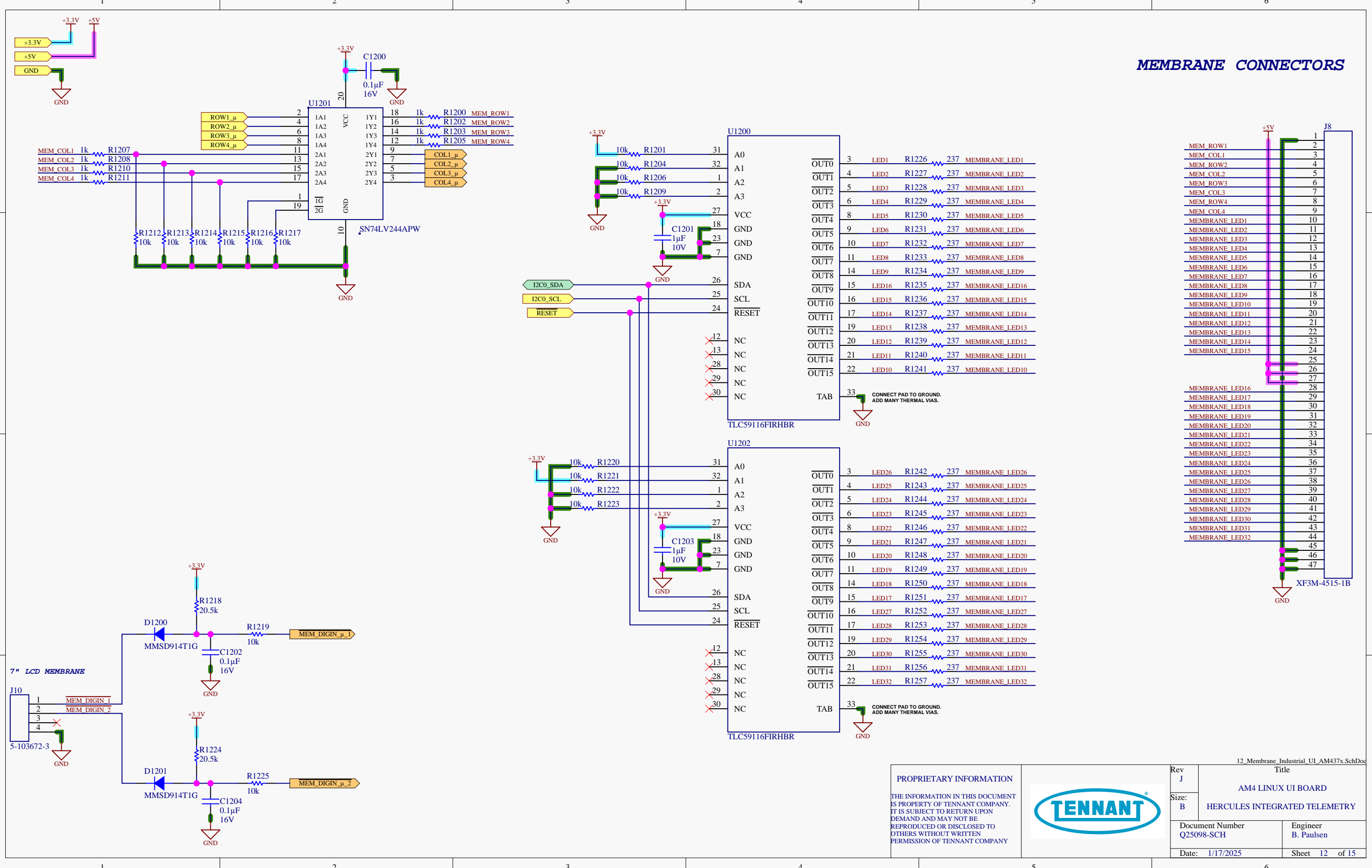




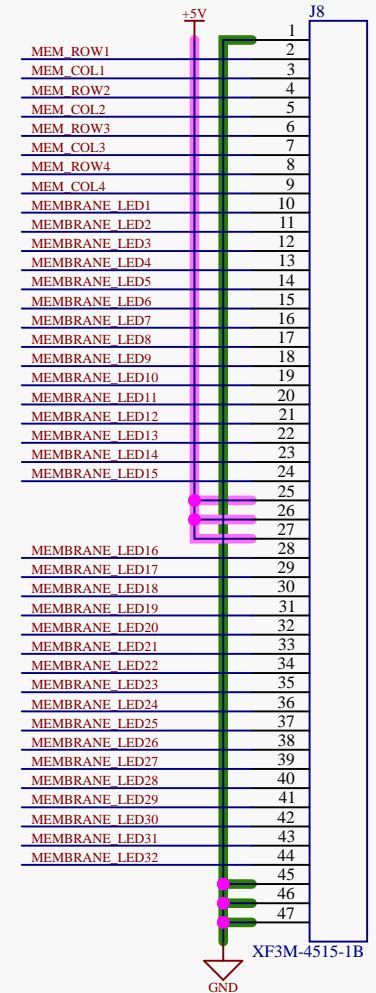








## MEMBRANE CONNECTORS



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