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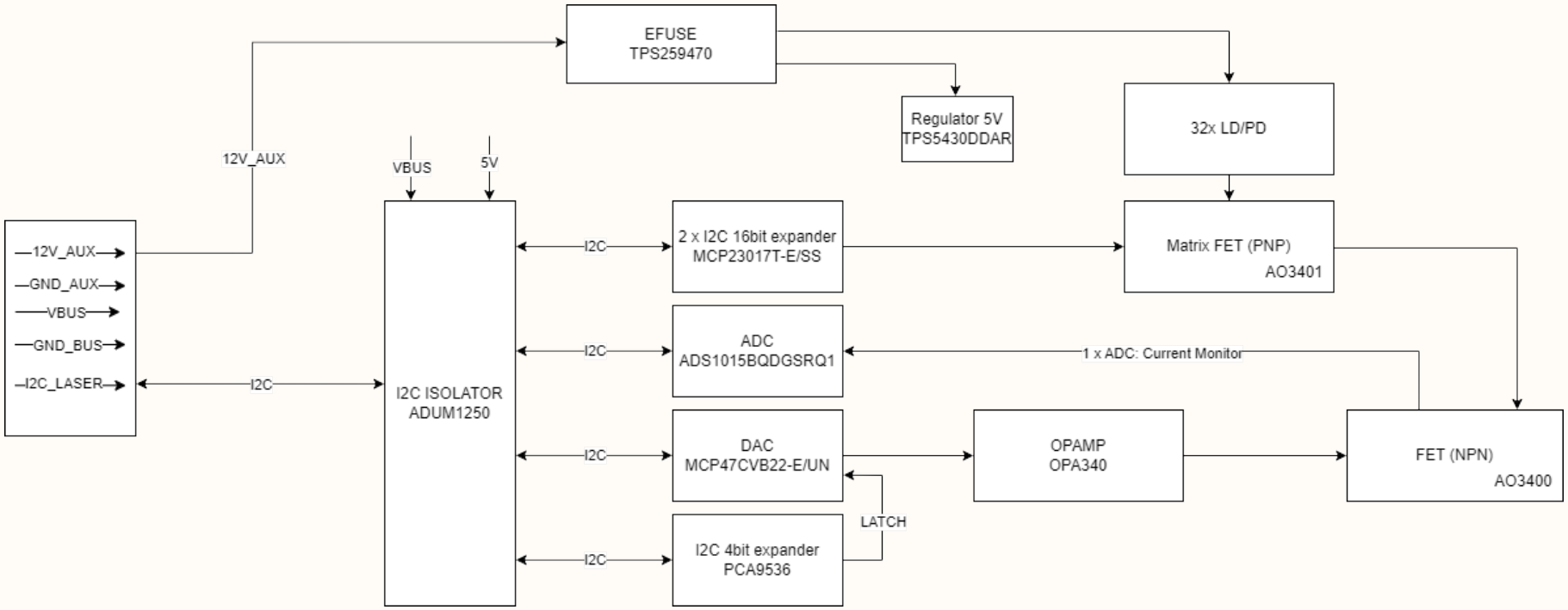
# NANORACK LASER

## Schematic V1.0.0

SpaceTechTech

| | | |
|---|---|---|
| Project: BEE-PC1 | Sub-system: NANORACK_LASER.PrjPcb | |
| Design by: Hung Nguyen D. | Sheet title: INDEX.SchDoc | Sheet 1 of 6 |
| Checked by: Bao Bui Q. | Document No: 1 | Size: A3 |
| Approved by: Vu Pham | Revision: V1.0.0 | Date: 10/3/2024 |

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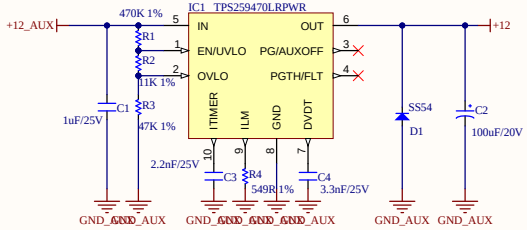
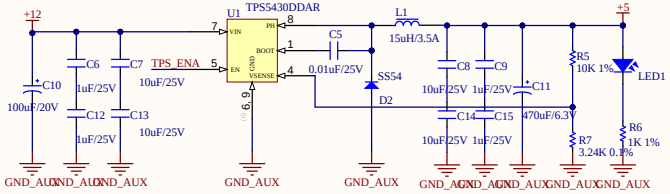
|---|---|---|
| Project: BEE-PC1 | Sub-system: NANORACK_LASER.PrjPcb | |
| Design by: Hung Nguyen D. | Sheet title: BLOCK_DIAGRAM.SchDoc | Sheet 2 of 6 |
| Checked by: Bao Bui Q. | Document No: 2 | Size: A3 |
| Approved by: Vu Pham | Revision: V1.0.0 | Date: 10/3/2024 |




**EFUSE**




**REGULATOR**

$$SR\left(\frac{V}{ms}\right) = \frac{V_{IN}(V)}{t_R(ms)}$$

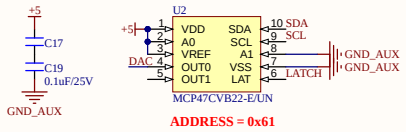
$$C_{dVdt}(pF) = \frac{2000}{SR\left(\frac{V}{ms}\right)}$$

$$I_{INRUSH}(mA) = SR(V/ms) \times C_{OUT}(uF)$$

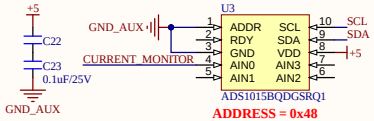
$$R_{LIM}(\Omega) = \frac{3334}{I_{LIM}(A)}$$

$$R_2 = \frac{R_1 \times 1{,}221}{V_{OUT} - 1{,}221}$$

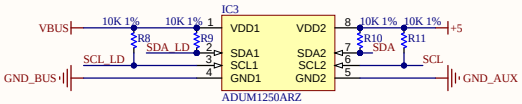
| | | |
|---|---|---|
| Project: BEE-PC1 | Sub-system: NANORACK_LASER.PrjPcb | |
| Design by: Hung Nguyen D. | Sheet title: EFUSE_AND_REGULATOR.SchDoc | Sheet 3 of 6 |
| Checked by: Bao Bui Q. | Document No: 3 | Size: A3 |
| Approved by: Vu Pham | Revision: V1.0.0 | Date: 10/3/2024 |



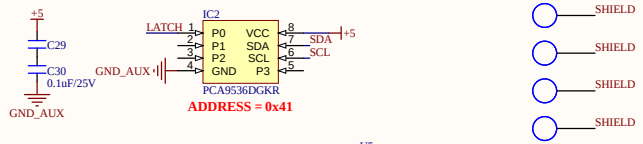

## DAC

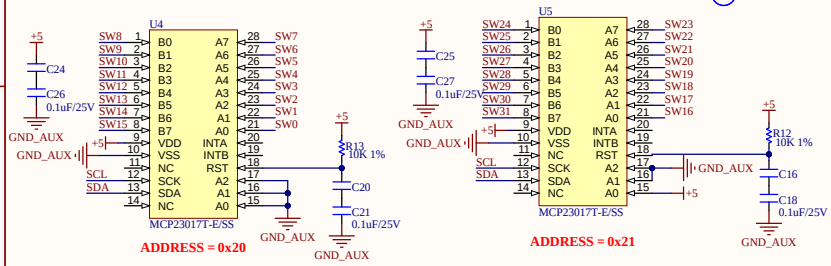



## ADC

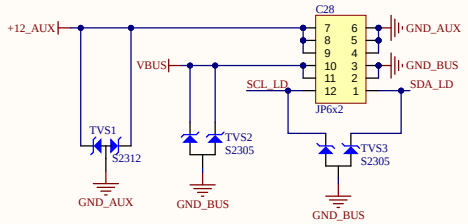



## I2C ISOLATE



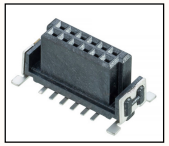

## I2C EXPANDER




## CONNECTOR

### Harwin Inc. M55-6001242R

- ELECTRICAL:
  CURRENT RATING: 1.2A/CONTACT
  VOLTAGE RATING: 100V/CONTACT
- ENVIRONMENTAL:
  TEMPERATURE RANGE: -55°C TO +125°C
- PHYSICAL:
  PITCH-MATING: 0.050" (1.27mm)
- MATING:
  Board to board
  MAX CURRENT: 0.7A/CONTACT
  Harwin Inc. M55-7001242R



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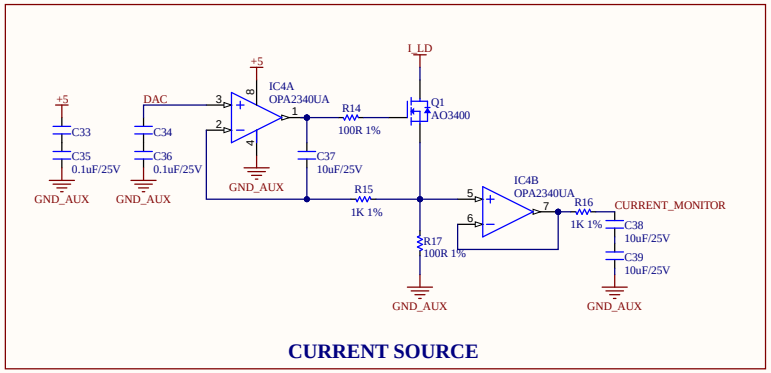
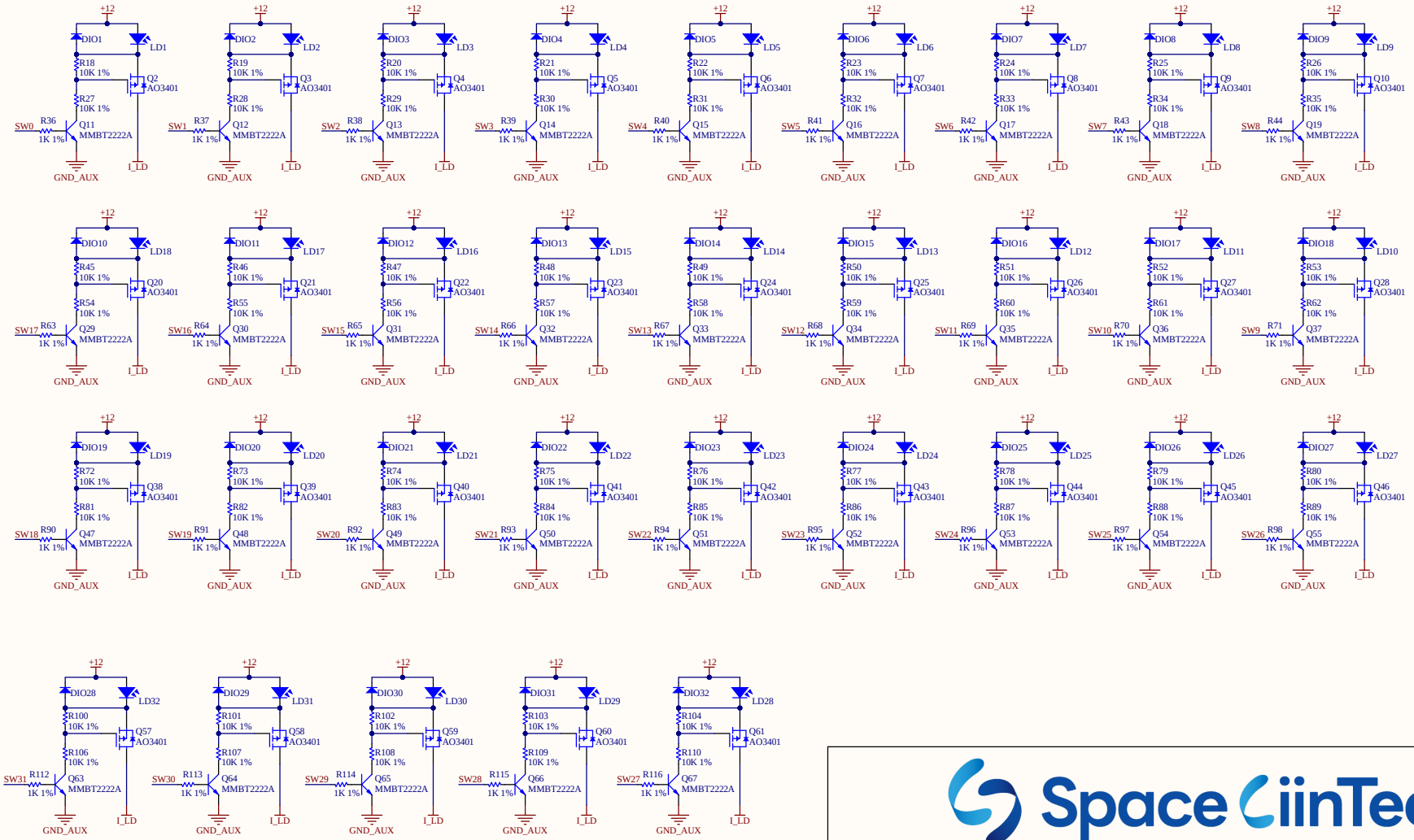
|---|---|---|
| Project: BEE-PC1 | Sub-system: NANORACK_LASER.PrjPcb | |
| Design by: Hung Nguyen D. | Sheet title: COMMUNICATION.SchDoc | Sheet 4 of 6 |
| Checked by: Bao Bui Q. | Document No: 4 | Size: A3 |
| Approved by: Vu Pham | Revision: V1.0.0 | Date: 10/3/2024 |




**CURRENT SOURCE**

| | | |
|---|---|---|
| Project: BEE-PC1 | Sub-system: NANORACK_LASER.PrjPcb | |
| Design by: Hung Nguyen D. | Sheet title: CURRENT_SOURCE.SchDoc | Sheet 5 of 6 |
| Checked by: Bao Bui Q. | Document No: 5 | Size: A3 |
| Approved by: Vu Pham | Revision: V1.0.0 | Date: 10/3/2024 |

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|---|---|---|
| Project: BEE-PC1 | Sub-system: NANORACK_LASER.PrjPcb | |
| Design by: Hung Nguyen D. | Sheet title: SWITCHING.SchDoc | Sheet 6 of 6 |
| Checked by: Bao Bui Q. | Document No: 6 | Size: A3 |
| Approved by: Vu Pham | Revision: V1.0.0 | Date: 10/3/2024 |