

X2E Reference Sensor

Variant: Default

26.02.2024
V1.2

DRAFT

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DESIGN CONSIDERATIONS

DESIGN NOTE:
Example text for informational
design notes .

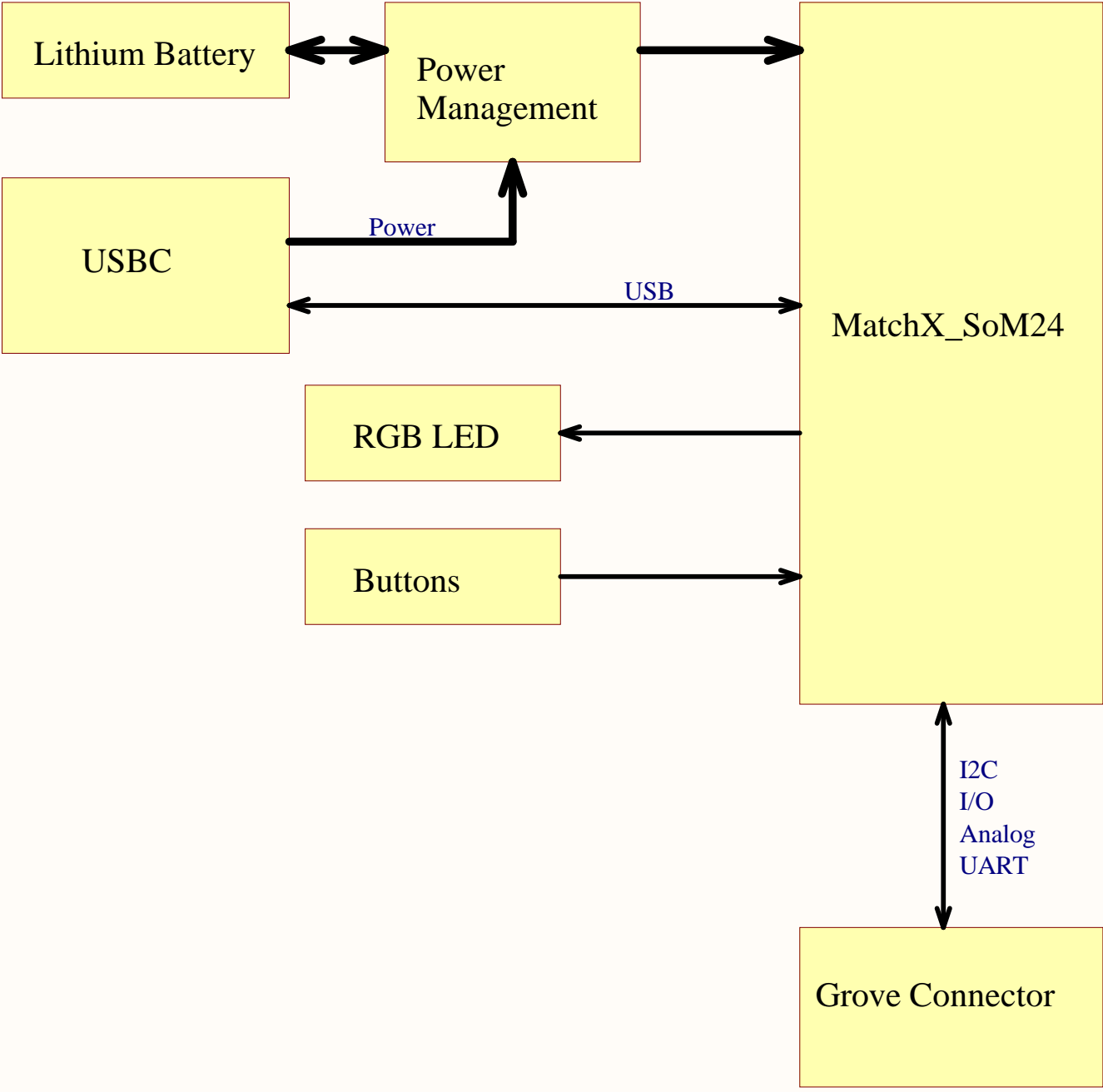
DESIGN NOTE:
Example text for critical
design notes.

DESIGN NOTE:
Example text for cautionary
design notes.

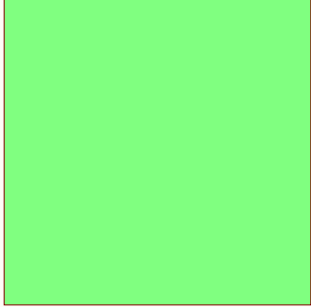
LAYOUT NOTE:
Example text for critical
layout guidelines.

X2E Reference Sensor

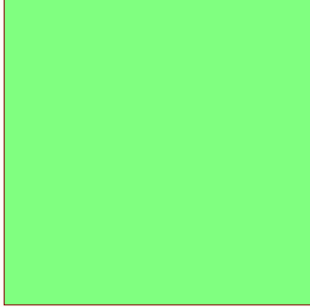
(Block Diagram)



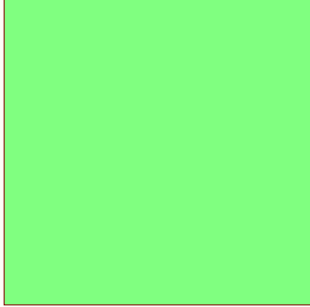
Designator
COVER PAGE.SchDoc



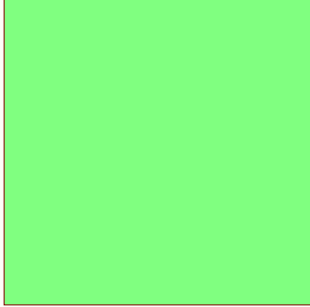
Designator
BLOCK DIAGRAM.SchDoc



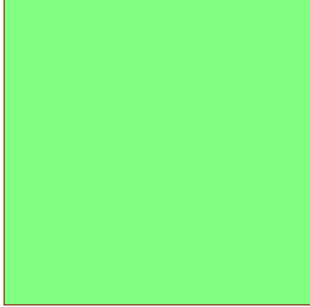
Designator
DOC REVISION HISTORY.SchDoc



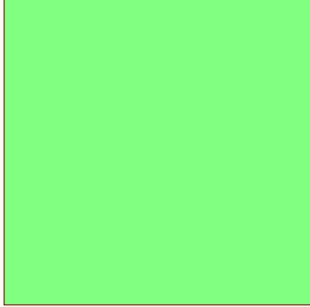
Designator
ESP32_S3.SchDoc



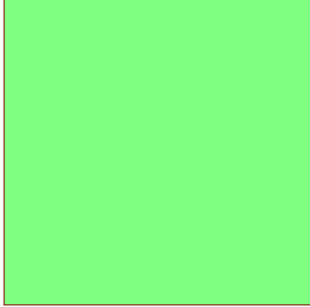
Designator
SENSORS.SchDoc



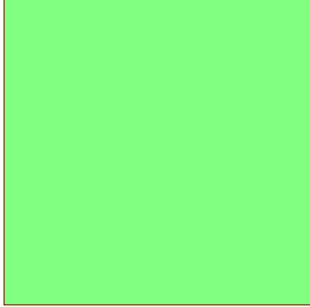
Designator
POWER.SchDoc



Designator
LoRa.SchDoc



Designator
GPS.SchDoc



TEMPLATE NOTES

Set Project Parameters

- 1) Go to Project -> Project Options -> Parameters
- 2) Set Company, Project and VersionRevision

Mark Not Fitted Components as

NF

Net Class Example



Differential signal example



TITLE Examples (You can change the color to reflect your company color)

PAGE TITLE

Peripheral / Group of component title

Smaller Ttitle


Schematic Status Explanation

DRAFT - Very early stage of schematic, ignore details.

PRELIMINARY - Close to final schematic.

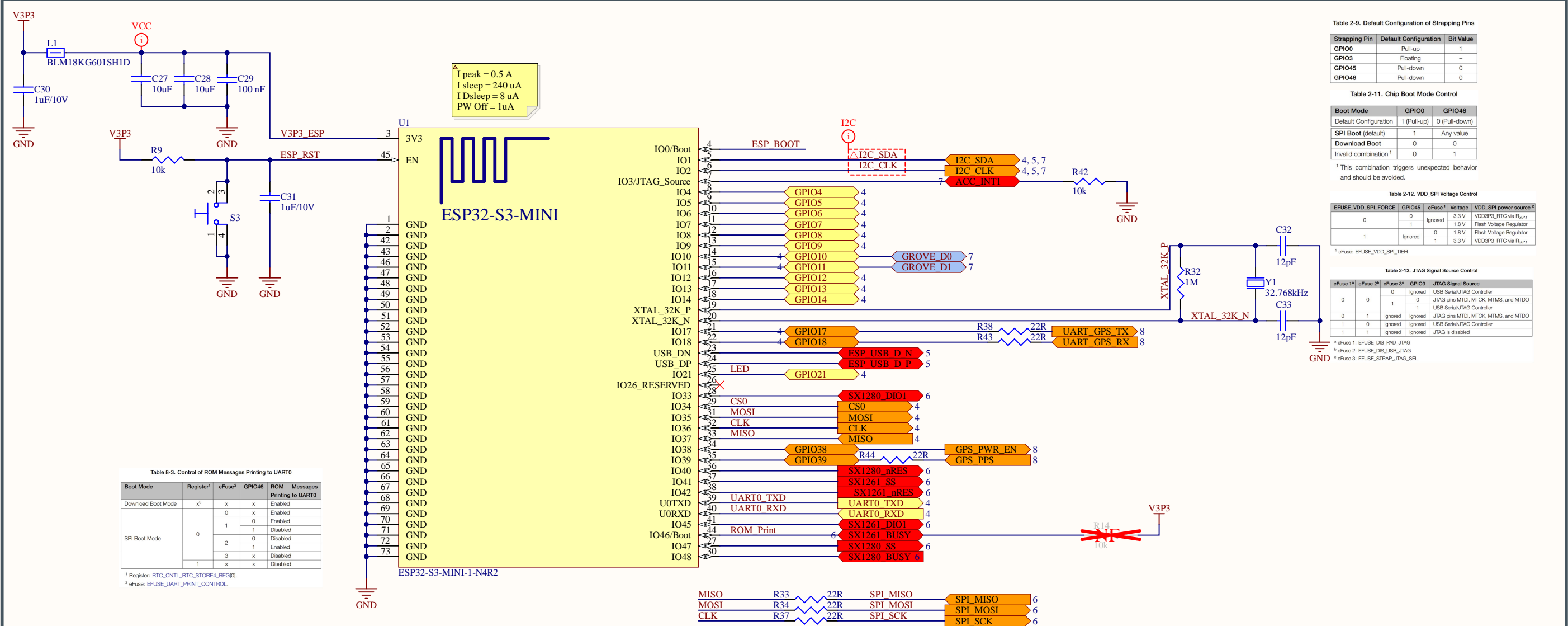
CHECKED - There should not be any mistakes. Tell the engineer if you find one.

RELEASED - A board with this schematic has been sent to production.

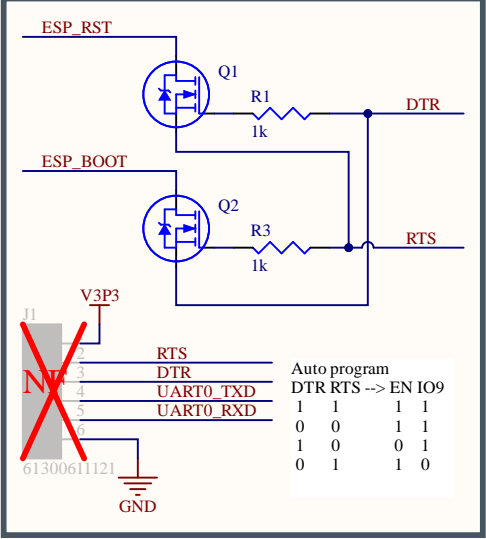
| | | | | |
|---|-----------------------|----------------------------|-----------------------------------|---|
| Company: <i>MatchX</i> | | | CONFIDENTIAL. Do not distribute. | |
| Title: <i>X2E Reference Sensor</i> Variant: Default | | | <i>MatchX</i> * * * * |  |
| Size: <i>A3</i> | Number: <i>3</i> | Revision: <i>V1.0</i> | | |
| Date: <i>26.02.2024</i> | Time: <i>18:41:13</i> | Sheet <i>3</i> of <i>9</i> | | |
| File: <i>TOPSHEET.SchDoc</i> | | | | |
| | | | Engineer: <i>PSB</i> | |

ESP32_S3.SchDoc

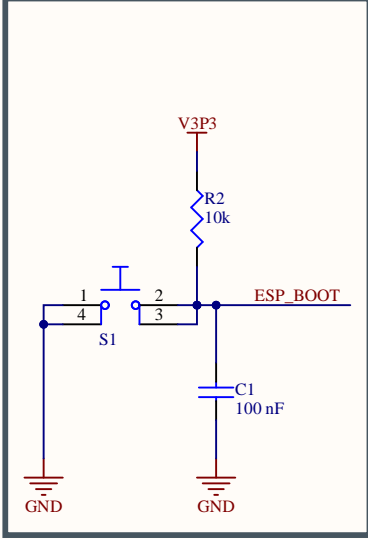
ESP32-S3 Module



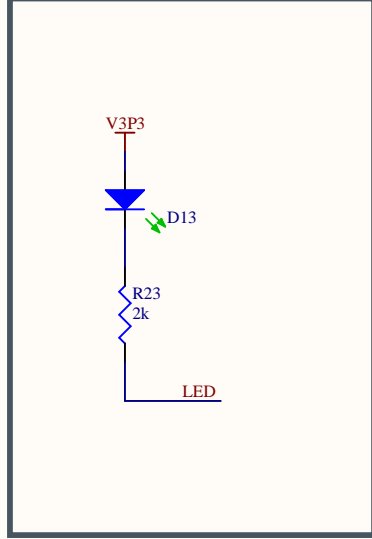
Programming interface



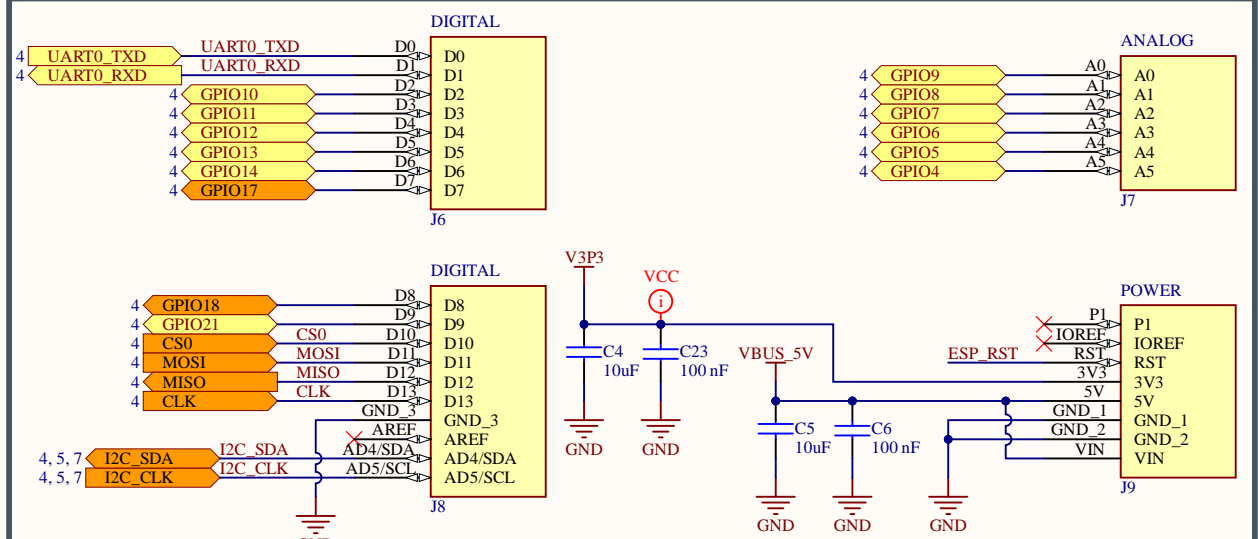
Boot



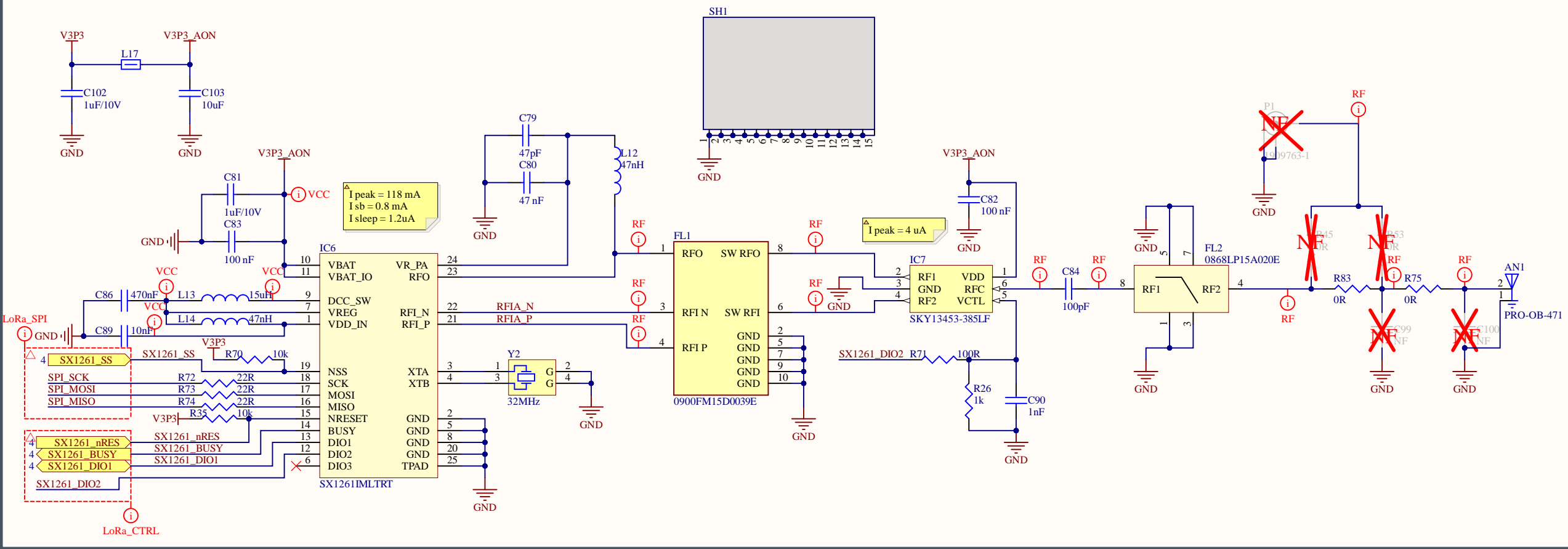
LED



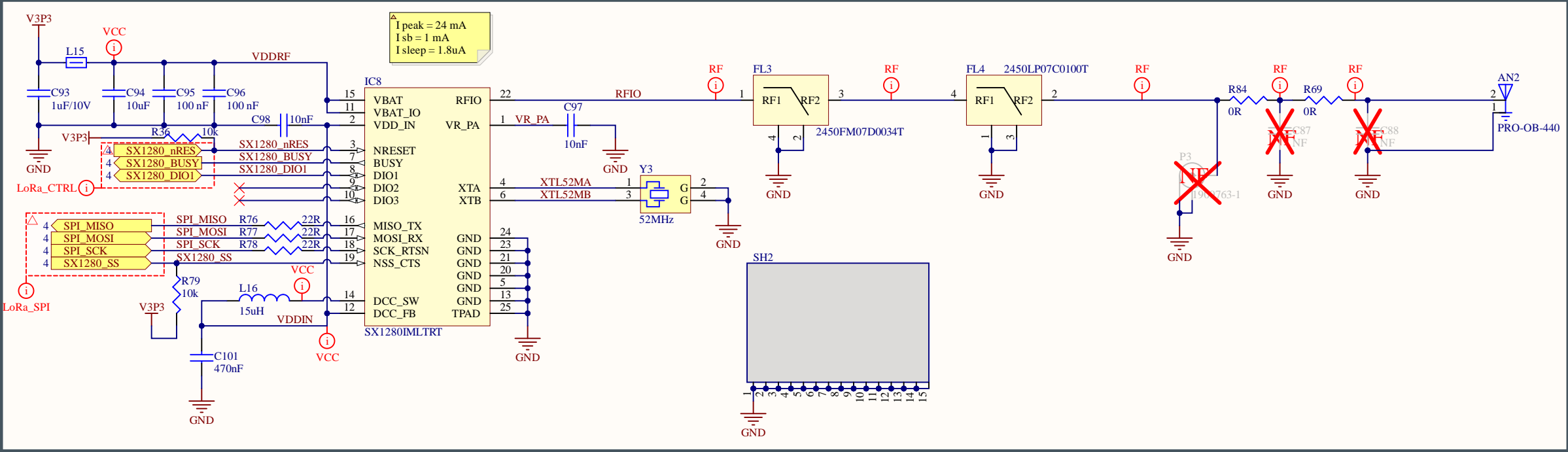
Arduino Header



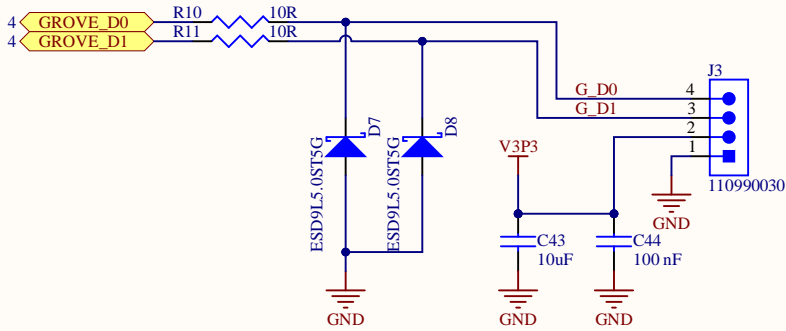
LoRa Sub-GHz Module



LoRa 2.4GHz

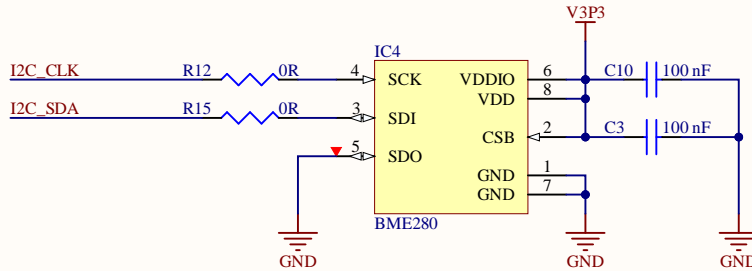


Grove Connector



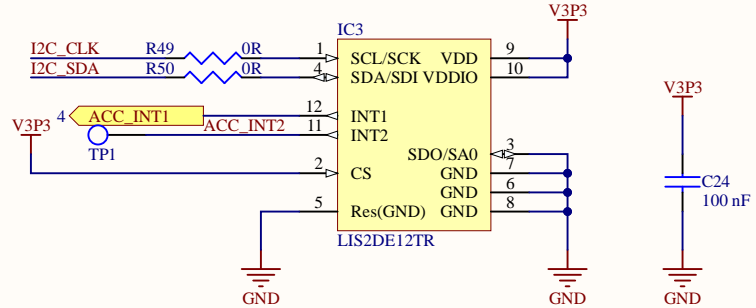
Pressure/Temp/Humidity Sensor

I2C 7 bits Address: 0x76

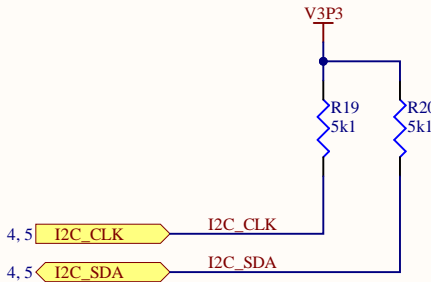


Accelerometer

I2C 7 bits Address: 0x18

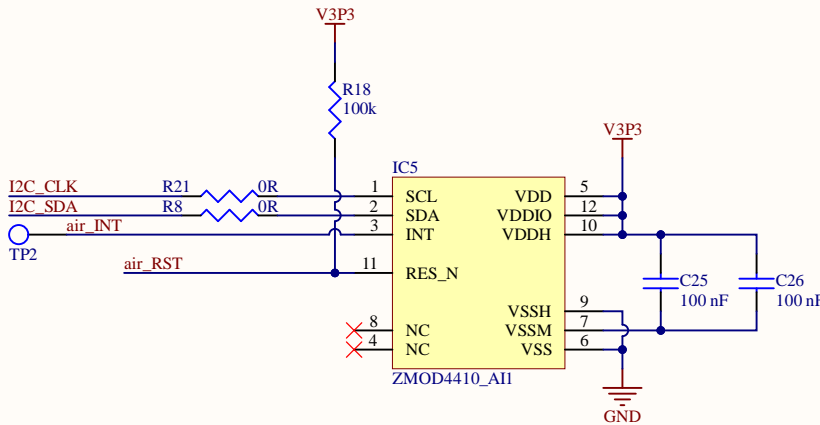


I2C Pull-Ups

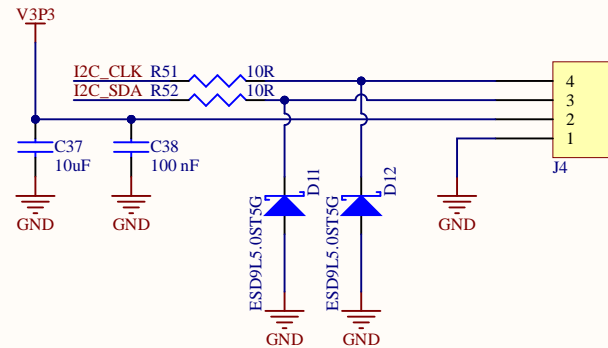


Air Quality Sensor

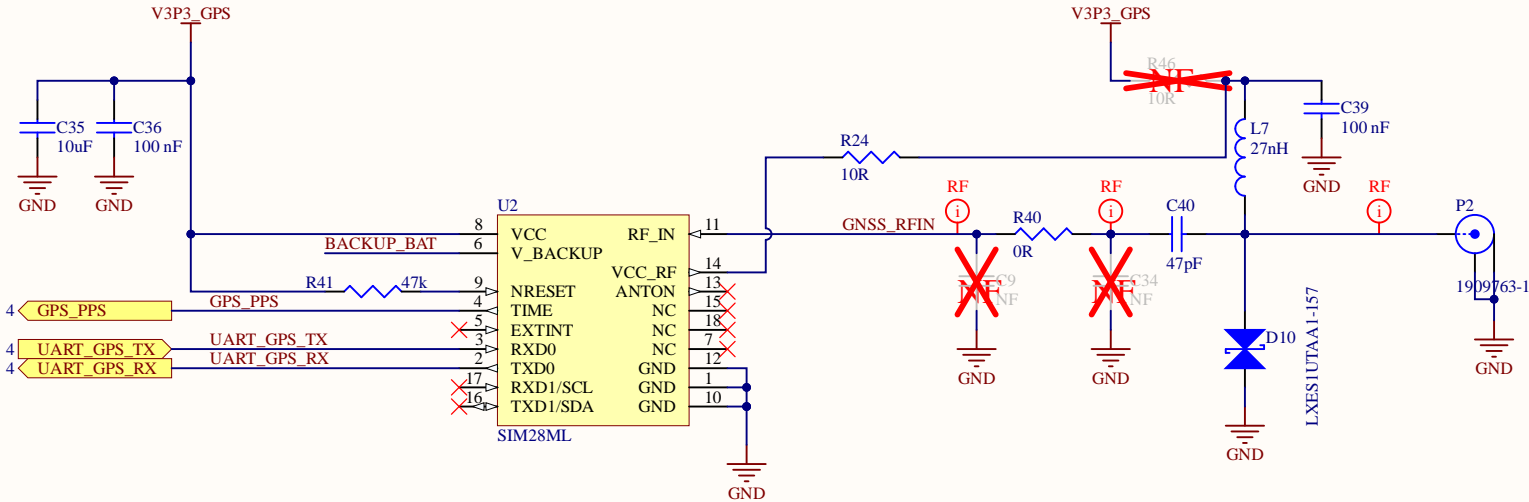
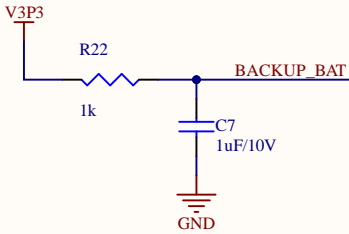
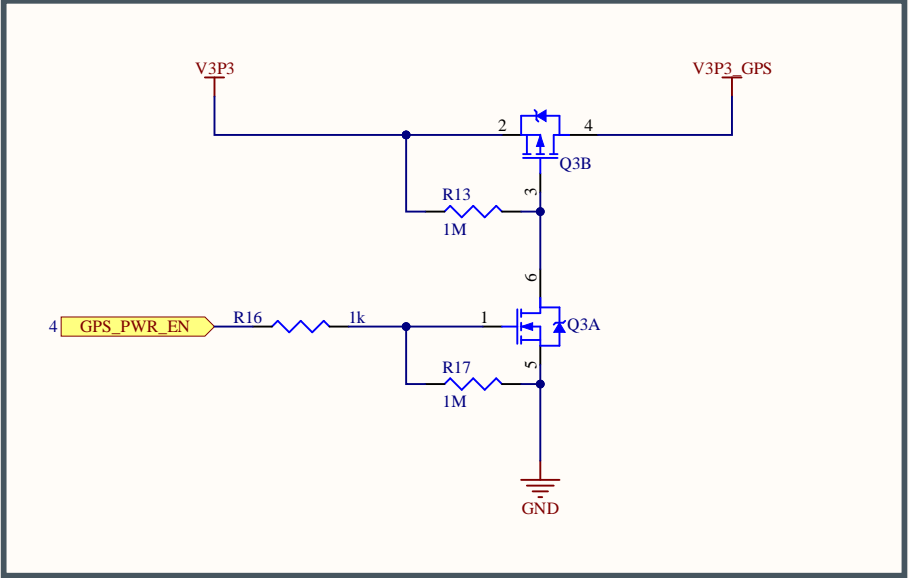
I2C 7 bits Address: 0x32



STEMMA 4-Pin



Power Enable




DOC: REVISION HISTORY

Revision History

TODO in rev.1.1

CLOCKS (CPU & PCIe)

| | | | | |
|---|----------------|---------------|----------------------------------|---|
| Company: <i>MatchX GmbH</i> | | | CONFIDENTIAL. Do not distribute. | |
| Title: <i>X2E Reference Sensor</i> Variant: Default | | | <i>MatchX GmbH</i> |  |
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| File: DOC REVISION HISTORY.SchDoc | | | Engineer: PSB | |