

RELEASE

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DESIGN CONSIDERATIONS

DESIGN NOTE:
Example text for informational
design notes .

DESIGN NOTE:
Example text for critical
design notes.

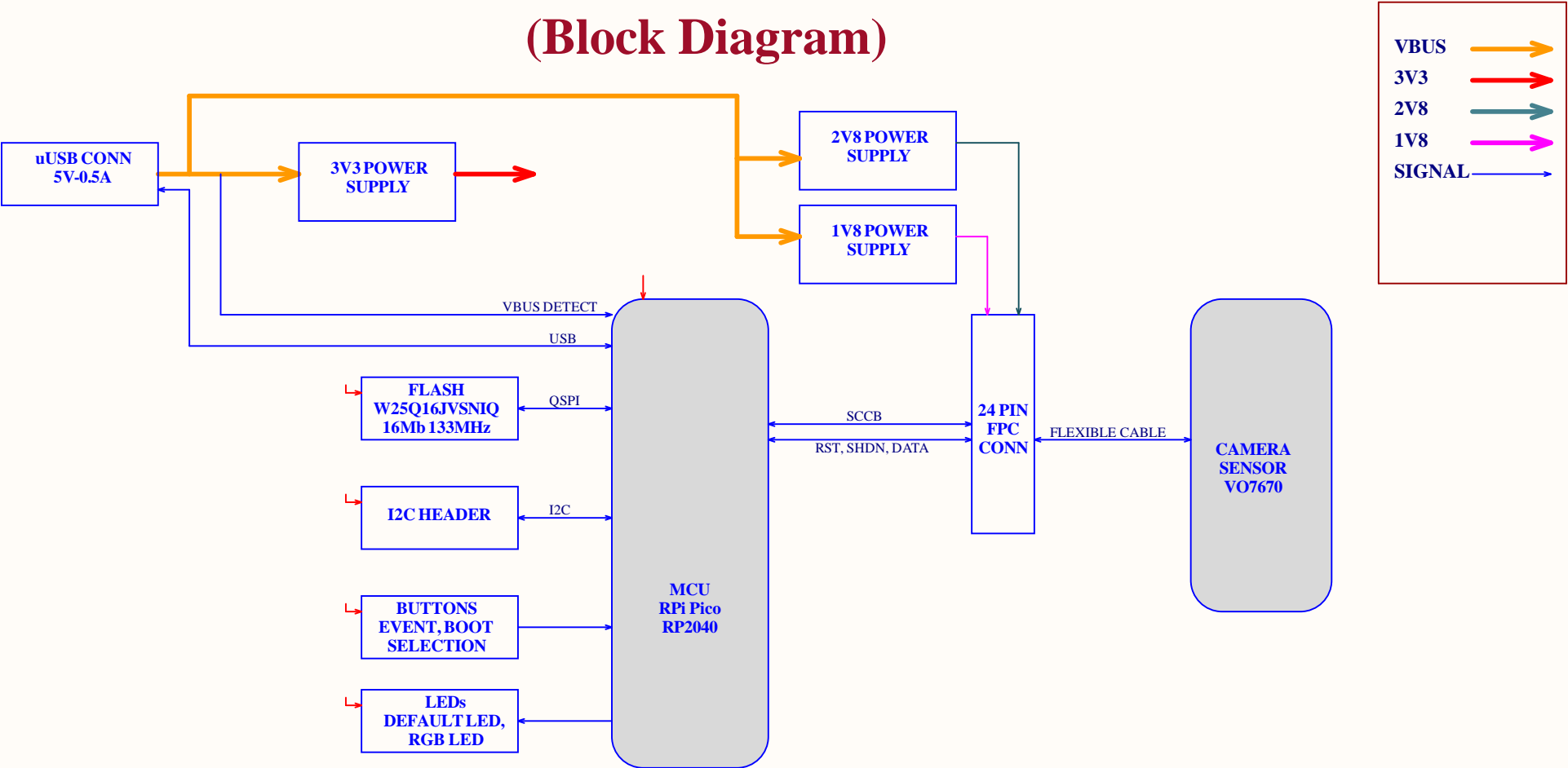
DESIGN NOTE:
Example text for cautionary
design notes.

LAYOUT NOTE:
Example text for critical
layout guidelines.

| | | | | | | |
|---------------------------------|-------------------|----------------|-----------|------|---|--|
| Title: [01] - COVER PAGE.SchDoc | | | | | ITR VN Corp. | |
| Size: A4 | Number: 1 | Revision: v1.0 | Designer: | Name | Room 904, Saigon Paragon Building, Tan Phu Ward, District 7, Ho Chi Minh City, 700000, Vietnam | |
| Date: 5/23/2024 | Time: 10:30:56 AM | Sheet 1 of 7 | Reviewer: | Name | | |
| File: [01] - COVER PAGE.SchDoc | | | Approved: | Name | | |

Pico Camera PCB v1.1.PrjPcb

(Block Diagram)



| | | | | | | |
|---|-------------------|-----------------------|-----------|------|---|--|
| Title: [02] - BLOCK DIAGRAM.SchDoc | | | | | ITR VN Corp. | |
| Size: A4 | Number: 2 | Revision: v1.0 | Designer: | Name | Room 904, Saigon Paragon Building, Tan Phu Ward, District 7, Ho Chi Minh City, 700000, Vietnam | |
| Date: 5/23/2024 | Time: 10:30:56 AM | Sheet 2 of 7 | Reviewer: | Name | | |
| File: [02] - BLOCK DIAGRAM.SchDoc | | | Approved: | Name | | |

MCU-RP2040

DEBUG

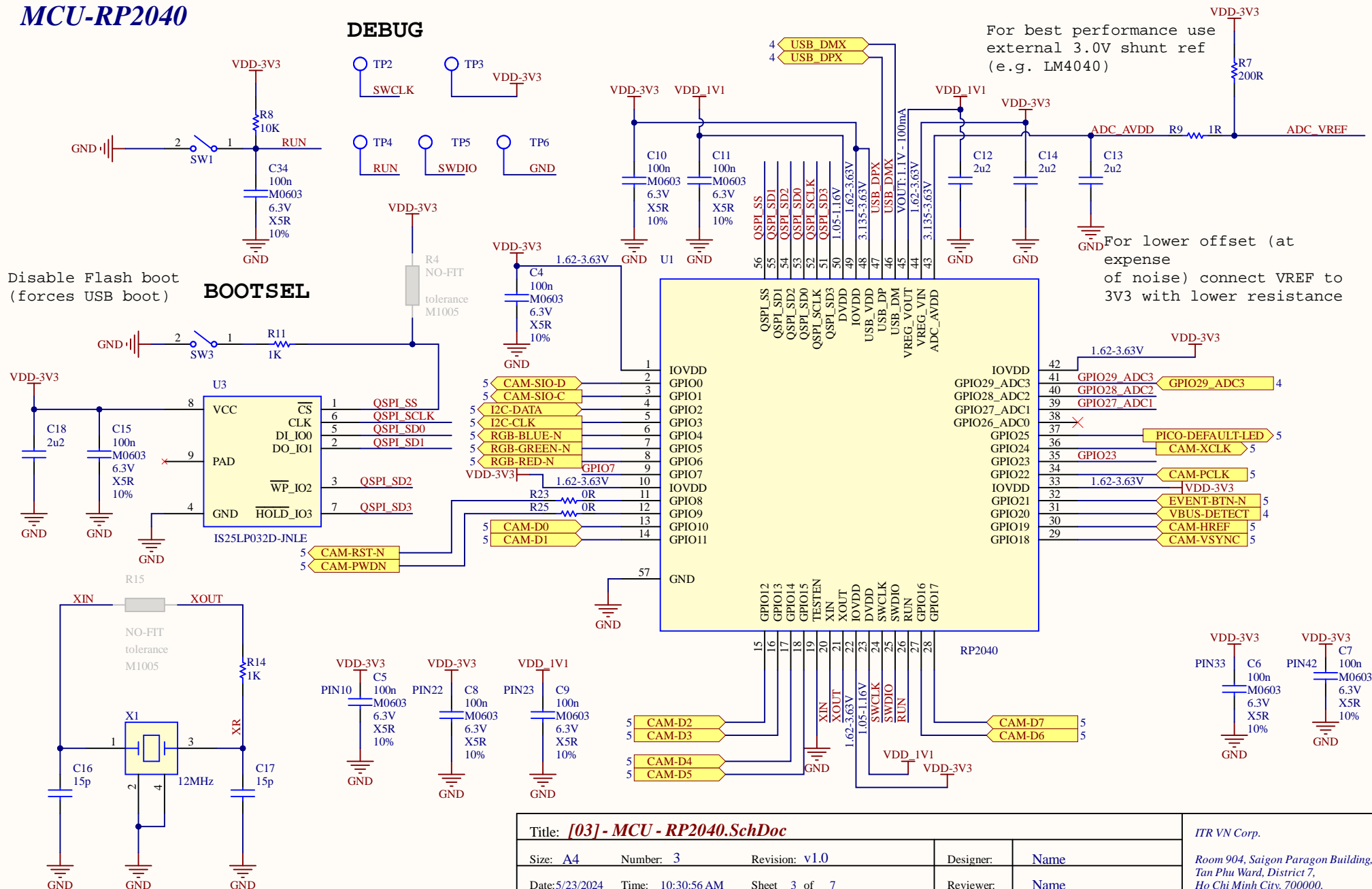
ADC current = 150uA

For best performance use external 3.0V shunt ref (e.g. LM4040)

Disable Flash boot
(forces USB boot)

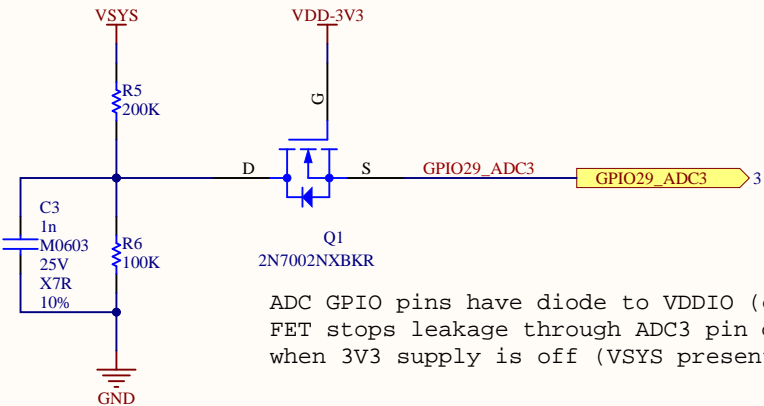
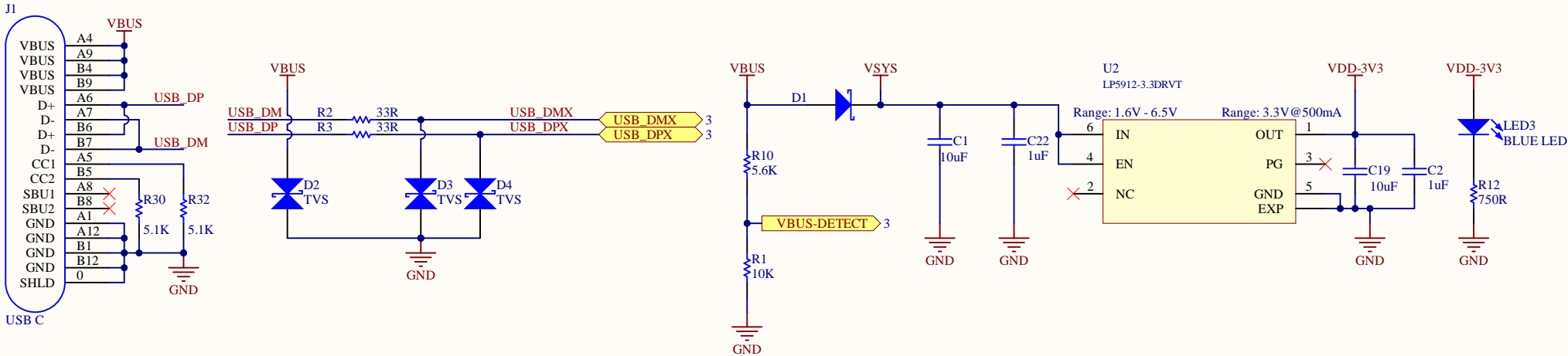
BOOTSEL

For lower offset (at expense of noise) connect VREF to 3V3 with lower resistance

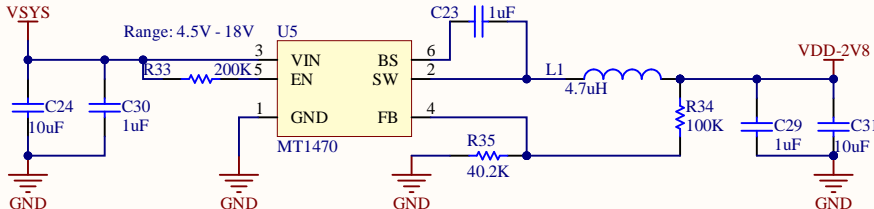


| | | | | | |
|-----------------------------------|-------------------|----------------|-----------|--------------|---|
| Title: [03] - MCU - RP2040.SchDoc | | | | ITR VN Corp. | |
| Size: A4 | Number: 3 | Revision: v1.0 | Designer: | Name | Room 904, Saigon Paragon Building, Tan Phu Ward, District 7, Ho Chi Minh City, 700000, Vietnam |
| Date: 5/23/2024 | Time: 10:30:56 AM | Sheet 3 of 7 | Reviewer: | Name | |
| File: [03] - MCU - RP2040.SchDoc | | | Approved: | Name | |

POWER SUPPLY

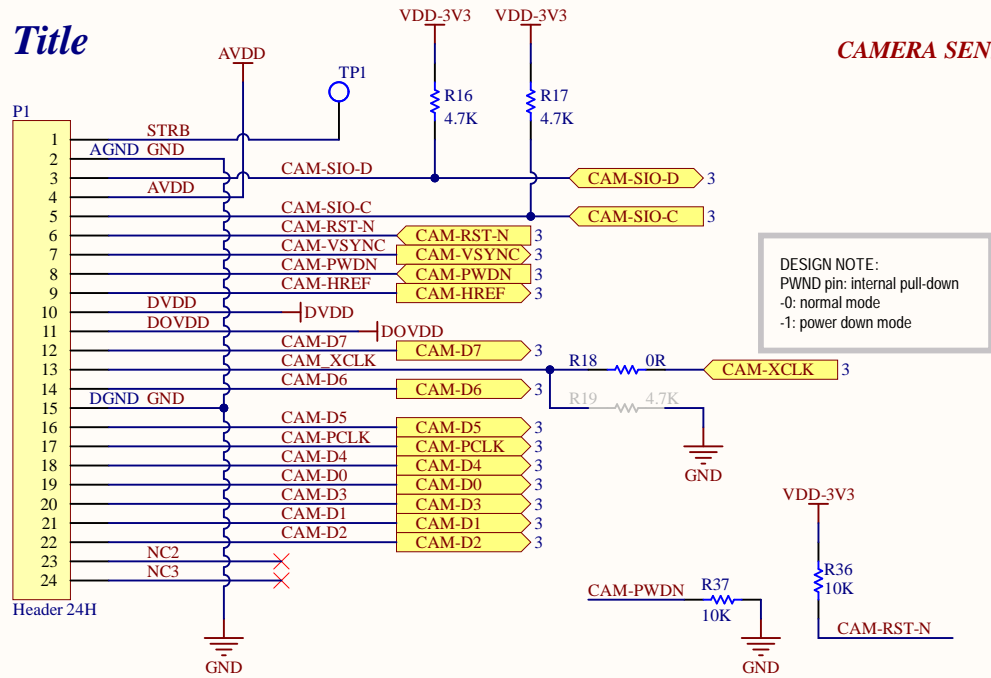


ADC GPIO pins have diode to VDDIO (other GPIO do not)
FET stops leakage through ADC3 pin diode into 3V3 net
when 3V3 supply is off (VSYS present but 3V3_EN low)

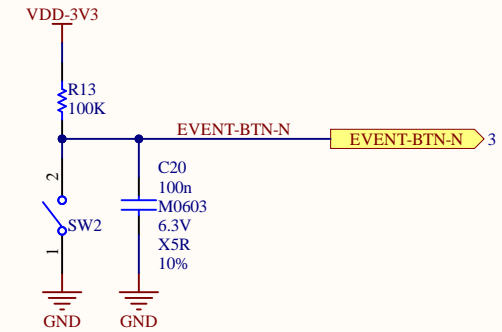


| | | | | | | |
|--|-------------------|-----------------------|-----------|------|---|--|
| Title: [04] - POWER SUPPLY.SchDoc | | | | | ITR VN Corp. | |
| Size: A4 | Number: 4 | Revision: v1.0 | Designer: | Name | Room 904, Saigon Paragon Building, Tan Phu Ward, District 7, Ho Chi Minh City, 700000, Vietnam | |
| Date: 5/23/2024 | Time: 10:30:57 AM | Sheet 4 of 7 | Reviewer: | Name | | |
| File: [04] - POWER SUPPLY.SchDoc | | | Approved: | Name | | |

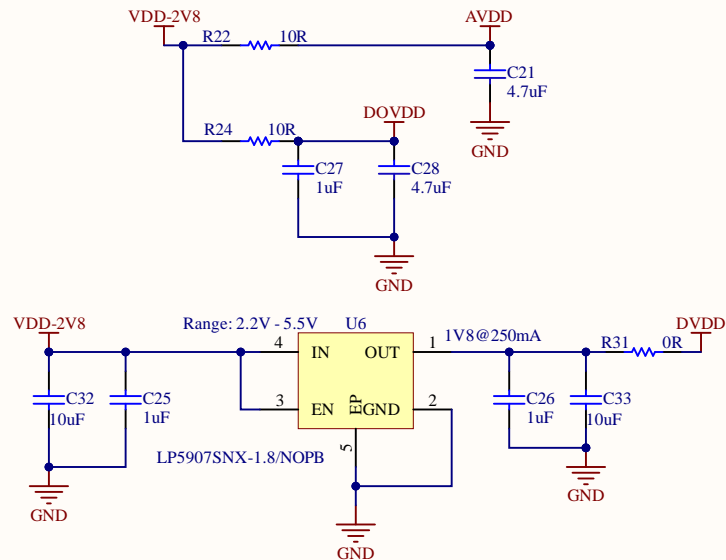
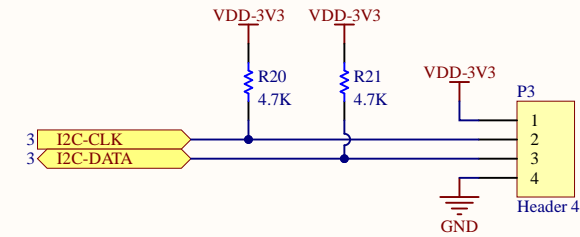
Title



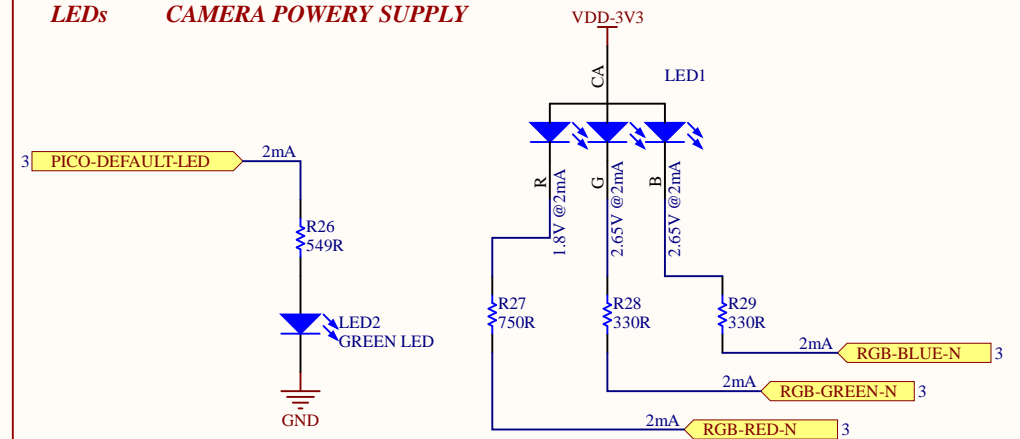
EVENT BUTTON



I2C HEADER



LEDs **CAMERA POWERY SUPPLY**



Title: **[05] - PERIPHERAL.SchDoc**

Size: A4Number: 5Revision: v1.0

Designer:

Name

Date:5/23/2024 Time: 10:30:57 AM

Time: 10:30:57 AMSheet 5 of 7Reviewer:NameFile: [05] - PERIPHERAL.SchDoc

| |
|----------|
| Approved |
|----------|

Name

ITR VN Corp.

Room 904, Saigon Paragon Building,
Tan Phu Ward, District 7,
Ho Chi Minh City, 700000,
Vietnam

DOC: REVISION HISTORY

A

B

C

D

| | | | | |
|--|--------------------------|----------------------------|-----------------------|---|
| Title: [06] - DOC REVISION HISTORY.SchDoc | | | | ITR VN Corp. Room 904, Saigon Paragon Building, Tan Phu Ward, District 7, Ho Chi Minh City, 700000, Vietnam |
| Size: A4 | Number: 6 | Revision: v1.0 | Designer: Name | |
| Date: 5/23/2024 | Time: 10:30:57 AM | Sheet 6 of 7 | Reviewer: Name | |
| File: [06] - DOC REVISION HISTORY.SchDoc | | | Approved: Name | |

| | | | | | | | | | | | |
|--|---|---|--|--|--|---|--|--|--|--|---|
| | 1 | 2 | 3 | 4 | | | | | | | |
| A | <div>Designator [01] - COVER PAGE.SchDoc</div> <div></div> | <div>Designator [02] - BLOCK DIAGRAM.SchDoc</div> <div></div> | <div>Designator [03] - MCU - RP2040.SchDoc</div> <div></div> | <div>Designator [04] - POWER SUPPLY.SchDoc</div> <div></div> | <div>Designator [05] - PERIPHERAL.SchDoc</div> <div></div> | A | | | | | |
| B | | | | | <div>Designator [06] - DOC REVISION HISTORY.SchDoc</div> <div></div> | B | | | | | |
| C | | | | | | C | | | | | |
| D | <div>Schematic Status Explanation</div> <div>DRAFT - Very early stage of schematic, ignore details.</div> <div>PRELIMINARY - Close to final schematic.</div> <div>CHECKED - There should not be any mistakes. Tell the engineer if you find one.</div> <div>RELEASED - A board with this schematic has been sent to production.</div> | | | | <table><tr><td>Title: <i>Pico Camera PCB v1.1 Project.SchDoc</i></td><td rowspan="4"><i>ITR VN Corp.</i> <i>Room 904, Saigon Paragon Building, Tan Phu Ward, District 7, Ho Chi Minh City, 700000, Vietnam</i></td></tr><tr><td>Size: <i>A4</i> Number: <i>7</i> Revision: <i>v1.0</i></td></tr><tr><td>Date:<i>5/23/2024</i> Time: <i>10:30:57 AM</i> Sheet <i>7</i> of <i>7</i></td></tr><tr><td>File: <i>Pico Camera PCB v1.1 Project.SchDoc</i></td></tr></table> | Title: <i>Pico Camera PCB v1.1 Project.SchDoc</i> | <i>ITR VN Corp.</i> <i>Room 904, Saigon Paragon Building, Tan Phu Ward, District 7, Ho Chi Minh City, 700000, Vietnam</i> | Size: <i>A4</i> Number: <i>7</i> Revision: <i>v1.0</i> | Date: <i>5/23/2024</i> Time: <i>10:30:57 AM</i> Sheet <i>7</i> of <i>7</i> | File: <i>Pico Camera PCB v1.1 Project.SchDoc</i> | D |
| Title: <i>Pico Camera PCB v1.1 Project.SchDoc</i> | <i>ITR VN Corp.</i> <i>Room 904, Saigon Paragon Building, Tan Phu Ward, District 7, Ho Chi Minh City, 700000, Vietnam</i> | | | | | | | | | | |
| Size: <i>A4</i> Number: <i>7</i> Revision: <i>v1.0</i> | | | | | | | | | | | |
| Date: <i>5/23/2024</i> Time: <i>10:30:57 AM</i> Sheet <i>7</i> of <i>7</i> | | | | | | | | | | | |
| File: <i>Pico Camera PCB v1.1 Project.SchDoc</i> | | | | | | | | | | | |
| | 1 | 2 | 3 | 4 | | | | | | | |