Olimex Extension Template v0.1

Project creator: Intergalaktik d.o.o.
Project License: CERN-OHL-S v2
Year: 2024.

Change project informations under.
File>>Schamatic Setup>>Text Variables

!!
Olimex board is delivering MAX 2.5V on connector.
You can use 2.5V output signals for 3.3V.
Be carefull FPGA input only tolerate MAX 2.5V!
!!

!!
2.5V input is connected over 500mA resetable fuse!
Maximum current for 2.5V is set to 500mA.
It may be possible to drain more current but
you will need add different FUSE and use it at your own risk!
3.3V step up is limited to 300mA
Idea behind limits is that you can use all 3 extensions slots
at once without any risk od draining to much!
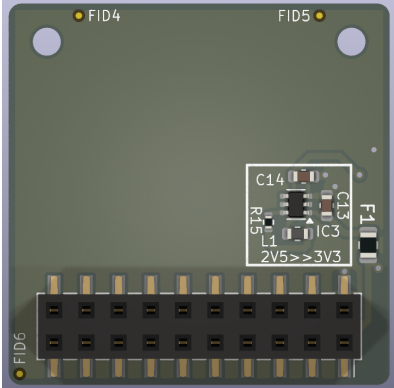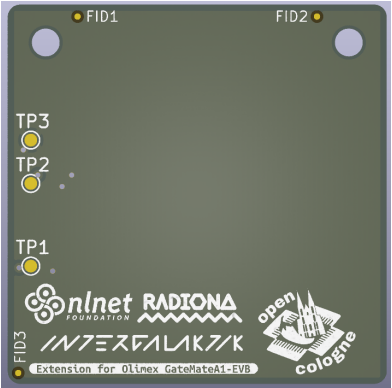!!

!!
There is same pinout part for 5V step up.
So you can have 5V with just one IC change.
For more details check Power page.
!!

Replace bottom 3D images with your PCB

TOP VIEW

BOTTOM VIEW

Dimension
File: dimension.kicad_sch

Main Sheet
File: main.kicad_sch

CERN-OHL-S v2
Intergalaktik d.o.o.
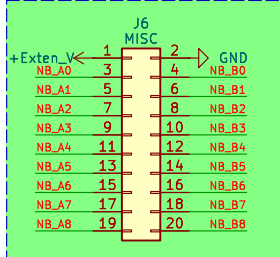Sheet: /
File: extension_template.kicad_sch
Title: Olimex Extension Template v0.1
Size: A4 | Date: 2024-12-02 | **Rev: v0.1**
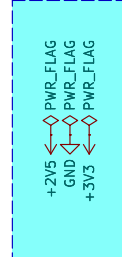KiCad E.D.A. 8.0.4 | Id: 1/4

Main Page

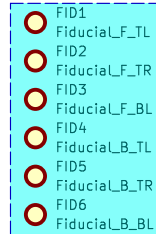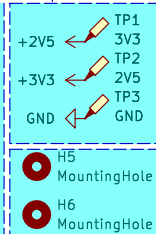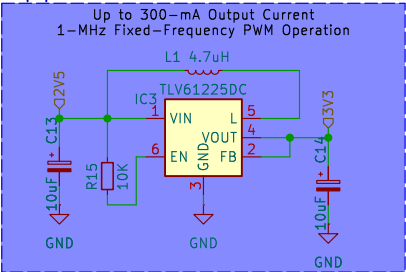## 2V5 over Resettable Fuses – PPTC 0.50A 6V 0805 >3V3

Power

+Exten_V — F1 0805L050WR — +2V5 — 2V5 3V3 — +3V3

File: power.kicad_sch

OLIMEX CONNECTOR

J6 MISC

+Exten_V	1	2	GND
NB_A0	3	4	NB_B0
NB_A1	5	6	NB_B1
NB_A2	7	8	NB_B2
NB_A3	9	10	NB_B3
NB_A4	11	12	NB_B4
NB_A5	13	14	NB_B5
NB_A6	15	16	NB_B6
NB_A7	17	18	NB_B7
NB_A8	19	20	NB_B8

POWER FLAGS

+2V5 PWR_FLAG
GND PWR_FLAG
+3V3 PWR_FLAG

Fiducials

- FID1 Fiducial_F_TL
- FID2 Fiducial_F_TR
- FID3 Fiducial_F_BL
- FID4 Fiducial_B_TL
- FID5 Fiducial_B_TR
- FID6 Fiducial_B_BL

TEST points

- +2V5 — TP1 3V3
- +3V3 — TP2 2V5
- GND — TP3 GND
- H5 MountingHole
- H6 MountingHole

- H1 Logo Intergalaktik
- H2 Logo NLnet
- H3 Logo OpenCologne
- H4 Logo Radiona

Title: Olimex Extension Template v0.1

Size: A5	Date: 2024–12–02	**Rev: v0.1**
KiCad E.D.A. 8.0.4		Id: 2/4

Power Page

StepUp 2V5>>3V3

Up to 300−mA Output Current
1−MHz Fixed−Frequency PWM Operation

L1 4.7uH

IC3 TLV61225DC

1 VIN	L 5
	VOUT 4
6 EN	FB 2
	3

Q2V5
C13 10uF
R15 10K
GND

GND
Q3V3
C14 10uF
GND

Replace with TPS61222DCKT for 2.5V>>5V

Title: Olimex Extension Template v0.1

Size: A5 | Date: 2024−12−02 | **Rev: v0.1**
KiCad E.D.A. 8.0.4 | | Id: 3/4

Dimension Page

30.00 mm

3.00 mm

3.00 mm

30.00 mm

Title: Olimex Extension Template v0.1

Size: A5	Date: 2024—12—02	**Rev: v0.1**
KiCad E.D.A. 8.0.4		Id: 4/4