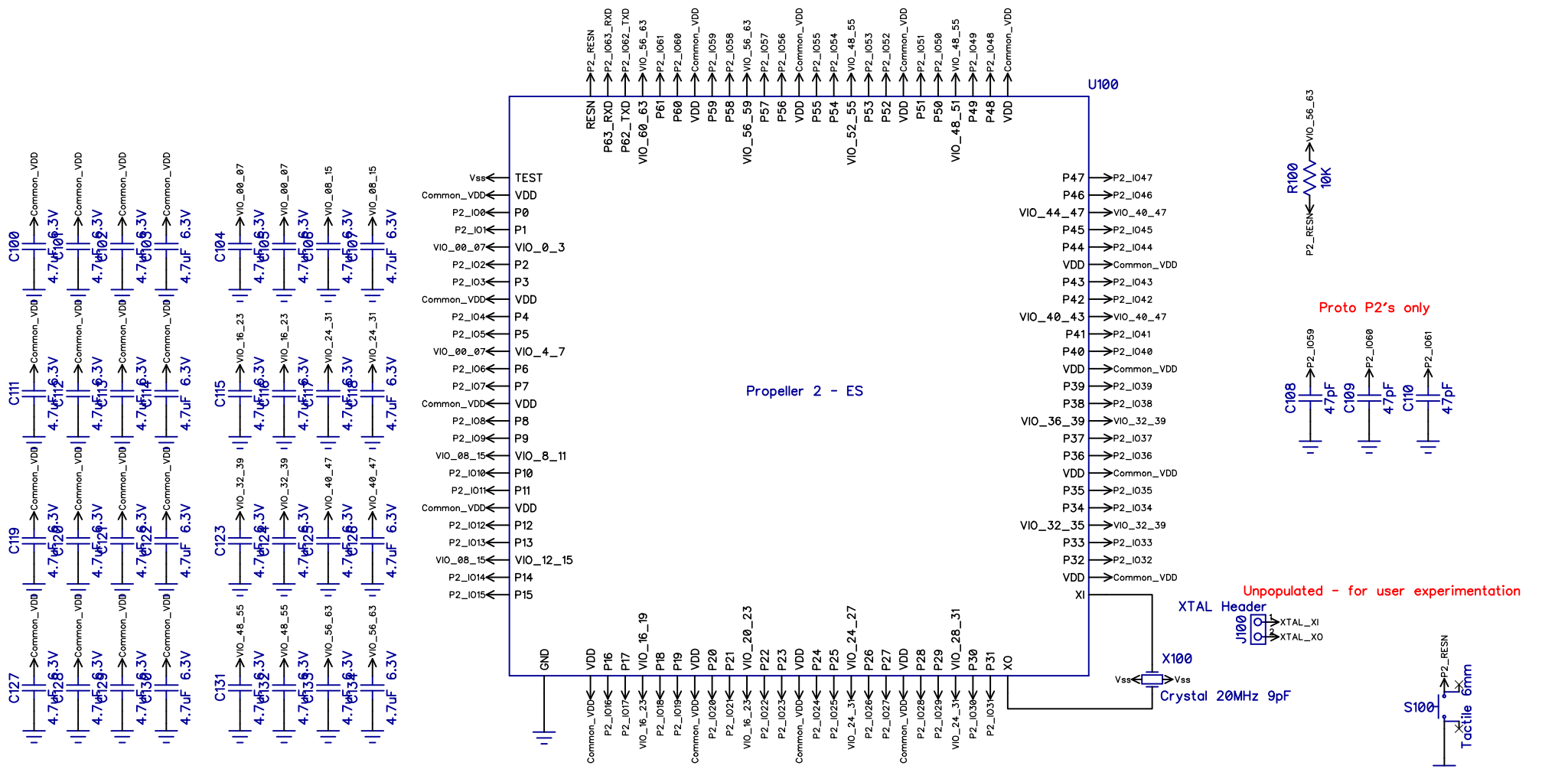


Microcontroller



Parallax P2X8C4M64P-ES Evaluation Board

ENGINEERING SAMPLE - NOT FOR RESALE
PRE-PRODUCTION EVALUATION

Copyright 2018 Parallax Incorporated. All Rights Reserved.

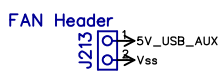
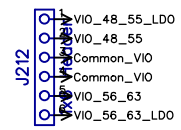
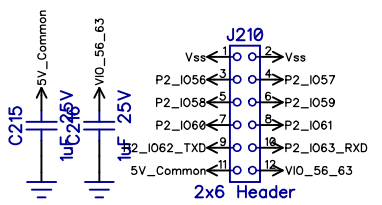
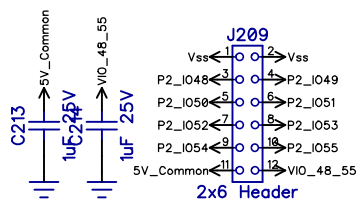
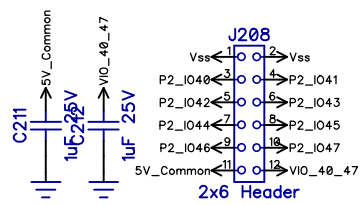
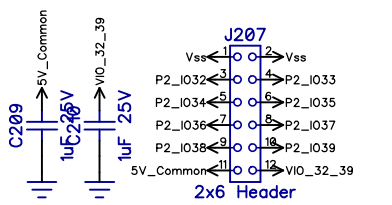
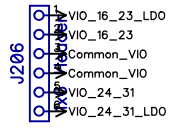
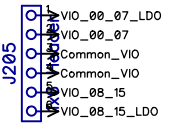
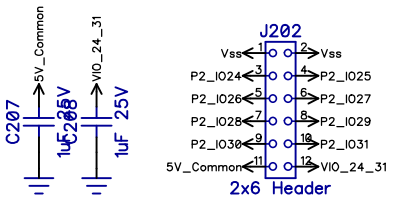
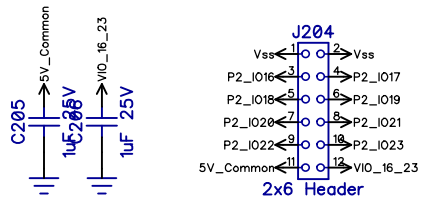
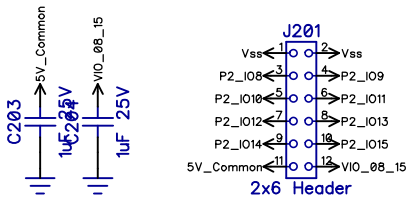
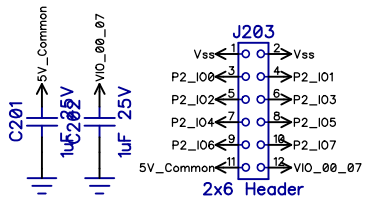
Part Number: 64000-ES
Revision: A1

Last Update: 07 Nov 2018

Parallax Inc.
599 Menlo Drive
Rocklin, CA 95765

(916) 624-8333
<http://www.parallax.com/>

I/O Headers



- HW201
CONN SHUNT
- HW202
CONN SHUNT
- HW203
CONN SHUNT
- HW204
CONN SHUNT
- HW205
CONN SHUNT
- HW206
CONN SHUNT
- HW207
CONN SHUNT
- HW208
CONN SHUNT
- HW209
CONN SHUNT
- HW210
CONN SHUNT

Parallax P2X8C4M64P-ES Evaluation Board

**ENGINEERING SAMPLE - NOT FOR RESALE
 PRE-PRODUCTION EVALUATION**

Copyright 2018 Parallax Incorporated. All Rights Reserved.

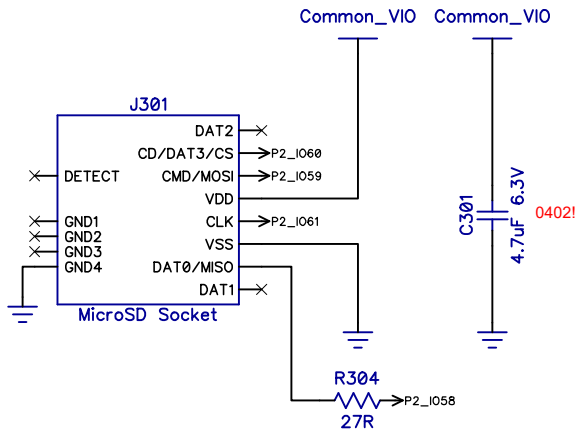
Part Number: 64000-ES
 Revision: A1

Last Update: 07 Nov 2018

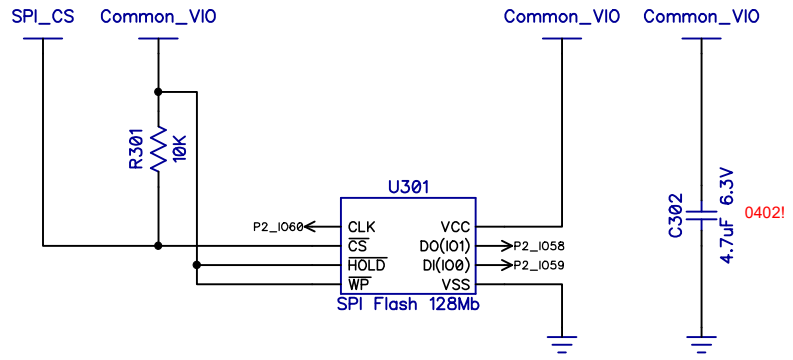
Parallax Inc.
 599 Menlo Drive
 Rocklin, CA 95765
 (916) 624-8333
<http://www.parallax.com/>

Memory

MicroSD



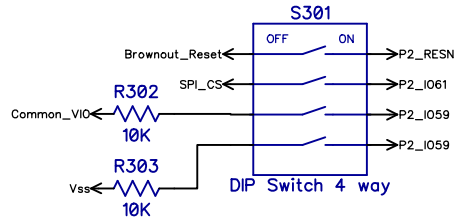
SPI Flash



Boot Memory	P61 (output)	P60 (output)	P59 (output)	P58 (input)
SPI flash	CSn	CLK	DI	DO
SD card	CLK	CSn	DI	DO

Boot Serial	P63 (input)	P62 (output)
Serial	RX	TX

Boot options and brownout enable switch



Parallax Inc.
599 Menlo Drive
Rocklin, CA 95765

(916) 624-8333
<http://www.parallax.com/>

Parallax P2X8C4M64P-ES Evaluation Board

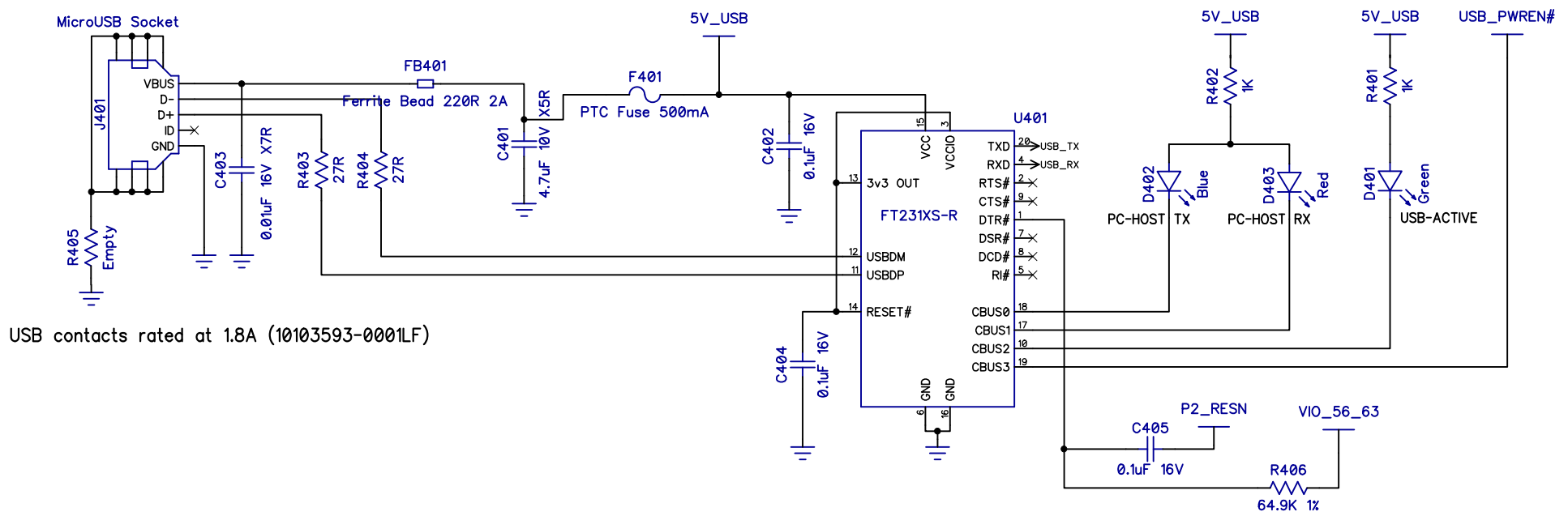
ENGINEERING SAMPLE - NOT FOR RESALE
PRE-PRODUCTION EVALUATION

Copyright 2018 Parallax Incorporated. All Rights Reserved.

Part Number: 64000-ES
Revision: A1

Last Update: 07 Nov 2018

USB

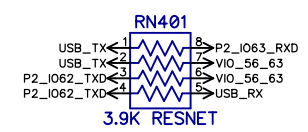


USB contacts rated at 1.8A (10103593-0001LF)

FTDI Configuration

- CBUS0 = RXLED#
- CBUS1 = TXLED#
- CBUS2 = PWREN#
- CBUS3 = PWREN#
- DTR = Inverted
- USB Config / MaxPower = 500mA
- Enable "Battery Charger Enable" option
- Manufacturer = Parallax Inc
- Product Description = Propeller 2 QuickStart Rev A
- Verify max desc. length, and bcd param

increase to 100K if pulse not shapely
- will be impacted by internal and possible external pup at RESN



Pull-up serial bus to prevent floating-state terminal chars
Include series to prevent parasitic power in either direction

Parallax Inc.
599 Menlo Drive
Rocklin, CA 95765

(916) 624-8333
<http://www.parallax.com/>

Parallax P2X8C4M64P-ES Evaluation Board

ENGINEERING SAMPLE - NOT FOR RESALE
PRE-PRODUCTION EVALUATION

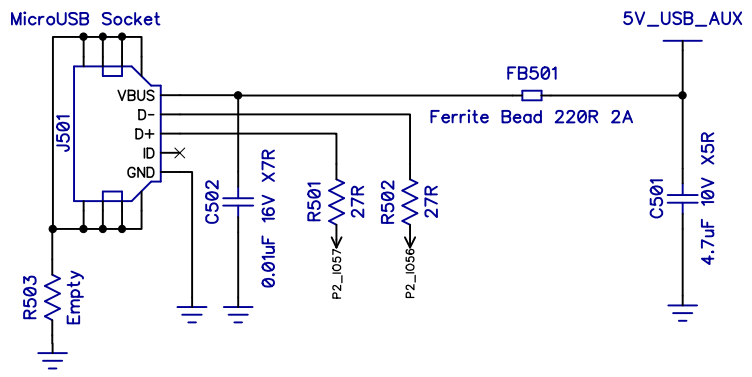
Part Number: 64000-ES
Revision: A1

Copyright 2018 Parallax Incorporated. All Rights Reserved.

Last Update: 07 Nov 2018

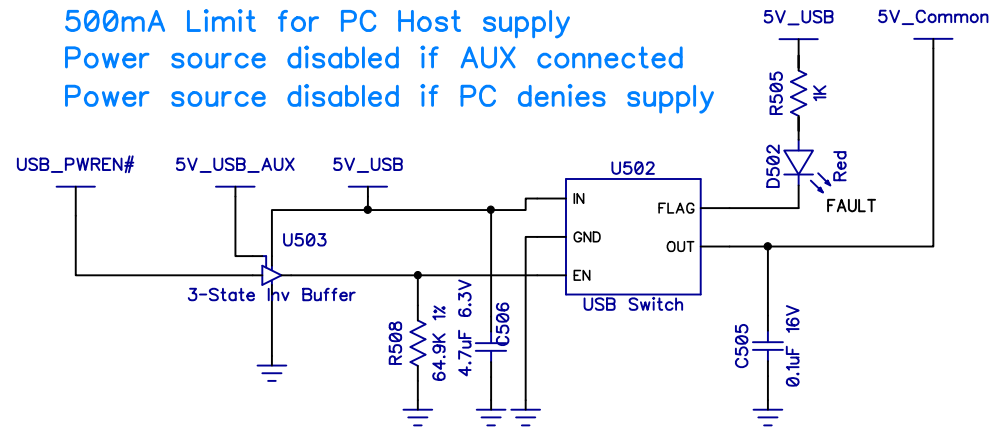
USB Aux, Logic and Limit

USB Aux power socket and P2 USB data

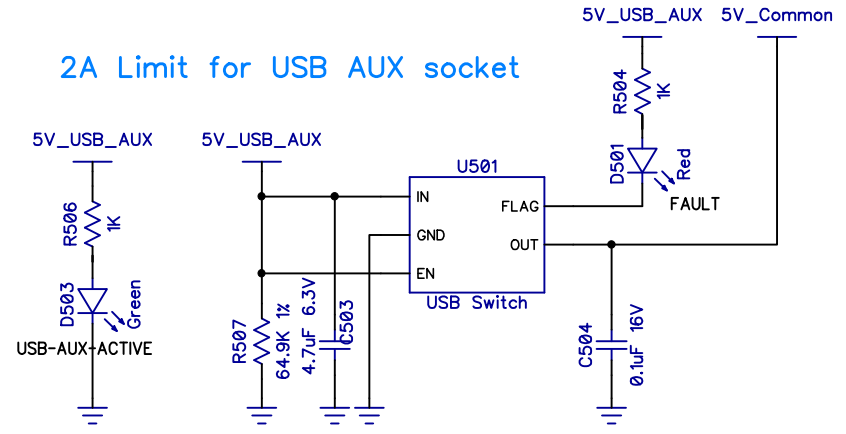


USB contacts rated at 1.8A (10103593-0001LF)

500mA Limit for PC Host supply Power source disabled if AUX connected Power source disabled if PC denies supply



2A Limit for USB AUX socket



Parallax Inc.
599 Menlo Drive
Rocklin, CA 95765

(916) 624-8333
<http://www.parallax.com/>

Parallax P2X8C4M64P-ES Evaluation Board

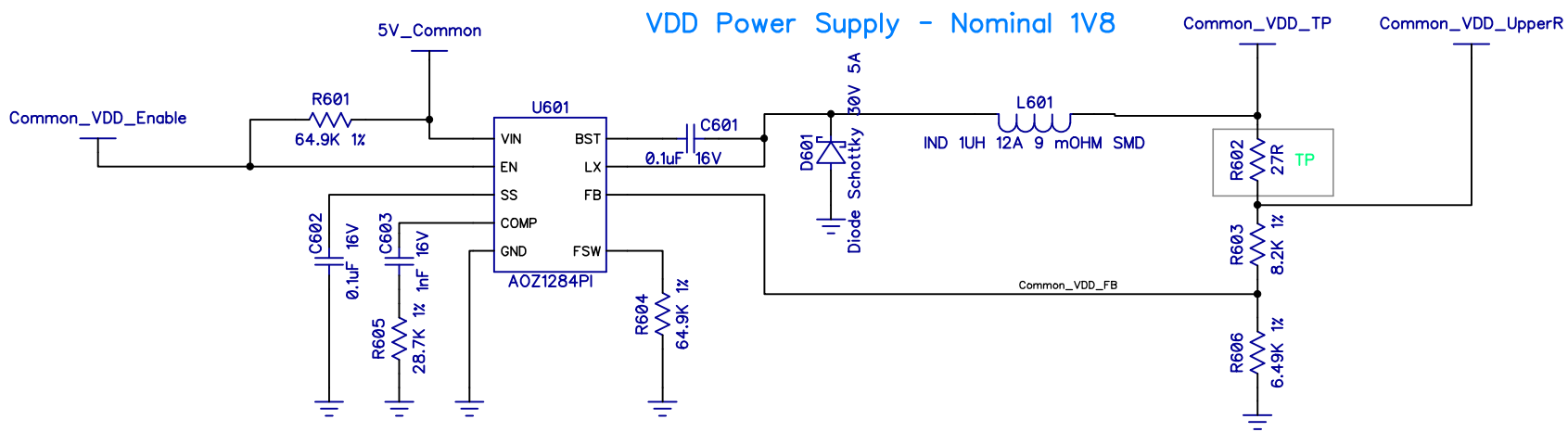
**ENGINEERING SAMPLE - NOT FOR RESALE
PRE-PRODUCTION EVALUATION**

Copyright 2018 Parallax Incorporated. All Rights Reserved.

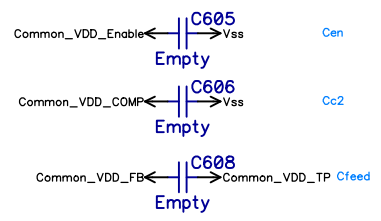
Part Number: 64000-ES
Revision: A1

Last Update: 07 Nov 2018

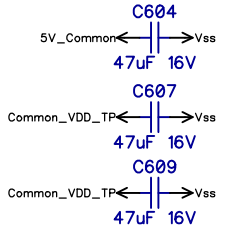
Common VDD 1V8



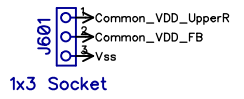
Optional / Tuning Caps



Bulk Caps

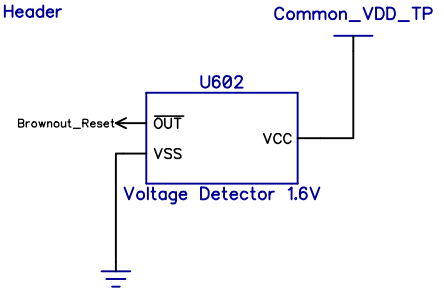
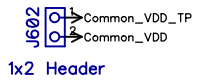


Common_VDD Override



Insert fixed value parallel resistance or variable resistor here

Current Test Point



Parallax Inc.
599 Menlo Drive
Rocklin, CA 95765

(916) 624-8333
<http://www.parallax.com/>

Parallax P2X8C4M64P-ES Evaluation Board

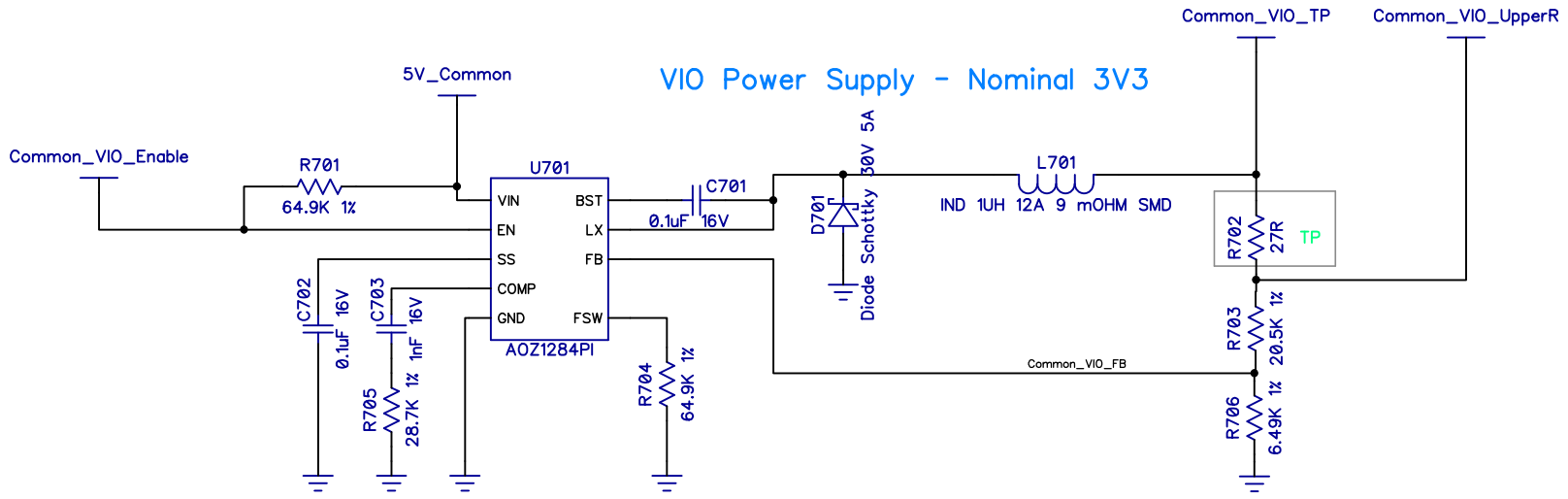
**ENGINEERING SAMPLE - NOT FOR RESALE
PRE-PRODUCTION EVALUATION**

Copyright 2018 Parallax Incorporated. All Rights Reserved.

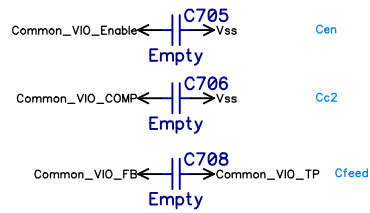
Part Number: 64000-ES
Revision: A1

Last Update: 07 Nov 2018

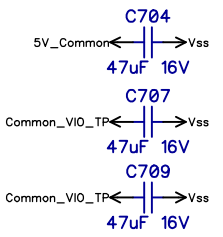
Common VIO 3V3



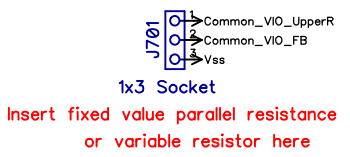
Optional / Tuning Caps



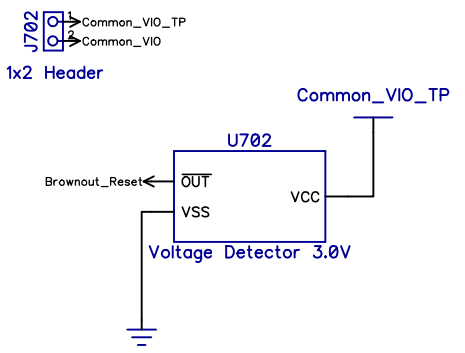
Bulk Caps



Common_VIO Override



Current Test Point



Parallax P2X8C4M64P-ES Evaluation Board

**ENGINEERING SAMPLE - NOT FOR RESALE
PRE-PRODUCTION EVALUATION**

Copyright 2018 Parallax Incorporated. All Rights Reserved.

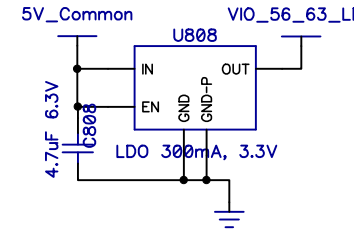
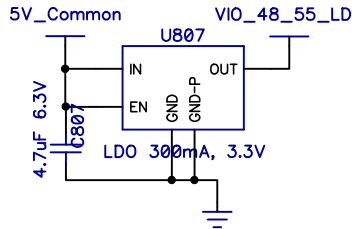
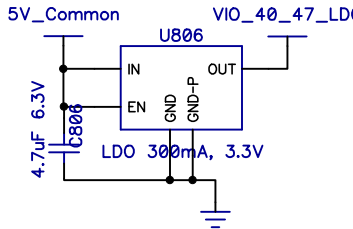
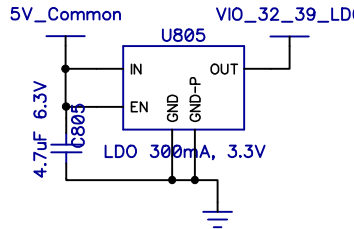
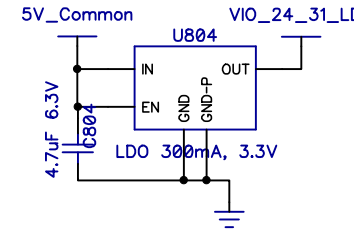
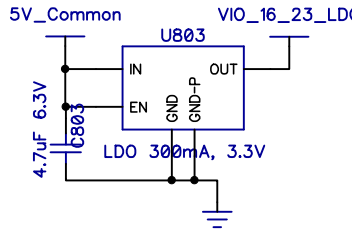
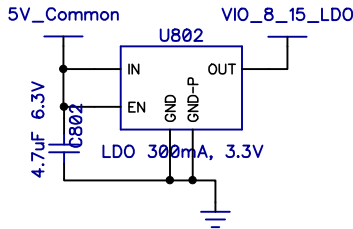
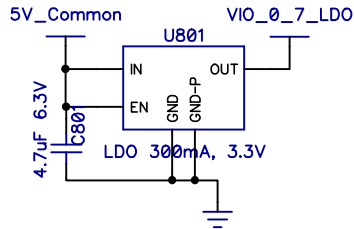
Part Number: 64000-ES
Revision: A1

Last Update: 07 Nov 2018

Parallax Inc.
599 Menlo Drive
Rocklin, CA 95765
(916) 624-8333
<http://www.parallax.com/>

LDO 3V3

4.7uF : DC Bias 5.0V, CapChange kb. 82% (0.8uF)
 4.7uF : DC Bias 3.3V, CapChange kb. 75% (1.2uF), ESR 200MHz kb. 0.03ohm
 0.1uF : DC Bias 3.3V, CapChange kb. 9% (0.09uF), ESR 200MHz kb. 0.05ohm



Note: LDO output caps at P2

Parallax P2X8C4M64P-ES Evaluation Board
ENGINEERING SAMPLE - NOT FOR RESALE
PRE-PRODUCTION EVALUATION

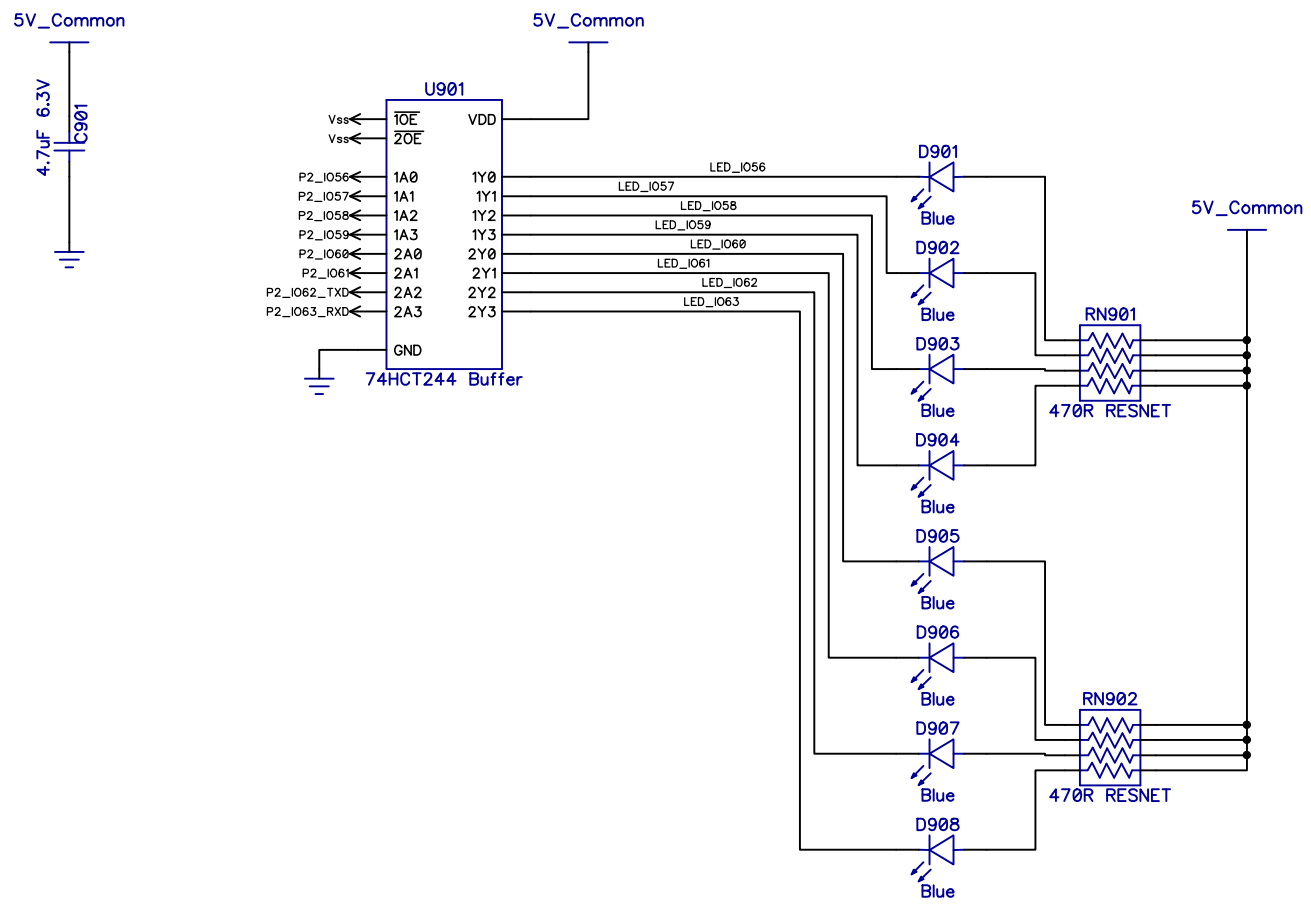
Part Number: 64000-ES
 Revision: A1

Parallax Inc.
 599 Menlo Drive
 Rocklin, CA 95765
 (916) 624-8333
<http://www.parallax.com/>

Copyright 2018 Parallax Incorporated. All Rights Reserved.

Last Update: 07 Nov 2018

LEDs



Parallax Inc.
 599 Menlo Drive
 Rocklin, CA 95765
 (916) 624-8333
<http://www.parallax.com/>

Parallax P2X8C4M64P-ES Evaluation Board

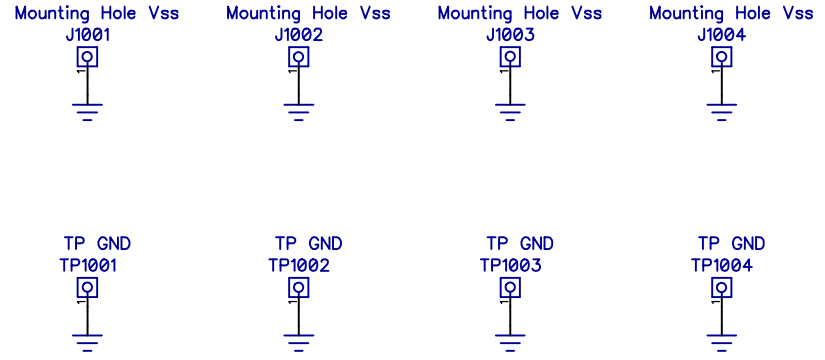
**ENGINEERING SAMPLE - NOT FOR RESALE
 PRE-PRODUCTION EVALUATION**

Copyright 2018 Parallax Incorporated. All Rights Reserved.

Part Number: 64000-ES
 Revision: A1

Last Update: 07 Nov 2018

Mount Holes



PCB
PCB for P2 Eval Board

Parallax Inc.
599 Menlo Drive
Rocklin, CA 95765

(916) 624-8333
<http://www.parallax.com/>

Parallax P2X8C4M64P-ES Evaluation Board

ENGINEERING SAMPLE - NOT FOR RESALE
PRE-PRODUCTION EVALUATION

Copyright 2018 Parallax Incorporated. All Rights Reserved.

Part Number: 64000-ES
Revision: A1

Last Update: 07 Nov 2018