

## Default Bus Connectors

First 104 pins follow pumpkin CSK bus (Rev E) pins  
Some user and IO pins have been assigned by SLI  
( that are not used by any other peripherals )

PCB BOTTOM J200\_2 PCB TOP

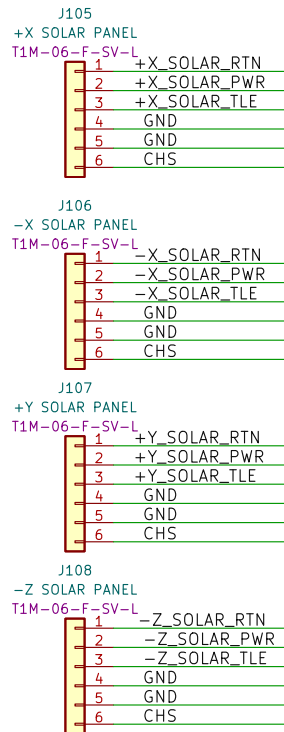
SEP1	HSEC8-160-01-5-DV-A-K-TR	SEP2	HSEC8-160-01-5-DV-A-K-TR
-Z SOLAR_TLE	3	4	+X SOLAR_TLE
-Z SOLAR_RTN	5	6	+X SOLAR_RTN
-Z SOLAR_PWR	7	8	+X SOLAR_PWR
H1-1	9	10	H1-2
H2-1	11	12	H2-2
H1-3	13	14	H1-4
H2-3	15	16	H2-4
H1-5	17	18	H1-6
H2-5	19	20	H2-6
H1-7	21	22	H1-8
H2-7	23	24	H2-8
H1-9	25	26	H1-10
H2-9	27	28	H2-10
H1-11	29	30	H1-12
H2-11	31	32	H2-12
H1-13	33	34	H1-14
H2-13	35	36	H2-14
RBF	37	38	H1-16
H2-15	39	40	H2-16
H1-17	41	42	H1-18
H2-17	43	44	H2-18
H1-19	45	46	H1-20
H2-19	47	48	H2-20
H1-21	49	50	H1-22
H2-21	51	52	H2-22
H1-23	53	54	H1-24
H2-23	55	56	H2-24
H1-25	57	58	H1-26
H2-25	59	60	H2-26
H1-27	61	62	H1-28
H2-27	63	64	H2-28
BUS_RESET	65	66	H1-30
GND	67	68	GND
H1-31	69	70	SV_USB
AGND	71	72	GND
H1-33	73	74	H1-34
H2-33	75	76	H2-34
H1-35	77	78	H1-36
H2-35	79	80	H2-36
H1-37	81	82	H1-38
H2-37	83	84	H2-38
H1-39	85	86	H1-40
H2-39	87	88	H2-40
H1-41	89	90	H1-42
H2-41	91	92	H2-42
H1-43	93	94	H1-44
H2-43	95	96	H2-44
H1-45	97	98	H1-46
H2-45	99	100	H2-46
SELF_TEST	101	102	USER_1
GND	103	104	GND
USER_2	105	106	USER_3
H2-49	107	108	H2-50
SEP1_RET	109	110	SEP2_RET
SEP3_RET	111	112	SEP4_RET
+Y SOLAR_TLE	113	114	-X SOLAR_TLE
+Y SOLAR_RTN	115	116	-X SOLAR_RTN
+Y SOLAR_PWR	117	118	-X SOLAR_PWR
SEP3	119	120	SEP4

SEP1	HSEC8-160-01-5-DV-A-K-TR	SEP2	HSEC8-160-01-5-DV-A-K-TR
-Z SOLAR_TLE	3	4	+X SOLAR_TLE
-Z SOLAR_RTN	5	6	+X SOLAR_RTN
-Z SOLAR_PWR	7	8	+X SOLAR_PWR
H1-1	9	10	H1-2
H2-1	11	12	H2-2
H1-3	13	14	H1-4
H2-3	15	16	H2-4
H1-5	17	18	H1-6
H2-5	19	20	H2-6
H1-7	21	22	H1-8
H2-7	23	24	H2-8
H1-9	25	26	H1-10
H2-9	27	28	H2-10
H1-11	29	30	H1-12
H2-11	31	32	H2-12
H1-13	33	34	H1-14
H2-13	35	36	H2-14
RBF	37	38	H1-16
H2-15	39	40	H2-16
H1-17	41	42	H1-18
H2-17	43	44	H2-18
H1-19	45	46	H1-20
H2-19	47	48	H2-20
H1-21	49	50	H1-22
H2-21	51	52	H2-22
H1-23	53	54	H1-24
H2-23	55	56	H2-24
H1-25	57	58	H1-26
H2-25	59	60	H2-26
H1-27	61	62	H1-28
H2-27	63	64	H2-28
BUS_RESET	65	66	H1-30
GND	67	68	GND
H1-31	69	70	SV_USB
AGND	71	72	GND
H1-33	73	74	H1-34
H2-33	75	76	H2-34
H1-35	77	78	H1-36
H2-35	79	80	H2-36
H1-37	81	82	H1-38
H2-37	83	84	H2-38
H1-39	85	86	H1-40
H2-39	87	88	H2-40
H1-41	89	90	H1-42
H2-41	91	92	H2-42
H1-43	93	94	H1-44
H2-43	95	96	H2-44
H1-45	97	98	H1-46
H2-45	99	100	H2-46
SELF_TEST	101	102	USER_1
GND	103	104	GND
USER_2	105	106	USER_3
H2-49	107	108	H2-50
SEP1_RET	109	110	SEP2_RET
SEP3_RET	111	112	SEP4_RET
+Y SOLAR_TLE	113	114	-X SOLAR_TLE
+Y SOLAR_RTN	115	116	-X SOLAR_RTN
+Y SOLAR_PWR	117	118	-X SOLAR_PWR
SEP3	119	120	SEP4

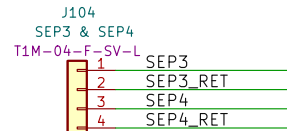
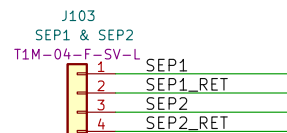
BACKPLANE CONNECTORS ARE NUMBERED FROM BOTTOM OF STACK  
CONTACT RATING 2.8A PER PIN

COPPER THICKNESS: 20Z  
TRACE WIDTH: 0.5mm VIA SIZE: 0.2mm DRILL, 0.5mm PAD

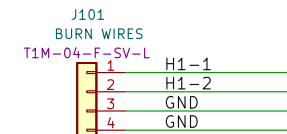
## Solar Connectors



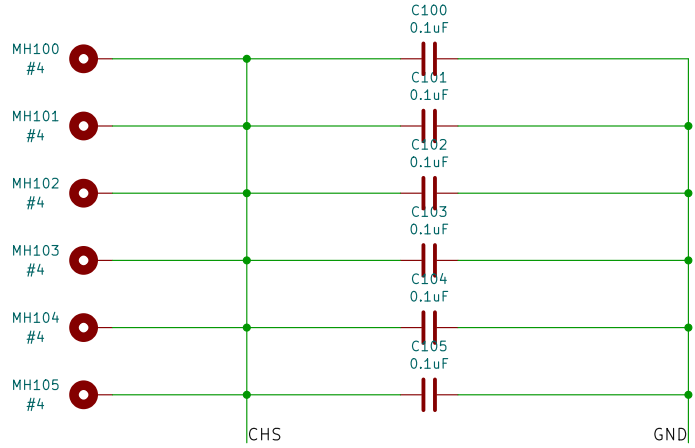
## Seperation Switch Connector



## Burn Wire Connector

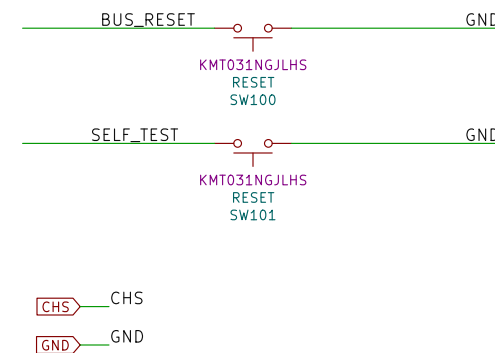


## Mounting Holes



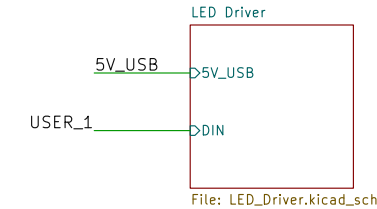
## User Switches

Configure pin on PPM/Motherboard/mainboard to have an internal pull up for H1-47 (USER0) for SELF\_TEST input.

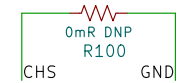


## LED Driver

SIN and SCLK are connected to the SDO0 and SCK0 pins on the bus respectively  
USER\_1 (active high) not only activates the latch on U600-601 but allows serial data to pass to them



## CHS, GND Jumper



SEP1	HSEC8-160-01-5-DV-A-K-TR	SEP2	HSEC8-160-01-5-DV-A-K-TR
-Z SOLAR_RTN	3	4	+X SOLAR_RTN
H1-1	5	6	H1-2
H1-3	7	8	H1-4
H1-5	9	10	H1-6
H1-7	11	12	H1-8
H1-9	13	14	H1-10
H1-11	15	16	H1-12
H1-13	17	18	H1-14
H1-17	19	20	H1-18
H1-19	21	22	H1-20
H1-21	23	24	H1-22
H1-23	25	26	H1-24
H1-25	27	28	H1-26
H1-27	29	30	H1-28
H1-29	31	32	H1-30
BUS_RESET	33	34	H1-30
H1-31	35	36	SV_USB
H1-33	37	38	H1-34
H1-35	39	40	H1-36
H1-37	41	42	H1-38
H1-39	43	44	H1-40
H1-41	45	46	H1-42
H1-43	47	48	H1-44
H1-45	49	50	H1-46
SELF_TEST	51	52	USER_1
USER_2	53	54	USER_3
SEP1_RET	55	56	SEP2_RET
+Y SOLAR_TLE	57	58	-X SOLAR_TLE
+Y SOLAR_PWR	59	60	-X SOLAR_PWR

SEP1	HSEC8-160-01-5-DV-A-K-TR	SEP2	HSEC8-160-01-5-DV-A-K-TR
-Z SOLAR_TLE	3	4	+X SOLAR_TLE
-Z SOLAR_PWR	5	6	+X SOLAR_PWR
H2-1	7	8	H2-2
H2-3	9	10	H2-4
H2-5	11	12	H2-6
H2-7	13	14	H2-8
H2-9	15	16	H2-10
H2-11	17	18	H2-12
H2-13	19	20	H2-14
H2-15	21	22	H2-16
H2-17	23	24	H2-18
H2-19	25	26	H2-20
H2-21	27	28	H2-22
H2-23	29	30	H2-24
H2-25	31	32	H2-26
H2-27	33	34	H2-28
GND	35	36	GND
AGND	37	38	GND
H2-33	39	40	H2-34
H2-35	41	42	H2-36
H2-37	43	44	H2-38
H2-39	45	46	H2-40
H2-41	47	48	H2-42
H2-43	49	50	H2-44
H2-45	51	52	H2-46
GND	53	54	GND
H2-49	55	56	H2-50
SEP3_RET	57	58	SEP4_RET
+Y SOLAR_RTN	59	60	-X SOLAR_RTN
SEP3	61	62	SEP4

BACKPLANE BREAKOUT CONNECTOR IS  
ONLY USED FOR GROUND TESTING  
CONTACT RATING 2.1A PER PIN  
TRACE WIDTH: 0.25mm  
VIA SIZE: 0.2mm DRILL, 0.5mm PAD

breakout connectors are spaced such that the breakout BOARD thickness is 3.2mm!!

## BACKPLANE

today:  
add burn wire connectors?

C. Kornowski

C. Hillis

Sierra Lobo, Inc.

Sheet: /

File: backplane.kicad\_sch

Title: backplane-SchDoc

Size: C

KiCad E.D.A.

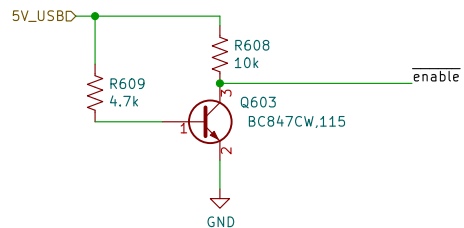
6.0.5

Date: 2021-12-10

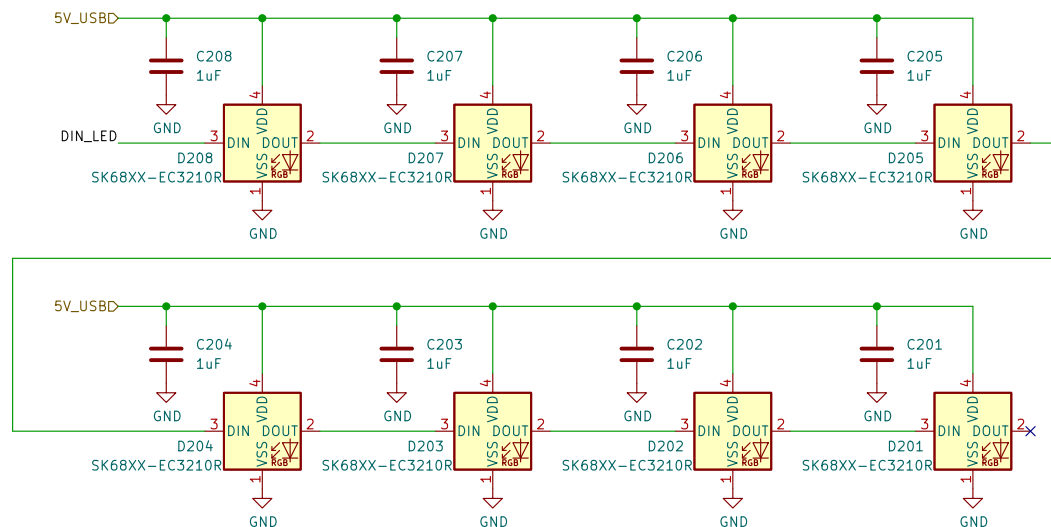
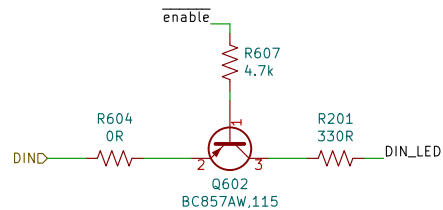
Rev: A1

Id: 1/2

## Reverse-Mounted NeoPixels



Only allows data lines to pass thru if 5vusb is connected  
disconnects these devices in flight



C. Kornowski  
C. Hillis

**Sierra Lobo, Inc.**

Sheet: /LED Driver/

File: LED\_Driver.kicad\_sch

**Title: LED Driver**

Size: A4 Date: 2021-12-10

KiCad E.D.A. kicad (6.0.5)

**Rev: A1**

Id: 2/2