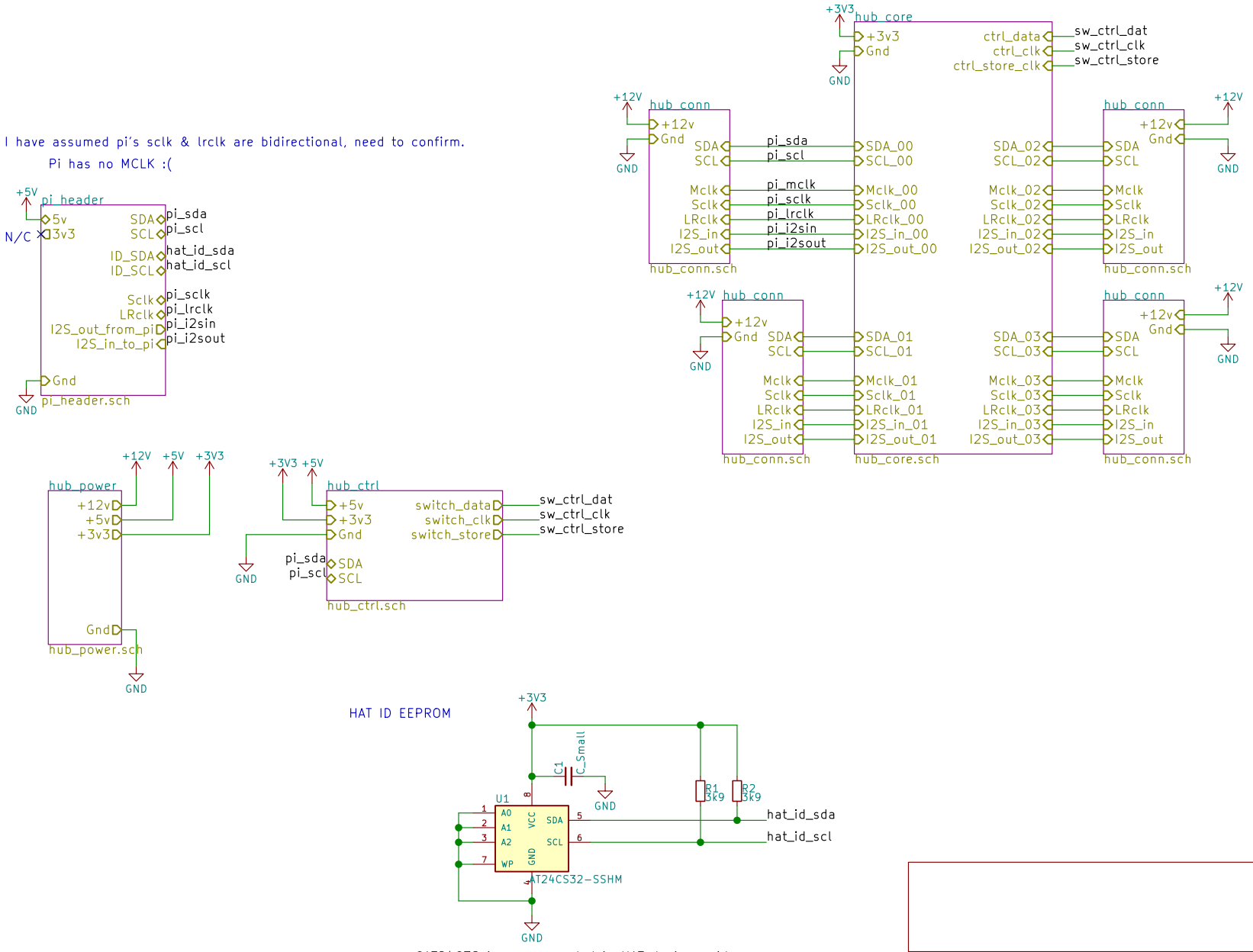
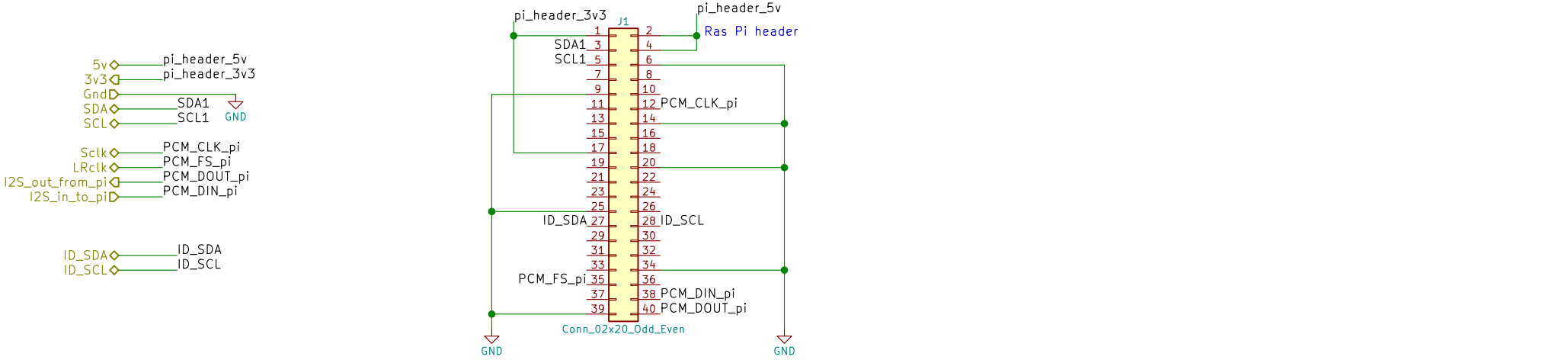

I have assumed pi's sclk & lrclk are bidirectional, need to confirm.
Pi has no MCLK :(
pi_header
pi_header.sch
hub_power
hub_power.sch
hub_ctrl
hub_ctrl.sch
hub_core
hub_core.sch
hub_conn
hub_conn.sch
HAT ID EEPROM
AT24CS32-SSHM
CAT24C32 is recommended in HAT design guide
AT24C32, AT24CS32, and others are equivalent
Sheet: /
File: flexibleaudiohub.sch
Title:
Size: A4
Date:
Rev:
KiCad E.D.A. kicad 4.0.7-e2-637658ubuntu17.04.1
Id: 1/10



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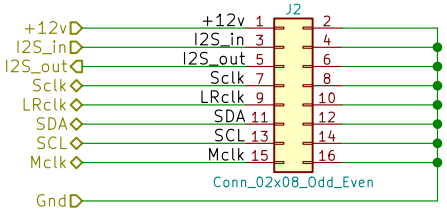
File: pi_header.sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 4.0.7-e2-637658ubuntu17.04.1		Id: 2/10

FreeDSP swaps in/out for master (DSP) and slave (expansion) boards.

So, lets copy their scheme for now...

This is the MASTER (hub) connector.



Sheet: /hub_conn/
File: hub_conn.sch

Title:

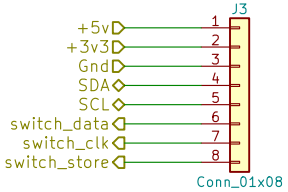
Size: A4 | Date: | **Rev:**

KiCad E.D.A. kicad 4.0.7-e2-637658ubuntu17.04.1 | Id: 3/10

Placeholder for controller.
(could use external mini Arduino / STM blue pill to start)

a chip with 2 i2c ports would be best, but not strictly necessary

only one power port will be required once a chip is chosen (3v3 most likely)



Sheet: /hub_ctrl/
File: hub_ctrl.sch

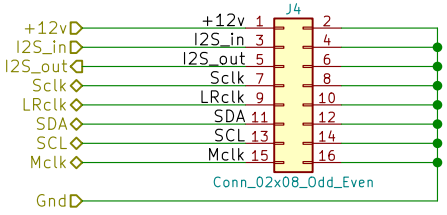
Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 4.0.7-e2-637658ubuntu17.04.1		Id: 4/10

FreeDSP swaps in/out for master (DSP) and slave (expansion) boards.

So, lets copy their scheme for now...

This is the MASTER (hub) connector.



Sheet: /hub_conn/
File: hub_conn.sch

Title:

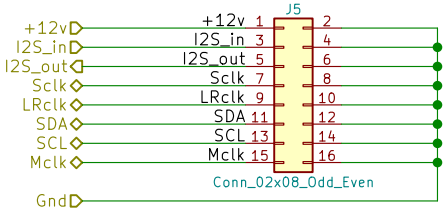
Size: A4 | Date: | **Rev:**

KiCad E.D.A. kicad 4.0.7-e2-637658ubuntu17.04.1 | Id: 5/10

FreeDSP swaps in/out for master (DSP) and slave (expansion) boards.

So, lets copy their scheme for now...

This is the MASTER (hub) connector.

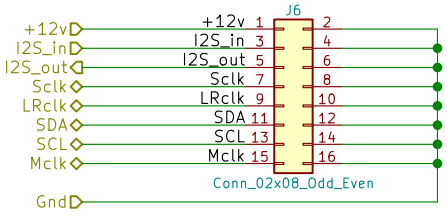


Sheet: /hub_conn/ File: hub_conn.sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 4.0.7-e2-637658ubuntu17.04.1		Id: 6/10

FreeDSP swaps in/out for master (DSP) and slave (expansion) boards.

So, lets copy their scheme for now...

This is the MASTER (hub) connector.

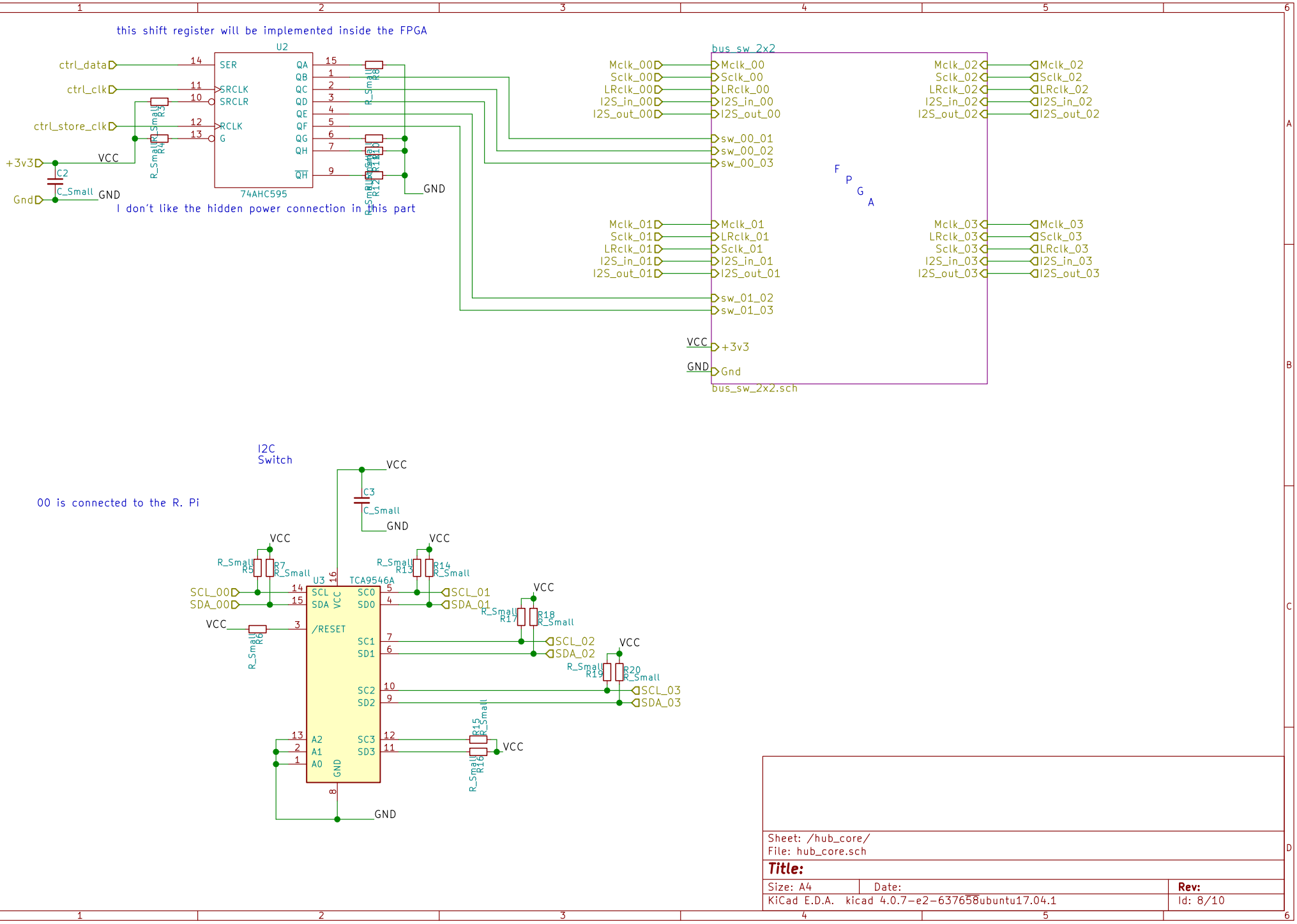


Sheet: /hub_conn/
File: hub_conn.sch

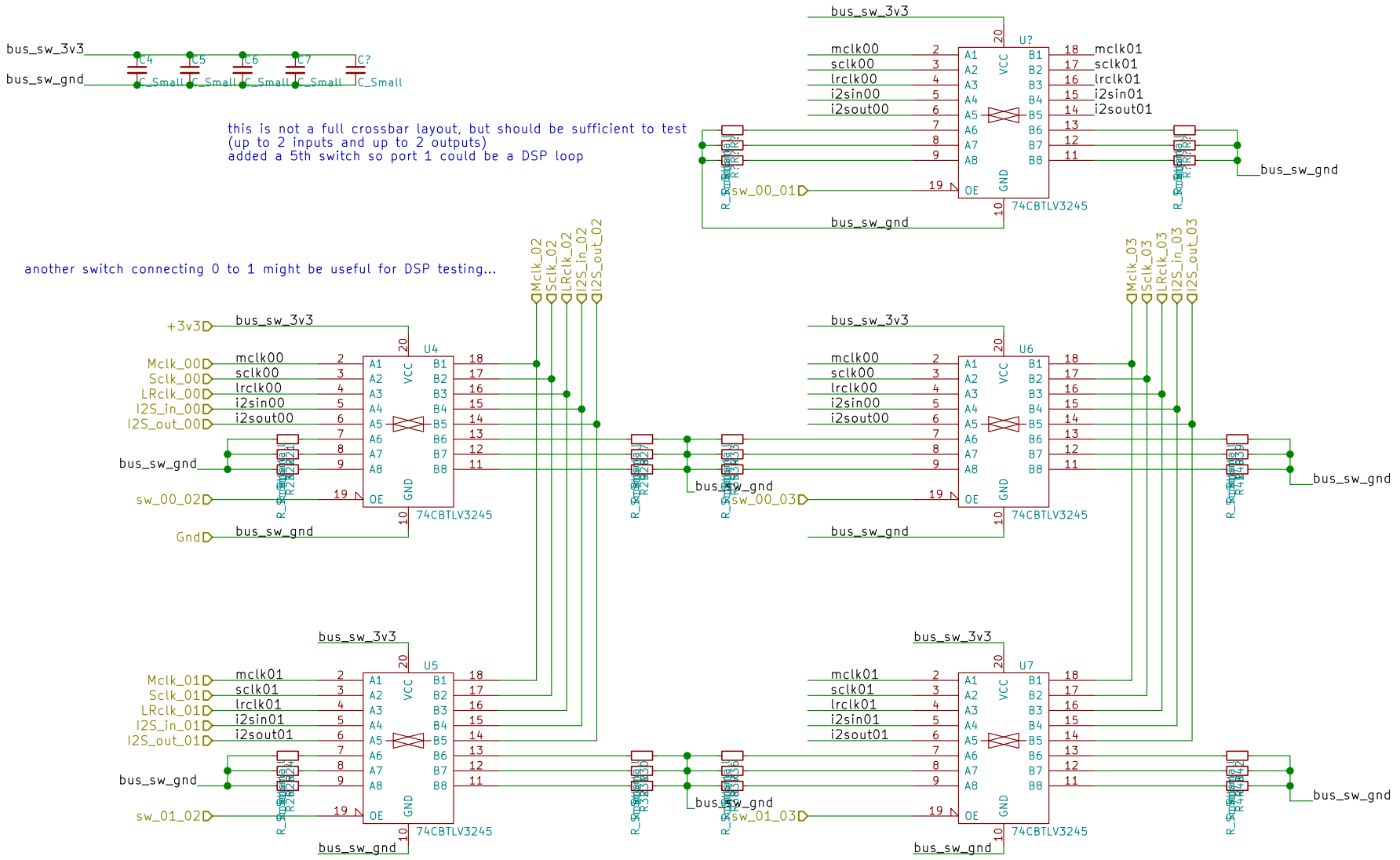
Title:

Size: A4 | Date: | **Rev:**

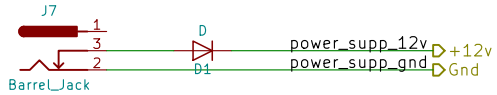
KiCad E.D.A. kicad 4.0.7-e2-637658ubuntu17.04.1 | Id: 7/10



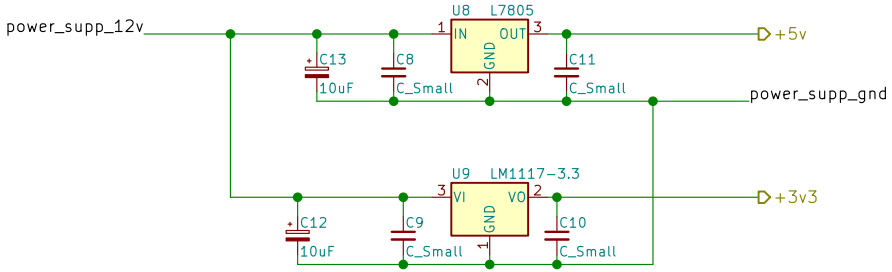
Sheet: /hub_core/		
File: hub_core.sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 4.0.7-e2-637658ubuntu17.04.1		Id: 8/10



Sheet: /hub_core/bus_sw_2x2/		
File: bus_sw_2x2.sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 4.0.7-e2-637658ubuntu17.04.1		Id: 9/10



TODO: replace regs with buck conv.



Sheet: /hub_power/ File: hub_power.sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 4.0.7-e2-637658ubuntu17.04.1		Id: 10/10