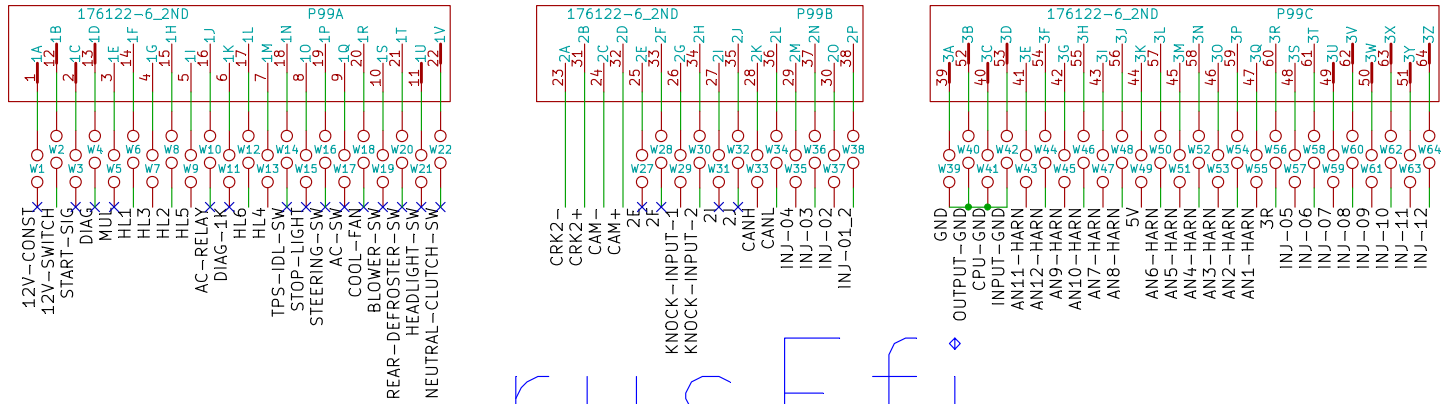
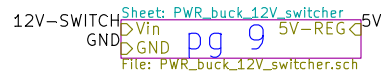
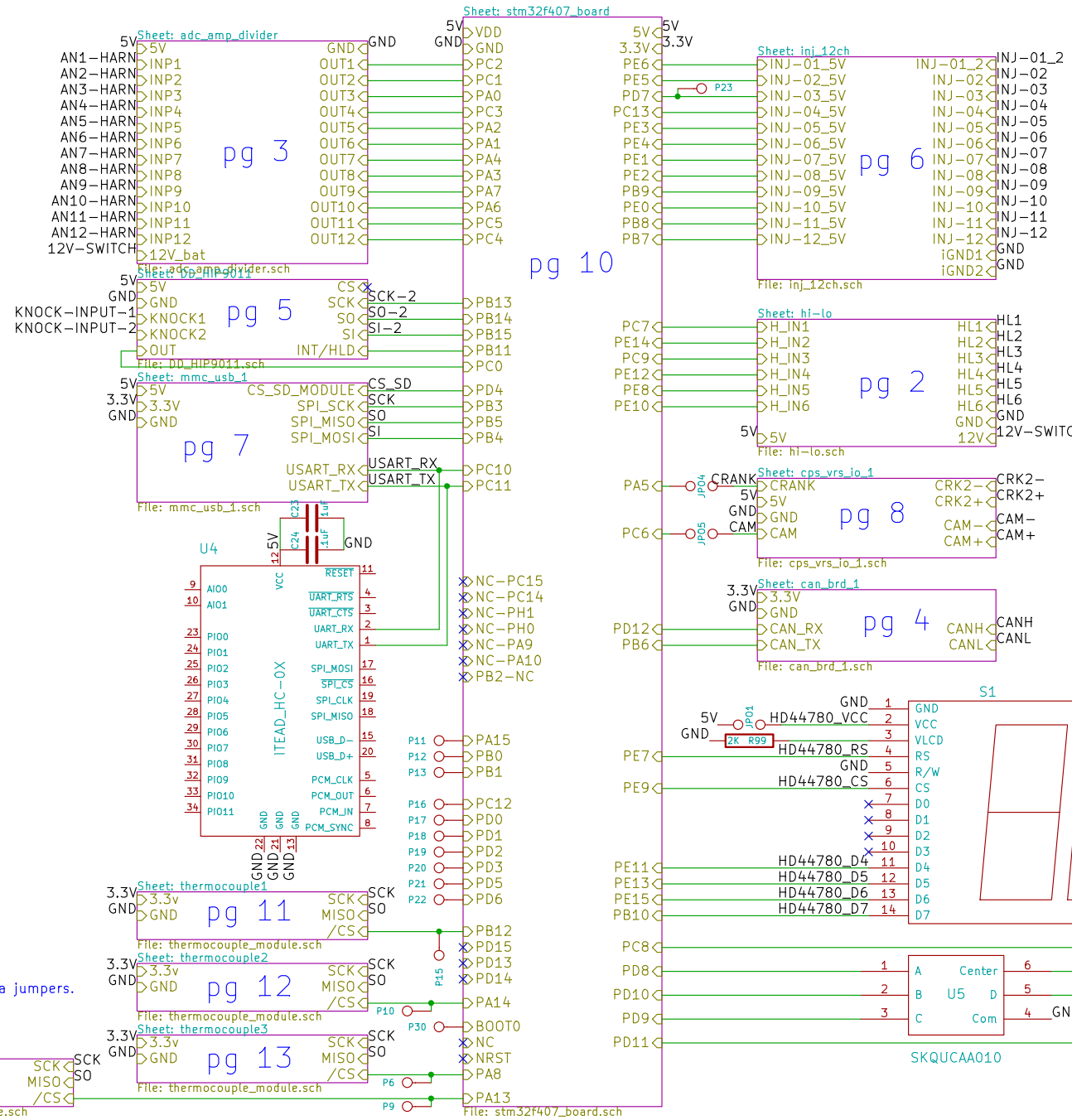
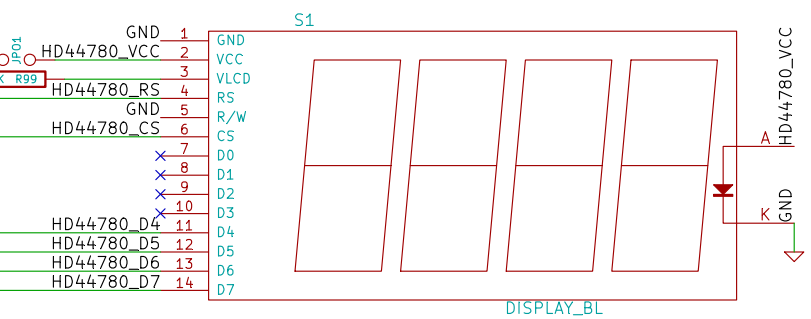


ruSEfi

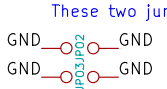




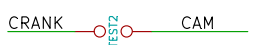
The JP1 jumper is needed because we cannot feed the screen via USB — we would need to disconnect it while the board is on a bench



These two jumpers are here to accomodate stm32f4discovery

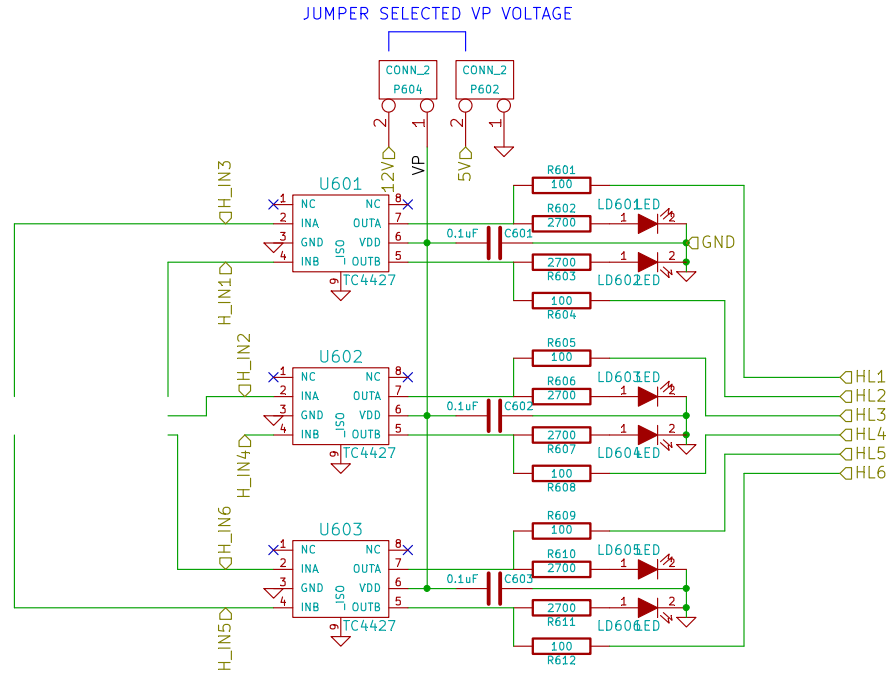


That's alternative signal OUTPUT — these traces should be routable to PC6 and PA5 via jumpers. Aleternative to W212 and W212 routung of op-amps ch 11 and ch 12



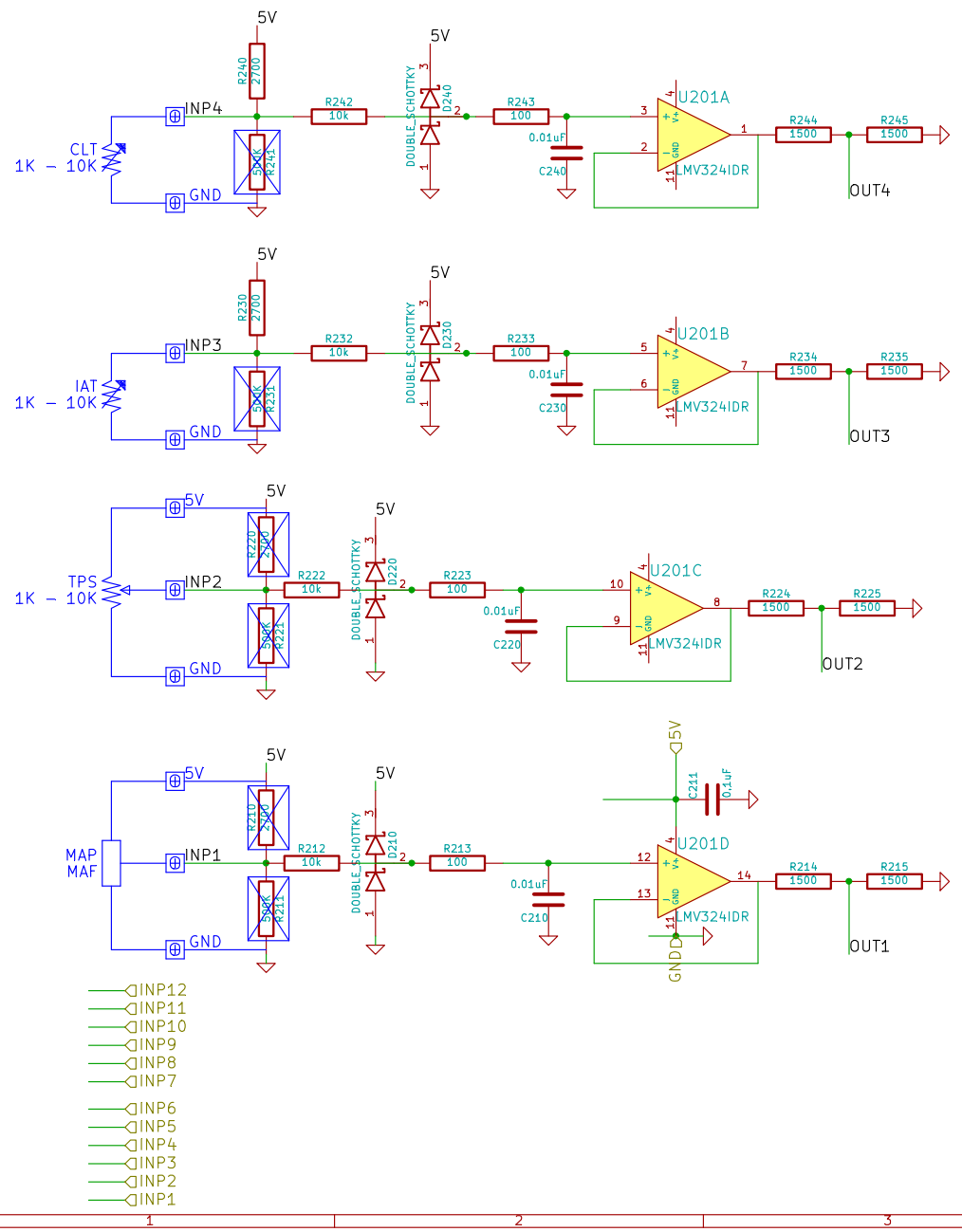
rusEFI.com		
File: frankenso.sch		
Sheet: /		
Title: Frankenso		
Size: B	Date: 14 jul 2014	**Rev: .01**
KiCad E.D.A.	eeschema (2013-07-07 BZR 4022)-stable	Id: 1/14

6 channel high / low side driver

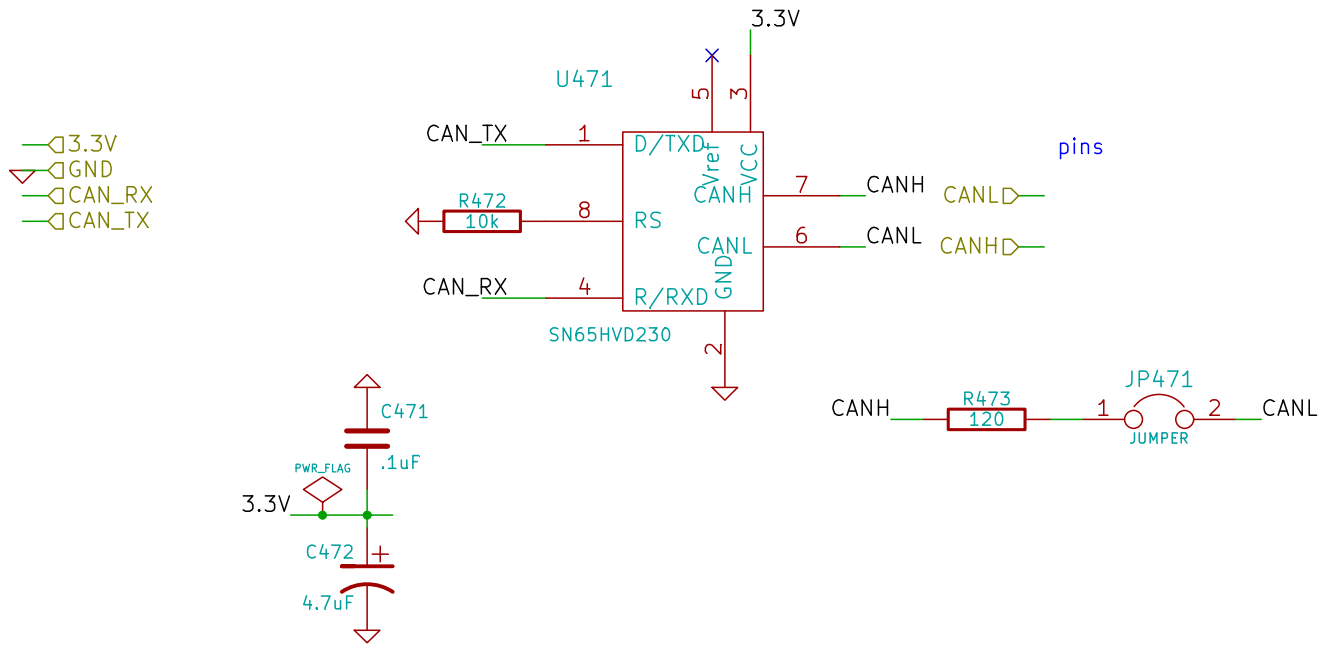


rusEFI.com		
File: hi-lo.sch		
Sheet: /hi-lo/		
Title: Frankenso		
Size: B	Date: 14 jul 2014	**Rev: .01**
KiCad E.D.A. eeschema (2013-07-07 BZR 4022)-stable		Id: 2/14

SUGGESTED ENGINE WIRING IN BLUE



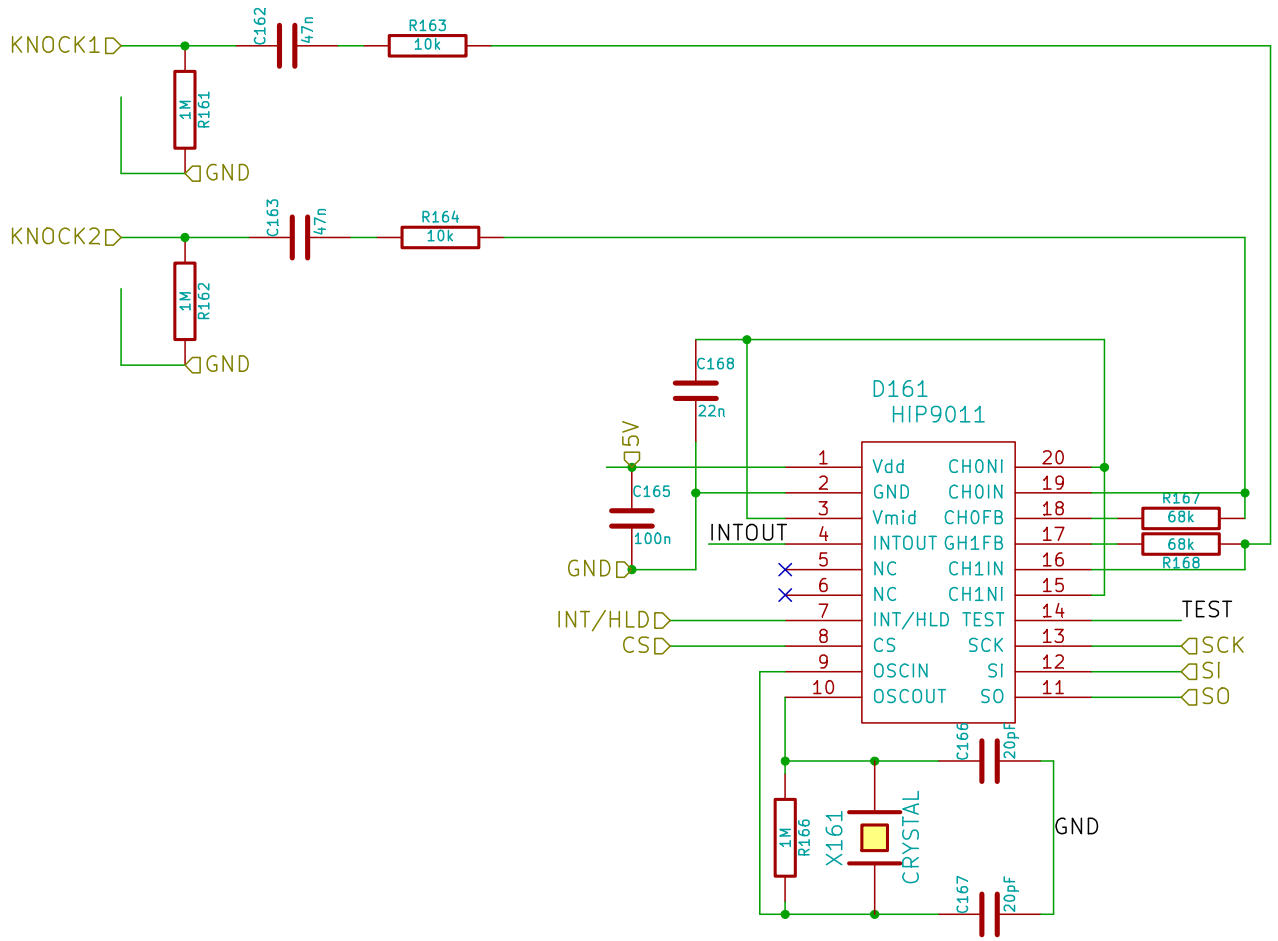
rusEFI.com		
File: adc_amp_divider.sch		
Sheet: /adc_amp_divider/		
Title: Frankenso		
Size: B	Date: 14 jul 2014	**Rev: .01**
KiCad E.D.A. eeschema (2013-07-07 BZR 4022)-stable		Id: 3/14

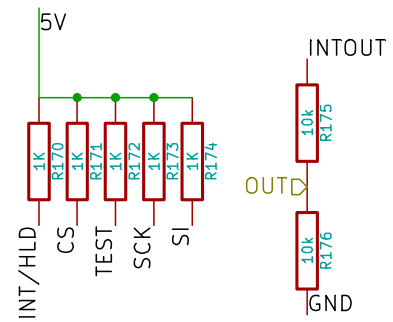


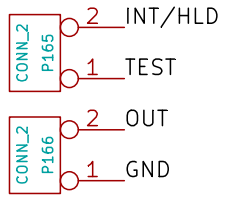
CAN level shifter

rusEFI.com		
File: can_brd_1.sch		
Sheet: /can_brd_1/		
Title: Frankenso		
Size: A4	Date: 14 jul 2014	**Rev: .01**
KiCad E.D.A.	eeschema (2013-07-07 BZR 4022)-stable	Id: 4/14

DD_HIP9011 ver.2
RusEfi.com







rusEFI.com		
File: DD_HIP9011.sch		
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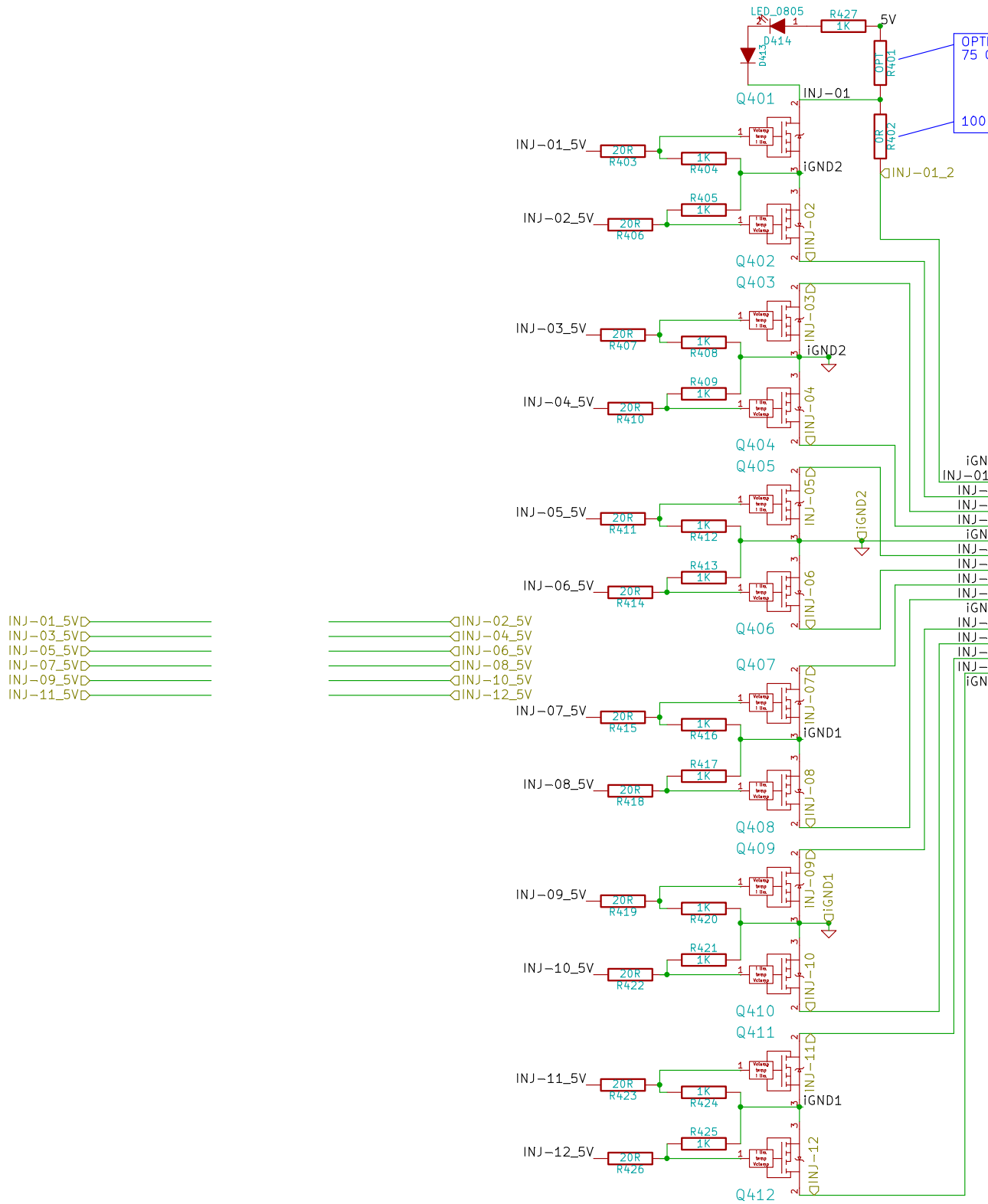
Title: Frankenso		
Size: A4	Date: 14 jul 2014	**Rev: .01**
KiCad E.D.A. eeschema (2013-07-07 BZR 4022)-stable		Id: 5/14



12 channel injector driver
also suitable for fuel pump relay, IAC solenoid etc

MISC NOTES

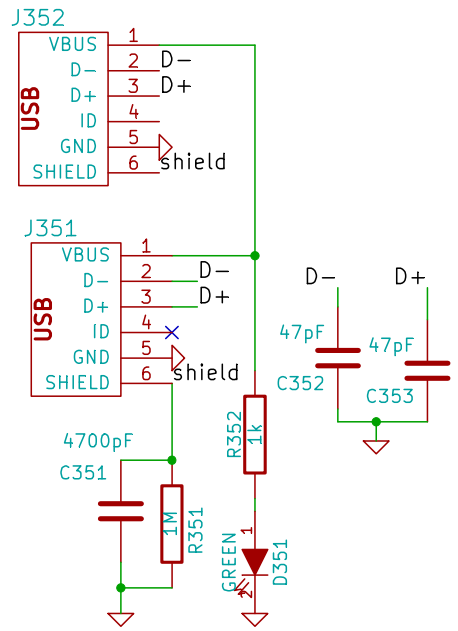
THE GENERAL SYSTEM LAYOUT IS SHOWN IN BLUE. THIS IS NOT
THE SUGGESTED SYSTEM WIRING, IT DOES SHOW THE GENERAL
OVERALL CIRCUIT LAYOUT TOPOLOGY.

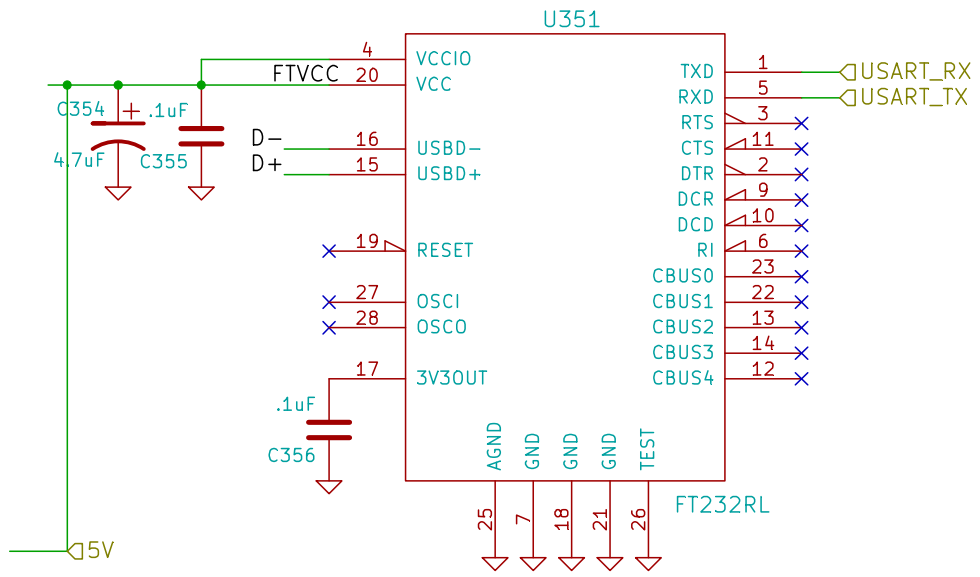
THE PCB WIRING IS SHOWN IN RED, GREEN WITH A BLUE BUS.

Screw terminals 1760500000

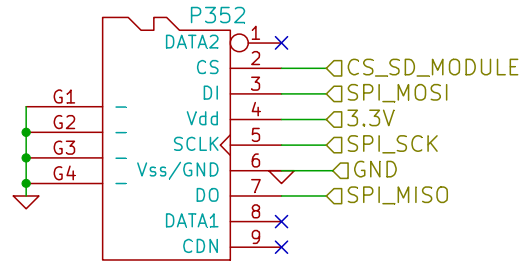
Screw connector PCB http://octopart.com/39522-1007-molex-655409
Screw connector harness http://octopart.com/partsearch#search/requestData&q=39520-0007

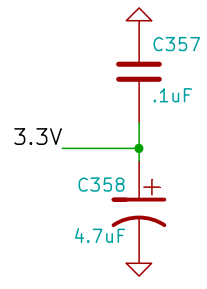
rusEFI.com		
File: inj_12ch.sch		
Sheet: /inj_12ch/		
Title: Frankenso		
Size: B	Date: 14 jul 2014	**Rev: .01**
KiCad E.D.A. eeschema (2013-07-07 BZR 4022)-stable		Id: 6/14





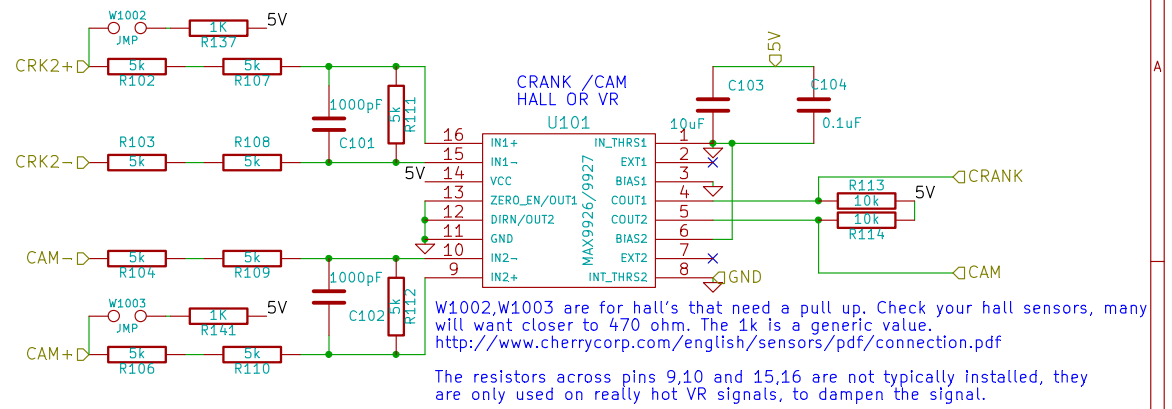
For right conn





SD card slot
USB TTL module

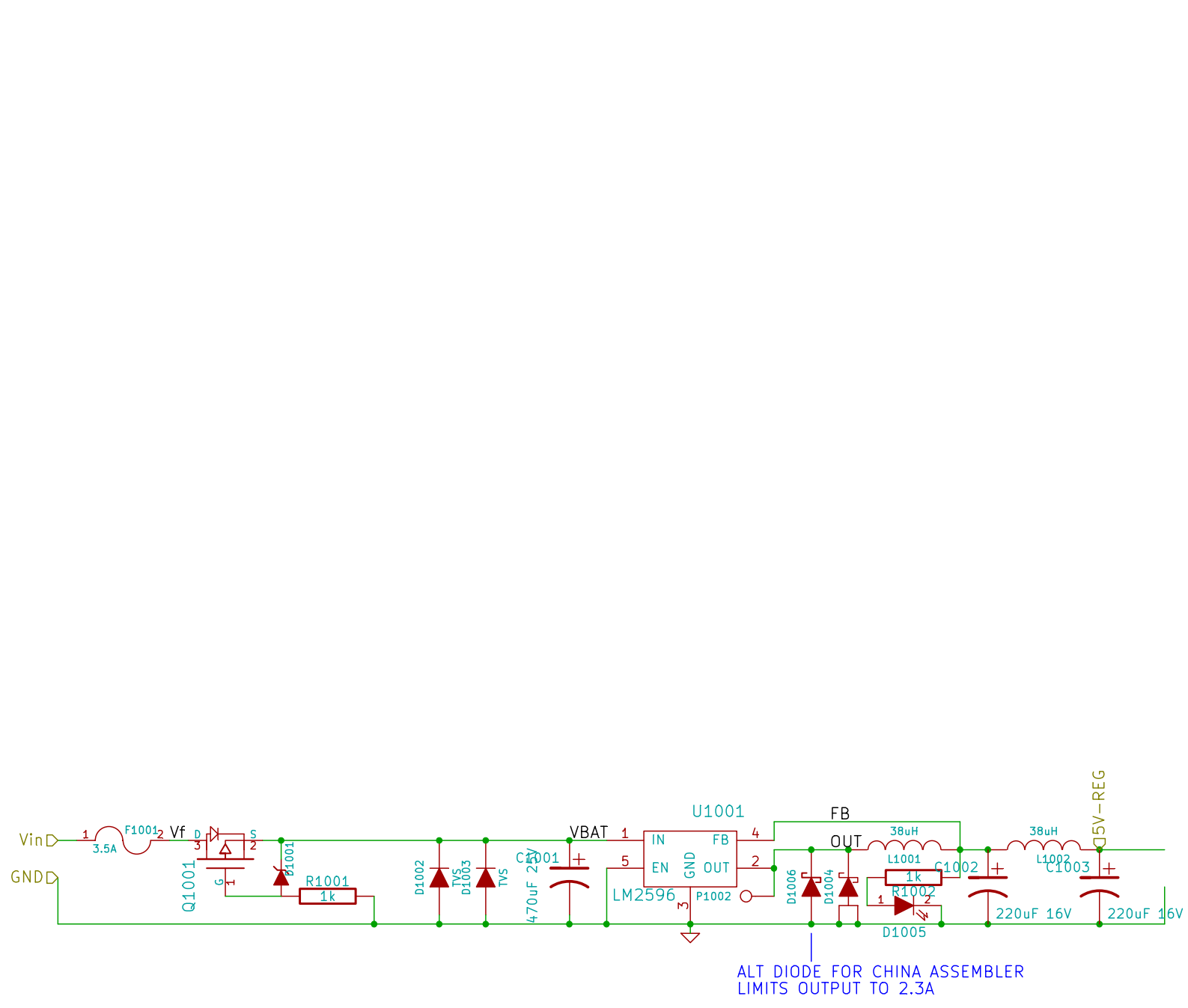
rusEFI.com		
File: mmc_usb_1.sch		
Sheet: /mmc_usb_1/		
Title: Frankenso		
Size: A4	Date: 14 jul 2014	**Rev: .01**
KiCad E.D.A. eeschema (2013-07-07 BZR 4022)-stable		Id: 7/14



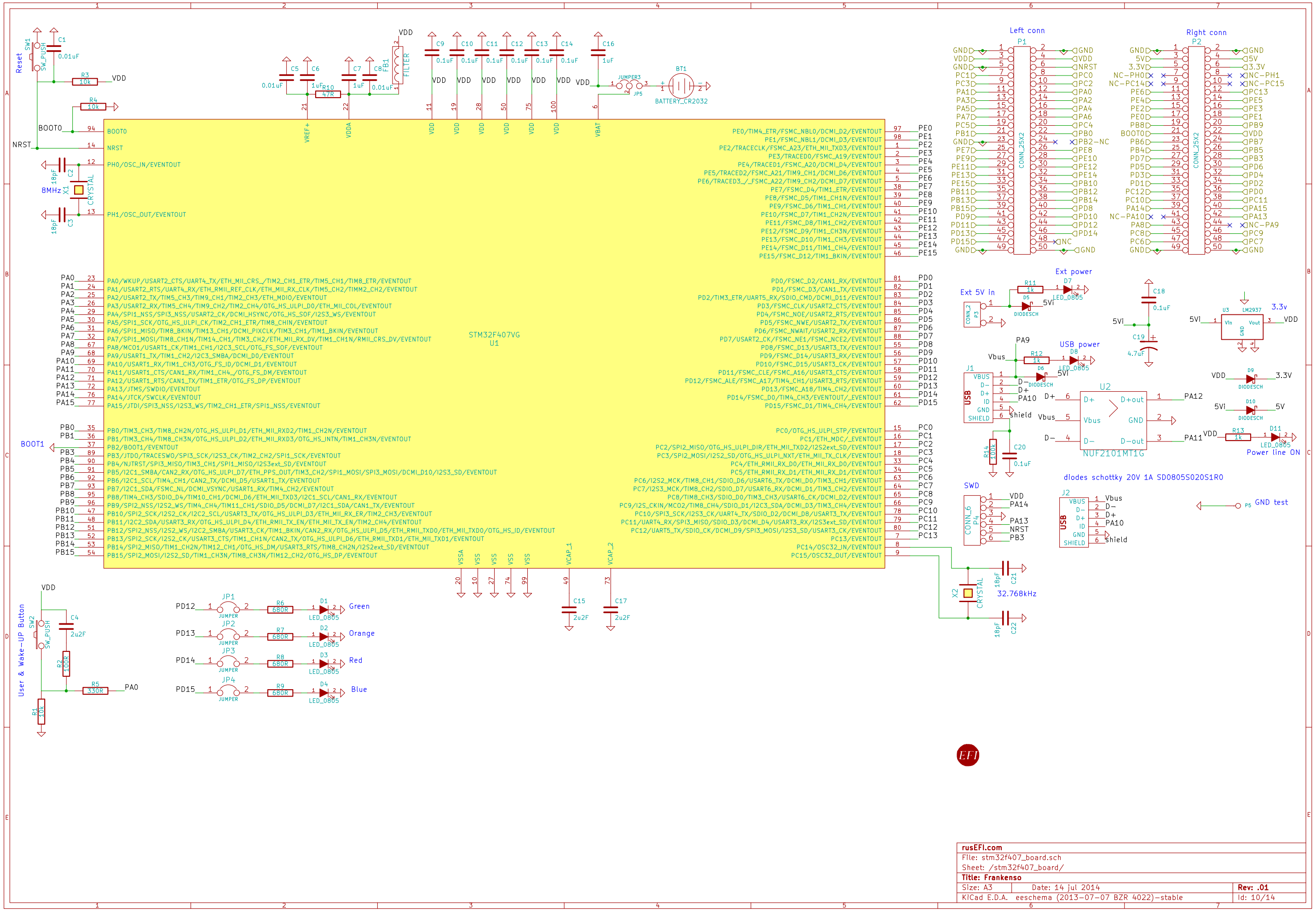
W1002,W1003 are for hall's that need a pull up. Check your hall sensors, many will want closer to 470 ohm. The 1k is a generic value.
http://www.cherrycorp.com/english/sensors/pdf/connection.pdf

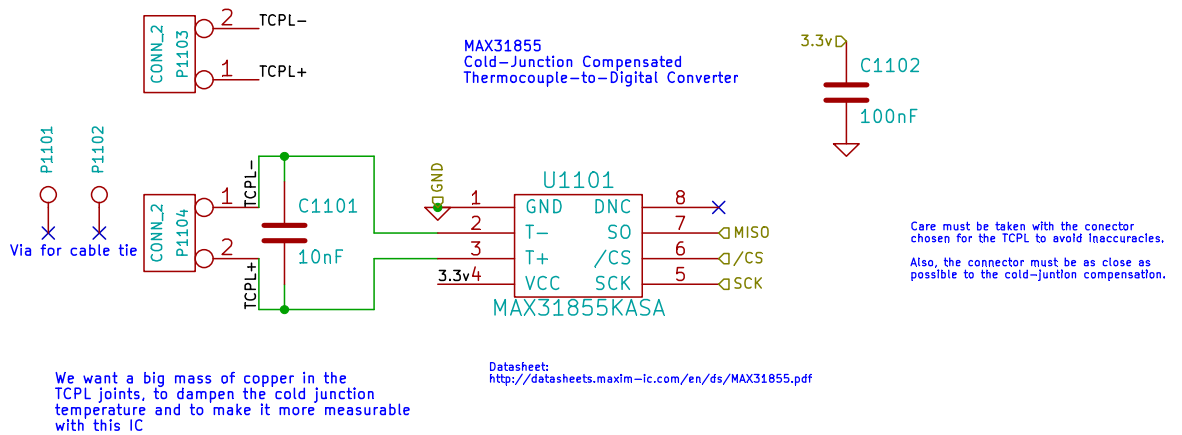
The resistors across pins 9,10 and 15,16 are not typically installed, they are only used on really hot VR signals, to dampen the signal.

rusEFI.com		
File: cps_vrs_io_1.sch		
Sheet: /cps_vrs_io_1/		
Title: Frankenso		
Size: B	Date: 14 jul 2014	**Rev: .01**
KiCad E.D.A. eeschema (2013-07-07 BZR 4022)-stable		Id: 8/14

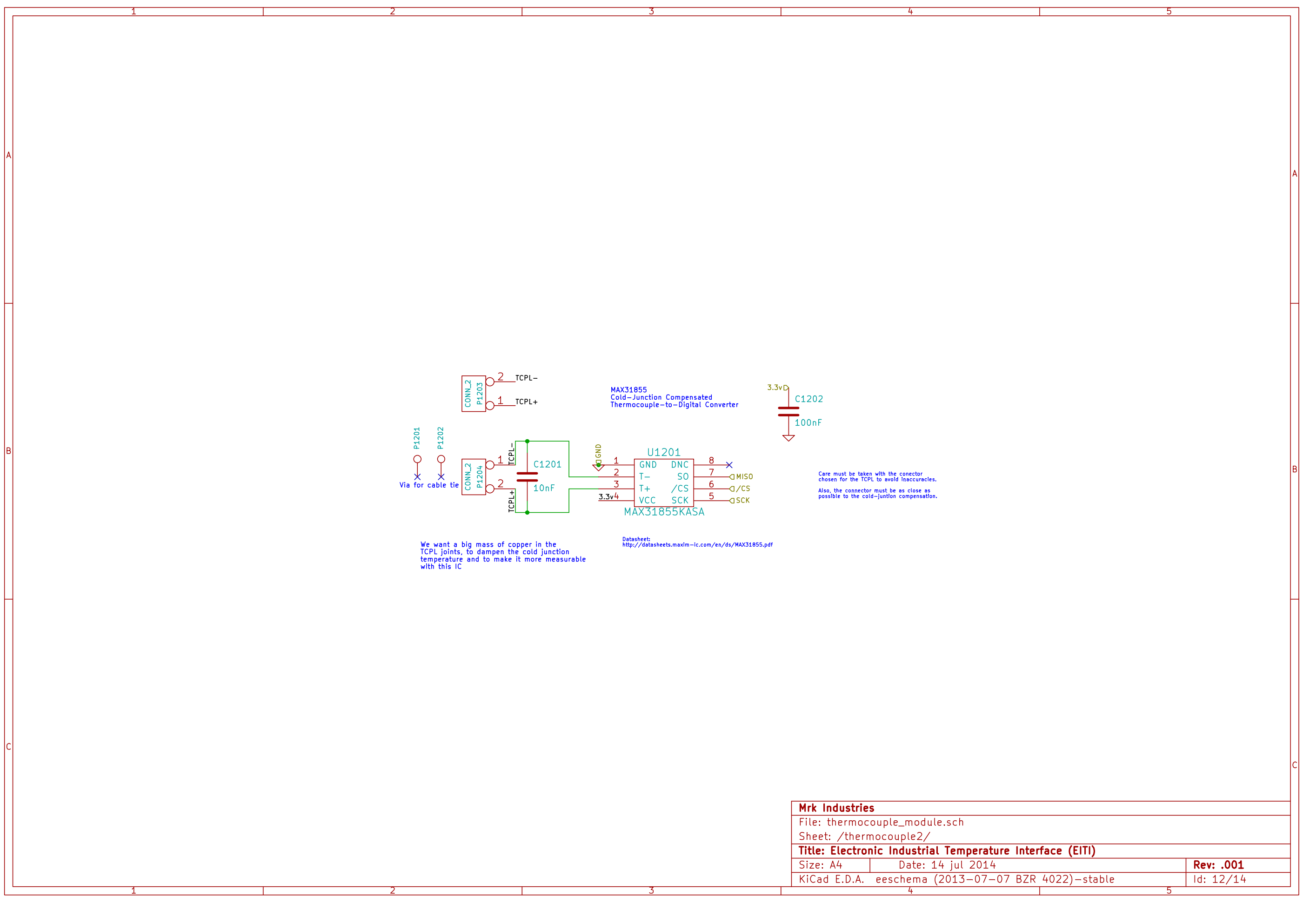


rusEFI.com		
File: PWR_buck_12V_switcher.sch		
Sheet: /PWR_buck_12V_switcher/		
Title: Frankenso		
Size: A	Date: 14 jul 2014	**Rev: .01**
KiCad E.D.A. eeschema (2013-07-07 BZR 4022)-stable		Id: 9/14

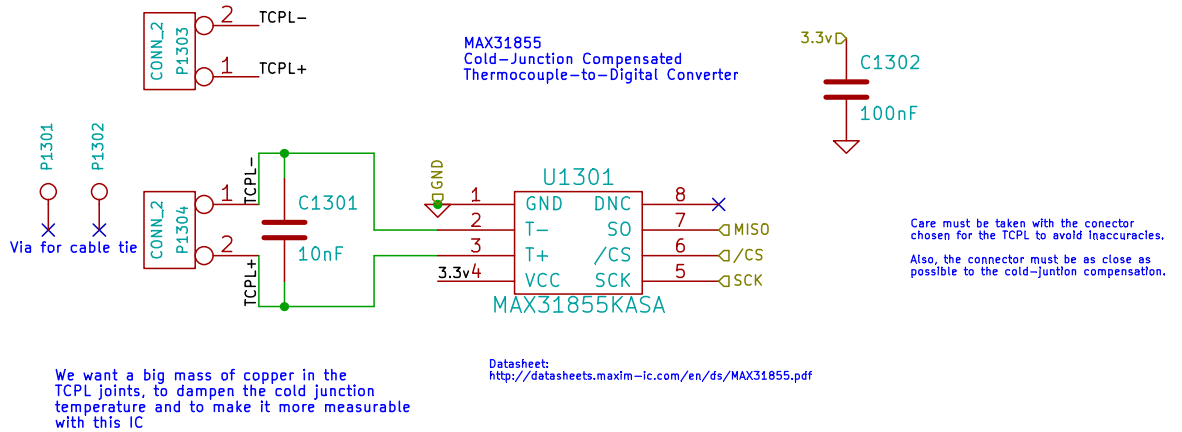

STM32F407VG
U1
Left conn
P1
Right conn
P2
Ext power
Ext 5V in
USB power
PA9
J1
USB
U2
NUF2101MT1G
SWD
P4
J2
diodes schottky 20V 1A SD0805S020S1R0
Power line ON
P5 GND test
User & Wake-UP Button
SW2
SW_PUSH
Reset
SW1
BOOT1
8MHz
X1
CRYSTAL
32.768kHz
X2
JUMPER3
JP5
BT1
BATTERY_CR2032
FILTER
FB1
JUMPER
LED_0805
DIODESCH
CONN_25X2
CONN_2
CONN_6
Green
Orange
Red
Blue
rusEFI.com
File: stm32f407_board.sch
Sheet: /stm32f407_board/
Title: Frankenso
Size: A3
Date: 14 jul 2014
Rev: .01
KiCad E.D.A. eeschema (2013-07-07 BZR 4022)-stable
Id: 10/14



Mrk Industries		
File: thermocouple_module.sch		
Sheet: /thermocouple1/		
Title: Electronic Industrial Temperature Interface (EITI)		
Size: A4	Date: 14 jul 2014	**Rev: .001**
KiCad E.D.A. eeschema (2013-07-07 BZR 4022)-stable		Id: 11/14



Mrk Industries		
File: thermocouple_module.sch		
Sheet: /thermocouple2/		
Title: Electronic Industrial Temperature Interface (EITI)		
Size: A4	Date: 14 jul 2014	**Rev: .001**
KiCad E.D.A. eeschema (2013-07-07 BZR 4022)-stable		Id: 12/14



Mrk Industries		
File: thermocouple_module.sch		
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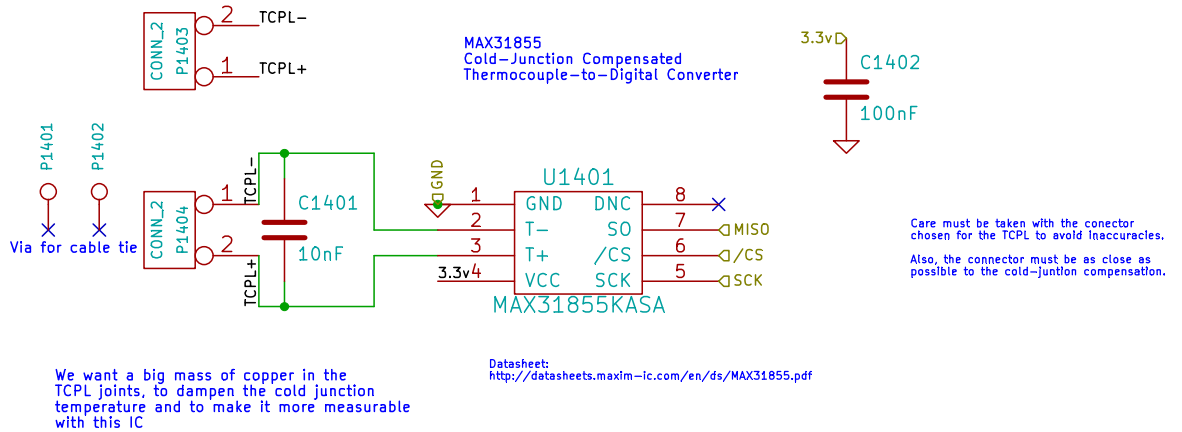
Title: Electronic Industrial Temperature Interface (EITI)		
Size: A4	Date: 14 jul 2014	**Rev: .001**
KiCad E.D.A. eeschema (2013-07-07 BZR 4022)-stable		Id: 13/14



Mrk Industries		
File: thermocouple_module.sch		
Sheet: /thermocouple4/		
Title: Electronic Industrial Temperature Interface (EITI)		
Size: A4	Date: 14 jul 2014	**Rev: .001**
KiCad E.D.A. eeschema (2013-07-07 BZR 4022)-stable		Id: 14/14