U3
Molex_48_pin

12V-SWITCH 1
GND 2
VVT-2 3
E-THROTTLE+ 4
12V-SWITCH 5
GND 6
VVT-1 7
E-THROTTLE- 8
COIL-1 9
COIL-2 10
COIL-3 11
COIL-4 12
GP_OUT_6 13
GP_OUT_5 14
USB_D- 15
USB_D+ 16
GND 17
AN-TEMP-1 18
AN-VOLT-4 19
AN-VOLT-5 20
GND 21
AN-TEMP-4 22
AN-TEMP-2 23
AN-TEMP-3 24
CAM_SENSOR 25
AN-VOLT-2 26
AN-VOLT-1 27
AN-VOLT-10 28
MAIN_RELAY 29
AN-VOLT-7 30
AN-VOLT-3 31
AN-VOLT-6 32
GP_OUT_3 33
GP_OUT_2 34
GP_OUT_1 35
AN-VOLT-8 36
INJECTOR-1 37
INJECTOR-2 38
5V2 39
AN-VOLT-9 40
INJECTOR-3 41
INJECTOR-4 42
GP_OUT_4 43
5V1 44
CRNK+ 45
CRNK- 46
CANL 47
CANH 48

R16
DNP

GP OUT 5 AND 6 ARE HIGH SIDE DRIVEN

ANALOG INPUTS.
ADC 1-4 HAS BIAS RESISTORS
FOR TEMP SENSORS

CAN ALSO BE USED
AS DIGITAL INPUTS

ADC
AN-TEMP-1
AN-TEMP-2
AN-TEMP-3
AN-TEMP-4
AN-VOLT-1
AN-VOLT-10
AN-VOLT-2
AN-VOLT-3
AN-VOLT-4
AN-VOLT-5
AN-VOLT-6
AN-VOLT-7
AN-VOLT-8
AN-VOLT-9
CAM_SENSOR
12V-SWITCH
5V
ADC_1 ... ADC_14
ADC_1_MCU ... ADC_14_MCU
CAM
12V-SWITCH
5V
ADC.sch

AnOut1
AnOut2
AnOut3
AnOut4
AnOut5
AnOut6
AnOut7
AnOut8
AnOut9
AnOut10
AnOut11
AnOut12
AnOut13
AnOut14
CAM_MCU
Vbat_MCU
Vref
TP
Vbat_MCU
Vref

MCU
VDD
GND
PA0
PA1
PA2
PA3
PC0
PA4
PA6
PA7
PC2
PC3
PC4
PC5
PB0
PB1
PA5
PC1
Vref
USB_D-
USB_D+
USB_D-
USB_D+

6A H-BRIDGE
E-THROTTLE+
E-THROTTLE-
12V-SWITCH
VDD
GND
OUT1
OUT2
12V
VDD
GND
H-BRIDGE
DIR
PWM
DIS
SO
SI
SCK
CS
GND
PA8
PC7
PC8
PC9
TLE9201SG.sch

FlashMemory
VDD
SO
SI
SCK
CS
VDD
FlashMemory.sch
PB14
PB15
PB13
PE15
PD12
PD13
PD14
PD15
PE2
PE0
PB10
PE4
PE3
PB8
PB2-NC
PD8
PC10
PC11
PA15
PA13
stm32.sch

TLE8888-1QK
GND
IGN_IN_1
IGN_IN_2
IGN_IN_3
IGN_IN_4
INJ_IN_1
INJ_IN_2
INJ_IN_3
INJ_IN_4
IN_9
IN_10
IN_11
IN_12
CAN_TX
CAN_RX
SO
SDO
CS_TLE
CSN
SI
SIP
SCK
SCLP
CRANK
CRNK_IN
GND
5V
5V2
5V1
PE14
PE13
PE12
PE11
PE10
PE9
PE8
PE7
PB6
PB12
PB4
PD5
PB5
PB3
PC6
PE1
5V
12V-SWITCH
12V-SWITCH
TLE8888-1QK.sch

IGN_OUT_1
IGN_OUT_2
IGN_OUT_3
IGN_OUT_4
INJ_1
INJ_2
INJ_3
INJ_4
OUT_5
OUT_6
OUT_7
OUT_14
OUT_15
OUT_16
OUT_17
OUT_18
OUT_19
OUT_20
OUT_21
OUT_22
OUT_23
OUT_24
CRNK+
CRNK-
CAN_L
CAN_H
MAIN_RELAY
VDD
CRNK+
CRNK-
CANL
CANH
MAIN_RELAY
VDD

LOW SIDE OUTPUTS
INJECTOR-1
INJECTOR-2
INJECTOR-3
INJECTOR-4
2.2A
VVT-2
VVT-1
4.5A
D1
D2
NSR0530HT
NSR0530HT
12V-SWITCH
12V-SWITCH

CAN BE USED AS LOW-SIDE
OR HIGH-SIDE
GP_OUT_1
GP_OUT_2
GP_OUT_3
GP_OUT_4
0.6A

hi-lo
PD7
PD6
PD4
PD3
PD2
PD1
IGN_1_MCU
IGN_2_MCU
IGN_3_MCU
IGN_4_MCU
HS1_MCU
HS2_MCU
IGN_1
IGN_2
IGN_3
IGN_4
HS1
HS2
5V
12V
5V
12V-SWITCH
hi-lo.sch

GP_OUT_5
GP_OUT_6
COIL-1
COIL-2
COIL-3
COIL-4
HIGH-SIDE OUTPUTS

PB9
PD9
PB7
PC12
PD10
PB11
PD0
PC13
PE6
PE5
PA14
PD11

D22 LED
R29 1K
PE1
5V
D21 LED
R36 1K
PE2
5V
D23 LED
R49 1K
PE3
5V
D27 LED
R51 1K
PE4
5V

Sheet: /
File: microRusEfi.sch

Title: microRusEfi

Size: User	Date: 2019-01-31	**Rev: R2.1**
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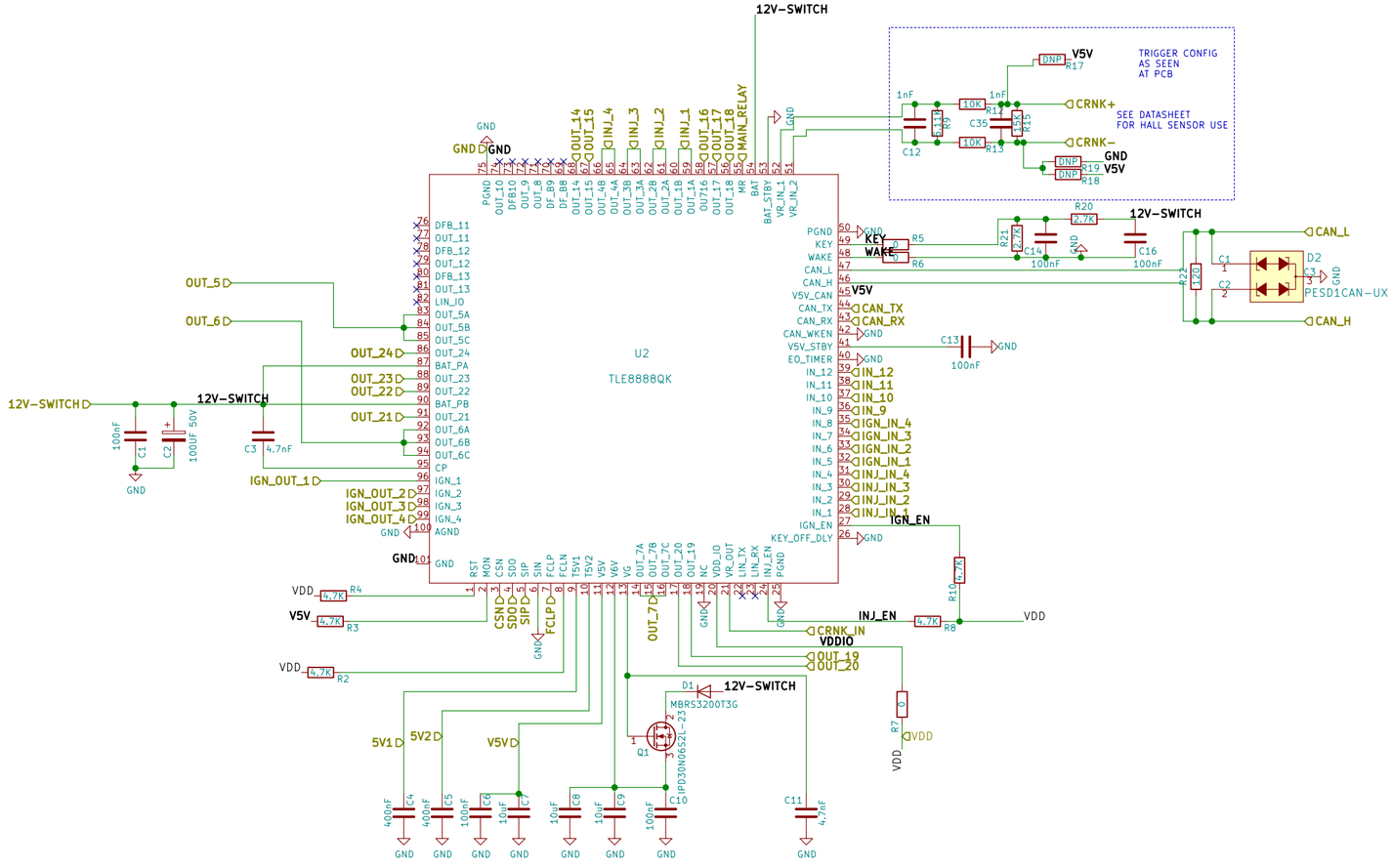

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Size: User	Date: 2019-01-31	**Rev: R2.1**
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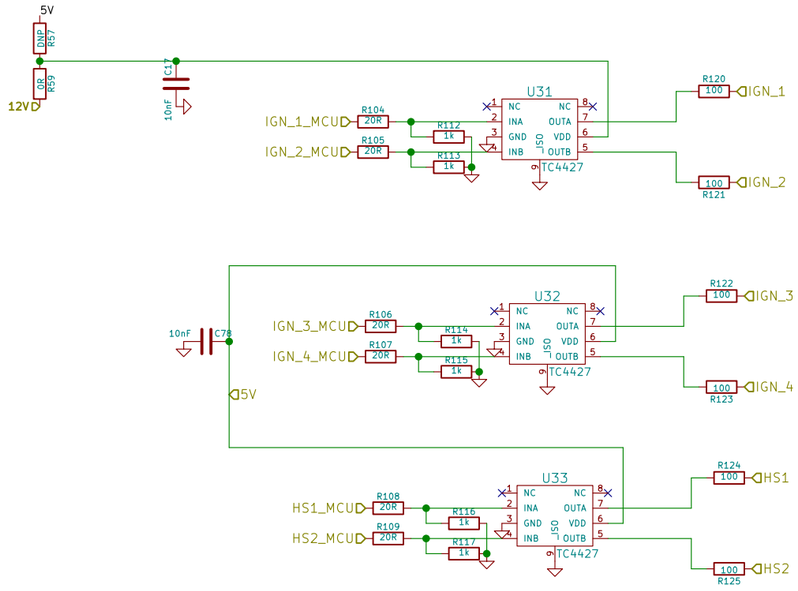
8 channel high / low side driver



rusEFI.com

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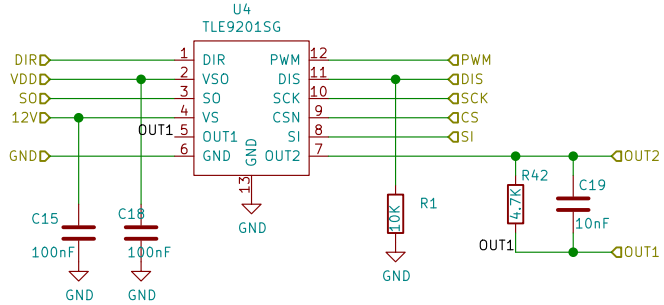
Rev: 0.5.5



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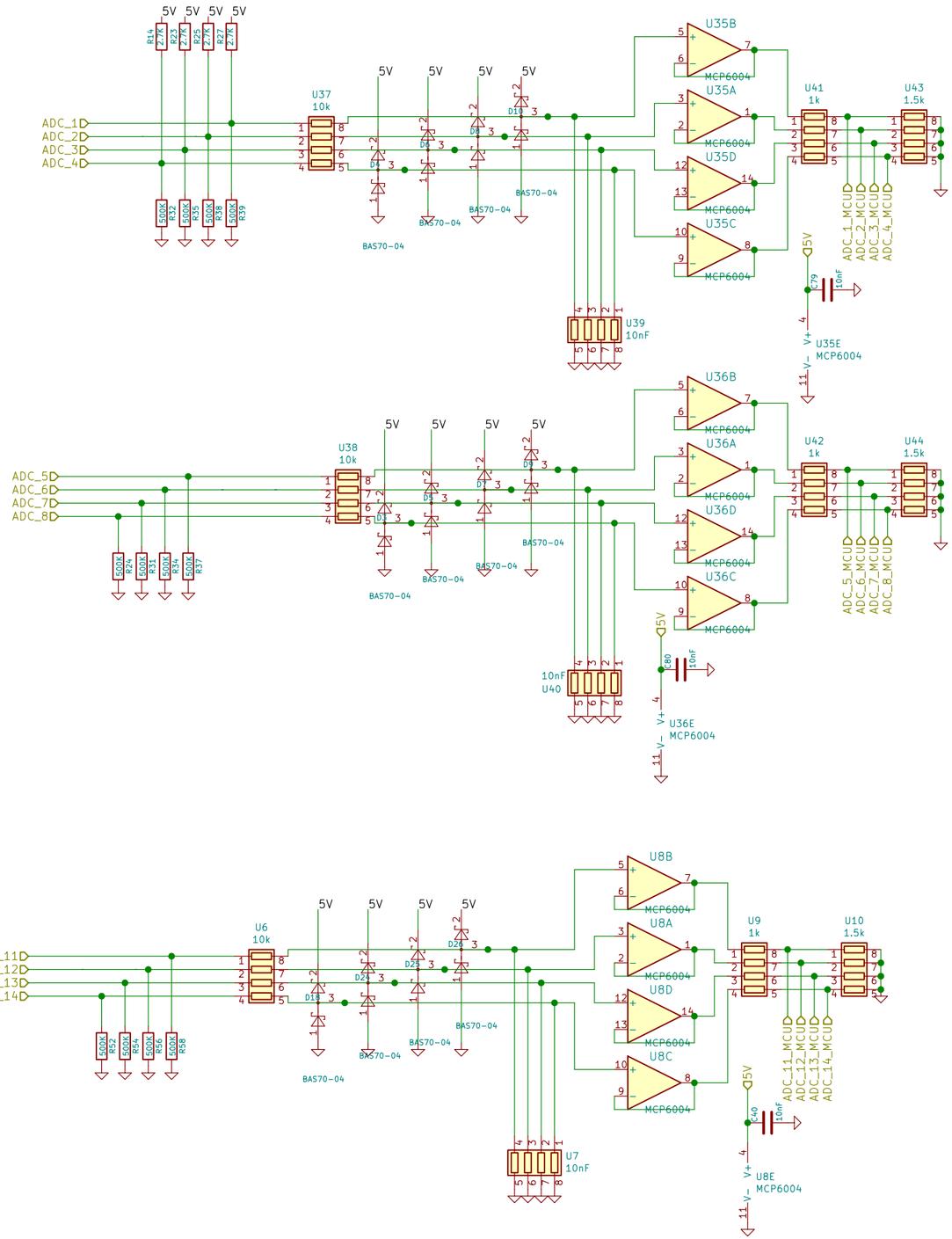

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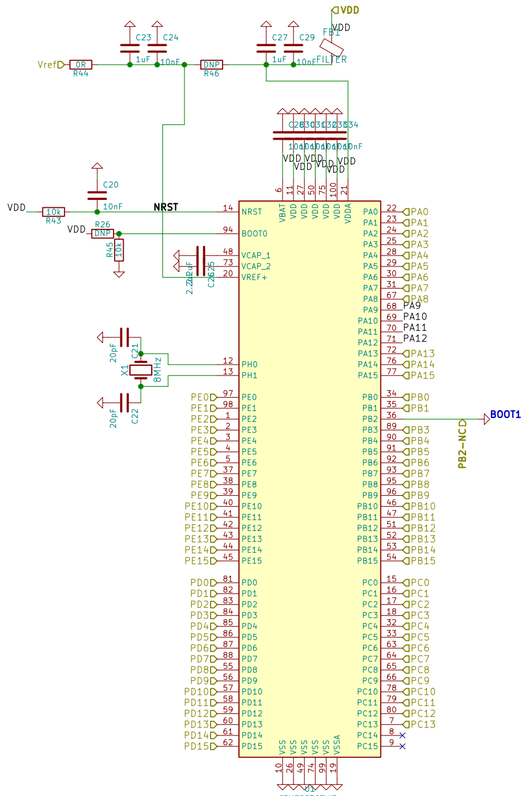

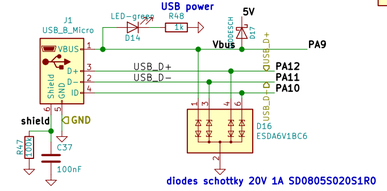

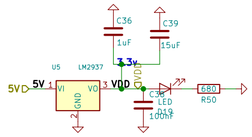

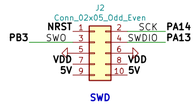

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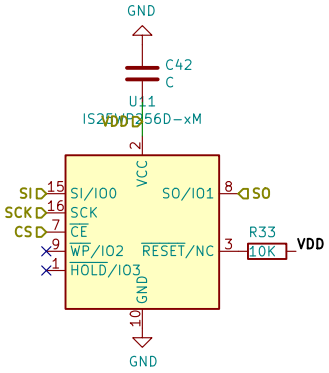

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