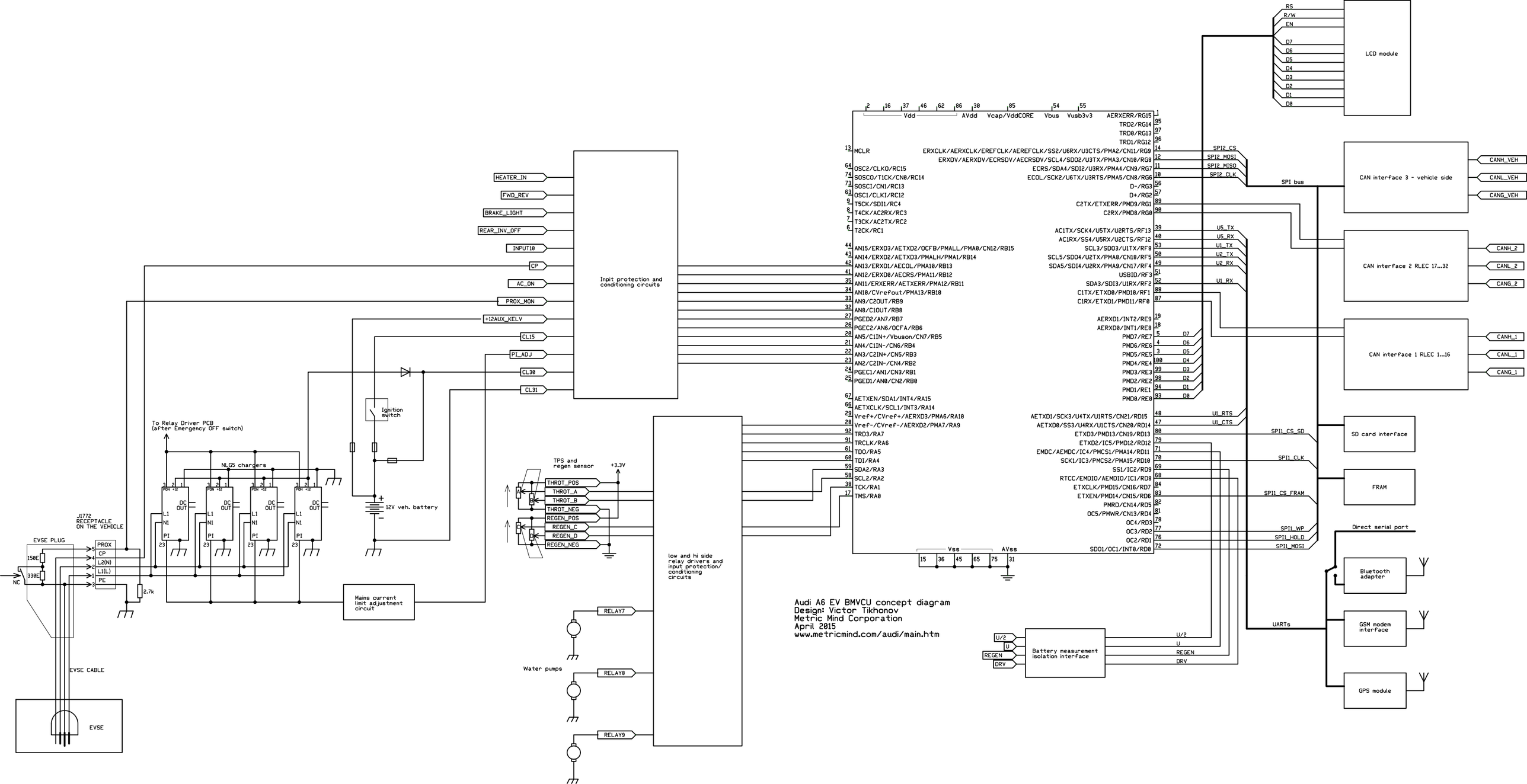
Audi A6 EV BMVCU concept diagram
Design: Victor Tikhonov
Metric Mind Corporation
April 2015
www.metricmind.com/audi/main.htm
LCD module
RS
R/W
EN
D7
D6
D5
D4
D3
D2
D1
D0
CAN interface 3 - vehicle side
CANH_VEH
CANL_VEH
CANG_VEH
CAN interface 2 RLEC 17...32
CANH_2
CANL_2
CANG_2
CAN interface 1 RLEC 1...16
CANH_1
CANL_1
CANG_1
SPI bus
SPI2_CS
SPI2_MOSI
SPI2_MISO
SPI2_CLK
SD card interface
SPI1_CS_SD
SPI1_CLK
FRAM
SPI1_CS_FRAM
SPI1_WP
SPI1_HOLD
SPI1_MOSI
Direct serial port
Bluetooth adapter
GSM modem interface
GPS module
UARTs
U5_TX
U5_RX
U1_TX
U2_TX
U2_RX
U1_RX
U1_RTS
U1_CTS
U/2
U
REGEN
DRV
Battery measurement isolation interface
Inpit protection and conditioning circuits
HEATER_IN
FWD_REV
BRAKE_LIGHT
REAR_INV_OFF
INPUT10
CP
AC_ON
PROX_MON
+12AUX_KELV
CL15
PI_ADJ
CL30
CL31
low and hi side relay drivers and input protection/ conditioning circuits
RELAY7
RELAY8
RELAY9
Water pumps
TPS and regen sensor
+3.3V
THROT_POS
THROT_A
THROT_B
THROT_NEG
REGEN_POS
REGEN_C
REGEN_D
REGEN_NEG
Ighition switch
12V veh. battery
To Relay Driver PCB (after Emergency OFF switch)
NLG5 chargers
Mains current limit adjustment circuit
J1772 RECEPTACLE ON THE VEHICLE
EVSE PLUG
PROX
CP
L2(N)
L1(L)
PE
150E
330E
NC
2.7k
EVSE CABLE
EVSE
Vdd
AVdd
Vcap/VddCORE
Vbus
Vusb3v3
Vss
AVss
MCLR
OSC2/CLKO/RC15
SOSCO/T1CK/CN0/RC14
SOSCI/CN1/RC13
OSCI/CLKI/RC12
T5CK/SDI1/RC4
T4CK/AC2RX/RC3
T3CK/AC2TX/RC2
T2CK/RC1
AN15/ERXD3/AETXD2/OCFB/PMALL/PMA0/CN12/RB15
AN14/ERXD2/AETXD3/PMALH/PMA1/RB14
AN13/ERXD1/AECOL/PMA10/RB13
AN12/ERXD0/AECRS/PMA11/RB12
AN11/ERXERR/AETXERR/PMA12/RB11
AN10/CVrefout/PMA13/RB10
AN9/C2OUT/RB9
AN8/C1OUT/RB8
PGED2/AN7/RB7
PGEC2/AN6/OCFA/RB6
AN5/C1IN+/Vbuson/CN7/RB5
AN4/C1IN-/CN6/RB4
AN3/C2IN+/CN5/RB3
AN2/C2IN-/CN4/RB2
PGEC1/AN1/CN3/RB1
PGED1/AN0/CN2/RB0
AETXEN/SDA1/INT4/RA15
AETXCLK/SCL1/INT3/RA14
Vref+/CVref+/AERXD3/PMA6/RA10
Vref-/CVref-/AERXD2/PMA7/RA9
TRD3/RA7
TRCLK/RA6
TDO/RA5
TDI/RA4
SDA2/RA3
SCL2/RA2
TCK/RA1
TMS/RA0
AERXERR/RG15
TRD2/RG14
TRD0/RG13
TRD1/RG12
ERXCLK/AERXCLK/EREFCLK/AEREFCLK/SS2/U6RX/U3CTS/PMA2/CN11/RG9
ERXDV/AERXDV/ECRSDV/AECRSDV/SCL4/SDO2/U3TX/PMA3/CN10/RG8
ECRS/SDA4/SDI2/U3RX/PMA4/CN9/RG7
ECOL/SCK2/U6TX/U3RTS/PMA5/CN8/RG6
D-/RG3
D+/RG2
C2TX/ETXERR/PMD9/RG1
C2RX/PMD8/RG0
AC1TX/SCK4/U5TX/U2RTS/RF13
AC1RX/SS4/U5RX/U2CTS/RF12
SCL3/SDO3/U1TX/RF8
SCL5/SDO4/U2TX/PMA8/CN18/RF5
SDA5/SDI4/U2RX/PMA9/CN17/RF4
USBID/RF3
SDA3/SDI3/U1RX/RF2
C1TX/ETXD0/PMD10/RF1
C1RX/ETXD1/PMD11/RF0
AERXD1/INT2/RE9
AERXD0/INT1/RE8
PMD7/RE7
PMD6/RE6
PMD5/RE5
PMD4/RE4
PMD3/RE3
PMD2/RE2
PMD1/RE1
PMD0/RE0
AETXD1/SCK3/U4TX/U1RTS/CN21/RD15
AETXD0/SS3/U4RX/U1CTS/CN20/RD14
ETXD3/PMD13/CN19/RD13
ETXD2/IC5/PMD12/RD12
EMDC/AEMDC/IC4/PMCS1/PMA14/RD11
SCK1/IC3/PMCS2/PMA15/RD10
SS1/IC2/RD9
RTCC/EMDIO/AEMDIO/IC1/RD8
ETXCLK/PMD15/CN16/RD7
ETXEN/PMD14/CN15/RD6
PMRD/CN14/RD5
OC5/PMWR/CN13/RD4
OC4/RD3
OC3/RD2
OC2/RD1
SDO1/OC1/INT0/RD0