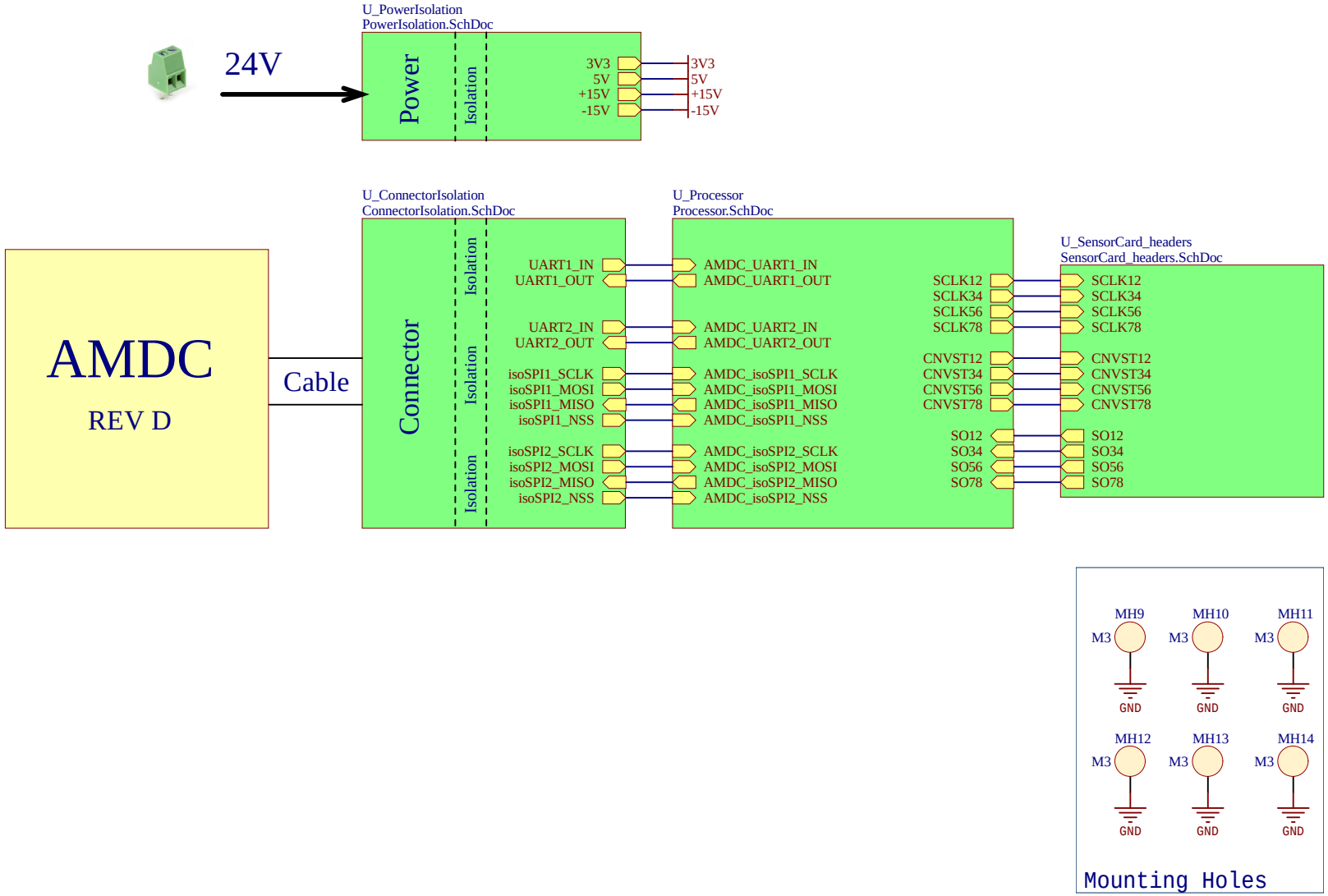
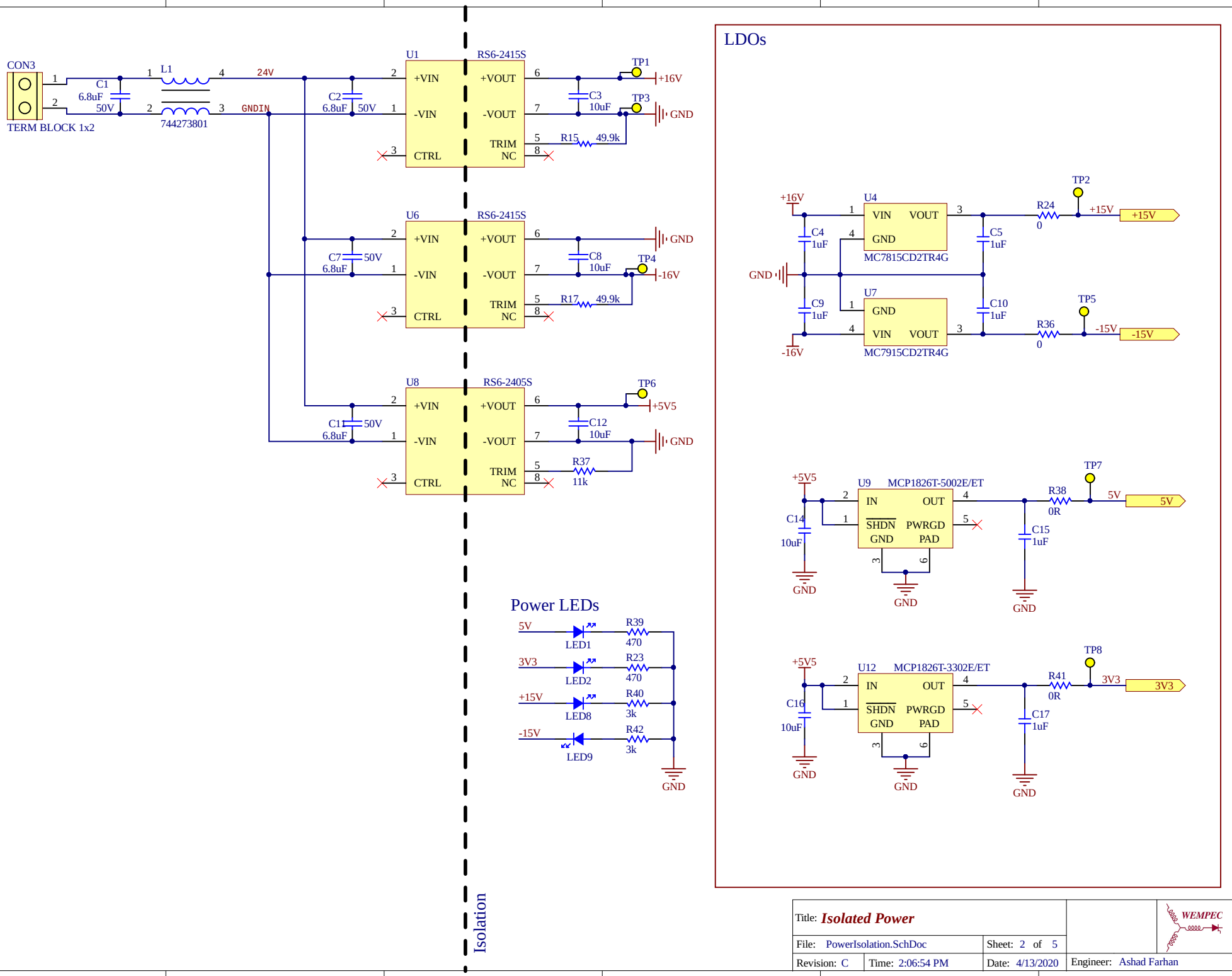
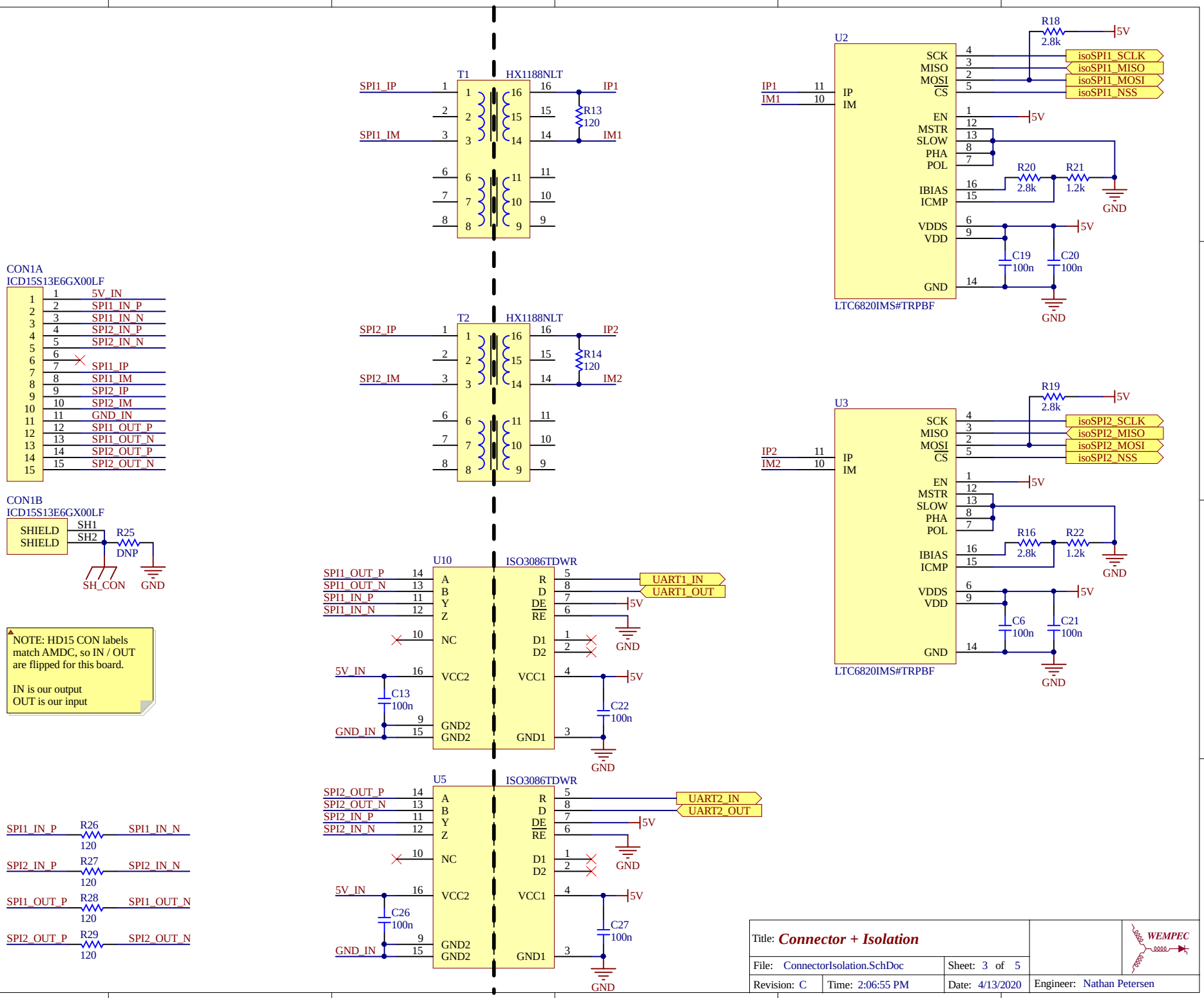
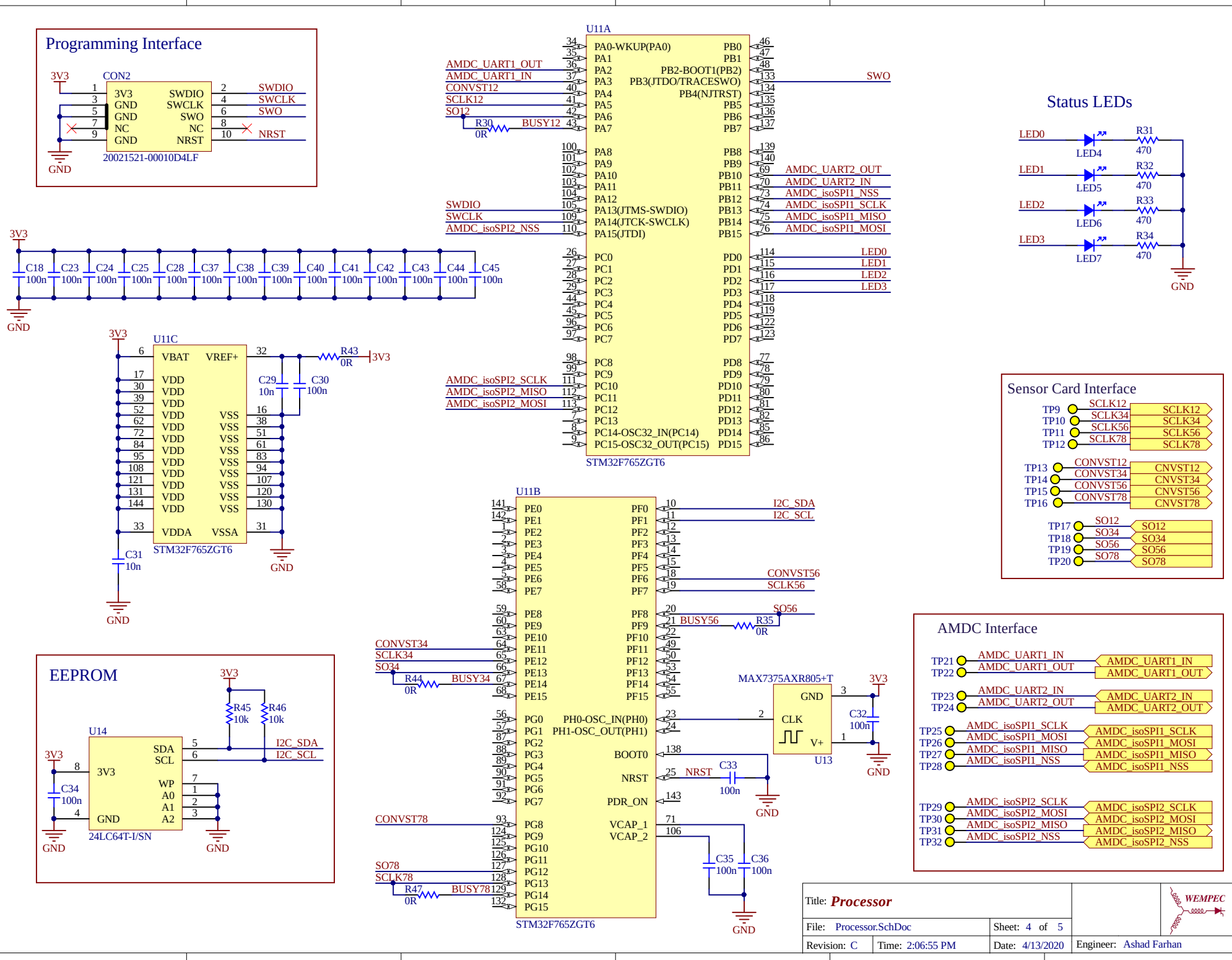


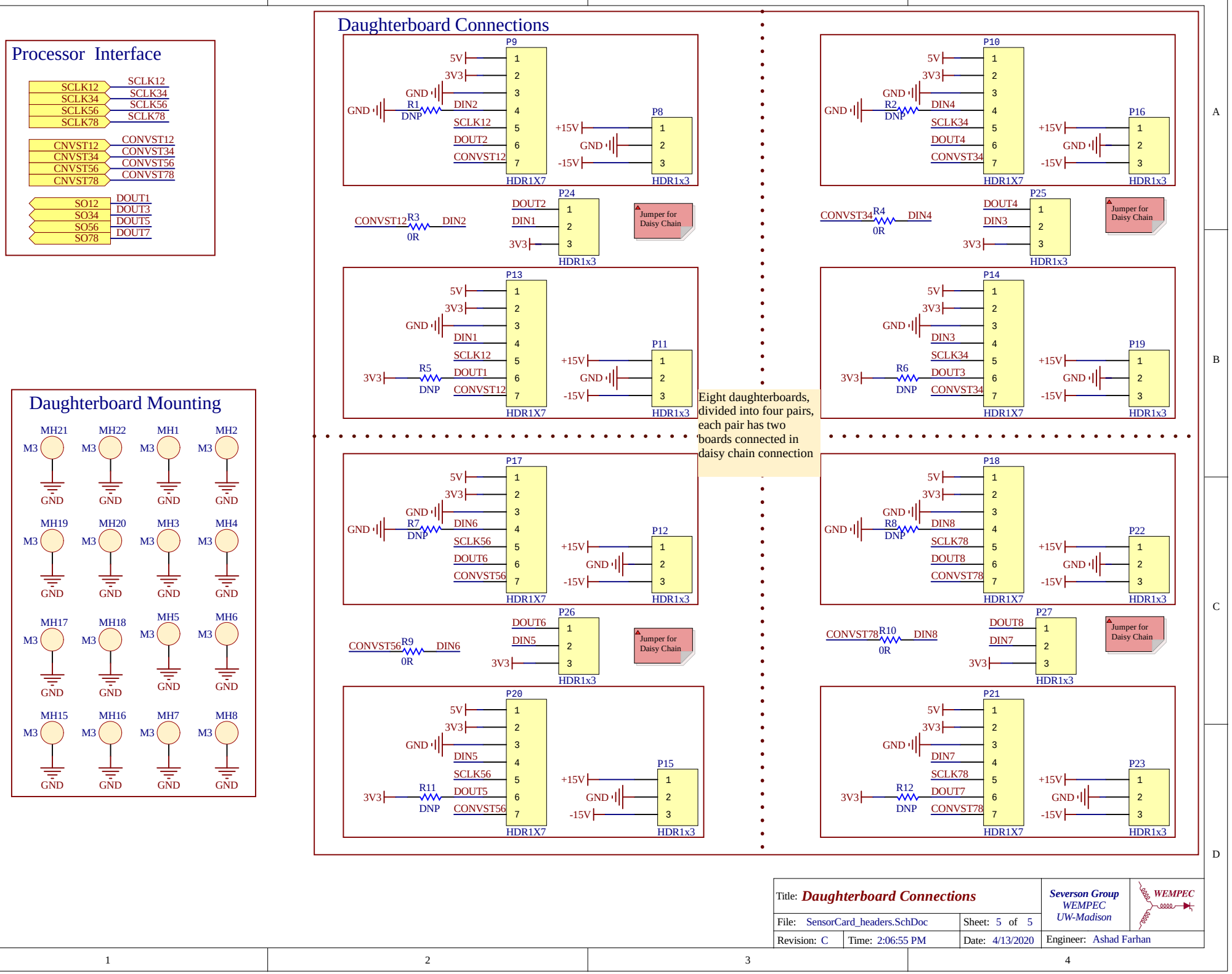
Title: *Measurement Motherboard REVC*			WEMPEC
File: TopLevel.SchDoc		Sheet: 1 of 5	
Revision: C	Time: 2:06:54 PM	Date: 4/13/2020	Engineer: Nathan and Ashad



Title: ***Isolated Power***			WEMPEC
File: PowerIsolation.SchDoc		Sheet: 2 of 5	
Revision: C	Time: 2:06:54 PM	Date: 4/13/2020	Engineer: Ashad Farhan


CON1A
ICD15S13E6GX00LF
5V_IN
SPI1_IN_P
SPI1_IN_N
SPI2_IN_P
SPI2_IN_N
SPI1_IP
SPI1_IM
SPI2_IP
SPI2_IM
GND_IN
SPI1_OUT_P
SPI1_OUT_N
SPI2_OUT_P
SPI2_OUT_N
CON1B
ICD15S13E6GX00LF
SHIELD
SHIELD
SH1
SH2
R25
DNP
SH_CON
GND
NOTE: HD15 CON labels match AMDC, so IN / OUT are flipped for this board.
IN is our output
OUT is our input
R26
R27
R28
R29
120
T1
HX1188NLT
T2
HX1188NLT
R13
R14
120
IP1
IP2
IM1
IM2
U10
ISO3086TDWR
U5
ISO3086TDWR
A
B
Y
Z
NC
VCC2
GND2
R
D
DE
RE
D1
D2
VCC1
GND1
UART1_IN
UART1_OUT
UART2_IN
UART2_OUT
C13
C22
C26
C27
100n
U2
U3
LTC6820IMS#TRPBF
IP
IM
SCK
MISO
MOSI
CS
EN
MSTR
SLOW
PHA
POL
IBIAS
ICMP
VDDS
VDD
GND
R18
R19
R20
R21
R22
2.8k
1.2k
isoSPI1_SCLK
isoSPI1_MISO
isoSPI1_MOSI
isoSPI1_NSS
isoSPI2_SCLK
isoSPI2_MISO
isoSPI2_MOSI
isoSPI2_NSS
C19
C20
C6
C21
Title: Connector + Isolation
File: ConnectorIsolation.SchDoc
Sheet: 3 of 5
Revision: C
Time: 2:06:55 PM
Date: 4/13/2020
Engineer: Nathan Petersen
WEMPEC


Programming Interface
3V3
CON2
3V3
GND
GND
NC
GND
SWDIO
SWCLK
SWO
NC
NRST
SWDIO
SWCLK
SWO
NRST
20021521-00010D4LF
GND
U11A
PA0-WKUP(PA0)
PA1
PA2
PA3
PA4
PA5
PA6
PA7
PA8
PA9
PA10
PA11
PA12
PA13(JTMS-SWDIO)
PA14(JTCK-SWCLK)
PA15(JTDI)
PB0
PB1
PB2-BOOT1(PB2)
PB3(JTDO/TRACESWO)
PB4(NJTRST)
PB5
PB6
PB7
PB8
PB9
PB10
PB11
PB12
PB13
PB14
PB15
PC0
PC1
PC2
PC3
PC4
PC5
PC6
PC7
PC8
PC9
PC10
PC11
PC12
PC13
PC14-OSC32_IN(PC14)
PC15-OSC32_OUT(PC15)
PD0
PD1
PD2
PD3
PD4
PD5
PD6
PD7
PD8
PD9
PD10
PD11
PD12
PD13
PD14
PD15
AMDC_UART1_OUT
AMDC_UART1_IN
CONVST12
SCLK12
SO12
R30
0R
BUSY12
SWO
AMDC_UART2_OUT
AMDC_UART2_IN
AMDC_isoSPI1_NSS
AMDC_isoSPI1_SCLK
AMDC_isoSPI1_MISO
AMDC_isoSPI1_MOSI
SWDIO
SWCLK
AMDC_isoSPI2_NSS
LED0
LED1
LED2
LED3
AMDC_isoSPI2_SCLK
AMDC_isoSPI2_MISO
AMDC_isoSPI2_MOSI
STM32F765ZGT6
Status LEDs
LED0
LED4
R31
470
LED1
LED5
R32
470
LED2
LED6
R33
470
LED3
LED7
R34
470
GND
3V3
C18 100n
C23 100n
C24 100n
C25 100n
C28 100n
C37 100n
C38 100n
C39 100n
C40 100n
C41 100n
C42 100n
C43 100n
C44 100n
C45 100n
GND
U11C
VBAT
VREF+
VDD
VSS
VDDA
VSSA
R43
0R
3V3
C29
10n
C30
100n
C31
10n
STM32F765ZGT6
GND
U11B
PE0
PE1
PE2
PE3
PE4
PE5
PE6
PE7
PE8
PE9
PE10
PE11
PE12
PE13
PE14
PE15
PF0
PF1
PF2
PF3
PF4
PF5
PF6
PF7
PF8
PF9
PF10
PF11
PF12
PF13
PF14
PF15
PG0
PG1
PG2
PG3
PG4
PG5
PG6
PG7
PG8
PG9
PG10
PG11
PG12
PG13
PG14
PG15
PH0-OSC_IN(PH0)
PH1-OSC_OUT(PH1)
BOOT0
NRST
PDR_ON
VCAP_1
VCAP_2
I2C_SDA
I2C_SCL
CONVST56
SCLK56
SO56
BUSY56
R35
0R
CONVST34
SCLK34
SO34
R44
0R
BUSY34
CONVST78
SO78
SCLK78
R47
0R
BUSY78
MAX7375AXR805+T
GND
CLK
V+
U13
C32
100n
C33
100n
C35
100n
C36
100n
STM32F765ZGT6
GND
Sensor Card Interface
TP9
TP10
TP11
TP12
SCLK12
SCLK34
SCLK56
SCLK78
TP13
TP14
TP15
TP16
CONVST12
CONVST34
CONVST56
CONVST78
TP17
TP18
TP19
TP20
SO12
SO34
SO56
SO78
AMDC Interface
TP21
TP22
AMDC_UART1_IN
AMDC_UART1_OUT
TP23
TP24
AMDC_UART2_IN
AMDC_UART2_OUT
TP25
TP26
TP27
TP28
AMDC_isoSPI1_SCLK
AMDC_isoSPI1_MOSI
AMDC_isoSPI1_MISO
AMDC_isoSPI1_NSS
TP29
TP30
TP31
TP32
AMDC_isoSPI2_SCLK
AMDC_isoSPI2_MOSI
AMDC_isoSPI2_MISO
AMDC_isoSPI2_NSS
EEPROM
3V3
R45
10k
R46
10k
U14
SDA
SCL
3V3
WP
A0
A1
A2
GND
I2C_SDA
I2C_SCL
C34
100n
24LC64T-I/SN
GND
GND
Title: Processor
File: Processor.SchDoc
Sheet: 4 of 5
Revision: C
Time: 2:06:55 PM
Date: 4/13/2020
Engineer: Ashad Farhan
WEMPEC


Processor Interface
SCLK12
SCLK34
SCLK56
SCLK78
CNVST12
CNVST34
CNVST56
CNVST78
SO12
SO34
SO56
SO78
DOUT1
DOUT3
DOUT5
DOUT7
Daughterboard Mounting
MH21
MH22
MH1
MH2
MH19
MH20
MH3
MH4
MH17
MH18
MH5
MH6
MH15
MH16
MH7
MH8
M3
GND
Daughterboard Connections
P9
P8
P10
P16
P24
P25
P13
P11
P14
P19
P17
P12
P18
P22
P26
P27
P20
P15
P21
P23
HDR1X7
HDR1x3
5V
3V3
+15V
-15V
R1
R2
R3
R4
R5
R6
R7
R8
R9
R10
R11
R12
DNP
0R
DIN1
DIN2
DIN3
DIN4
DIN5
DIN6
DIN7
DIN8
SCLK12
SCLK34
SCLK56
SCLK78
DOUT1
DOUT2
DOUT3
DOUT4
DOUT5
DOUT6
DOUT7
DOUT8
CONVST12
CONVST34
CONVST56
CONVST78
Jumper for Daisy Chain
Eight daughterboards, divided into four pairs, each pair has two boards connected in daisy chain connection
Title: Daughterboard Connections
File: SensorCard_headers.SchDoc
Sheet: 5 of 5
Revision: C
Time: 2:06:55 PM
Date: 4/13/2020
Severson Group
WEMPEC
UW-Madison
Engineer: Ashad Farhan