XMC1300 Digital Power Control Card V1.0

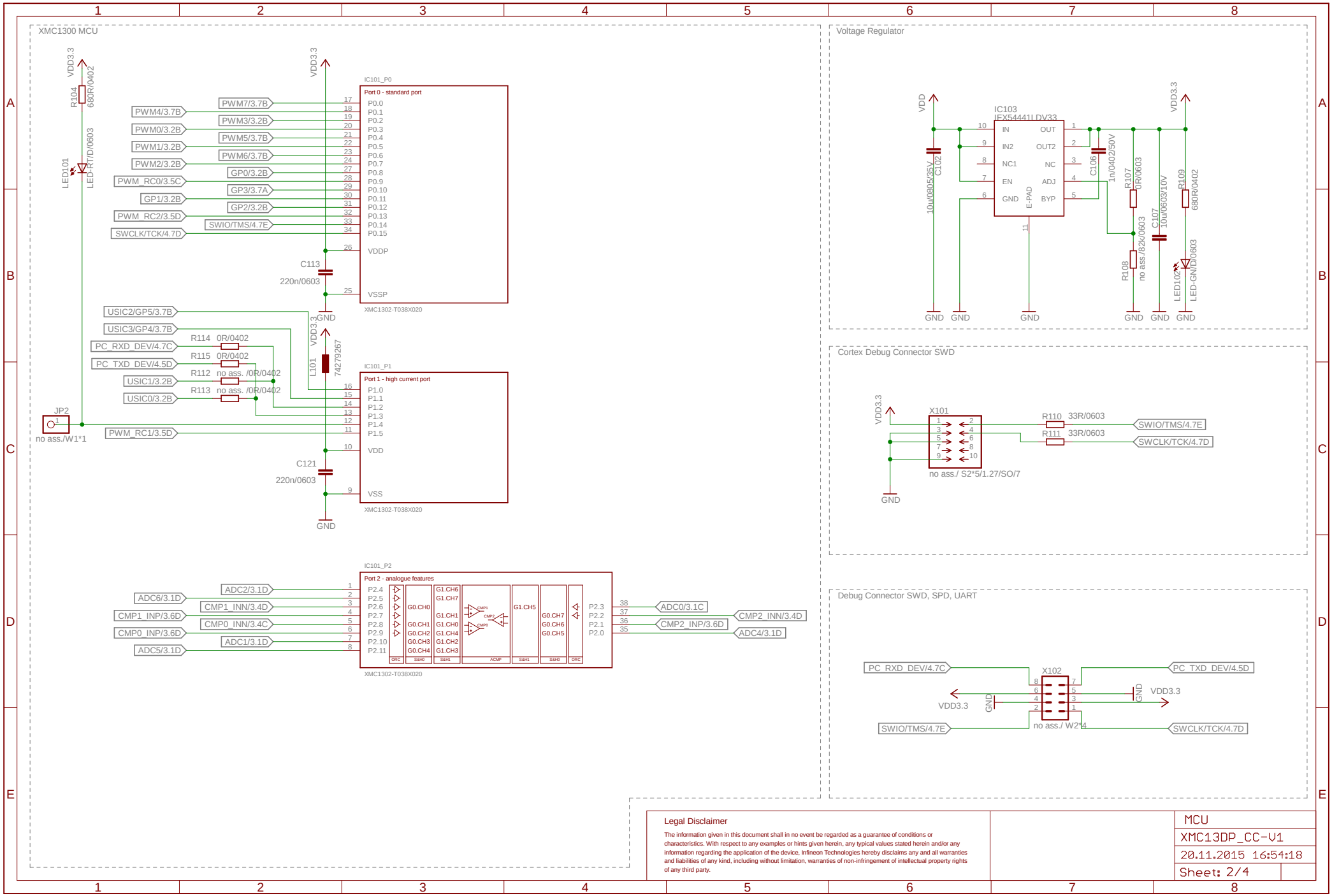
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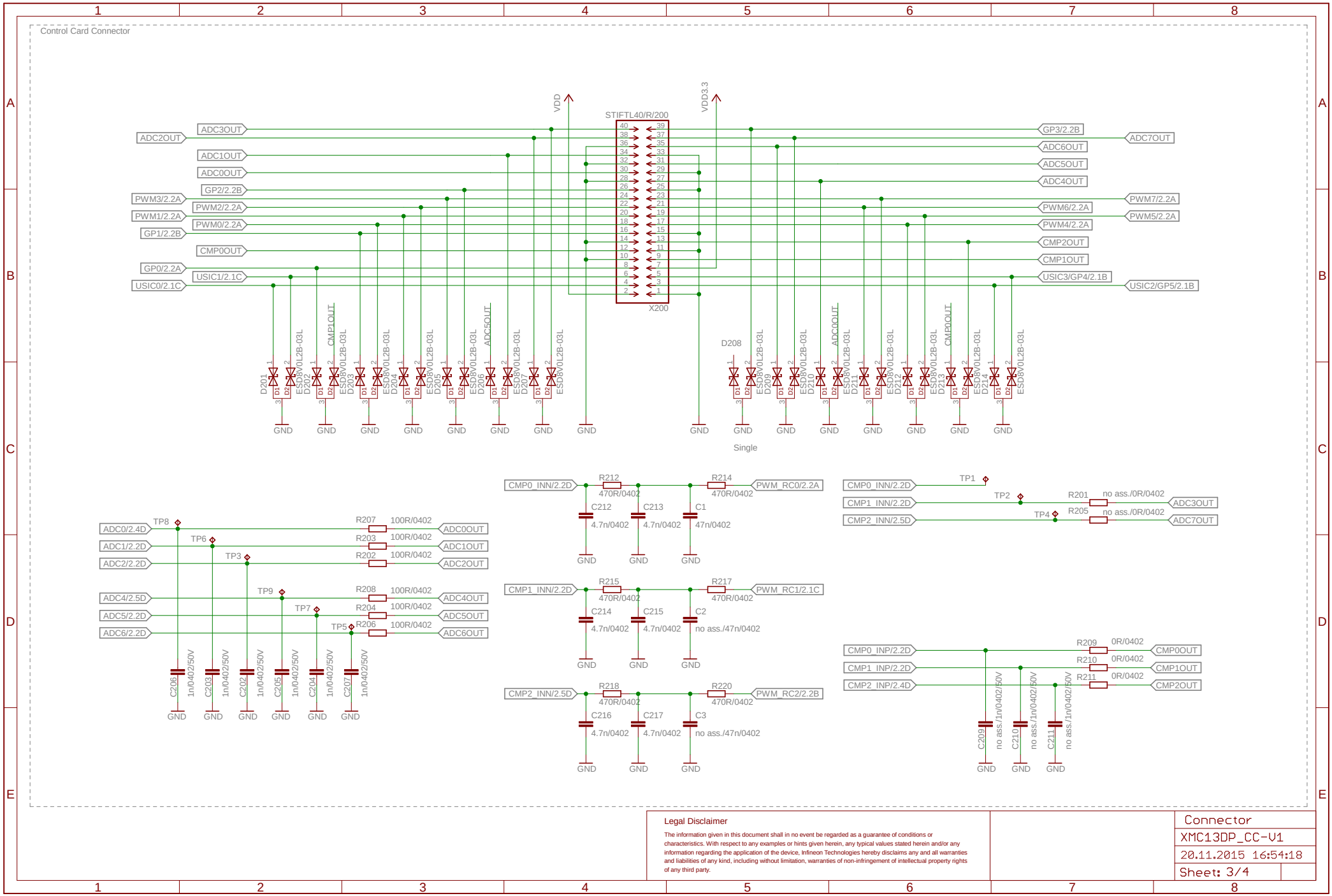
[1] Contents
[2] XMC1300, Power Supply, Connector
[3] Signal Conditioning Circuit
[4] Isolated J-Link OBD & UART

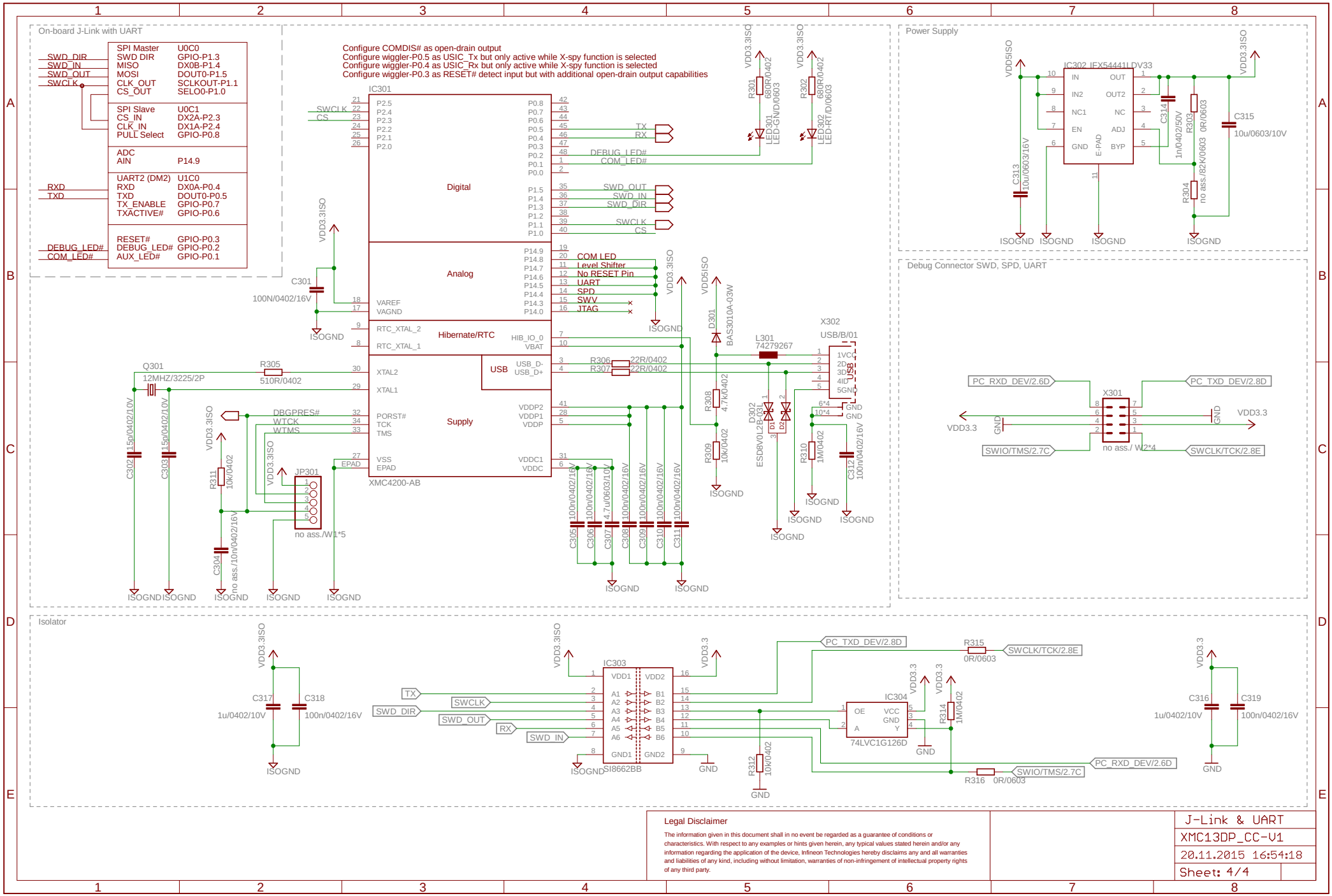
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2015/20
XMC13DP_CC-V1
20.11.2015 16:54:18
Sheet: 1/4


XMC1300 MCU
Voltage Regulator
Cortex Debug Connector SWD
Debug Connector SWD, SPD, UART
IC101_P0
Port 0 - standard port
IC101_P1
Port 1 - high current port
IC101_P2
Port 2 - analogue features
XMC1302-T038X020
IC103
IFX54441LDV33
X101
X102
JP2
no ass./W1*1
no ass./ S2*5/1.27/SO7
no ass./ W2*4
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MCU
XMC13DP_CC-V1
20.11.2015 16:54:18
Sheet: 2/4


Control Card Connector
STIFTL40/R/200
X200
VDD
VDD3.3
ADC2OUT
ADC3OUT
ADC1OUT
ADC0OUT
GP2/2.2B
PWM3/2.2A
PWM2/2.2A
PWM1/2.2A
PWM0/2.2A
GP1/2.2B
CMP0OUT
GP0/2.2A
USIC1/2.1C
USIC0/2.1C
GP3/2.2B
ADC7OUT
ADC6OUT
ADC5OUT
ADC4OUT
PWM7/2.2A
PWM6/2.2A
PWM5/2.2A
PWM4/2.2A
CMP2OUT
CMP1OUT
USIC3/GP4/2.1B
USIC2/GP5/2.1B
D201
D208
ESD8V0L2B-03L
CMP1OUT
ADC5OUT
ADC0OUT
CMP0OUT
GND
Single
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
ADC0/2.4D
ADC1/2.2D
ADC2/2.2D
ADC4/2.5D
ADC5/2.2D
ADC6/2.2D
R207
R203
R202
R208
R204
R206
100R/0402
ADC0OUT
ADC1OUT
ADC2OUT
ADC4OUT
ADC5OUT
ADC6OUT
C206
C203
C202
C205
C204
C207
1n/0402/50V
CMP0_INN/2.2D
CMP1_INN/2.2D
CMP2_INN/2.5D
R212
R214
R215
R217
R218
R220
470R/0402
PWM_RC0/2.2A
PWM_RC1/2.1C
PWM_RC2/2.2B
C212
C213
C1
C214
C215
C2
C216
C217
C3
4.7n/0402
47n/0402
no ass./47n/0402
CMP0_INP/2.2D
CMP1_INP/2.2D
CMP2_INP/2.4D
R201
R205
R209
R210
R211
no ass./0R/0402
0R/0402
ADC3OUT
ADC7OUT
CMP0OUT
CMP1OUT
CMP2OUT
C209
C210
C211
no ass./1n/0402/50V
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Connector
XMC13DP_CC-V1
20.11.2015 16:54:18
Sheet: 3/4


On-board J-Link with UART
SWD_DIR
SWD_IN
SWD_OUT
SWCLK
SPI Master U0C0
SWD DIR GPIO-P1.3
MISO DX0B-P1.4
MOSI DOUT0-P1.5
CLK_OUT SCLKOUT-P1.1
CS_OUT SELO0-P1.0
SPI Slave U0C1
CS_IN DX2A-P2.3
CLK_IN DX1A-P2.4
PULL Select GPIO-P0.8
ADC
AIN P14.9
RXD
TXD
UART2 (DM2) U1C0
RXD DX0A-P0.4
TXD DOUT0-P0.5
TX_ENABLE GPIO-P0.7
TXACTIVE# GPIO-P0.6
DEBUG_LED#
COM_LED#
RESET# GPIO-P0.3
DEBUG_LED# GPIO-P0.2
AUX_LED# GPIO-P0.1
Configure COMDIS# as open-drain output
Configure wiggler-P0.5 as USIC_Tx but only active while X-spy function is selected
Configure wiggler-P0.4 as USIC_Rx but only active while X-spy function is selected
Configure wiggler-P0.3 as RESET# detect input but with additional open-drain output capabilities
IC301
Digital
Analog
Hibernate/RTC
USB
Supply
XMC4200-AB
COM LED
Level Shifter
No RESET Pin
UART
SPD
SWV
JTAG
Power Supply
IC302 IFX54441LDV33
Debug Connector SWD, SPD, UART
PC_RXD_DEV/2.6D
PC_TXD_DEV/2.8D
SWIO/TMS/2.7C
SWCLK/TCK/2.8E
no ass./ W2*4
Isolator
IC303
SI8662BB
IC304
74LVC1G126D
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J-Link & UART
XMC13DP_CC-V1
20.11.2015 16:54:18
Sheet: 4/4