XMC4200 Digital Power Control Card V1.0

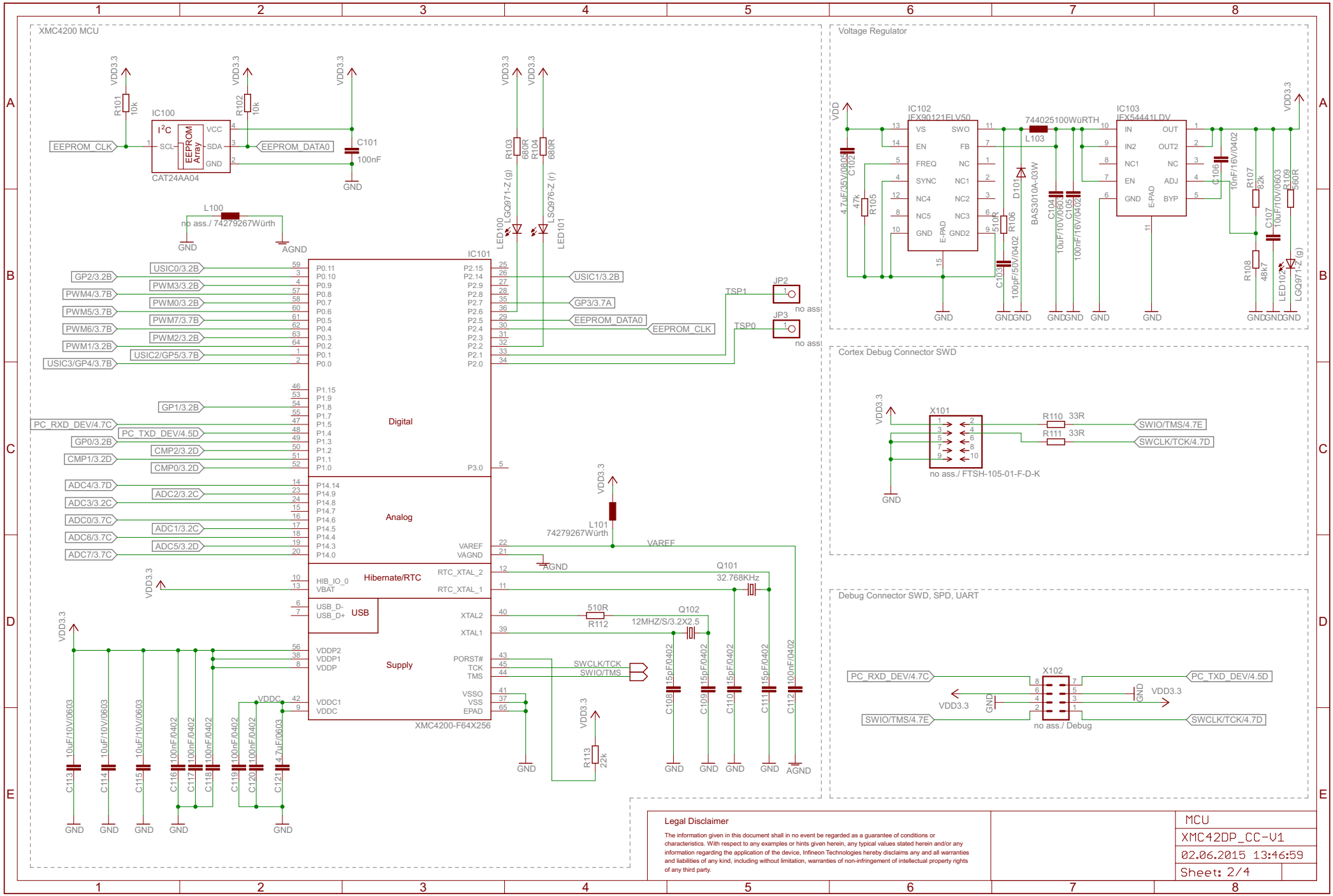
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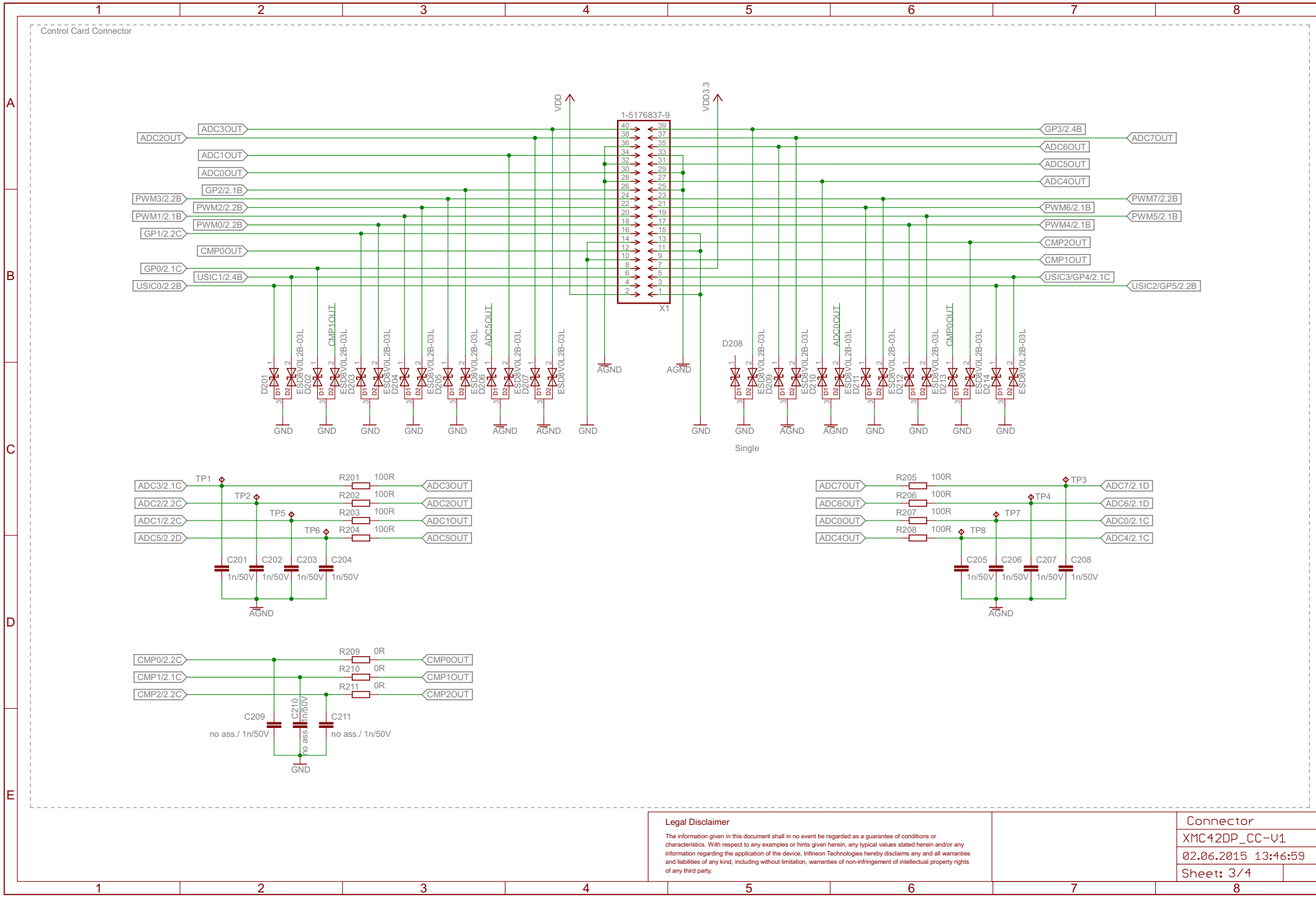
[1] Contents
[2] XMC4200, Power Supply, Connector
[3] Signal Conditioning Circuit
[4] Isolated J-Link OBD & UART

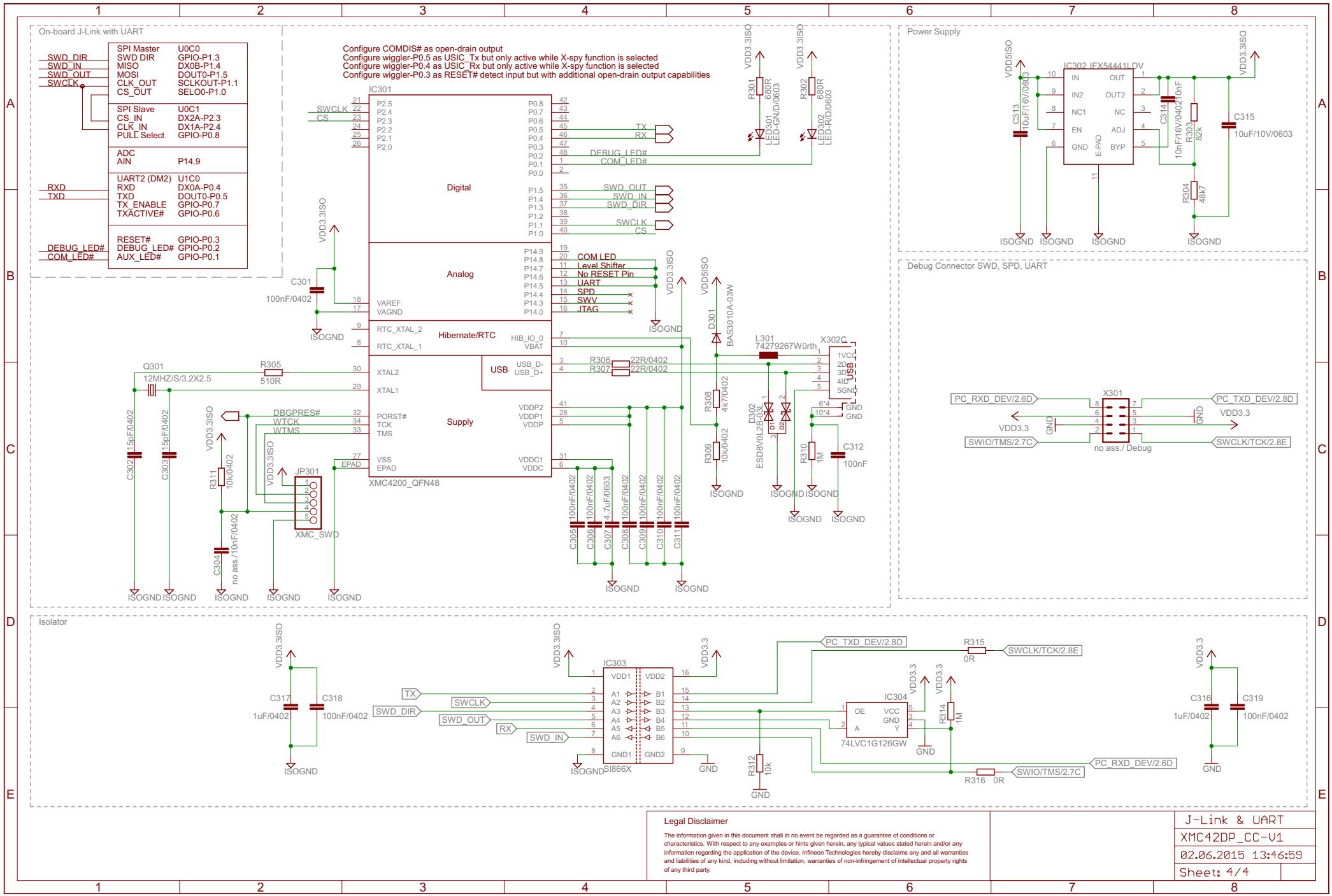
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2015/23	
XMC42DP_CC-V1	
02.06.2015 13:46:59	
Sheet: 1/4	


XMC4200 MCU
Voltage Regulator
Cortex Debug Connector SWD
Debug Connector SWD, SPD, UART
IC100
CAT24AA04
EEPROM_CLK
EEPROM_DATA0
IC101
XMC4200-F64X256
Digital
Analog
Hibernate/RTC
USB
Supply
IC102
IFX90121ELV50
IC103
IFX54441LDV
744025100WüRTH
L100
no ass./ 74279267Würth
L101
74279267Würth
Q101
32.768KHz
Q102
12MHZ/S/3.2X2.5
X101
no ass./ FTSH-105-01-F-D-K
X102
no ass./ Debug
SWIO/TMS/4.7E
SWCLK/TCK/4.7D
PC_RXD_DEV/4.7C
PC_TXD_DEV/4.5D
VAREF
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MCU
XMC42DP_CC-V1
02.06.2015 13:46:59
Sheet: 2/4


Control Card Connector
1-5176837-9
X1
VDD
VDD3.3
AGND
GND
Single
ADC2OUT
ADC3OUT
ADC1OUT
ADC0OUT
GP2/2.1B
PWM3/2.2B
PWM2/2.2B
PWM1/2.1B
PWM0/2.2B
GP1/2.2C
CMP0OUT
GP0/2.1C
USIC1/2.4B
USIC0/2.2B
GP3/2.4B
ADC7OUT
ADC6OUT
ADC5OUT
ADC4OUT
PWM7/2.2B
PWM6/2.1B
PWM5/2.1B
PWM4/2.1B
CMP2OUT
CMP1OUT
USIC3/GP4/2.1C
USIC2/GP5/2.2B
D201
D202
D203
D204
D205
D206
D207
D208
D209
D210
D211
D212
D213
D214
ESD8V0L2B-03L
CMP1OUT
ADC5OUT
ADC0OUT
CMP0OUT
ADC3/2.1C
ADC2/2.2C
ADC1/2.2C
ADC5/2.2D
TP1
TP2
TP5
TP6
R201
R202
R203
R204
100R
C201
C202
C203
C204
1n/50V
ADC7OUT
ADC6OUT
ADC0OUT
ADC4OUT
TP3
TP4
TP7
TP8
R205
R206
R207
R208
ADC7/2.1D
ADC6/2.1D
ADC0/2.1C
ADC4/2.1C
C205
C206
C207
C208
CMP0/2.2C
CMP1/2.1C
CMP2/2.2C
R209
R210
R211
0R
C209
C210
C211
no ass./ 1n/50V
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Connector
XMC42DP_CC-V1
02.06.2015 13:46:59
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_QFN48
Power Supply
IC302 IFX54441LDV
Debug Connector SWD, SPD, UART
X301
no ass./ Debug
Isolator
IC303
SI866X
IC304
74LVC1G126GW
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J-Link & UART
XMC42DP_CC-V1
02.06.2015 13:46:59
Sheet: 4/4