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Confidential

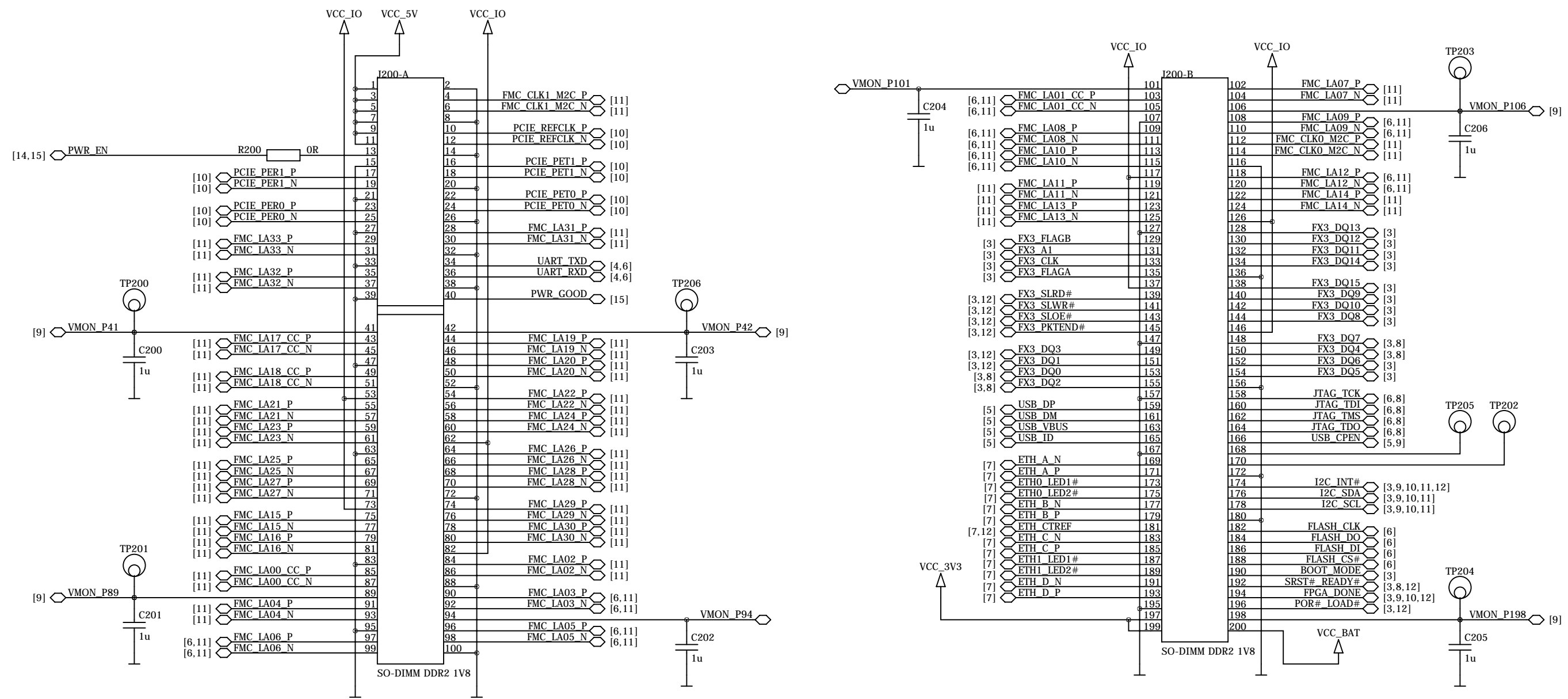
Enclustra GmbH

Mars PM3 Rev. 3

- Sheet 1: Cover
- Sheet 2: Module Connector
- Sheet 3: USB Controller 1
- Sheet 4: USB Controller 2
- Sheet 5: USB Connector
- Sheet 6: Configuration
- Sheet 7: Ethernet Magnetics
- Sheet 8: JTAG
- Sheet 9: I2C I/O
- Sheet 10: PCI Express
- Sheet 11: I/O Connector
- Sheet 12: User Interface
- Sheet 13: Power Protection
- Sheet 14: Power
- Sheet 15: Power 2
- Sheet 16: Mechanics and Shield
- Sheet 17: Revision History

Parts marked with * are not equipped.

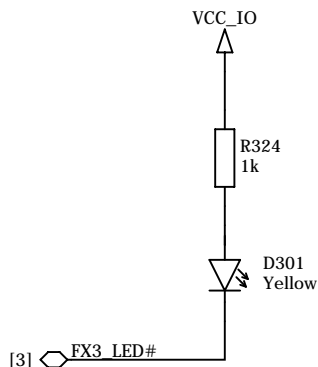
Company		Enclustra GmbH		
Sheet name		1_COVER		
Project		Mars PM3 R3		
Revision	006	Date	Designed PC	Date 03.07.2013
Scale	1:1	Format A3		Sheet/sheets 1 / 17



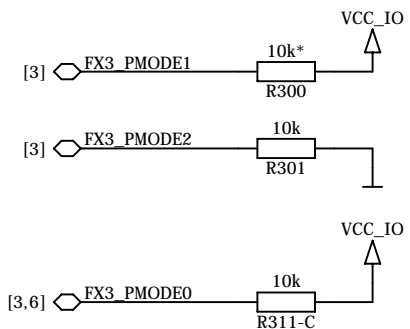
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Sheet name		2_MODULE_CONNECTOR	
Project		Mars PM3 R3	
Revision	006	Date	Designed PC
		Date	03.07.2013
Scale	1:1	Format	A3
		Sheet/sheets	2 / 17

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FX3 LED

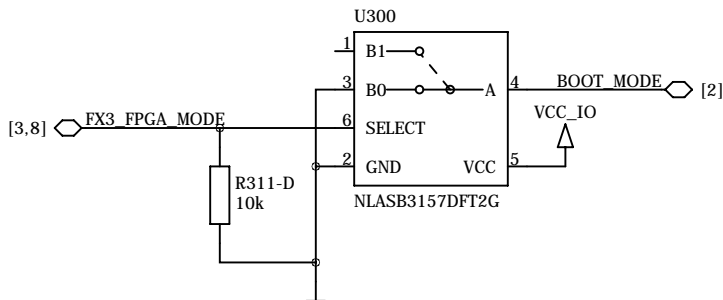


FX3 Boot Mode



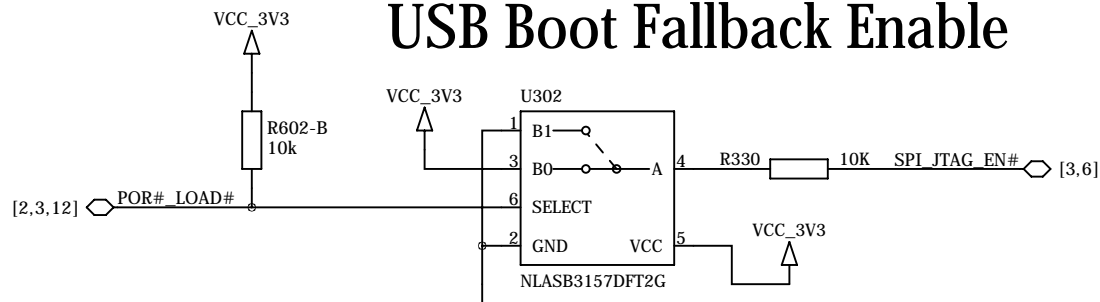
SPI boot mode enabled with USB fall back

FX3 FPGA Mode Select



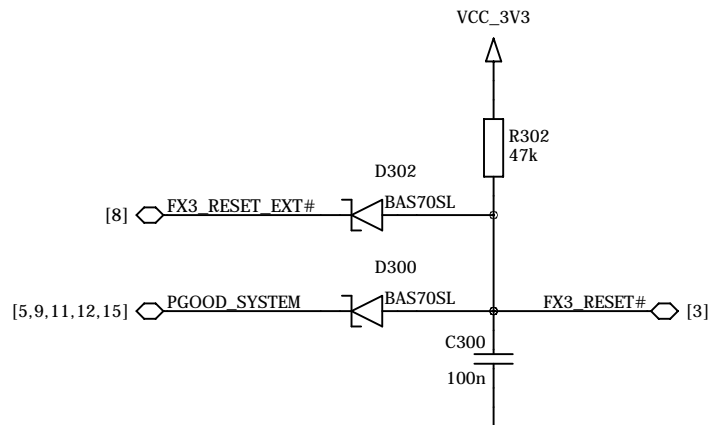
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USB Boot Fallback Enable



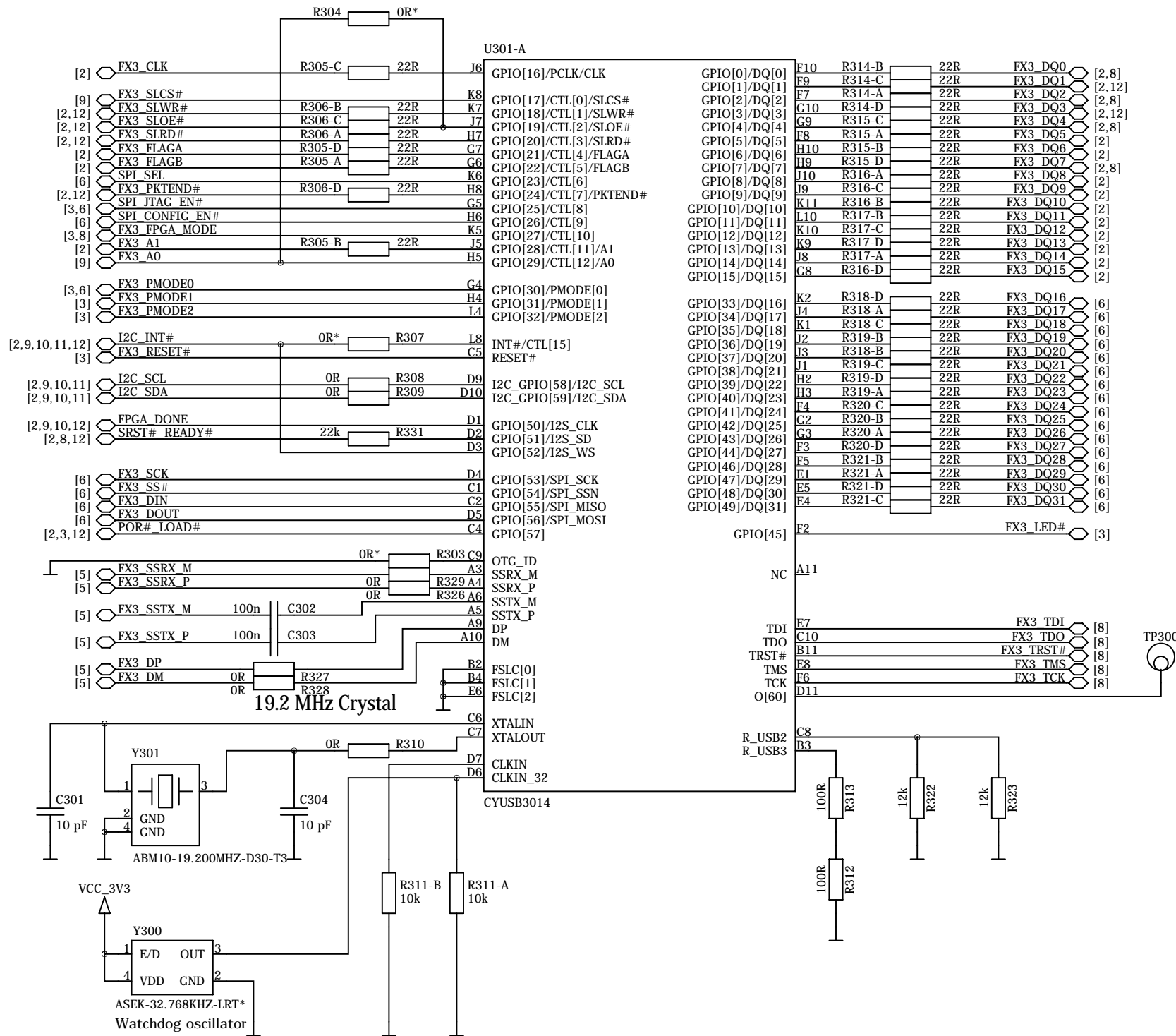
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FX3 Reset

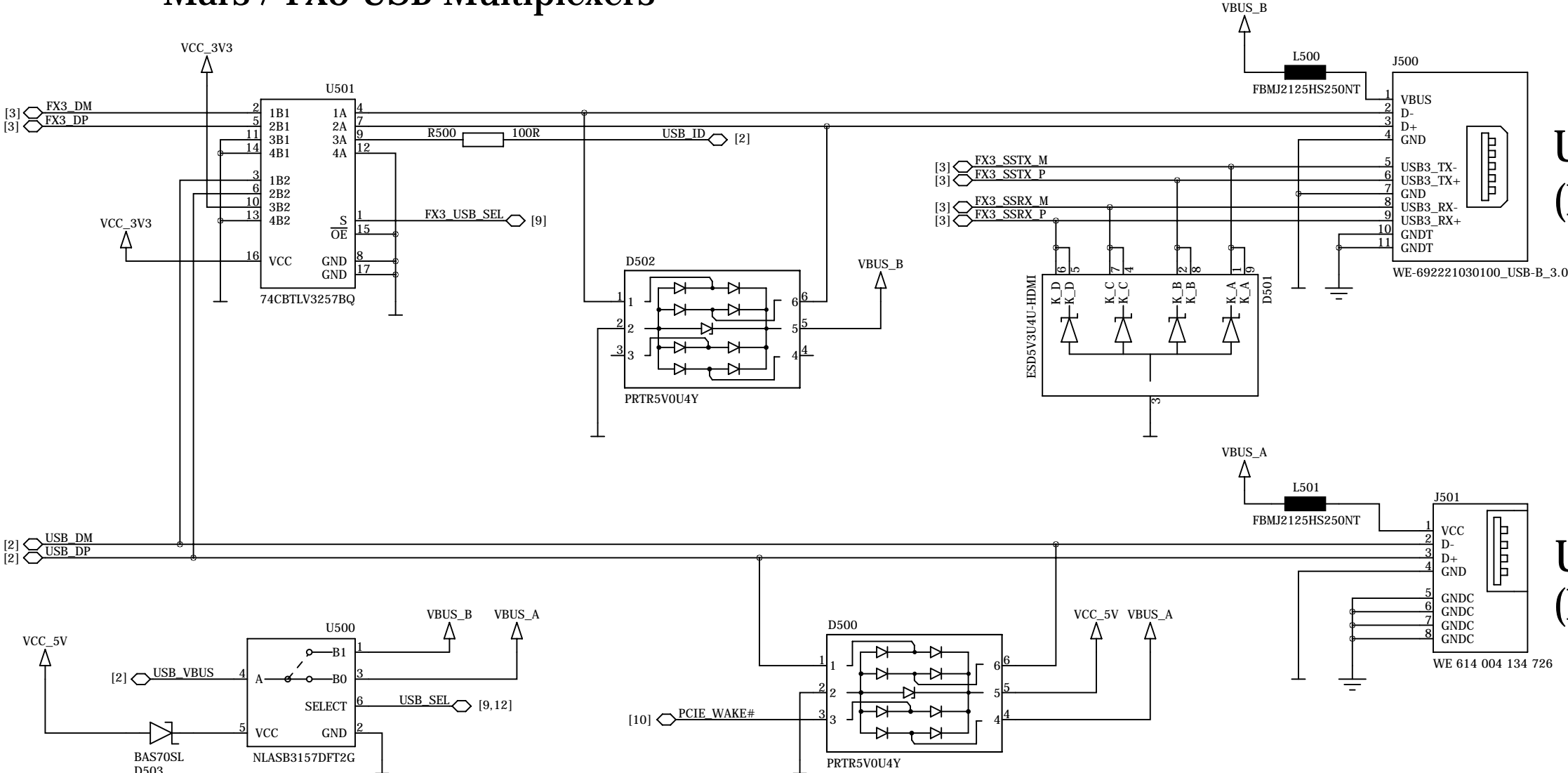


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USB 3.0 Device Controller (Cypress FX3)



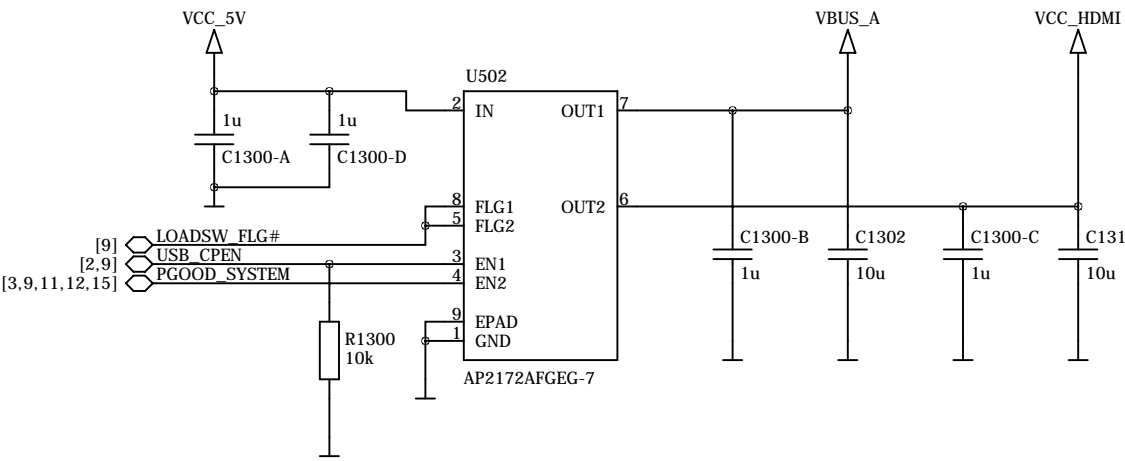
Mars / FX3 USB Multiplexers



USB 3.0 B Connector
(Device)

USB 2.0 A Connector
(Host)

USB / HDMI Load Switch



Company		Enclustra GmbH		
Sheet name		5_USB_CONNECTOR		
Project		Mars PM3 R3		
Revision	006	Date	Designed	Date
Scale	1:1	Format	PC	03.07.2013
				Sheet/sheets
				5 / 17

FX3 SPI Multiplexers

FX3 DQ Multiplexers

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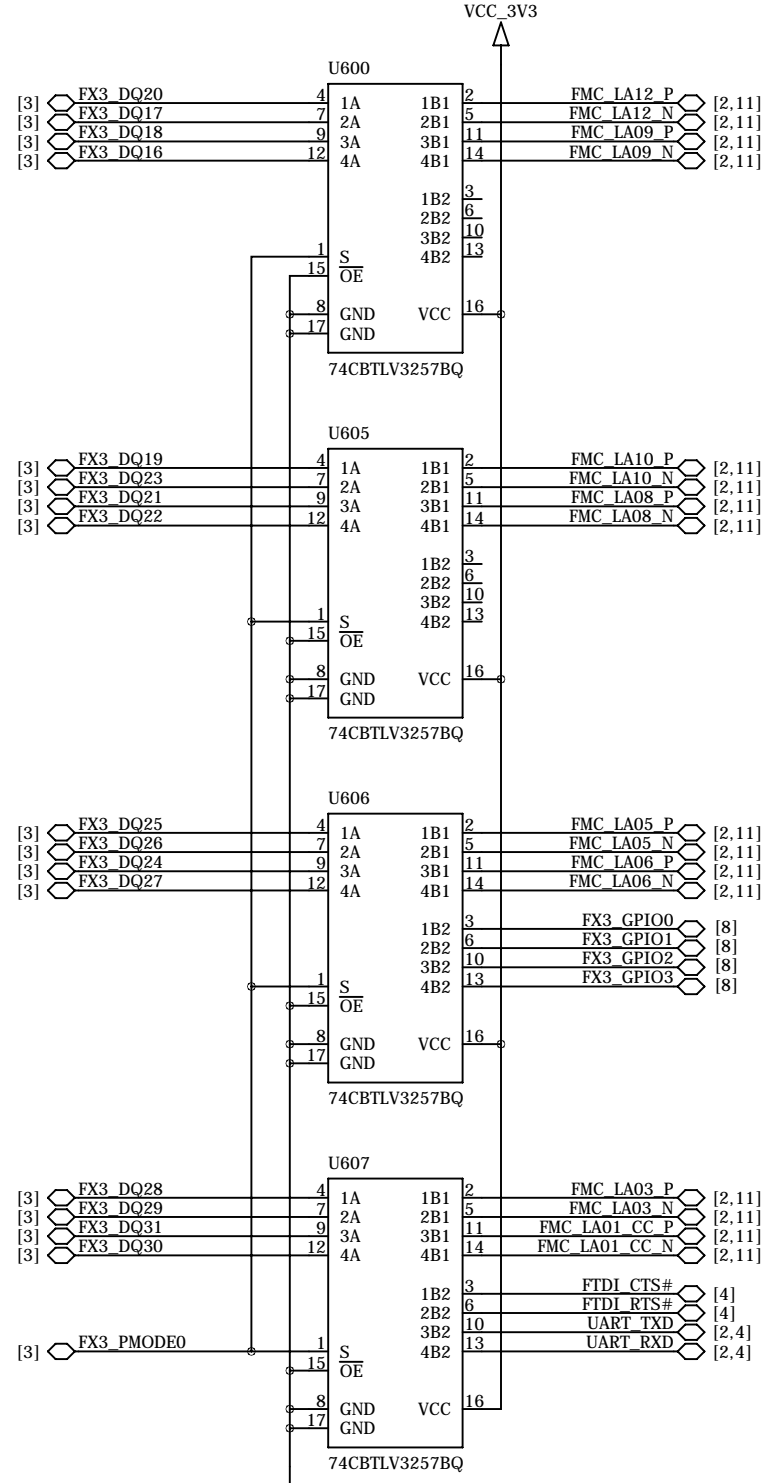
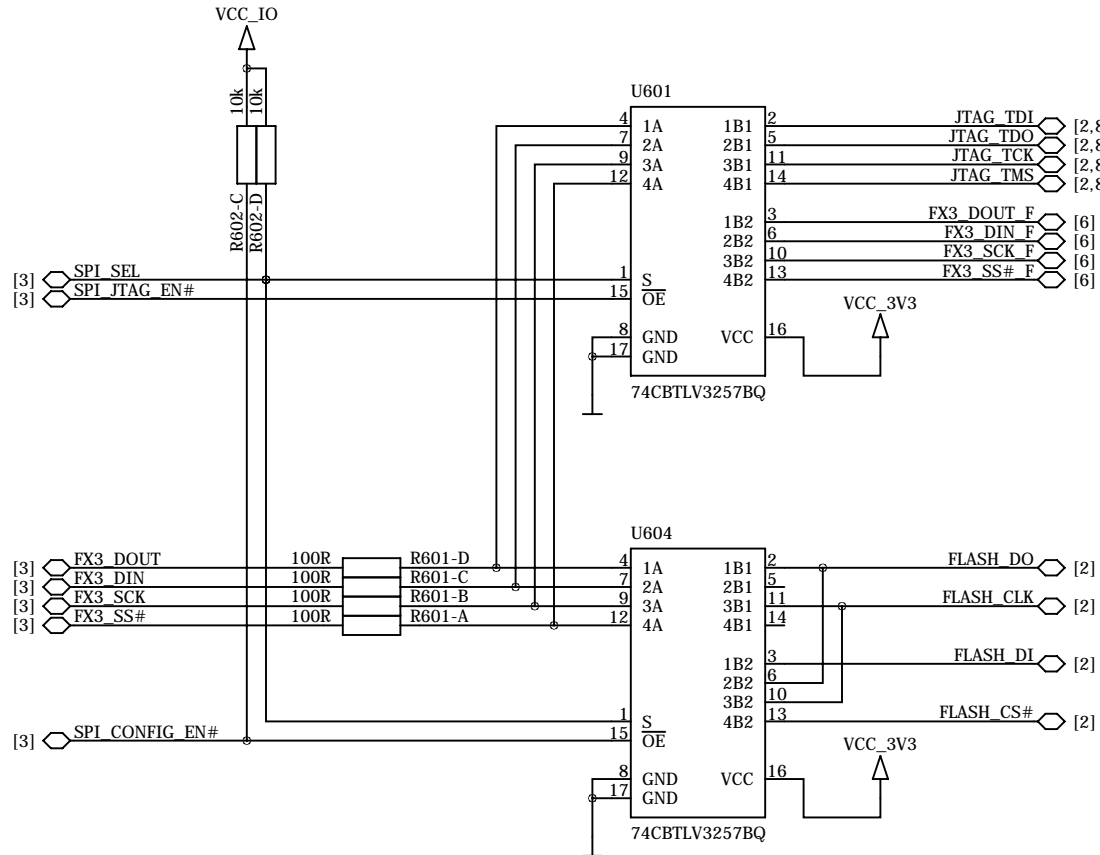
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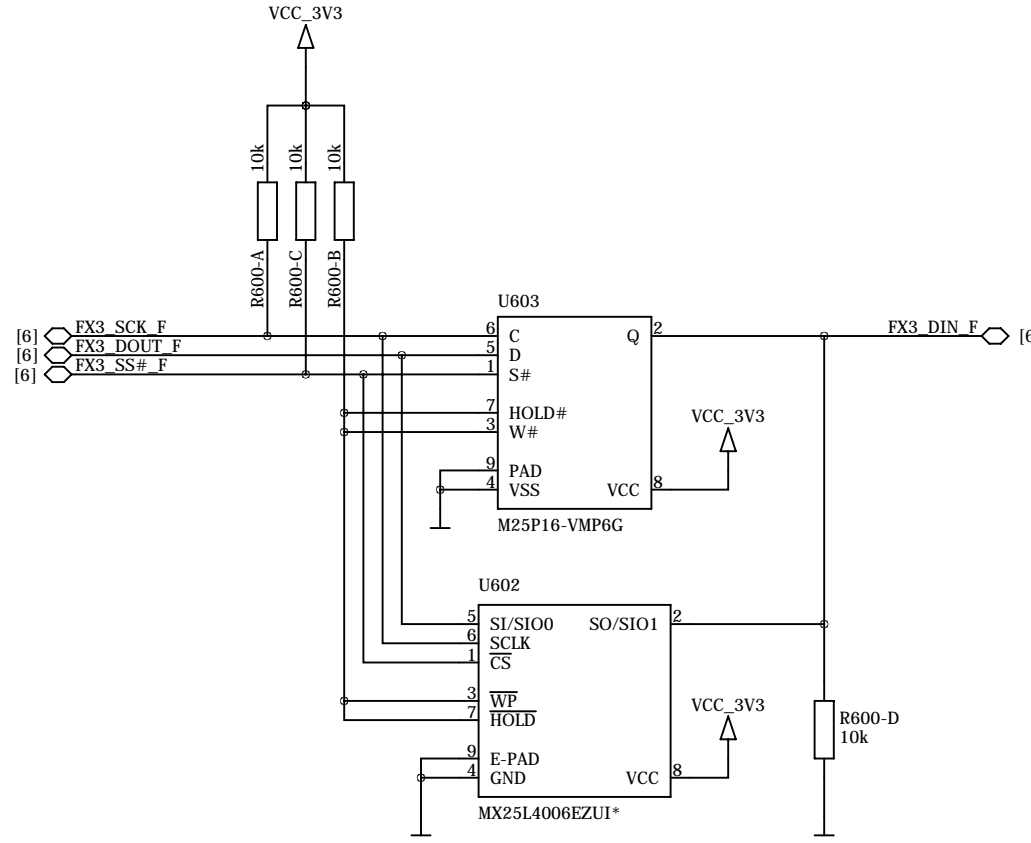
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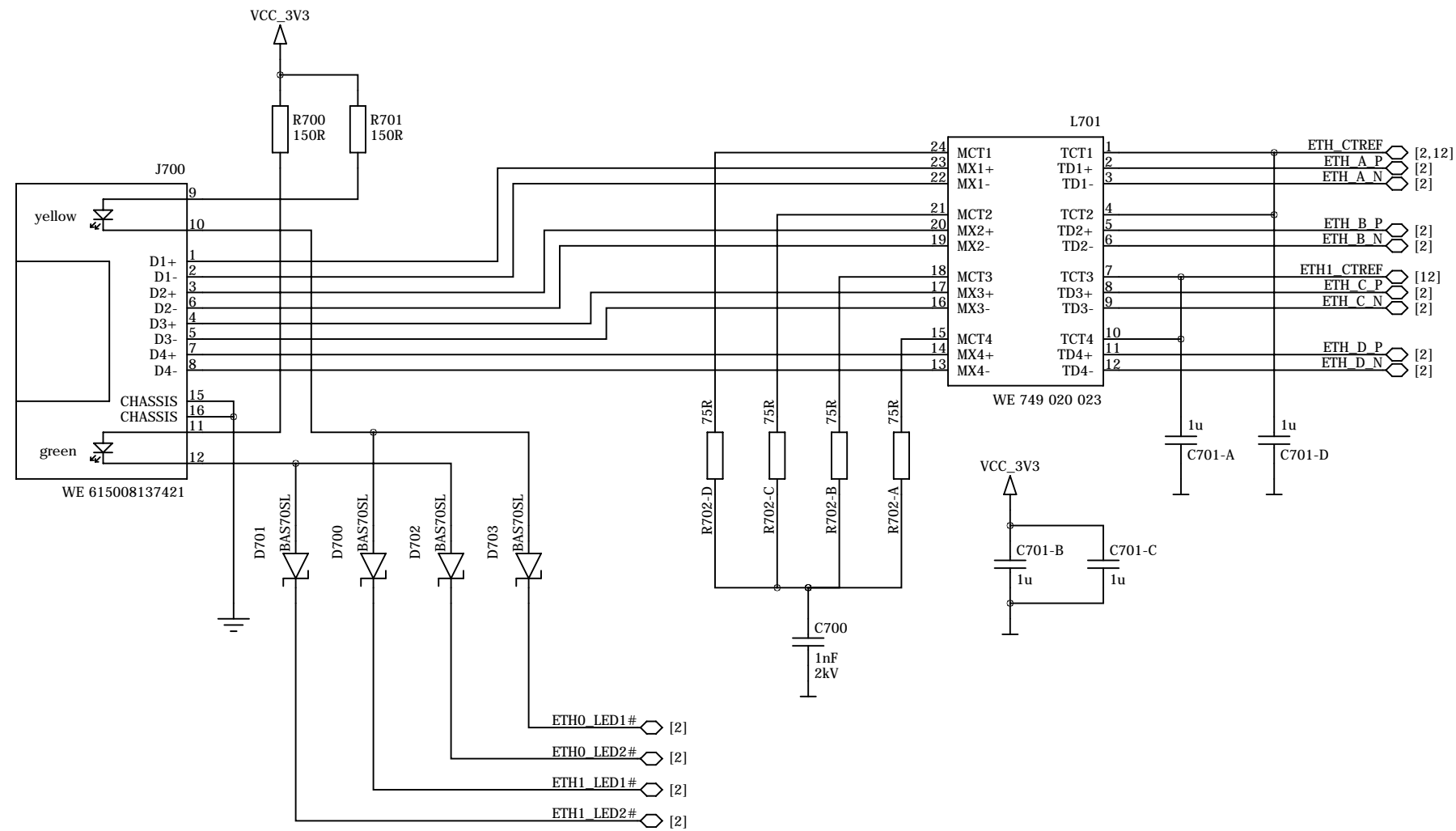


FX3 SPI Flash



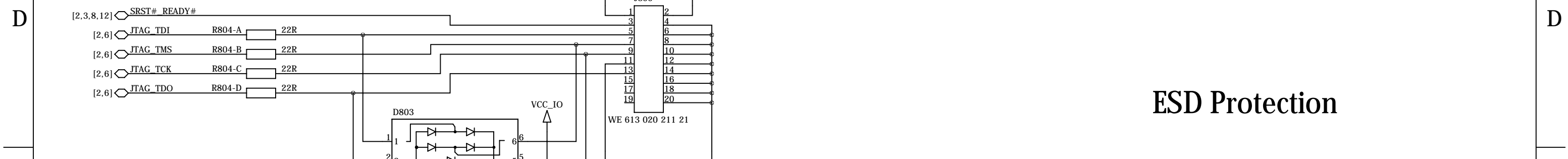
Company				Enclustra GmbH			
Sheet name				6_CONFIGURATION			
Project				Mars PM3 R3			
Revision		Date		Designed		Date	
006				PC		03.07.2013	
Scale		Format				Sheet/sheets	
1:1		A3				6 / 17	

Gigabit Ethernet Port



Company		Enclustra GmbH	
Sheet name		7_ETH-MAGNETICS	
Project		Mars PM3 R3	
Revision	006	Date	03.07.2013
Scale	1:1	Designed	PC
Format	A3	Sheet/sheets	7 / 17

6 | 5 | 4 | 3 | 2 | 1

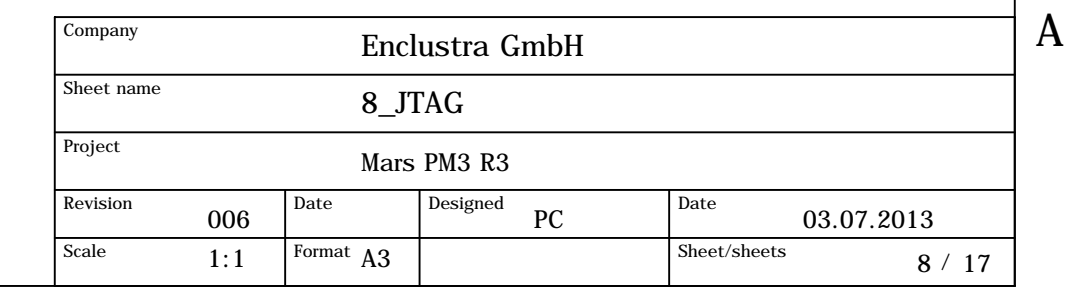
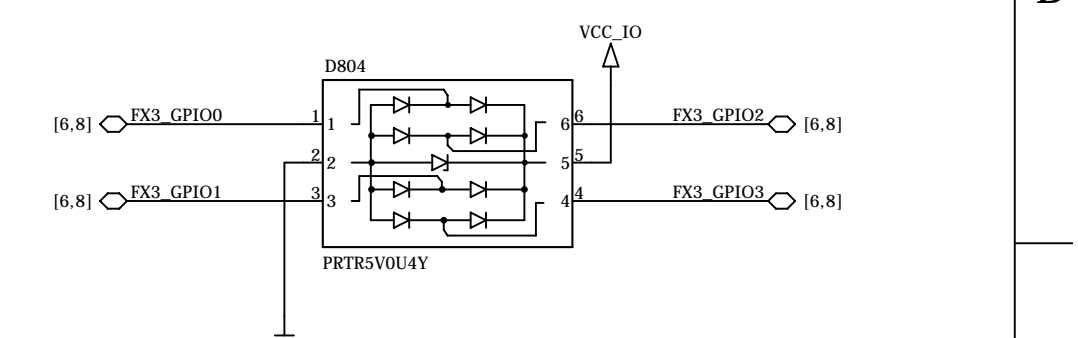
[illegible]

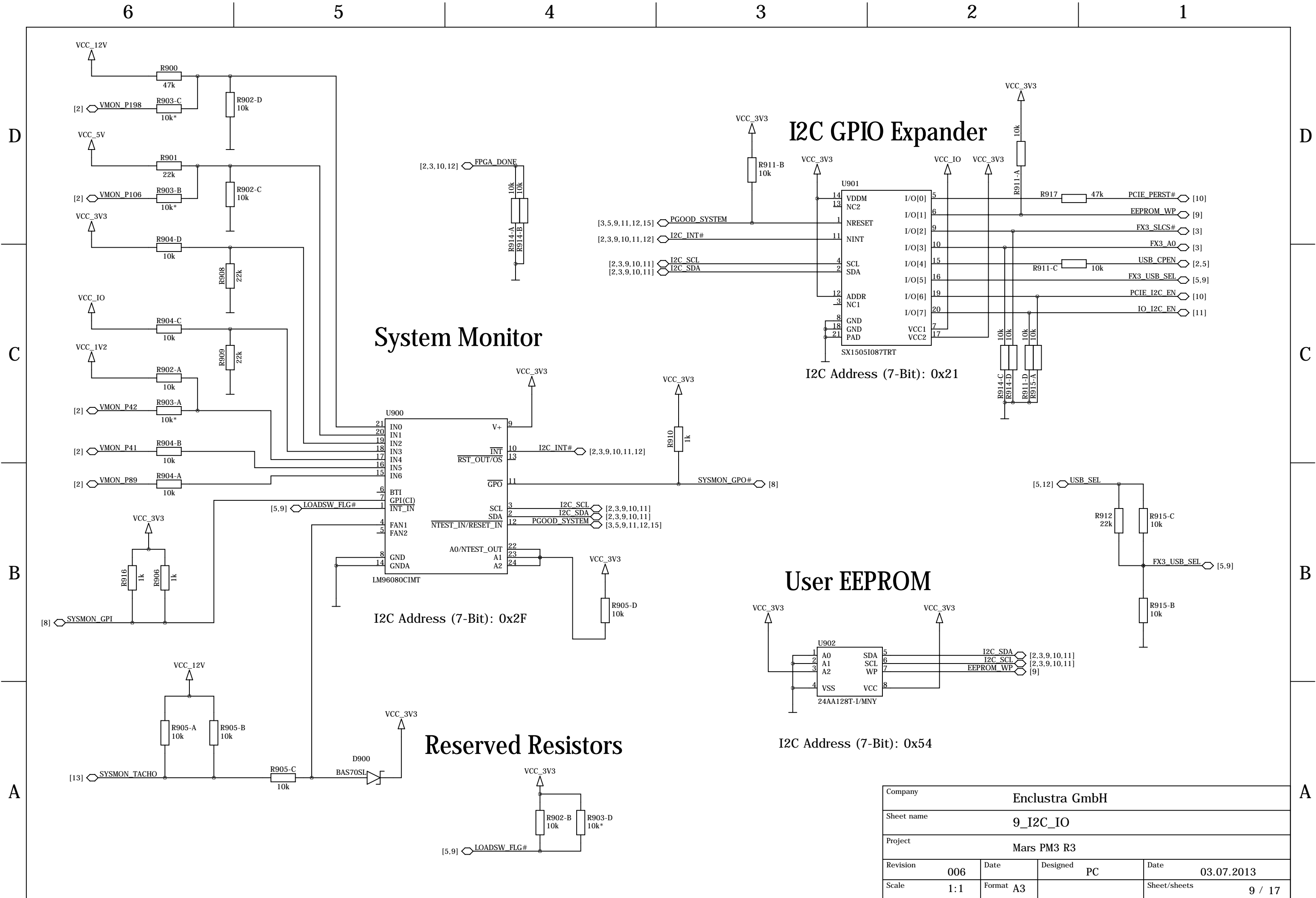
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Company

Enclustra GmbH

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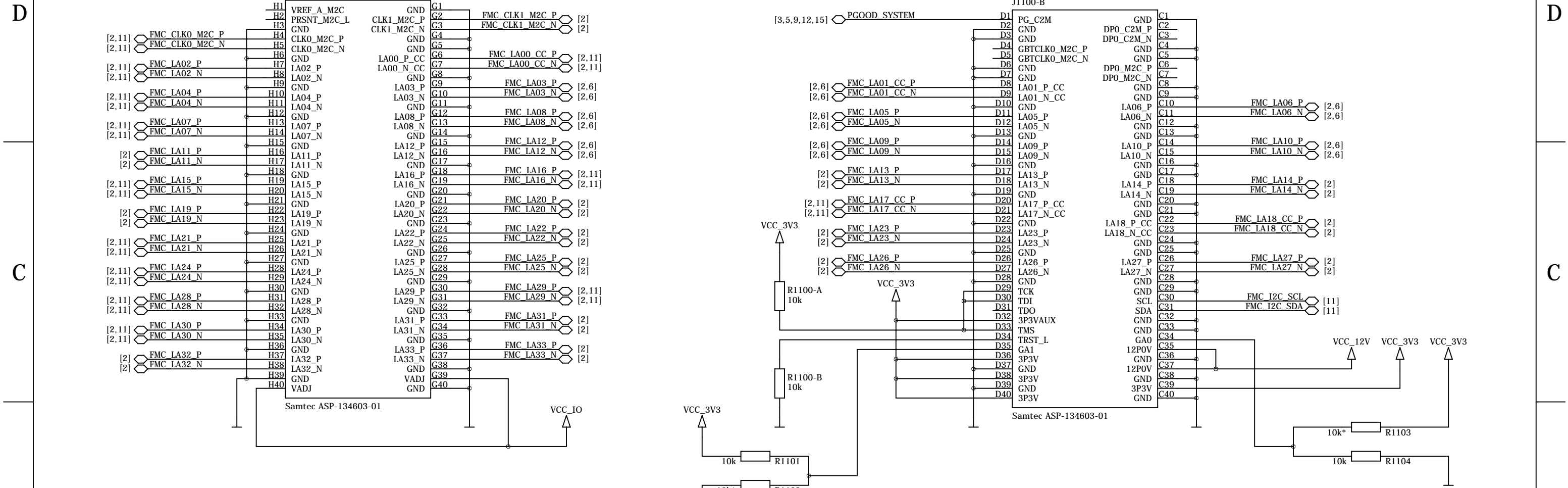




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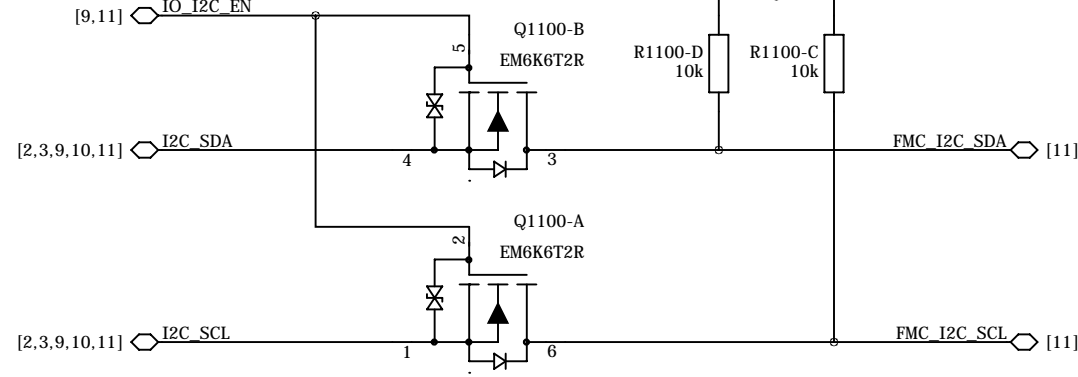
FMC LPC Connector



IO Connector



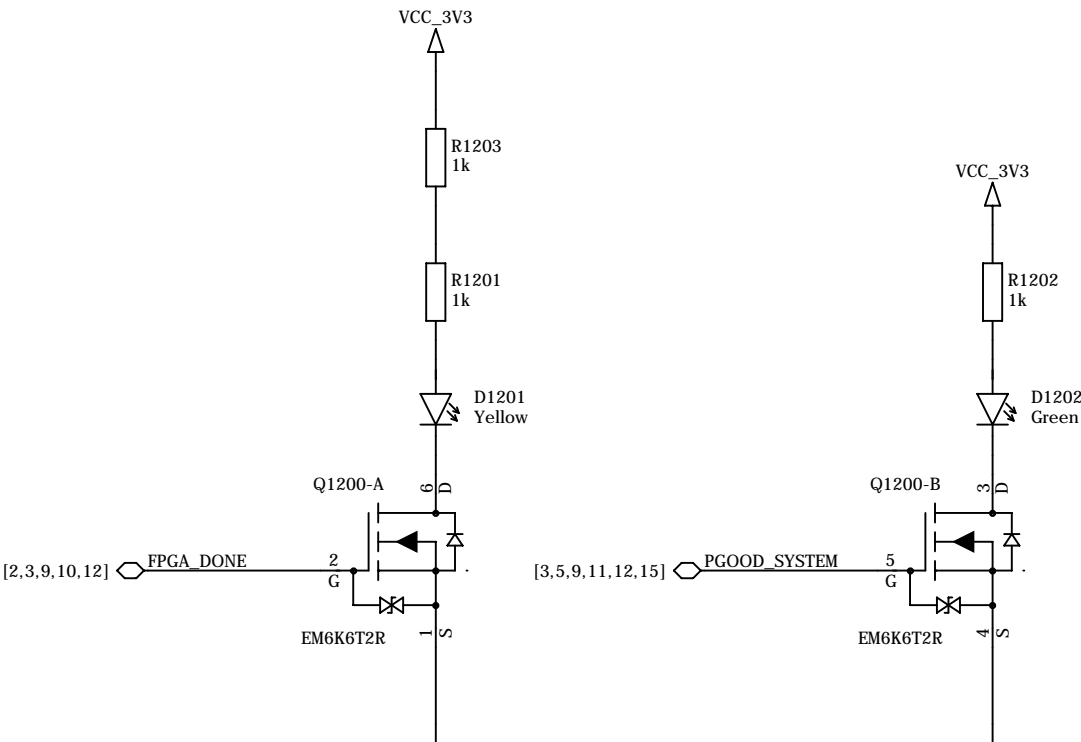
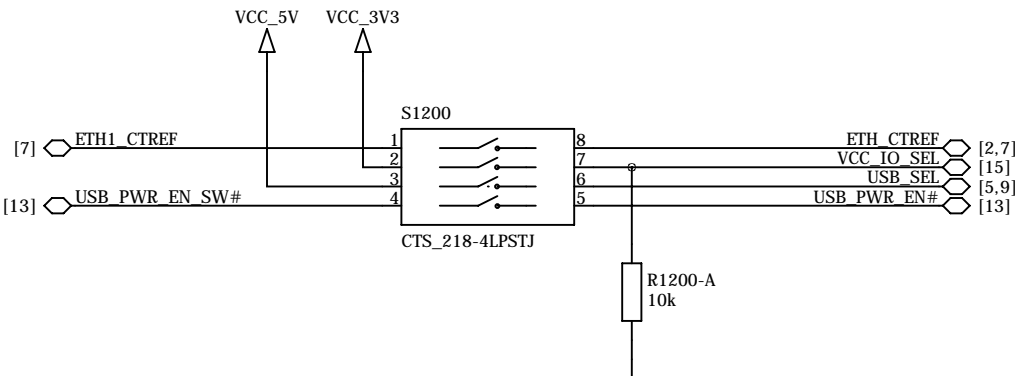
FMC I2C Bus



Company				Enclustra GmbH			
Sheet name				11_I/O_CONNECTOR			
Project				Mars PM3 R3			
Revision		Date		Designed		Date	
006				PC		03.07.2013	
Scale		Format				Sheet/sheets	
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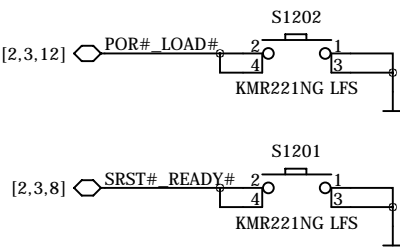
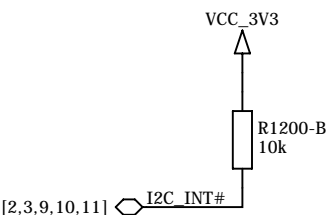
Board Configuration

Status LEDs



Pull Resistors

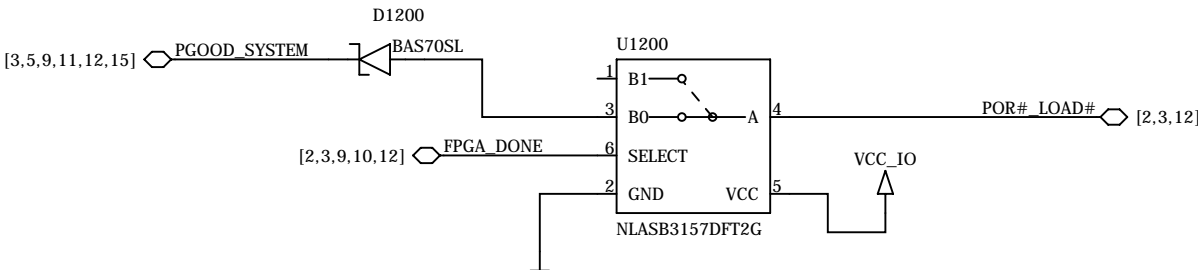
Buttons



Hard Reset

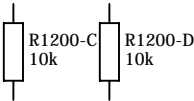
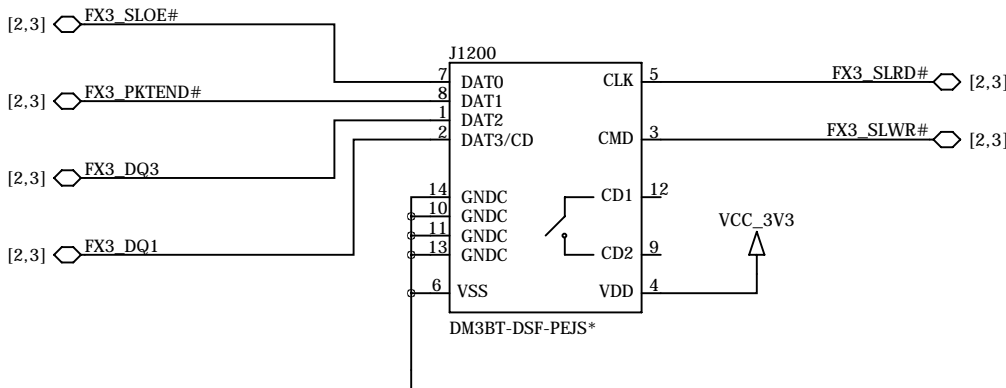
Soft Reset

Reset Circuit



(Prevents FPGA startup until power is stable)

SD-CARD Holder



Company		Enclustra GmbH				
Sheet name		12_USER_INTERFACE				
Project		Mars PM3 R3				
Revision	006	Date	Designed	PC	Date	03.07.2013
Scale	1:1	Format	A3		Sheet/sheets	12/ 17

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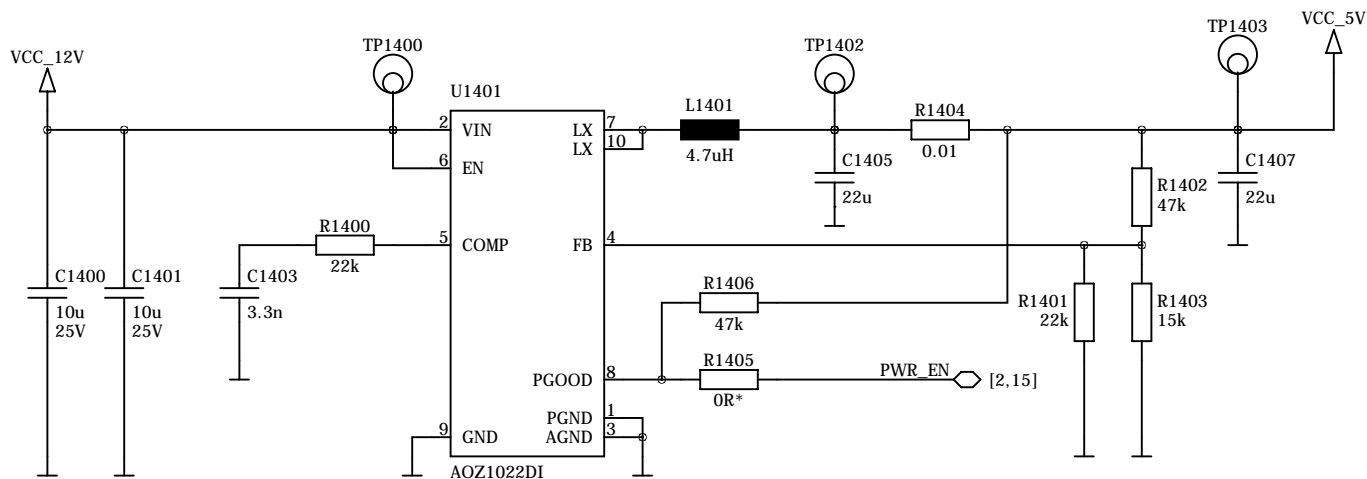
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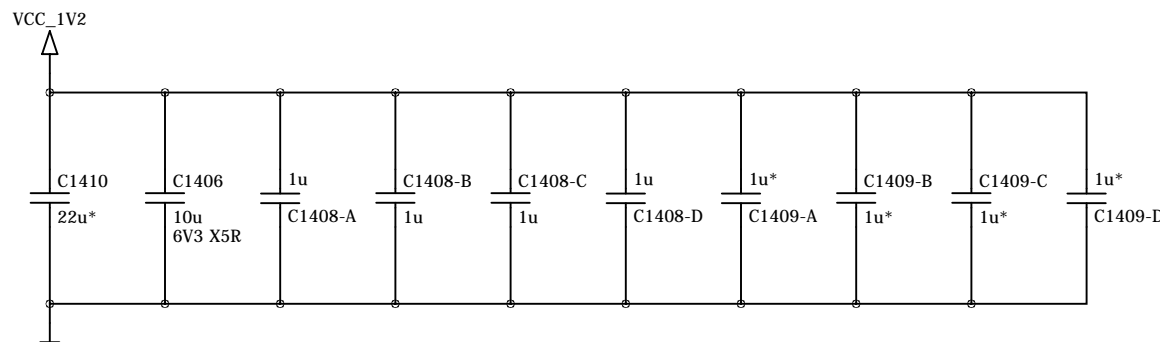
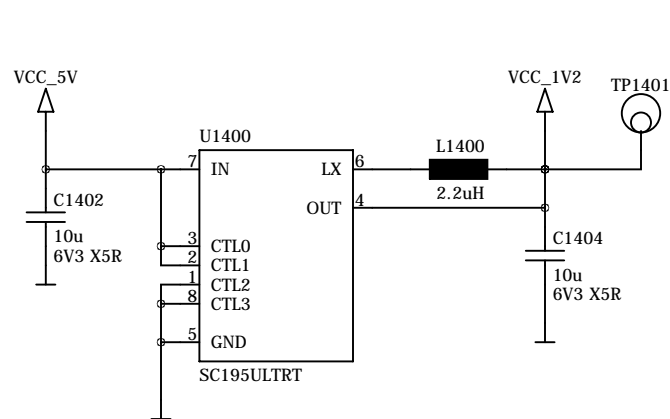
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DC/DC Converter
12V to 5V, 3A, 500kHz



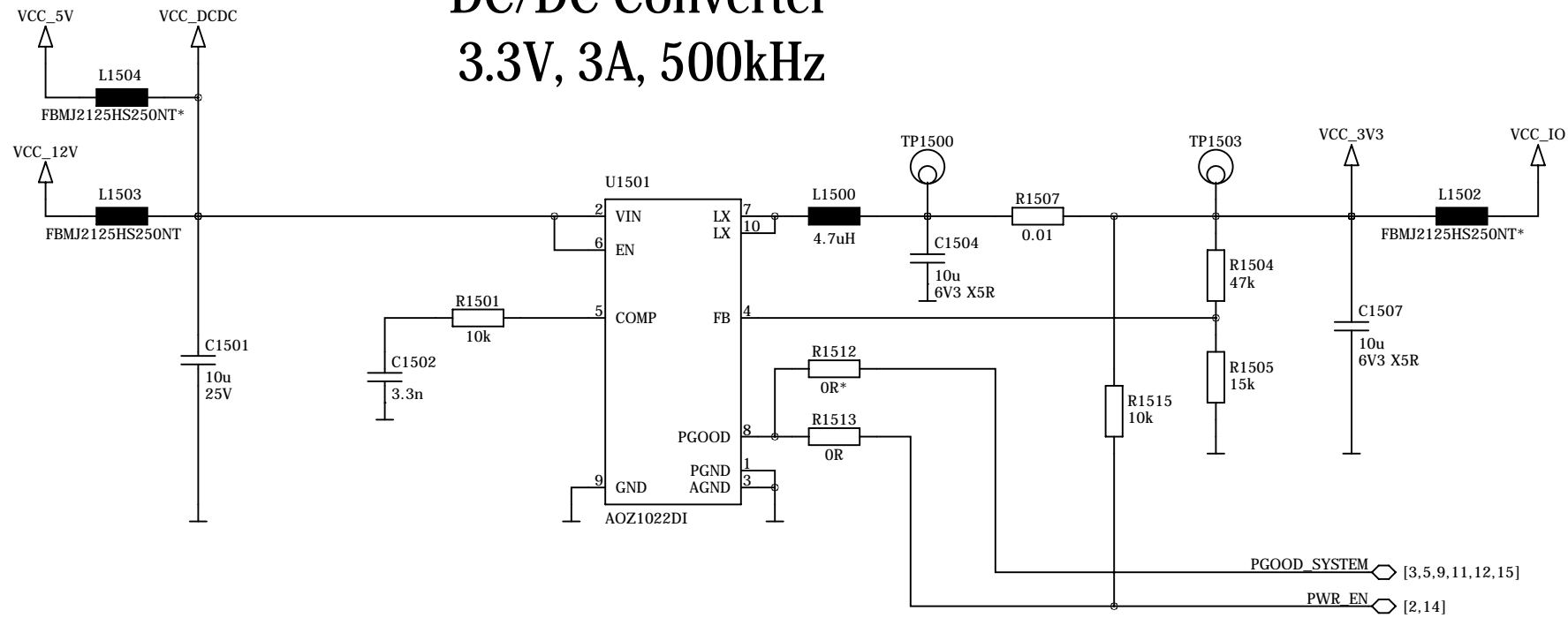
DC/DC Converter
5V to 1.2V, 0.5A, 3.5MHz



Company		Enclustra GmbH		
Sheet name		14_POWER		
Project		Mars PM3 R3		
Revision	006	Date	Designed PC	Date 03.07.2013
Scale	1:1	Format A3		Sheet/sheets 14/ 17

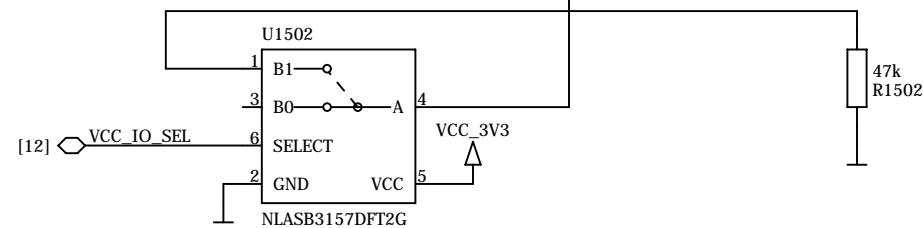
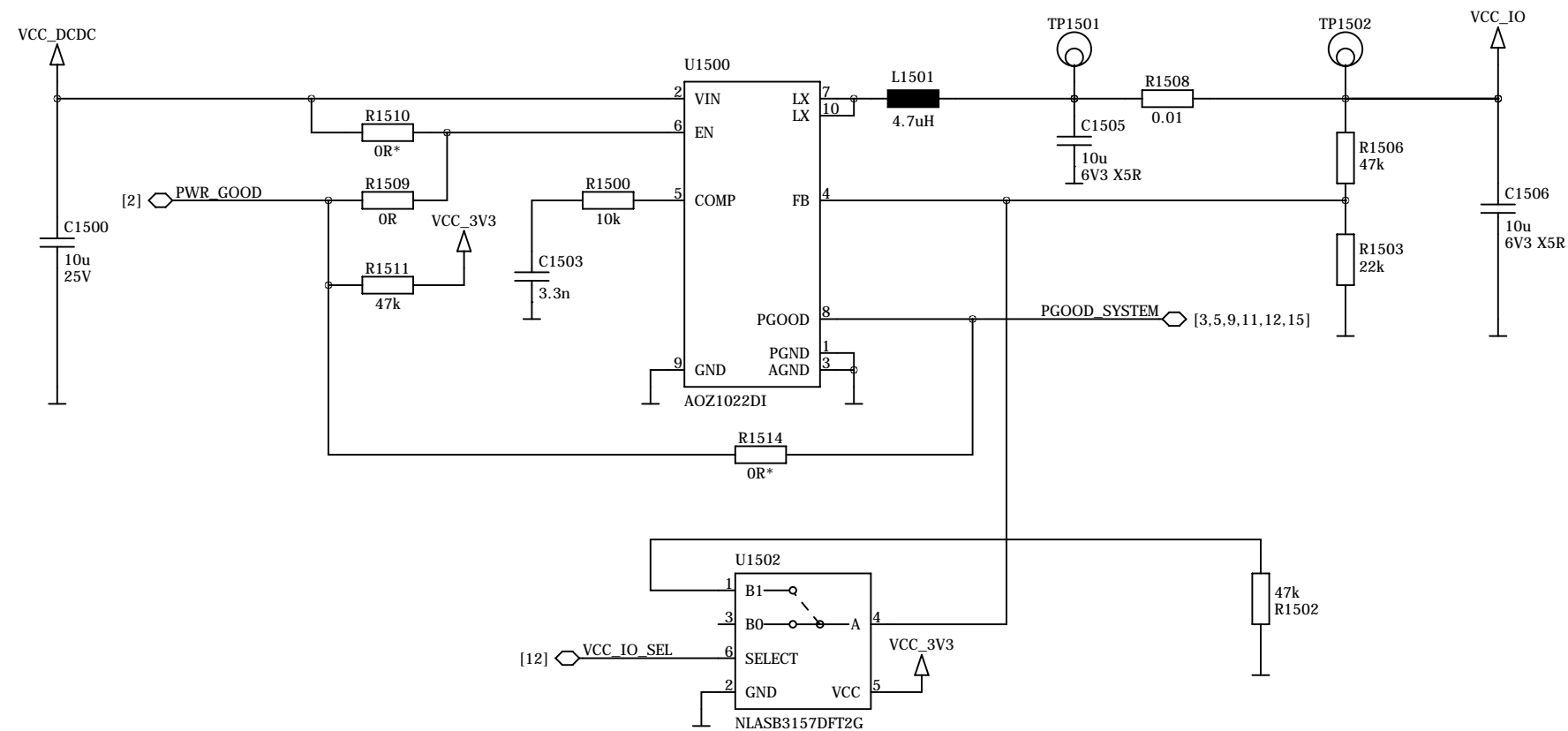
DC/DC Converter

3.3V, 3A, 500kHz

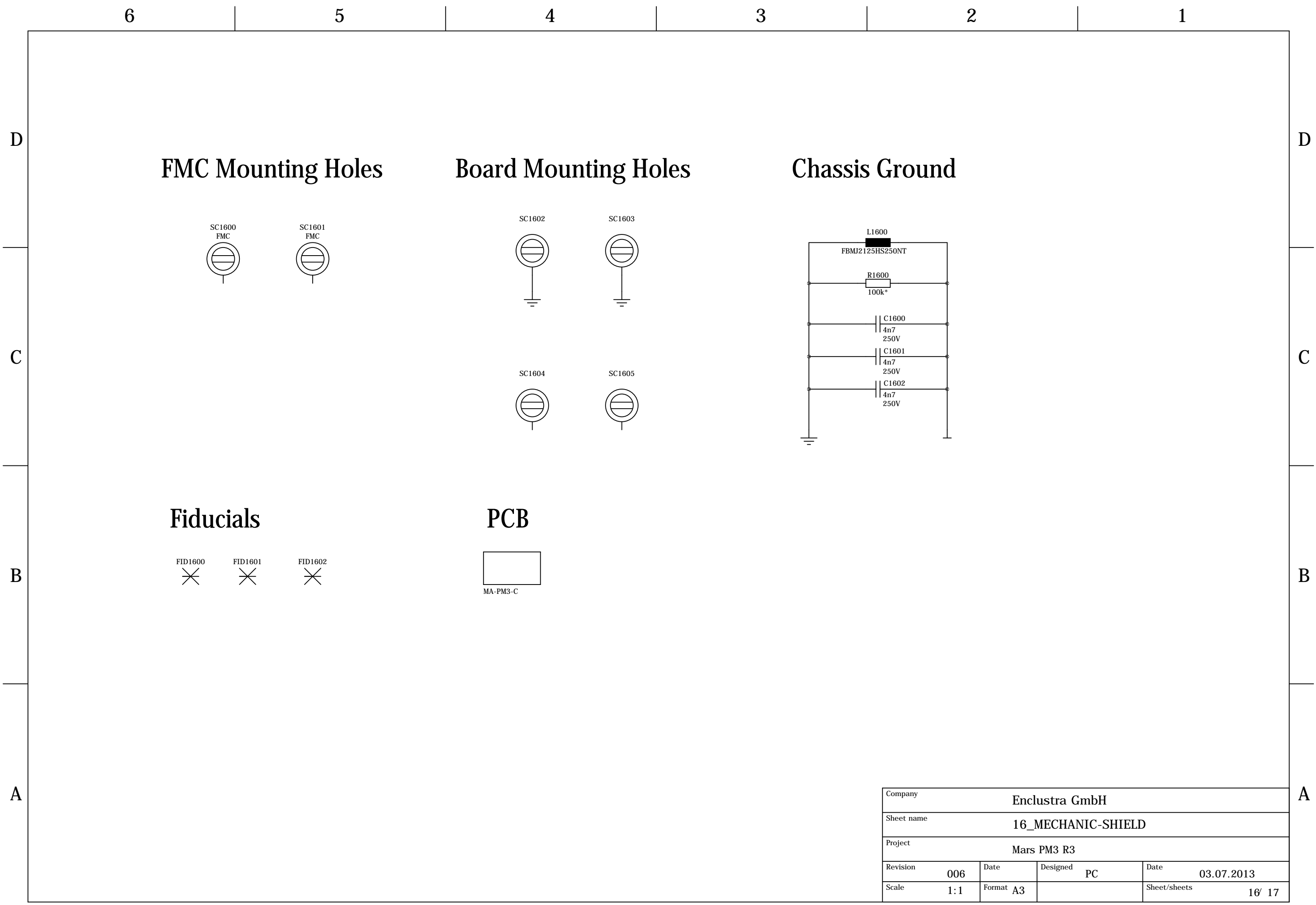


DC/DC Converter

VCC_IO, 3A, 500kHz



Company		Enclustra GmbH	
Sheet name		15_POWER2	
Project		Mars PM3 R3	
Revision	006	Date	03.07.2013
Scale	1:1	Designed	PC
Format	A3	Sheet/sheets	15/ 17



Company		Enclustra GmbH		
Sheet name		16_MECHANIC-SHIELD		
Project		Mars PM3 R3		
Revision	006	Date	Designed PC	Date 03.07.2013
Scale	1:1	Format A3		Sheet/sheets 16/ 17

Revision History

Date	Revision	Changes
24.1.2012	R1	First Release
30.3.2012	R2	Fixed several minor issues
14.11.2012	R3	Added USB boot fallback, connected FT232 to VCC_5V, slowed down DCDC compensation filter Connected FPGA_PROG directly FX3 GPIO
03.07.2013	R3	Updated pinouts

Company		Enclustra GmbH		
Sheet name		17_REVISIONHISTORY		
Project		Mars PM3 R3		
Revision	006	Date	Designed PC	Date 03.07.2013
Scale	1:1	Format A3		Sheet/sheets 17/ 17

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