

A

A

B

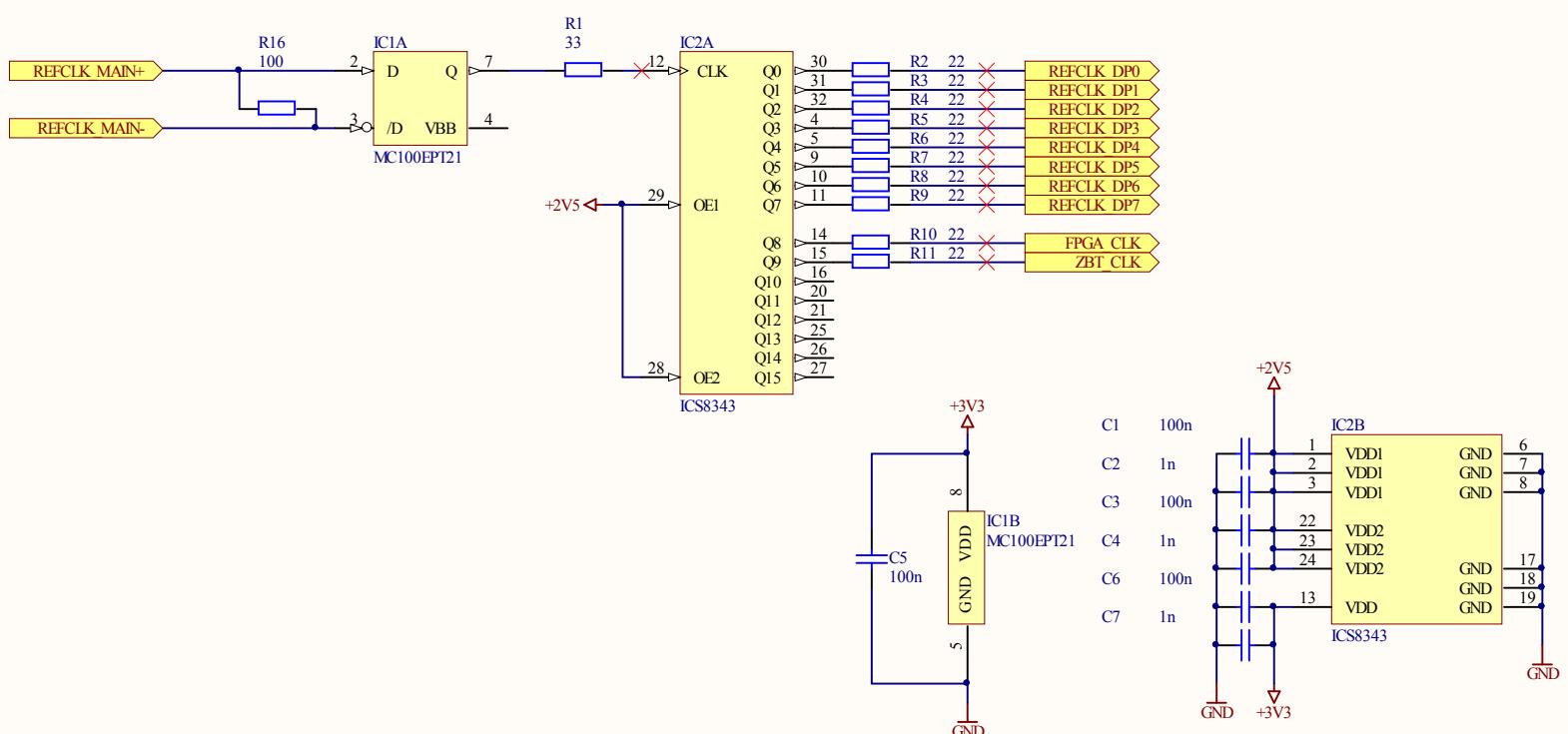
B

C

C

D

D



Title

White Rabbit Switch MCH - mainboard
Clock fanout

Size

A

Number

Revision

Date:

2009-03-01

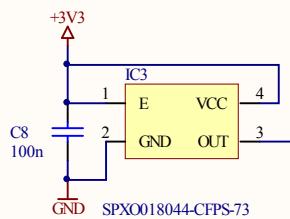
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File:

D:\projects\...\MB_clocking.SchDoc

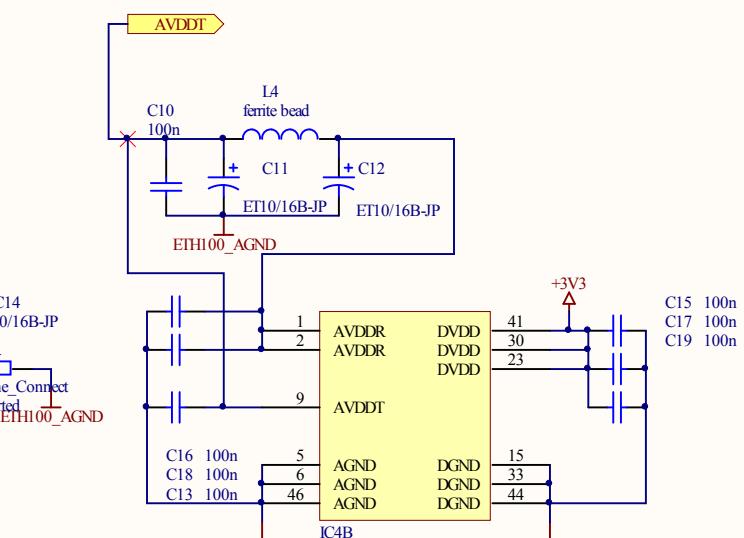
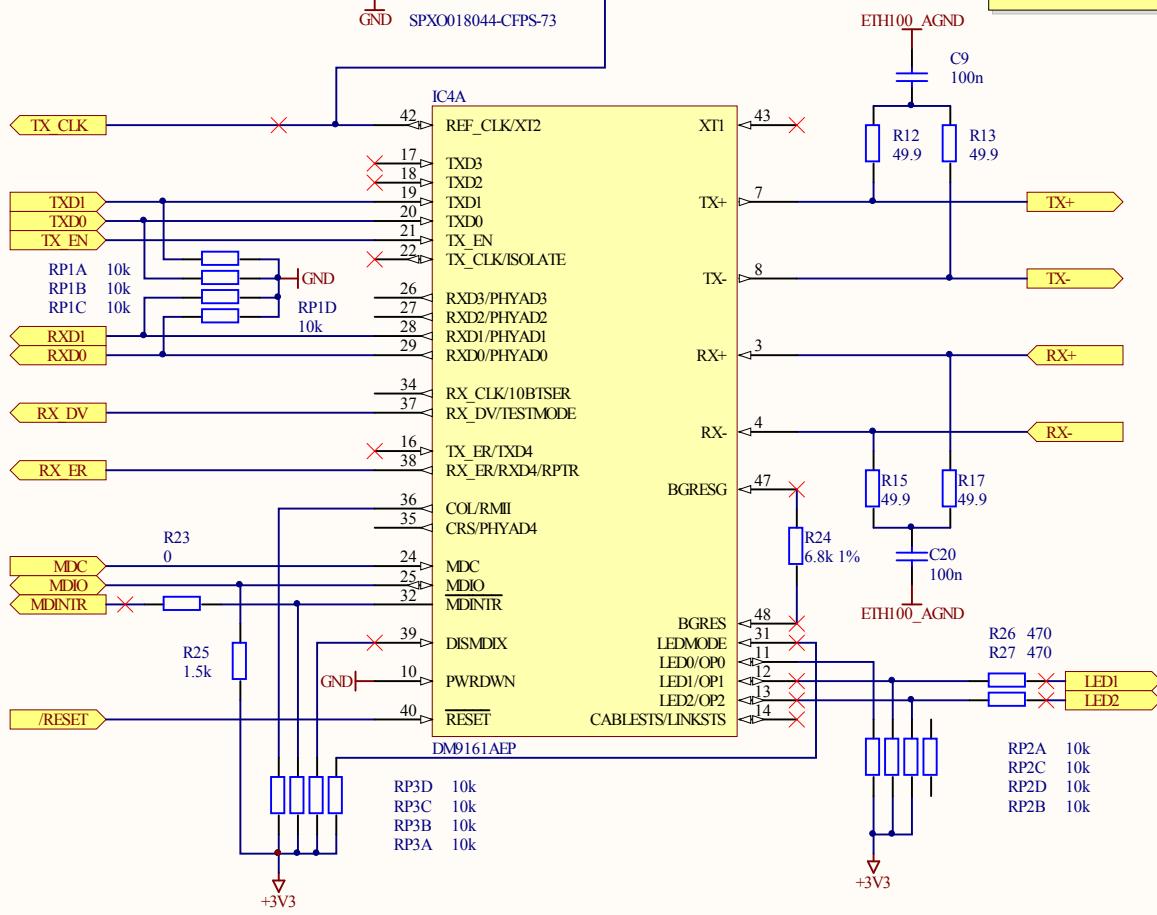
Drawn By:

A



100 MBit external twisted-pair Ethernet port. Uses DM9161 PHY and RMII interface to communicate with CPU MAC.

B



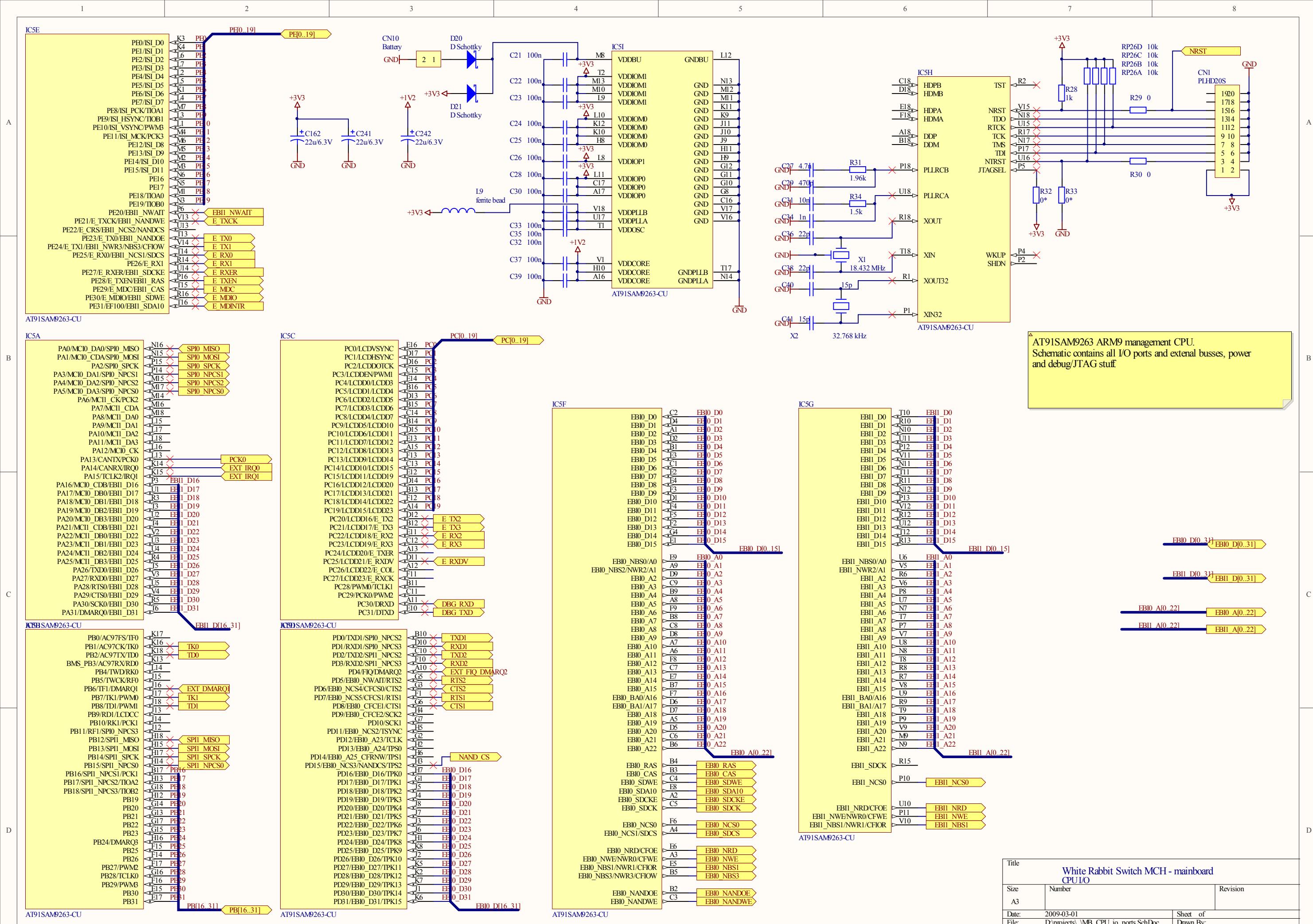
Title		
Size	Number	Revision
A4		
Date:	2009-03-01	Sheet of
File:	D:\projects\...\MB_CPU_100m_ethermet.SchDoc	Drawn By:

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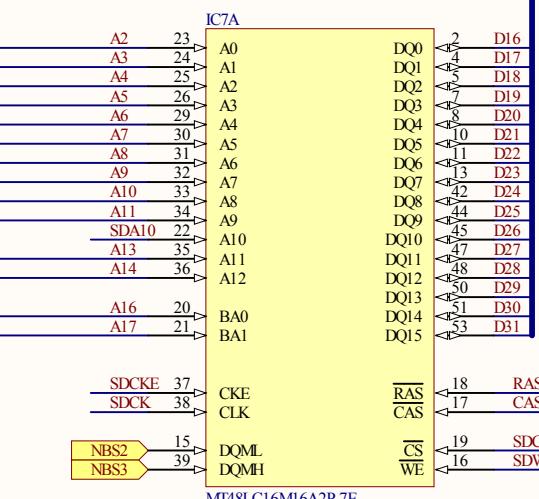
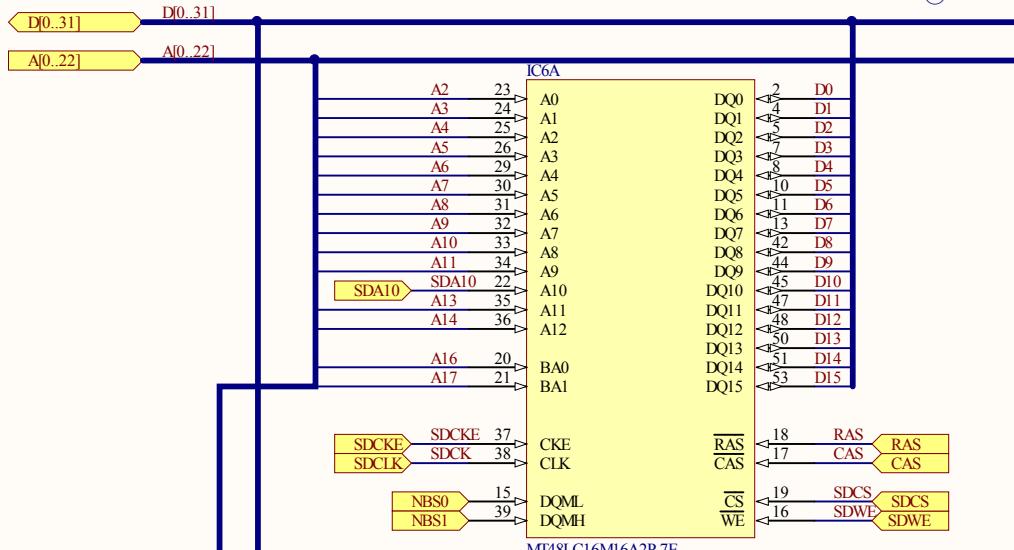
B

C

D



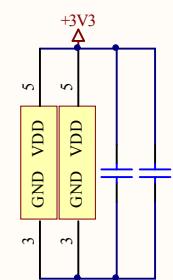
64 MB SDRAM @ 133 MHz (32 bit bus)



CPU memories:

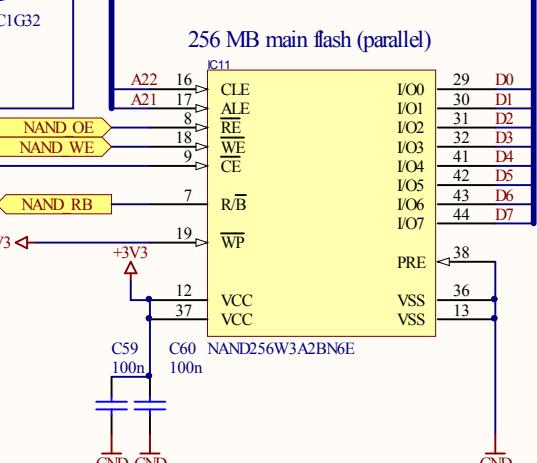
- 64 MB SDRAM @ 133 MHz (32-bit)
- 256 MB main NAND flash
- 8 MB boot NAND flash

C43 100n
C42 100n

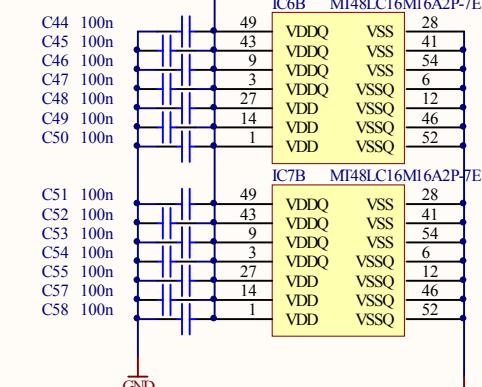
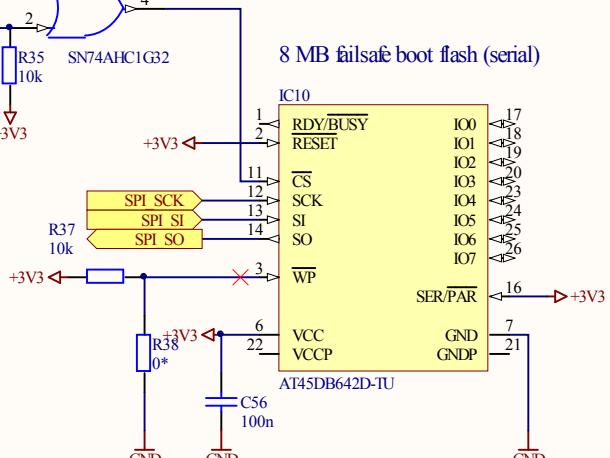


+3V3

256 MB main flash (parallel)



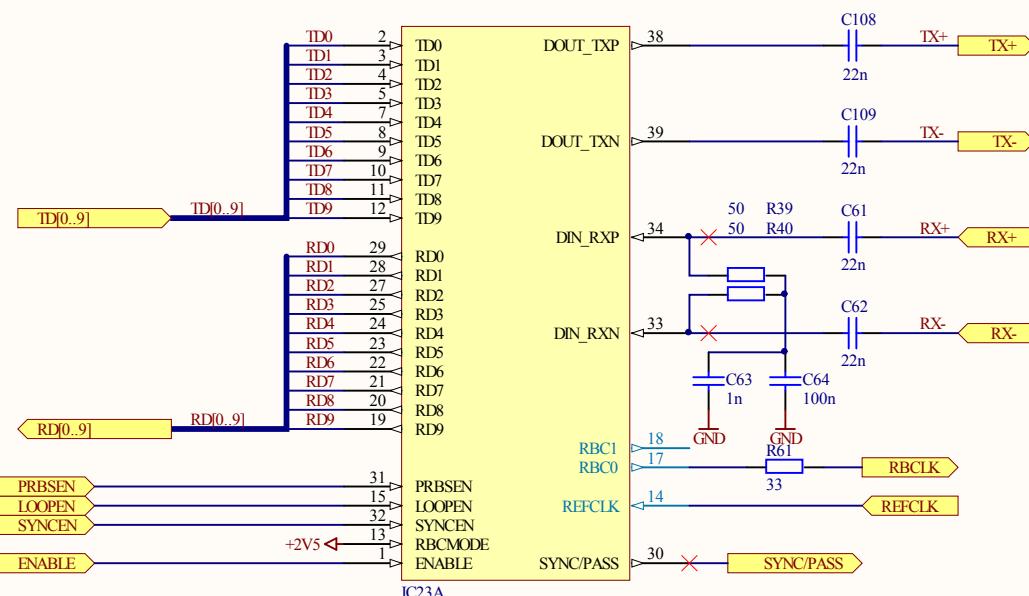
8 MB failsafe boot flash (serial)



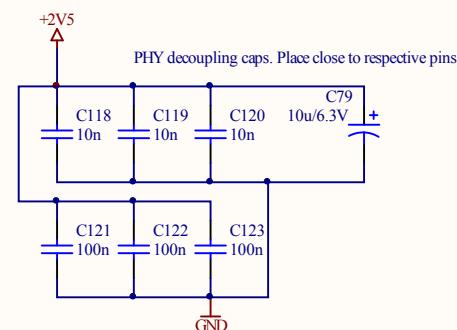
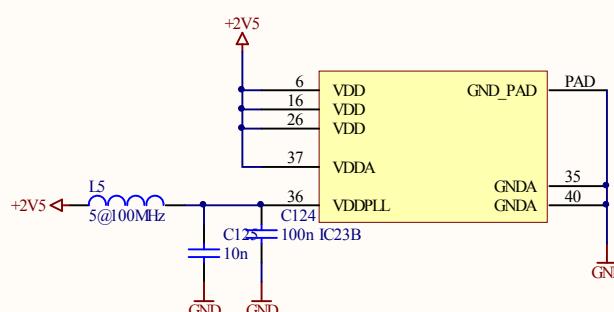
+3V3

Title		White Rabbit Switch MCH - mainboard	
Size	Number	CPU SDRAM and flash memories	
A4		Date:	2009-03-01
		Sheet	of
		File:	D:\projects\VMB_CPU_memory.SchDoc
		Drawn By:	

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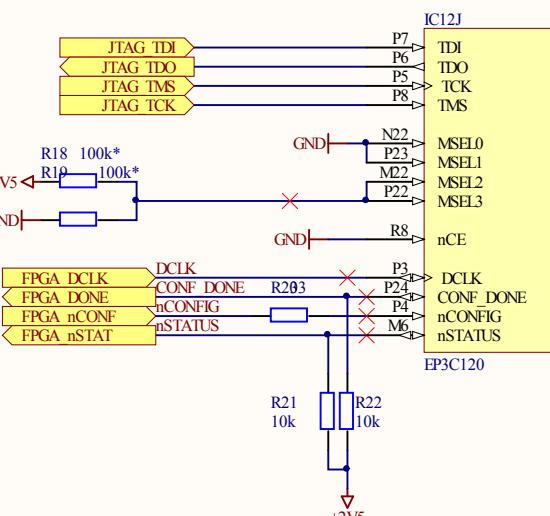
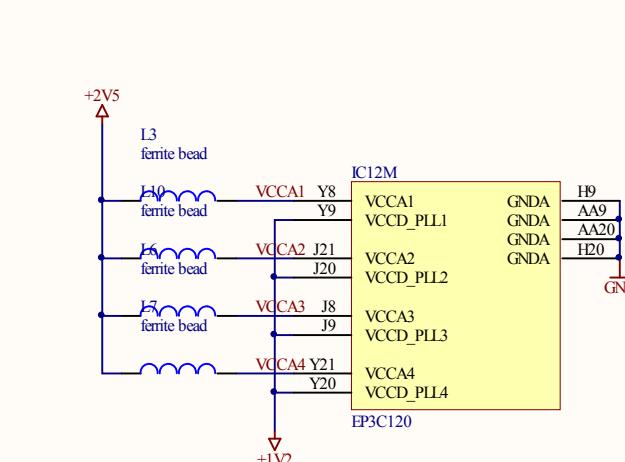
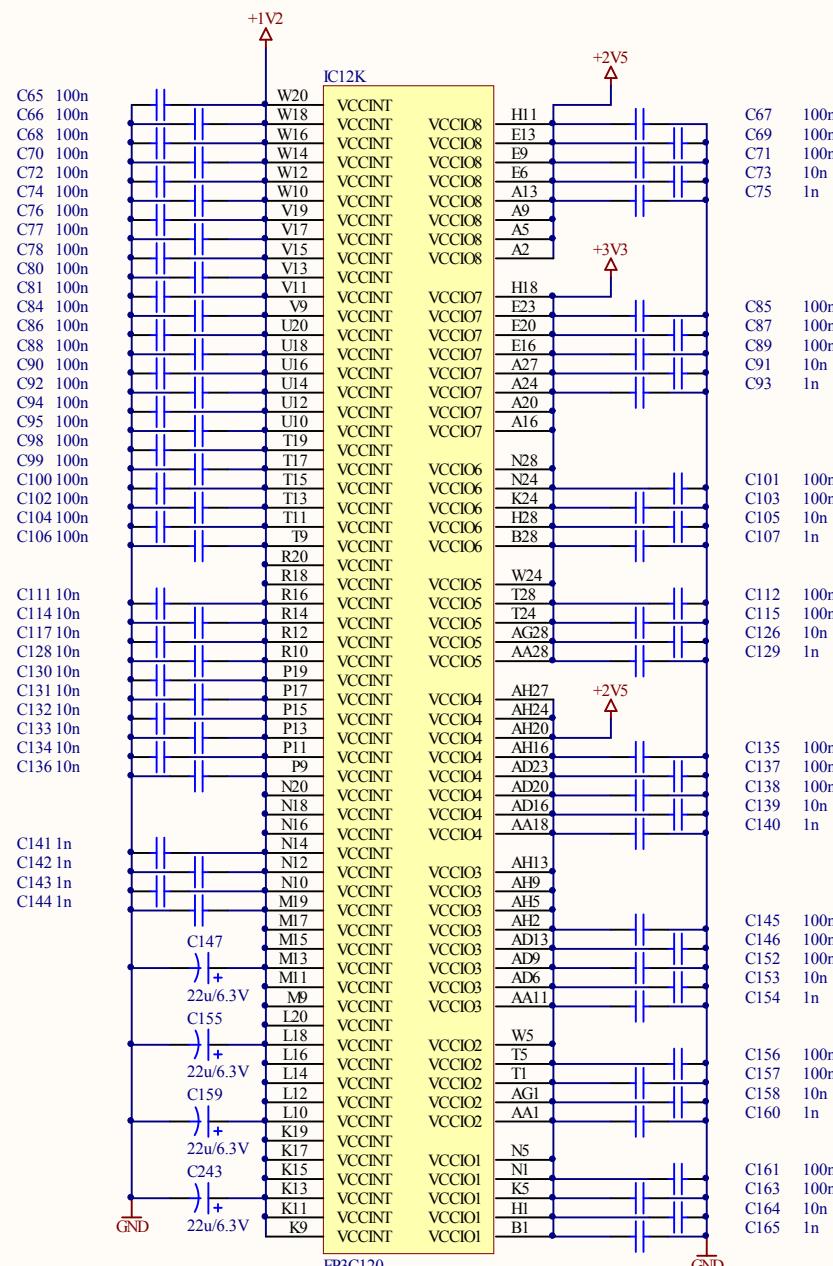
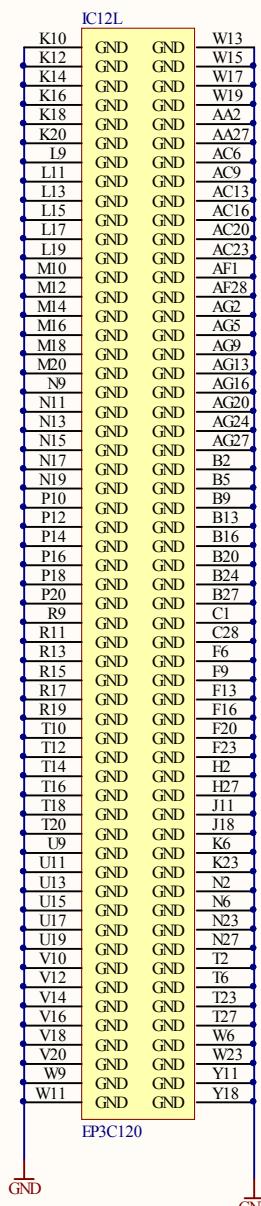


B



D

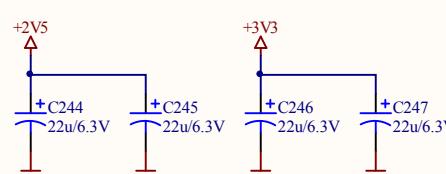
Title		
White Rabbit Switch MCH - mainboard Backplane downlinkPHY		
Size	Number	Revision
A4		
Date:	2009-03-01	Sheet of
File:	D:\projects\MB_downlink_phy.SchDoc	Drawn By:



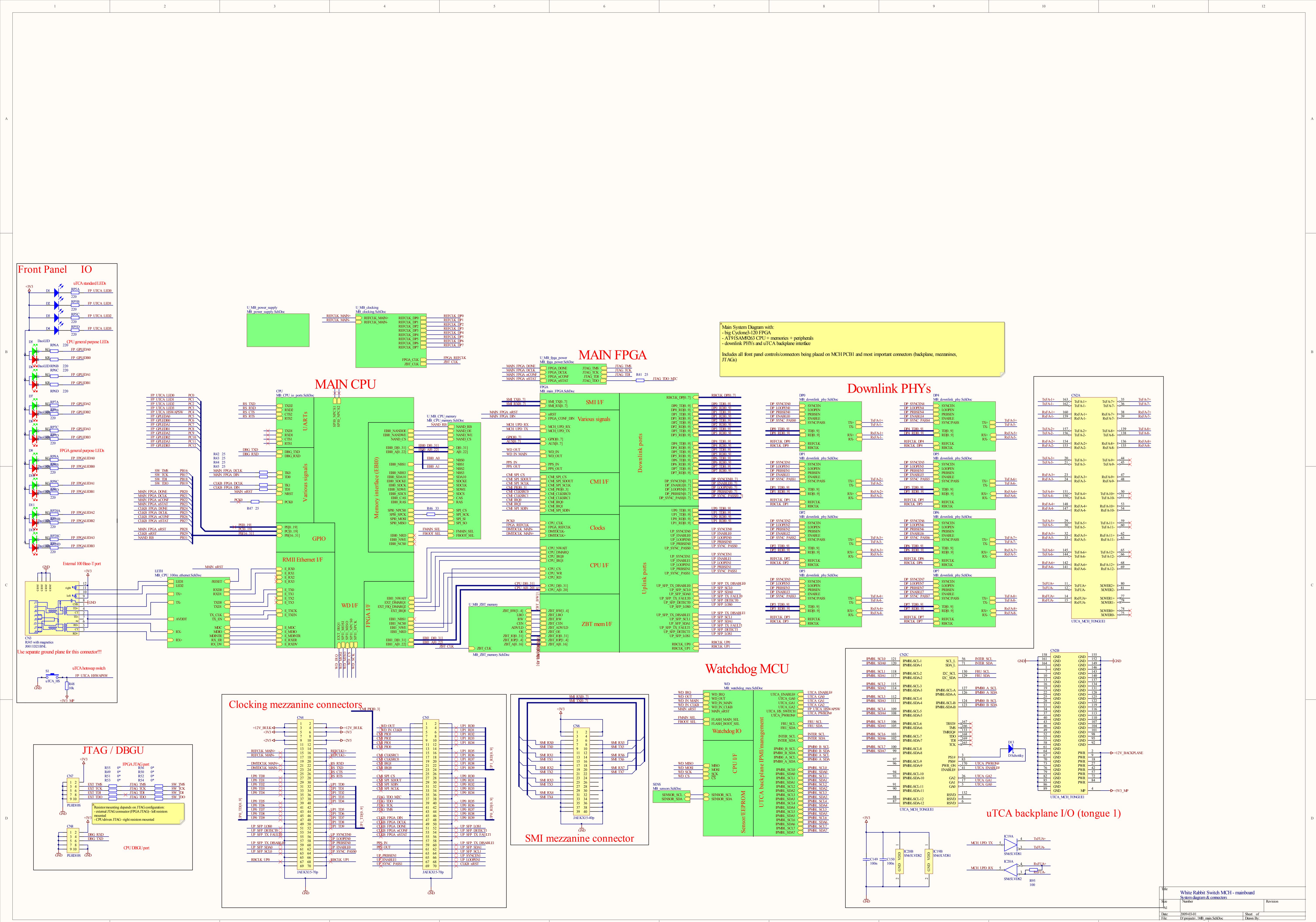
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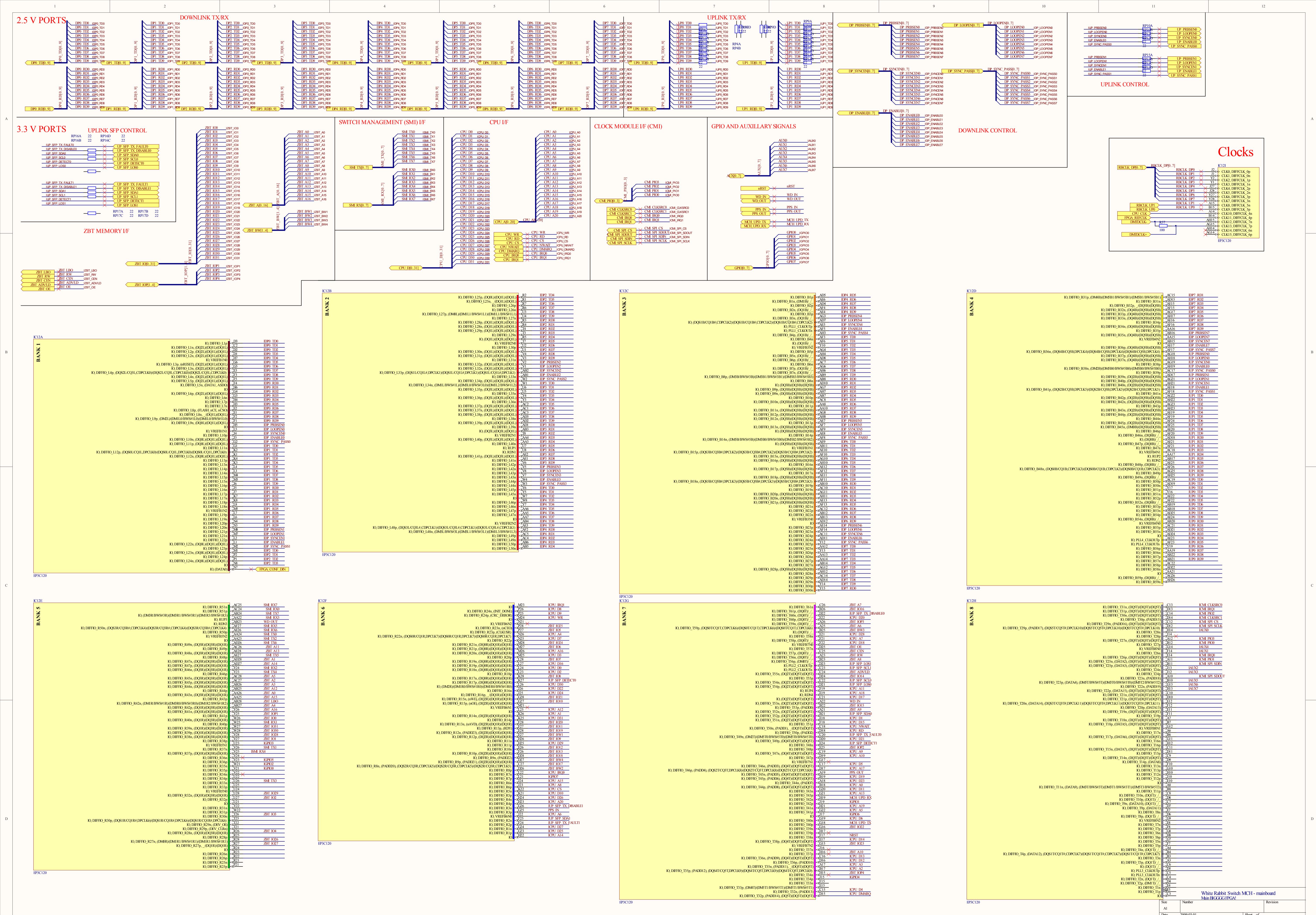
Main FPGA power and configuration.

Decoupling caps for VDDINT:
4 x 22u tantalum
24 x 100 n / 0402
10 x 10n / 0402
4x 1n /0402



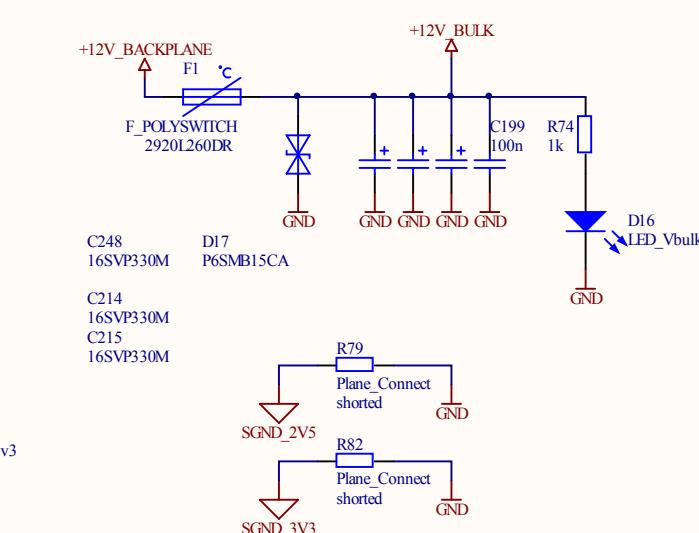
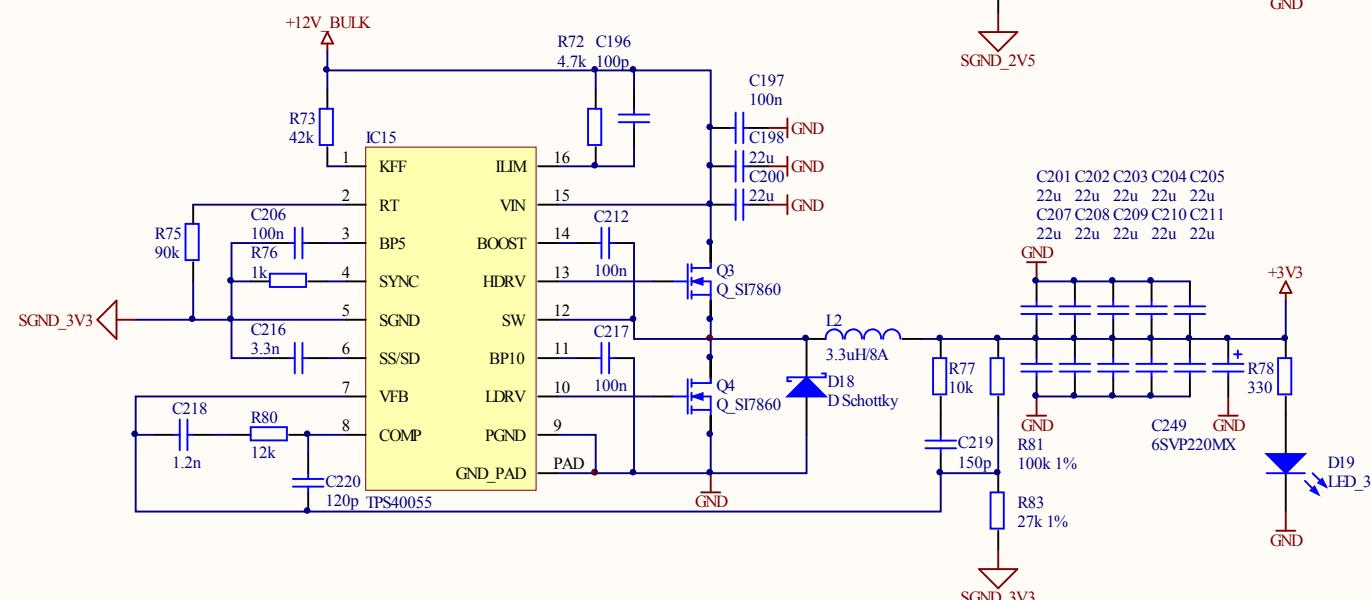
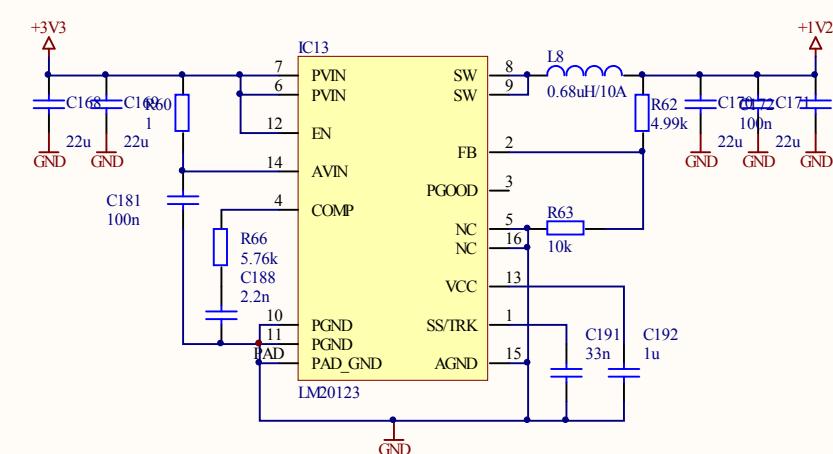
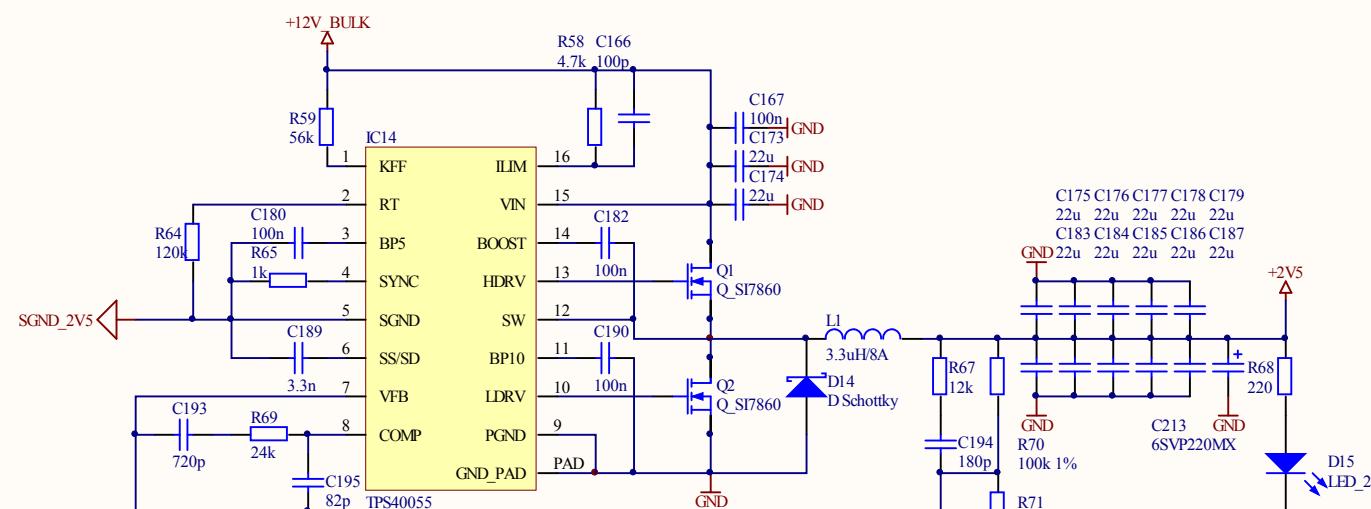
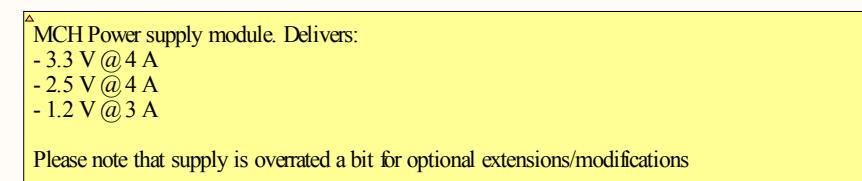
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White Rabbit Switch MCH - mainboard BIGGG FPGAs power and configuration		
Size	Number	Revision
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Date:	2009-03-01	Sheet of
File:	D:\projects\MB_fpga_power.SchDoc	Drawn By:





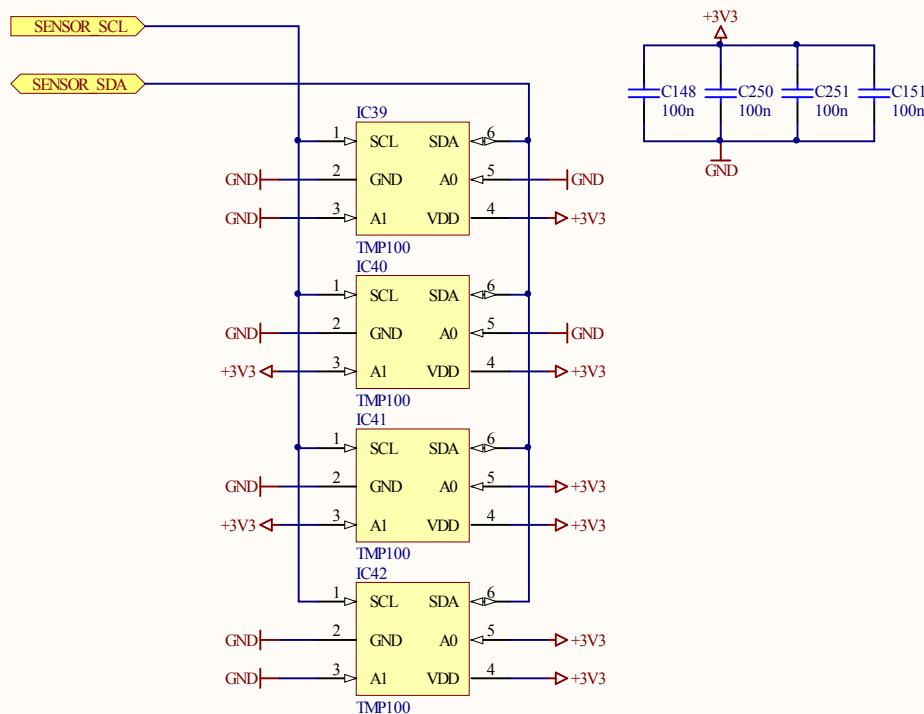
A

A



Title		
White Rabbit Switch MCH - mainboard Main power supply		
Size	Number	Revision
A3		
Date:	2009-03-01	Sheet of
File:	D:\projects\MB_power_supply.SchDoc	Drawn By:

Four (4) I2C temperature sensors, placed in various spots on the MCH PCB1

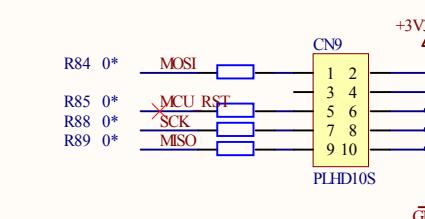
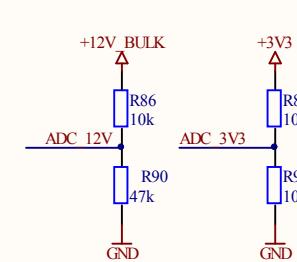


Title White Rabbit Switch MCH - mainboard Temperature sensors		
Size A	Number	Revision
Date: 2009-03-01	Sheet of	
File: D:\projects\...\MB_sensors.SchDoc		Drawn By:

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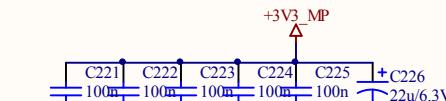
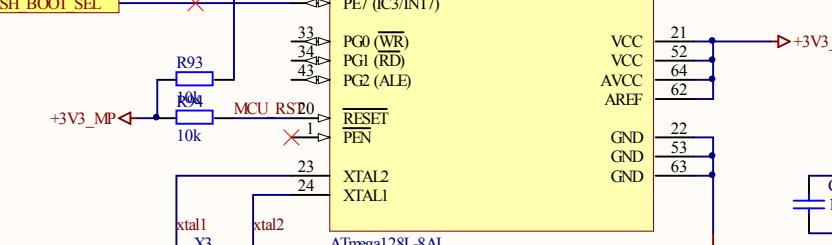
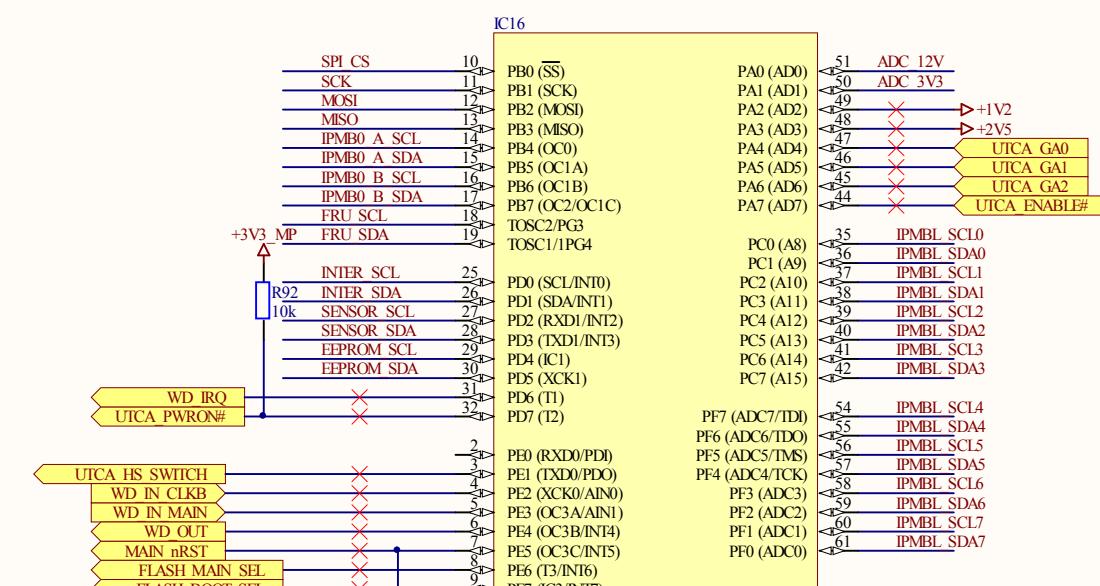
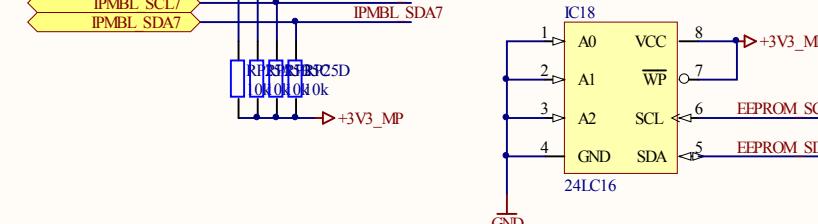
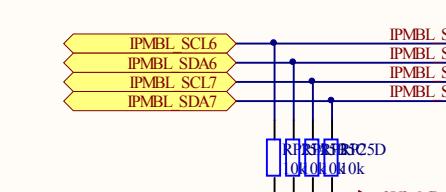
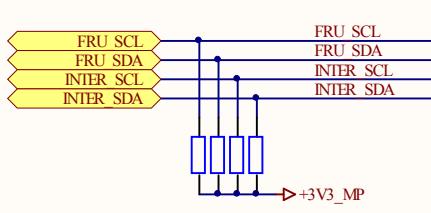
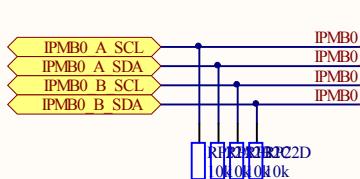
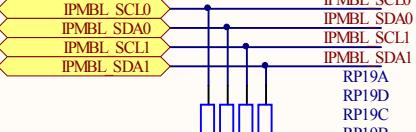
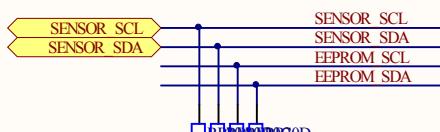
A

RP18A 22
RP18B 22
RP18C 22
RP18D 22



MCH watchdog microcontroller:

- takes care of safe boot process after reprogramming
- monitors board temperature and supply voltages
- implements multichannel I2C hub for IPMB bus access
- takes care of uTCA board initialization
- CANT BE PROGRAMMED EXTERNALLY!



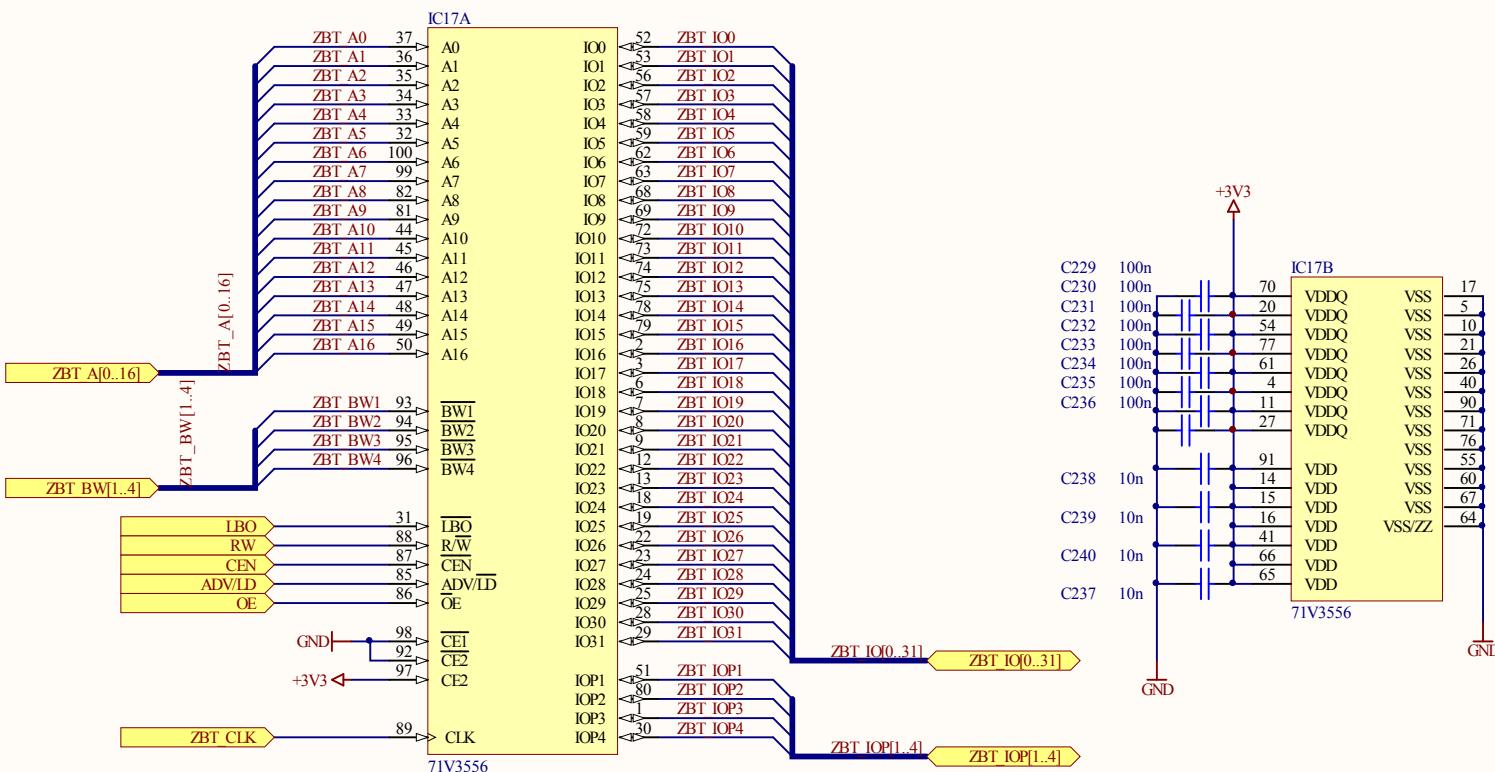
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Size	Number	Revision
A3		

Date: 2009-03-01 Sheet of:

File: D:\projects\MB_watchdog_mcu.SchDoc Drawn By:

A



Title

White Rabbit Switch MCH - mainboard
ZBT routing table memory

Size

A

Number

Revision

Date:

File:

2009-03-01

D:\projects\...\MB_ZBT_memory.SchDoc

Sheet of

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