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MPC5777C-416DS

Revisions

Rev	Description	Date	Approved
X1	Initial Draft	11/09/13	David Erazmus
X2	1. 4.7uF cap @ V_USB power properties changed	12/09/13	David Erazmus
X3	1. On Board linear 5.0V LDO circuit removed 2. 4.7uF cap PKG changed to 0603 3. Ext clock and OSC circuit removed 4. AGND and VSS_OSC resistors and TP removed. 5. VSS_OSC @ xtal components connected to GND 6. J21, C87, C88, C47 and C58 removed	13/09/13	David Erazmus
X4	1. TEST pin is GNDed through a 0ohms resistor. 2. ENGCLK is connected to a 1X1 header (DNP) and terminated with a 50 ohms resistor. 3. REGSEL pin is connected to 1X3 header through a 10K res for PU/PD selection.	16/09/13	David Erazmus
X5	1. MOSFET source is connected to VDDPWR 2. PORST_B and ESR0_B signals replaced with RESET_B 3. OR gate used in the reset sectio removed 4. VDD_HV_IO_MAIN connected to 3.3/5V SEL connector. 5. VDD_HV_IO_FLEX connected to 3.3/5V SEL connector. 6. Crystal Load Cap added 7. 1000uF/50v used in 12V in changed to 100uF/25V	19/09/13	David Erazmus
X6	1. 3 pin Header added to VDD_HV_IO_JTAG 2. 3 pin Header and net VDD_HV_IO_FLEX removed	19/09/13	David Erazmus
X7	1. 3.3/5V sel option removed from 1.25V(OB1) and VDDPMC connected directly 2. For reset LED, Reset_B connected to buffer control instead of RST-MCU_B.	20/09/13	David Erazmus
X8	Components properties updated	25/09/13	David Erazmus
X9	1. Transistor&Diode, changed from SQ2301 & SS8P3L to FMV65XP & STPS8L30B in 1.25V onboard reg section	26/09/13	David Erazmus
X10	J11 swapped for easy routing	26/09/13	David Erazmus
A	Back Annatation A085 Release	01/10/13	David Erazmus
AX1	Include PowerSBC	02/03/15	David Erazmus
B	Updated SBC to MC33908LAE. Routed 50MHz CLK to J501.20. Release to Agile A085	04/07/15	David Erazmus
B1	Change R541 to 4.53K	07/13/15	Steve Harrington

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Designer: Catalin Neacsu (nPRO)		Drawing Title: MPC5777C-416DS	
Drawn by: Catalin Neacsu (nPRO)		Page Title: Table of Contents/Revisions	
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1. Unless Otherwise Specified:
 All resistors are in ohms, 5%, 1/8 Watt
 All capacitors are in uF, 20%, 50V
 All voltages are DC
 All polarized capacitors are aluminum electrolytic
2. Intruded lines coded with the same letter or letter combinations are electrically connected.
3. Device type number is for reference only, the number varies with the manufacturer.
4. Special signal usage:
 _B Denotes - Active-Low Signal
 <> or [] Denotes - Vectored Signals
5. Interpret diagram in accordance with American National Standards Institute specifications, current revision, with the exception of logic block symbology

DEFAULT JUMPER SETTINGS

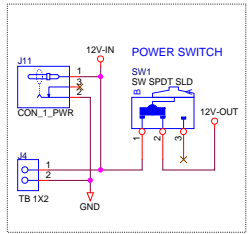
REFDES	Default settings	Description	Header	Jumper Type	Page
J1	2 & 3	3.3V Mother board	HDR 1X3	2MM	3
J2	2 & 3	5V Mother board	HDR 1X3	2MM	3
J3	2 & 3	5V Mother board	HDR 1X3	2MM	7
J25	2 & 3	PM4 as PCSA2	HDR 1X3	2MM	5
J27	1 & 2	3.3V Mother board	1X2	2MM	6
J32	1 & 2	Reset Enable	HDR 1X3	2MM	6
J512	1 & 2	DEBUG PULL-UP	HDR 1X2	2MM	3
J502	1 & 2	LIN Master/Slave	HDR 1X2	2MM	3
J504	2 - 3	VCCA	HDR 1X3	100MIL	3
J505	1 - 2	VCCA	HDR 1X2	2MM	3
J506	2 & 3	CAN RX	HDR 3X4	100MIL	3
	5 & 6	CAN TX			
	8 & 9	LIN RX			
	11 & 12	LIN TX			
J507	1 & 3	CAN	HDR 2X2	100MIL	3
	2 & 4	CAN			
J510	OPEN	CLK SELECTION	HDR 1X3	100MIL	3
J511	2 - 3	VDDIO	HDR 1X3	100MIL	3
J517	2 - 3	SOUTB	HDR 3X6	100MIL	3
	5 - 6	SINB			
	8 - 9	SCKB			
	11 - 12	PCSB0			
	14 - 15	ANA4			
	16, 17, 18 OPEN	ETPUA10			
J518	OPEN	IO_[0:5]	HDR 2X6	100MIL	3
J519	OPEN	IO_1_PD	HDR 1X2	2MM	3
J520	1 - 2	LED En ETPUA0	HDR 1X2	2MM	5
J521	1 - 2	LED En ETPUA1	HDR 1X2	2MM	5
J523	OPEN	SBC_INT	HDR 2X2	100MIL	3
	OPEN	SBC_RST			
J524	2 & 3	50MHz Clock	HDR 1X2	2MM	5



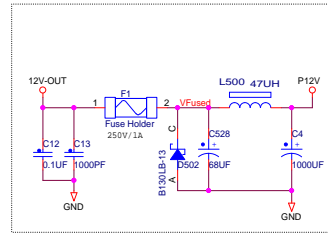
Power supply : Connectors and Regulators

Test and reference points

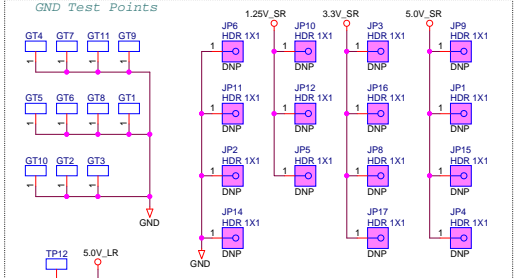
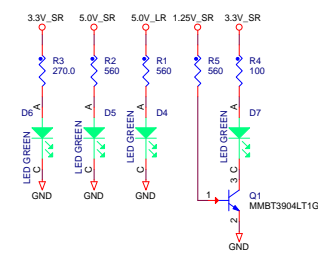
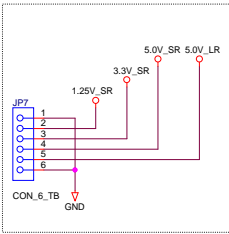
Input Power Connectors



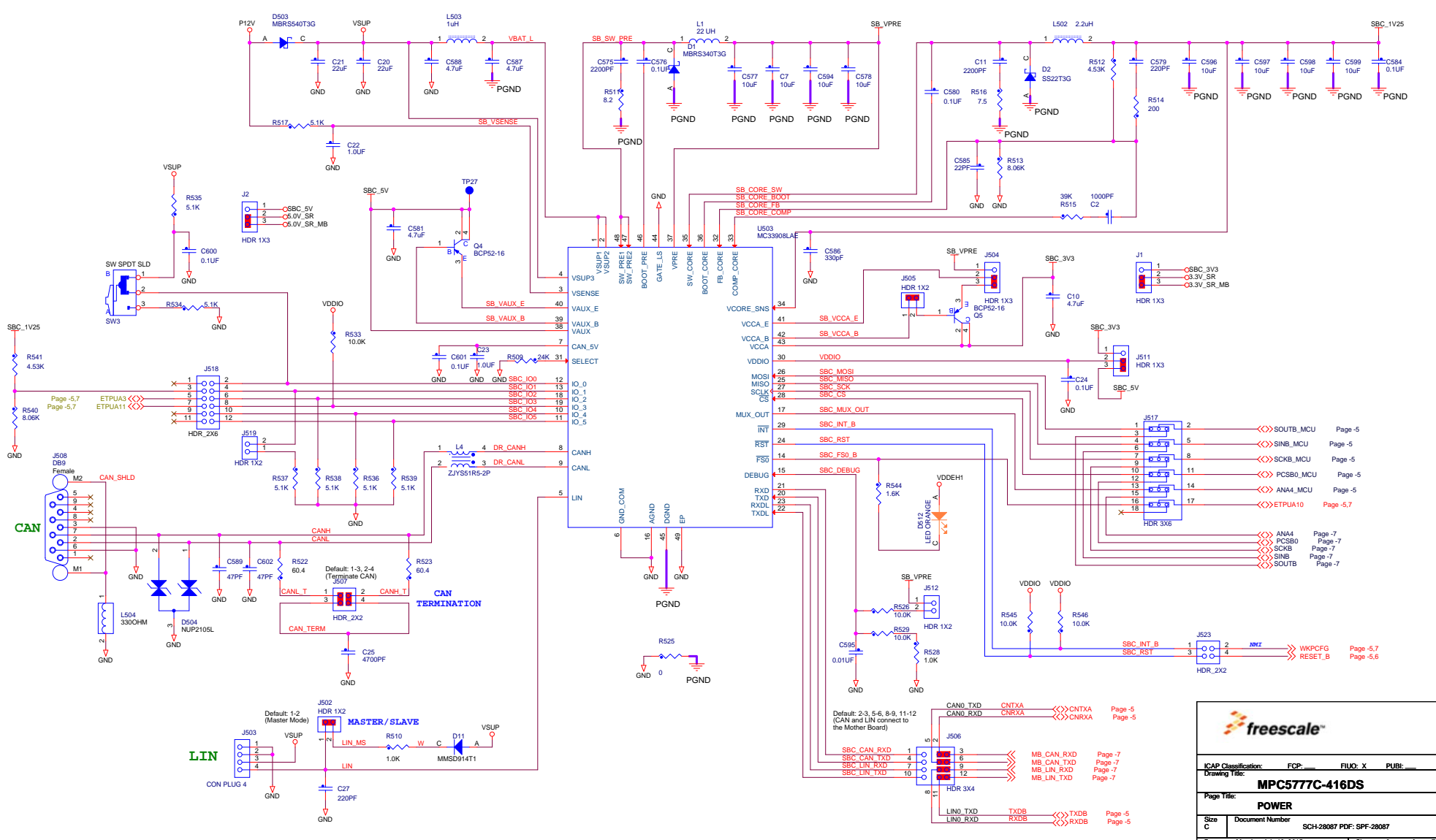
Power supply input and filter



External Power feed

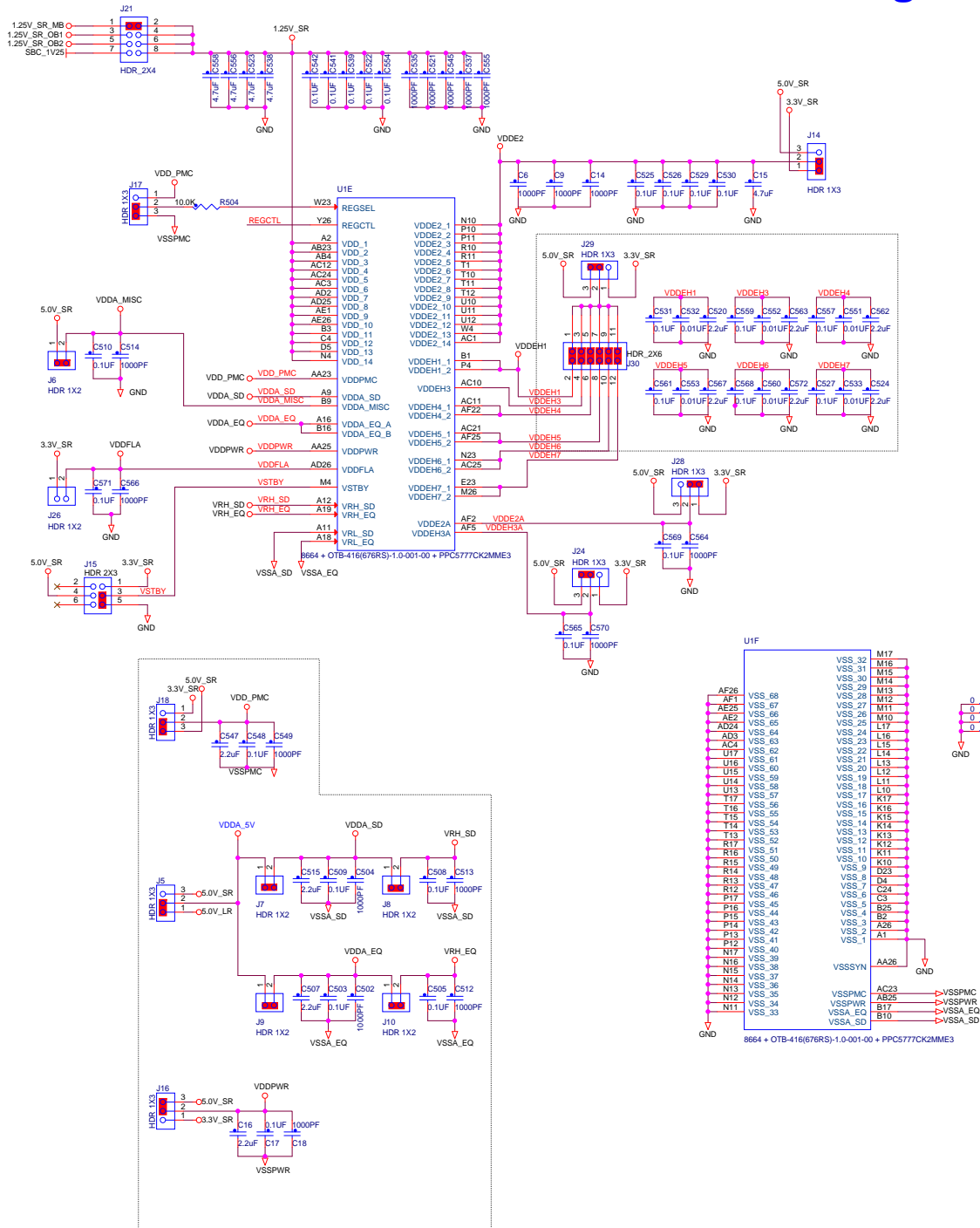


Prototype Area Reference Points
Test points will be distributed among the EVB or grouped logically where applicable.



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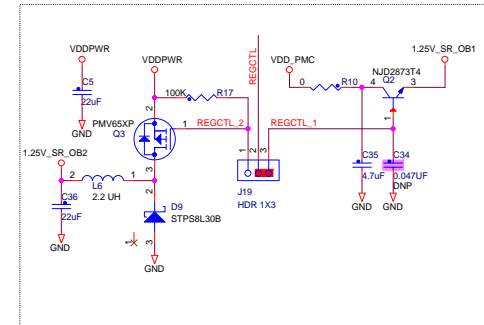
MCU Power and 1.2V Regulator



DEFAULT JUMPER SETTINGS

REFDES	Default settings	Description	Header	Jumper Type
J5	1 & 2	5V_LR to VDDA	HDR 1X3	2MM
J6	1 & 2	VDDA_MISC Selection	HDR 1X2	2MM
J7	1 & 2	VDDA_SD Selection	HDR 1X2	2MM
J8	1 & 2	VRH_SD Selection	HDR 1X2	2MM
J9	1 & 2	VDDA_EQ Selection	HDR 1X2	2MM
J10	1 & 2	VRH_EQ Selection	HDR 1X2	2MM
J14	1 & 2	3.3V Mother board	HDR 1X3	2MM
J15	3 & 5	VSTBY to GND	HDR 1X3	2MM
J16	2 & 3	5V Mother board	HDR 1X3	2MM
J17	2 & 3	REGSEL to GND	HDR 1X3	2MM
J18	2 & 3	5V Mother board	HDR 1X3	2MM
J19	2 & 3	1.25V_SR_OB1	HDR 1X3	2MM
J21	1 & 2	1.25V_SR_MB	HDR 2X4	100MIL
J23	1 & 2	Reset Enable	HDR 1X2	2MM
J24	2 & 3	5V Mother board	HDR 1X3	2MM
J26	OPEN	VDDFLA Selection	HDR 1X2	2MM
J28	1 & 2	3.3V Mother board	HDR 1X3	2MM
J29	2 & 3	5V Mother board	HDR 1X3	2MM
J30	1 & 2	VDDEH1 Selection	HDR_2X6	100MIL
	11 & 12	VDDEH7 Selection		
	3 & 4	VDDEH3 Selection		
	5 & 6	VDDEH4 Selection		
	7 & 8	VDDEH5 Selection		
9 & 10	VDDEH6 Selection			

Onboard 1.25V Switching Regulator



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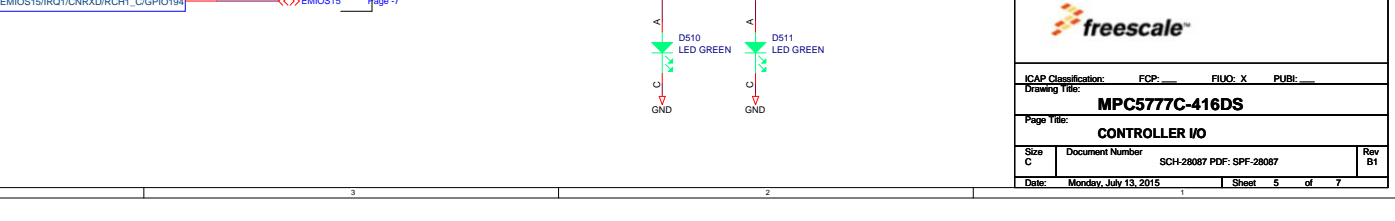
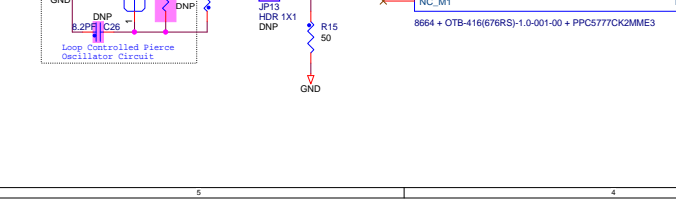
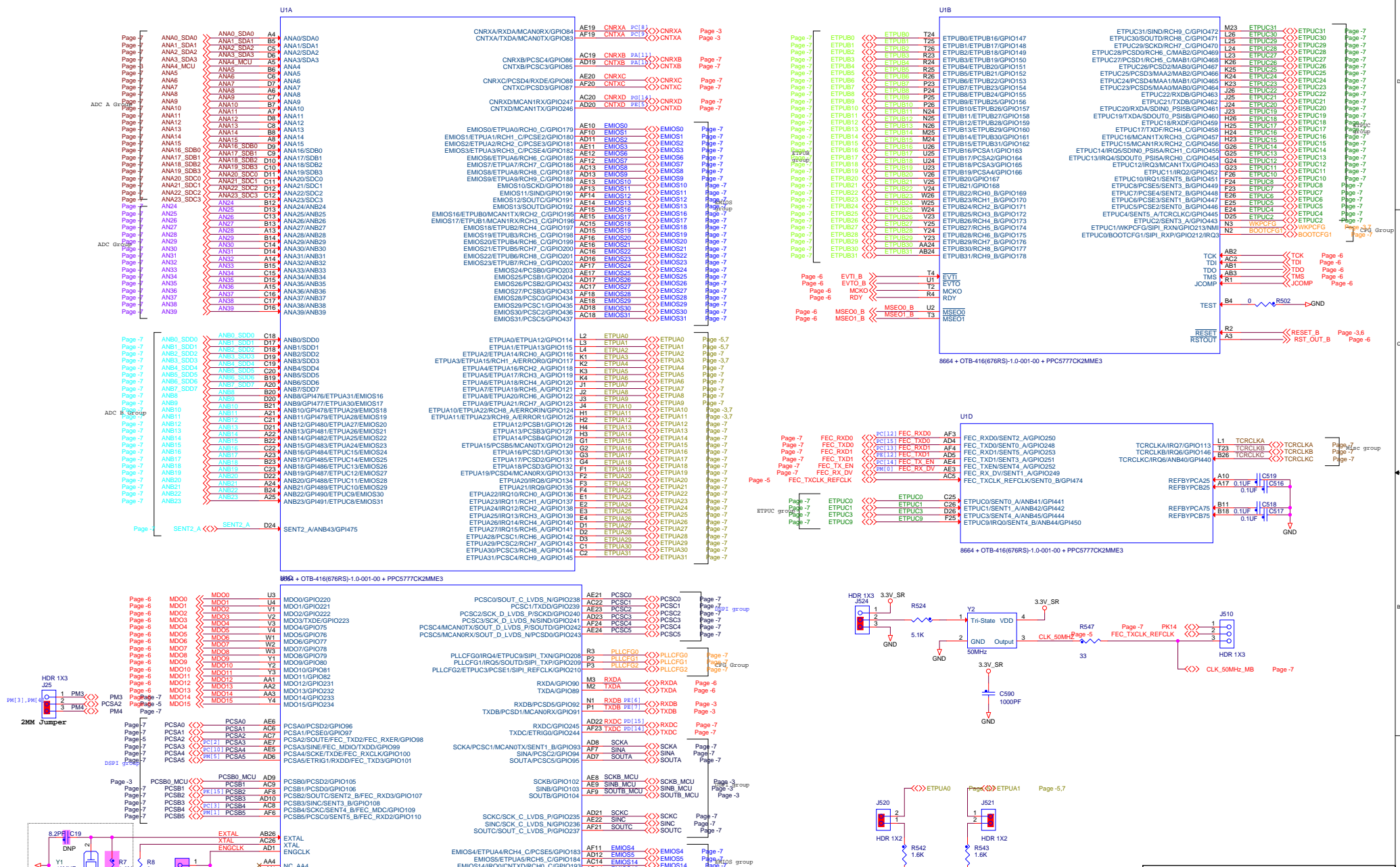
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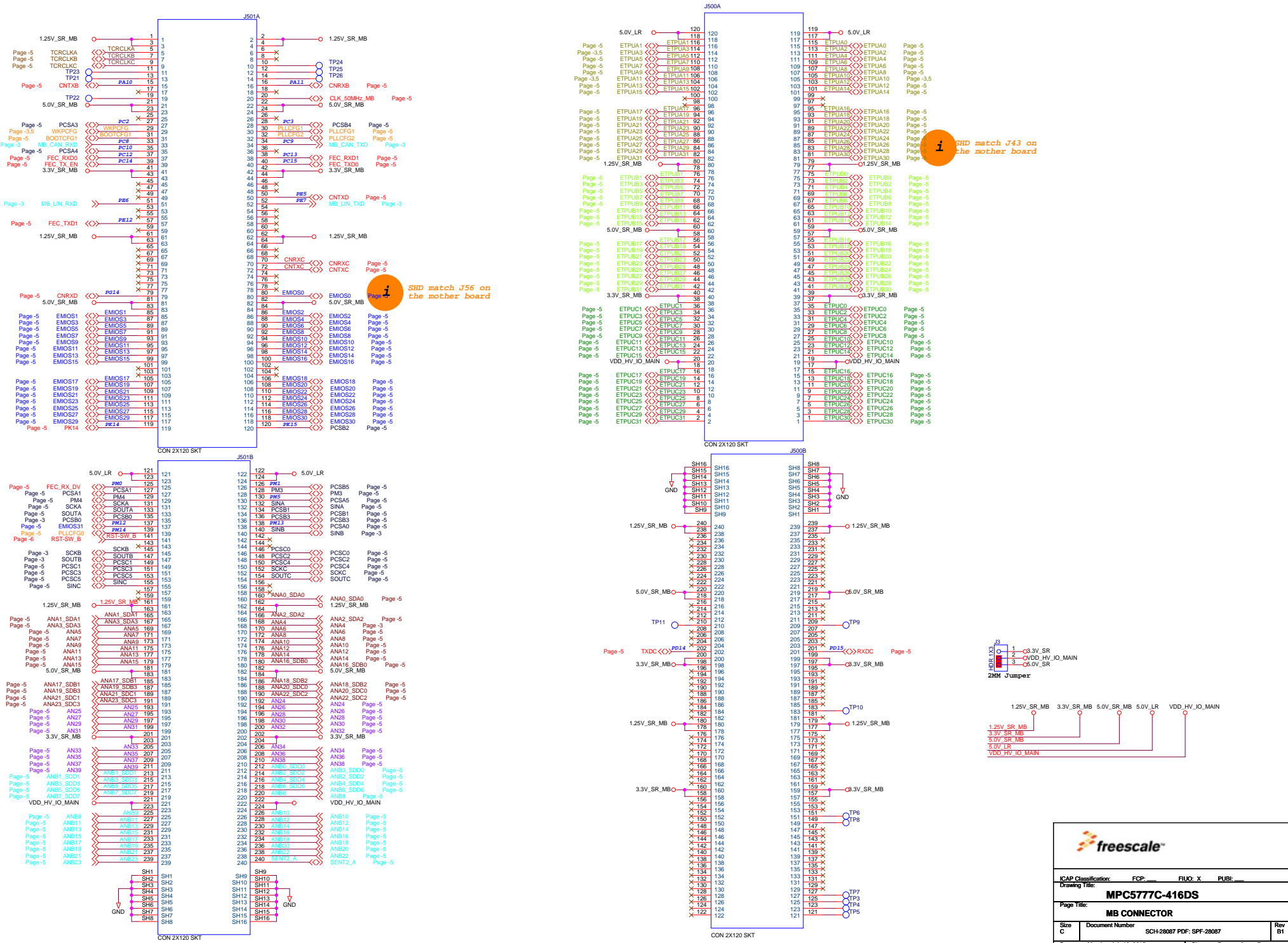
CONTROLLER I/O



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DAUGHTER CARD TO MOTHERBOARD CONNECTOR



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