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DWG. NO.	SH	REV.
<Drawing Number>	1	3.0

PRODIGY

MPC5534 MICROCONTROLLER BOARD

REVISION HISTORY

REV	DATE	AUTHOR	DESCRIPTION/MODIFICATIONS
1.0	29.04.11	R. Vasavi	Preliminary release
1.1	06.06.11	R. Vasavi	Added IOP board connectors Changed the JTAG/Nexus, CPLD & RS232 to right angled type
1.2	30.06.11	R. Vasavi	Changed the RS232 debug console to RS485 Moved the second SPI EEPOM to IOP board eTPU & eMIOS interfaces support for 16 DI & 16 DO Addition of mictor connectors
2.0	3.10.2011	AJM	Added Termination on ECAT RX Lines Changed value of C218-C220
3.0	11.07.12	VAIBHAV DOSHI	Updated parts with the standard Prodigy_Parts_Library Power supply for 1.5V,3.3V,5V changed MPC_CLK signal added Voltage monitoring Op-Amp replaced

APPROVALS	DATE	COMPRESSOR CONTROLS CORPORATION 4725 121st Street - Des Moines, Iowa 50323		
DRAWN VAIBHAV DOSHI	11-07-2012	SHEET1-TITLE		
CHECKED <Checked By>	<Checked Date>			
ENGINEER VAIBHAV DOSHI		SIZE C	DWG. NO. <Drawing Number>	SHEET 1 of 14
		FILE CCCNGP_MPC5534_BOARD_REV3.0.sch	SCALE <Scale>	PROD REV. 3.0

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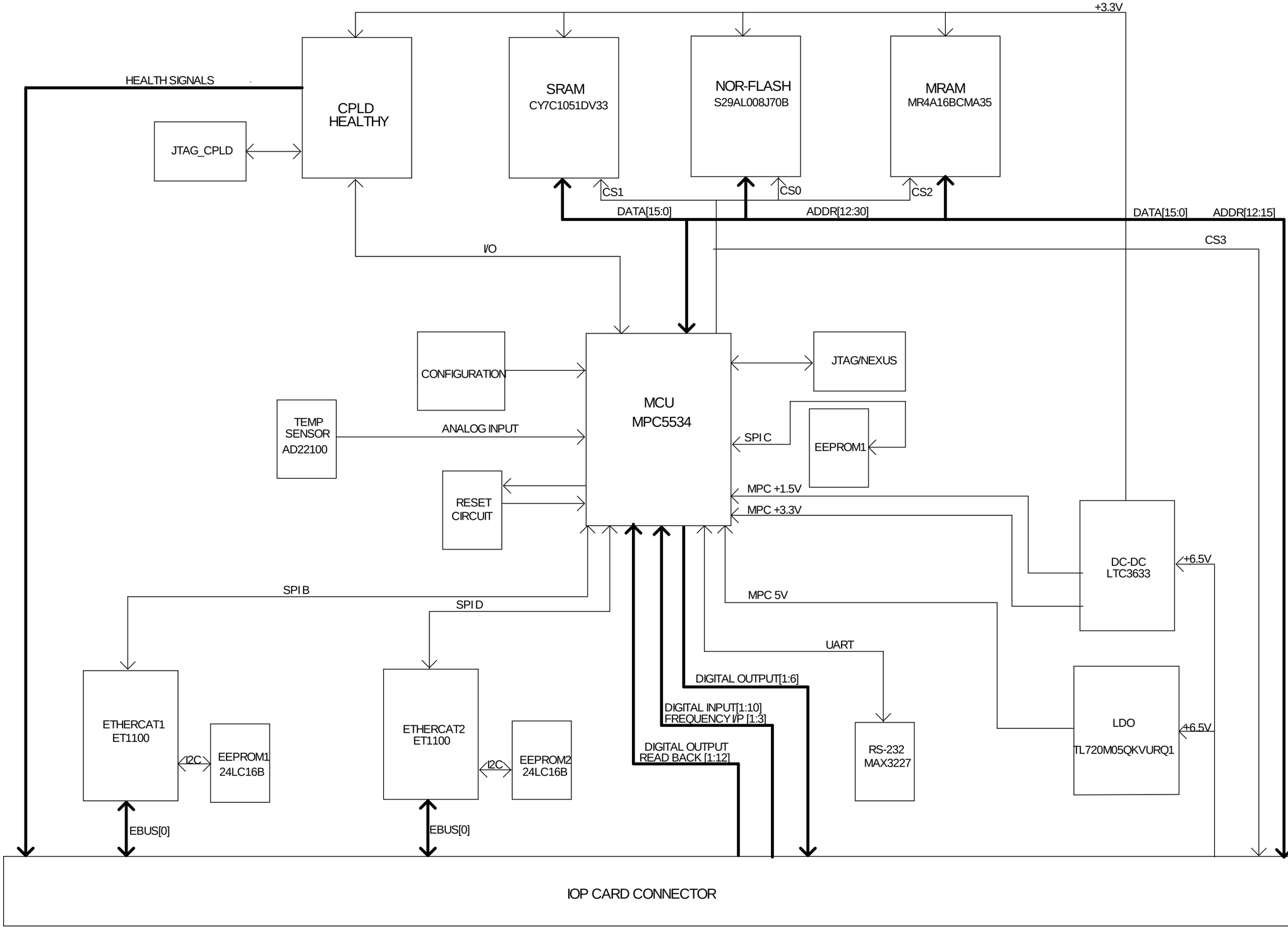
DWG. NO.	SH	REV.
<Drawing Number>	2	3.0



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CHECKED <Checked By>	<Checked Date>	SHEET2-BLOCK-DIAGRAM
ENGINEER VAIBHAV DOSHI		SIZE C · DWG. NO. <Drawing Number> · SHEET 2 of 14 · PROD REV. 3.0 · FILE CCCNGP_MPC5534_BOARD_REV3.0.sch · SCALE <Scale>

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DWG. NO.	SH	REV.
<Drawing Number>	3	3.0

MPC5534

U1-A

TCRCLK/IRQ[7]/GPIO113

ETPUA0/ETPUA12/GPIO114
ETPUA1/ETPUA13/GPIO115
ETPUA2/ETPUA14/GPIO116
ETPUA3/ETPUA15/GPIO117
ETPUA4/ETPUA16/GPIO118
ETPUA5/ETPUA17/GPIO119
ETPUA6/ETPUA18/GPIO120
ETPUA7/ETPUA19/GPIO121
ETPUA8/ETPUA20/GPIO122
ETPUA9/ETPUA21/GPIO123
ETPUA10/ETPUA22/GPIO124
ETPUA11/ETPUA23/GPIO125
ETPUA12/PCSB1/GPIO126
ETPUA13/PCSB3/GPIO127
ETPUA14/PCSB4/GPIO128
ETPUA15/PCSB5/GPIO129
ETPUA16/PCSD1/GPIO130
ETPUA17/PCSD2/GPIO131
ETPUA18/PCSD3/GPIO132
ETPUA19/PCSD4/GPIO133
ETPUA20/IRQ8/GPIO134
ETPUA21/IRQ9/GPIO135
ETPUA22/IRQ10/GPIO136
ETPUA23/IRQ11/GPIO137
ETPUA24/IRQ12/GPIO138
ETPUA25/IRQ13/GPIO139
ETPUA26/IRQ14/GPIO140
ETPUA27/IRQ15/GPIO141
ETPUA28/PCSC1/GPIO142
ETPUA29/PCSC2/GPIO143
ETPUA30/PCSC3/GPIO144
ETPUA31/PCSC4/GPIO145

[14] DIGITAL_INPUT1
[14] DIGITAL_INPUT2
[14] DIGITAL_INPUT3
[14] DIGITAL_INPUT4
[14] DIGITAL_INPUT5
[14] DIGITAL_INPUT6
[14] DIGITAL_INPUT7
[14] DIGITAL_INPUT8
[14] DIGITAL_INPUT9
[14] DIGITAL_INPUT10
[14] DIGITAL_INPUT11
[14] DIGITAL_INPUT12
[14] DIGITAL_INPUT13
[14] DIGITAL_INPUT14
[14] DIGITAL_INPUT15
[14] DIGITAL_INPUT16
[14] FREQ_INPUT1
[14] FREQ_INPUT2
[14] FREQ_INPUT3
[10] ESC1_SYNC/LATCH[0]
[10] ESC1_SYNC/LATCH[1]
[11] ESC2_SYNC/LATCH[0]
[11] ESC2_SYNC/LATCH[1]
[14] SLOT_ID1
[14] SLOT_ID2
[14] SLOT_ID3
[14] SLOT_ID4
[8,14] 5534_PLD_TMS
[8,14] 5534_PLD_TCK
[8,14] 5534_PLD_TDI
[14] 5534_PLD_TDO

+5V
R118 4.7K
R134 4.7K
R135 4.7K
R136 4.7K

[14] EMIOS0_DO1
[14] EMIOS0_DO2
[14] EMIOS0_DO3
[14] EMIOS0_DO4
[14] EMIOS0_DO5
[14] EMIOS0_DO6
[14] EMIOS0_DO7
[14] EMIOS0_DO8
[14] EMIOS0_DO9
[14] EMIOS0_DO10
[14] EMIOS0_DO11
[14] EMIOS0_DO12
[14] EMIOS0_DO13
[14] EMIOS0_DO14
[14] EMIOS0_DO15
[14] EMIOS0_DO16

EMIOS0/ETPUA0/GPIO179
EMIOS1/ETPUA1/GPIO180
EMIOS2/ETPUA2/GPIO181
EMIOS3/ETPUA3/GPIO182
EMIOS4/ETPUA4/GPIO183
EMIOS5/ETPUA5/GPIO184
EMIOS6/ETPUA6/GPIO185
EMIOS7/ETPUA7/GPIO186
EMIOS8/ETPUA8/GPIO187
EMIOS9/ETPUA9/GPIO188
EMIOS10/PCSD3/GPIO189
EMIOS11/PCSD4/GPIO190
EMIOS12/SOUTC/GPIO191
EMIOS13/SOUTD/GPIO192
EMIOS14/IRQ0/GPIO193
EMIOS15/IRQ1/GPIO194
EMIOS16/GPIO195
EMIOS17/GPIO196
EMIOS18/GPIO197
EMIOS19/GPIO198
EMIOS20/GPIO199
EMIOS21/GPIO200
EMIOS22/GPIO201
EMIOS23/GPIO202

[14] MPC_LED_LEARN
[14] MPC_LED_CPU
[14] MPC_LED_FAULT
[14] MPC_LED_ALARM
[14] MPC_LED_POWER

[14] IOP_SPARE1
[14] IOP_SPARE2
[14] IOP_SPARE3

EMIOS14/GPIO203
EMIOS15/GPIO204
GPIO206
GPIO207

[7] MPC_ADDR[12:30]

MPC_ADDR12 R103-A 33E ADDR12
MPC_ADDR13 R103-B 33E ADDR13
MPC_ADDR14 R103-C 33E ADDR14
MPC_ADDR15 R103-D 33E ADDR15
MPC_ADDR16 R103-E 33E ADDR16
MPC_ADDR17 R103-F 33E ADDR17
MPC_ADDR18 R103-G 33E ADDR18
MPC_ADDR19 R103-H 33E ADDR19
MPC_ADDR20 R104-A 33E ADDR20
MPC_ADDR21 R104-B 33E ADDR21
MPC_ADDR22 R104-C 33E ADDR22
MPC_ADDR23 R104-D 33E ADDR23
MPC_ADDR24 R104-E 33E ADDR24
MPC_ADDR25 R104-F 33E ADDR25
MPC_ADDR26 R104-G 33E ADDR26
MPC_ADDR27 R104-H 33E ADDR27
MPC_ADDR28 R105-A 33E ADDR28
MPC_ADDR29 R105-B 33E ADDR29
MPC_ADDR30 R105-C 33E ADDR30
[14] MPC_ADDR31 ADDR31

[7] MPC_DATA[0:15]

MPC_DATA0 R101-A 33E DATA0
MPC_DATA1 R101-B 33E DATA1
MPC_DATA2 R101-C 33E DATA2
MPC_DATA3 R101-D 33E DATA3
MPC_DATA4 R101-E 33E DATA4
MPC_DATA5 R101-F 33E DATA5
MPC_DATA6 R101-G 33E DATA6
MPC_DATA7 R101-H 33E DATA7
MPC_DATA8 R102-A 33E DATA8
MPC_DATA9 R102-B 33E DATA9
MPC_DATA10 R102-C 33E DATA10
MPC_DATA11 R102-D 33E DATA11
MPC_DATA12 R102-E 33E DATA12
MPC_DATA13 R102-F 33E DATA13
MPC_DATA14 R102-G 33E DATA14
MPC_DATA15 R102-H 33E DATA15

[7,8,14] MPC_RD_WR/ R105-H 33E RD_WR
[7,8,14] MPC_OE/ R105-E 33E BDIP/GPIO63 OE
TS/GPIO69
TA/GPIO70

[9] NEXUS_EVTI EVTI
[9] MPC_RDY EVTO RDY MCKO MSEO0 MSEO1

[9] MPC_JCOMP TEST
[9] MPC_TMS JCOMP
[9] MPC_TDO TMS
[9] MPC_TDI TDO
[9] MPC_TCK TDI TCK

[3] VRL VRL VRH

+3.3V
R90 10K
+5V
0.01UF C182
R105-G 33E

[3] VRL FB1 120E
VSSA

AN0/DAN0+ B8
AN1/DAN0- A8
AN2/DAN1+ D10
AN3/DAN1- C9
AN4/DAN2+ B9
AN5/DAN2- A9
AN6/DAN3+ D11
AN7/DAN3- C10
AN8/ANW C5
AN9/ANX D7
AN10/ANY D8
AN11/ANZ A5
AN12/MA0/SDS A16
AN13/MA1/SDO B16
AN14/MA2/SDI C16
AN15/FCK D16
AN16 B7 — AN0_TEMP [9]
AN17 C6 — ADC_6.5V [13]
AN18 D9 — ADC_MPC5.0V [13]
AN19 B6 — ADC_MPC3.3V [13]
AN20 C7 — ADC_VDD1.5V [13]
AN21 C8 — ADC_3.3V [13]
AN22 C11 — ADC_CON_+24V_F [13]
AN23 B11 — ADC_CON_+5.0V [13]
AN24 D12 — ADC_CON_+3.3V [13]
AN25 C12
AN26 B12
AN27 A12
AN28 A13
AN29 D13
AN30 C13
AN31 B13
AN32 B14
AN33 C14
AN34 D14
AN35 A14
AN36 B4
AN37 A4
AN38 D6
AN39 B5

MDO0 B20
MDO1 C19
MDO2 C18
MDO3 D18
MD4/GPIO75 B19
MD5/GPIO76 C17
MD6/GPIO77 D17 — PLD_SPARE1 [8]
MD7/GPIO78 B18 — PLD_SPARE2 [8]
MD8/GPIO79 A19 — APP1_OPN_EN/ [8]
MD9/GPIO80 B17 — APP2_OPN_EN/ [8]
MD10/GPIO81 A18 — I_AM_HEALTHY [8]
MD11/GPIO82 A17 — TAKE_CONTROL [8]

MCKO
TP1_GPIO
TP2_GPIO1

CNTXA/GPIO83 Y17 — MPC_CNTXA [14]
CNRXA/GPIO84 AA18 — MPC_CNRXA [14]
GPIO85 AB18 — MPC_ESC1_ERR [14]
GPIO86 AB19 — MPC_ESC2_ERR [14]
GPIO87 P19
GPIO88 R20

TXDA/GPIO89 N20 — MPC_TX [9]
RXDA/GPIO90 P20 — MPC_RX [9]
TXDB/PCSD1/GPIO91 R21
RXDB/PCSD5/GPIO92 T19 — MPC_WD [13]

SCKA/PCSC1/GPIO93 L22
SINA/PCSC2/GPIO94 L21
SOUTA/PCSC5/GPIO95 L20
PCSA0/PCSD2/GPIO96 M20 — SCLK1 [14]
PCSA1/PCSB2/GPIO97 M19 — SDATA1 [14]
PCSA2/SCKD/GPIO98 M21 — SPID_SCK [11,14]
PCSA3/SIND/GPIO99 K19 — SPID_MISO [11,14]
PCSA4/SOUTD/GPIO100 N19 — SPID_MOSI [11,14]
PCSA5/PCSB3/GPIO101 N21 — SCLK2 [14] / SPID_SEL [11,14]

SCKB/PCSC1/GPIO102 K21 — SPIB_SCK [10,14]
SINB/PCSC2/GPIO103 H22 — SPIB_MISO [10,14]
SOUTB/PCSC5/GPIO104 J19 — SPIB_MOSI [10,14]
PCSB0/PCSD2/GPIO105 J21 — SPIB_SEL [10,14]
PCSB1/PCSD0/GPIO106 J22 — SDATA2 [14]
PCSB2/SOUTC/GPIO107 K22 — SPIC_MOSI [9,14]
PCSB3/SINC/GPIO108 J20 — SPIC_MISO [9,14]
PCSB4/SCKC/GPIO109 K20 — SPIC_SCK [9,14]
PCSB5/PCSC0/GPIO110 L19 — SPIC_SEL2 [14] / SPIC_SEL1 [9]

CS0 M4 — MPC_CS0/ [7,14]
CS1 M3 — MPC_CS1/ [7,14]
CS2 N2 — MPC_CS2/ [7,14]
CS3 N1 — MPC_CS3/ [8,14]
WE_BE0/GPIO64 N4 R105-D 33E — MPC_WE0/ [7,8,14]
WE_BE1/GPIO65 N3 R105-F 33E — MPC_WE1/ [7,8,14]

RSTCFG P22 — RSTCFG/ [4]
BOOTCFG0/IRQ2 U21 — BOOTCFG0_IRQ2 [4,14]
BOOTCFG1/IRQ3 T20 — BOOTCFG1 [4]
PLLCFG0/IRQ4 V21 — PLLCFG0_SPIB_IRQ [4,10]
PLLCFG1/IRQ5 U20 — PLLCFG1_SPID_IRQ [4,11]
WKPCFG R19 — WKPCFG/ [4]
RSTOUT P21 — RSTOUT/ [4,14]
RESET R22 — MPC_RESET/ [8,9,13,14]

REFBYPC B10 — C7 0.1UF — VRL [3]
CLKOUT AA20 — MPC_CLK_OUT [3,8,14]
ENGCLK AB21 — MPC_ENG_CLK [8,14]

XTAL V22 — R8 100E — C6 15PF — R94 10M DNI — 8MHZ X1
EXTAL/EXTCLK U22 — R99 0E — C5 15PF — VSSSYN

R100 0E

MPC5534MVZ80

+3.3V — C217 0.01UF — DGND

+3.3V — Y2 8MHZ (VCC, OUT, SBY, GND) — DGND

Load R99 & DNE R100 for internal crystal

Load R100 & DNE R99 for external oscillator

Clock to IOP-CPLD

+3.3V
FB3 600E
C23 0.1UF
C24 0.01UF
GND

U23 ICS553MILF (VDD, OE, ICLK, GND; Q0, Q1, Q2, Q3)

[3,8,14] MPC_CLK_OUT — R14 33E
R11 33E — MPC_CLK [14]

APPROVALS	DATE	COMPRESSOR CONTROLS CORPORATION
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CHECKED <Checked By>	<Checked Date>	SHEET3-MPC5534
ENGINEER VAIBHAV DOSHI		SIZE C · DWG. NO. <Drawing Number> · SHEET 3 of 14 · PROD REV. 3.0 · FILE CCCNGP_MPC5534_BOARD_REV3.0.sch · SCALE <Scale>

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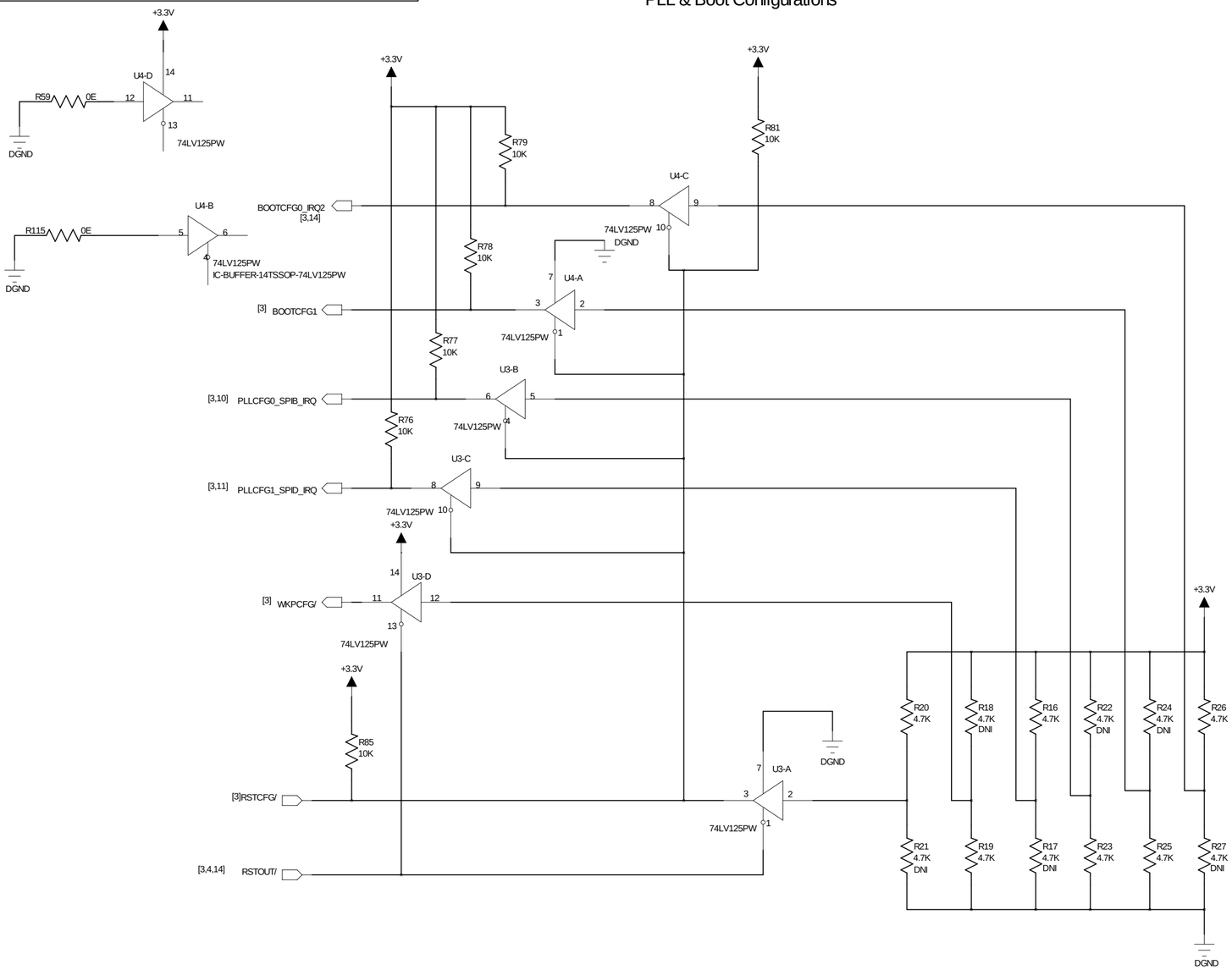
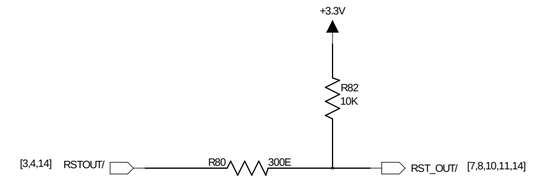
DWG. NO.	SH	REV.
<Drawing Number>	4	3.0

PLL & Boot Configurations



Reset Out signal to devices on-board



Configuration Table

RSTCFG	PLLCFG[1:0]	BOOTCFG[1:0]	Description
Load R20 DNE R21	Load R16,R23 DNE R17,R22		Clock Mode-Crystal Reference
Load R21 DNE R20	Load R17,R22 DNE R16,R23		Clock Mode-External Oscillator
Load R21 DNE R20		Load R24,R27 DNE R25,R26	Boot from external FLASH - CS0/
Load R20 DNE R21		Load R25,R26 DNE R24, R27	Boot from internal FLASH

Configurations,

PLLCFG[1:0]= 10, crystal reference is used

BOOTCFG[1:0]=01, internal boot option is selected

RSTCFG=1, Boot from internal flash and clock source is crystal

WKPCFG=0, Weak pull down applied to eTPU and eMIOS pins at reset

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DRAWN VAIBHAV DOSHI	11-07-2012	SHEET4-MPC-CONFIGURATIONS		
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ENGINEER VAIBHAV DOSHI		SIZE C	DWG. NO. <Drawing Number>	SHEET 4 of 14
			FILE CCCNGP_MPC5534_BOARD_REV3.0.sch	SCALE <Scale>
				PROD REV. 3.0

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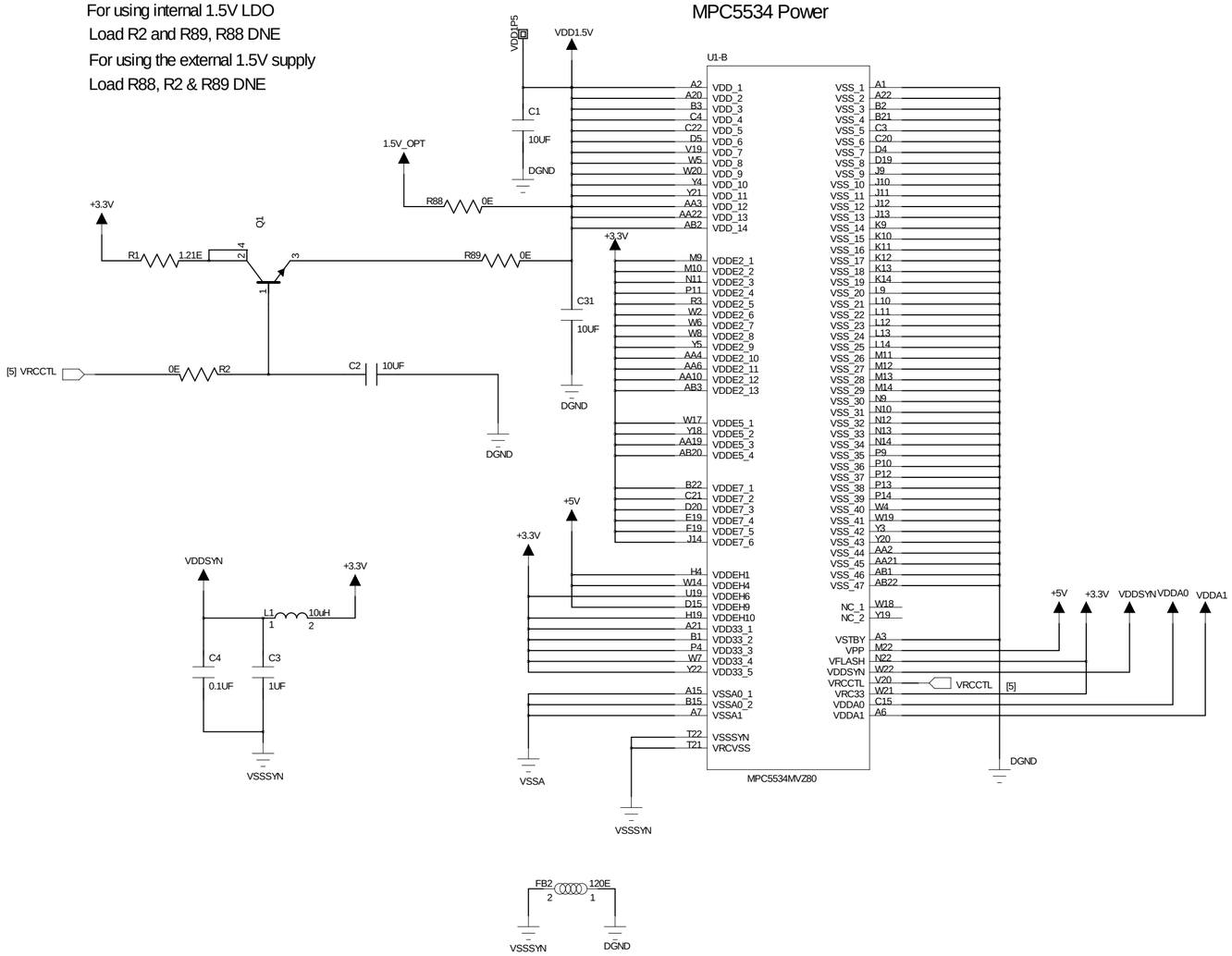
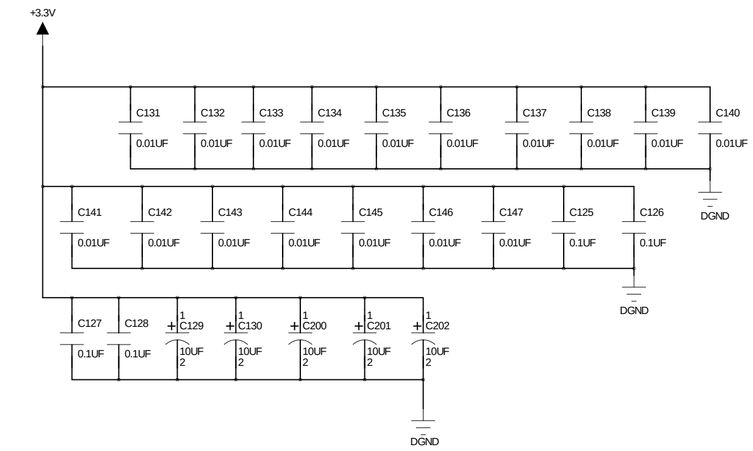
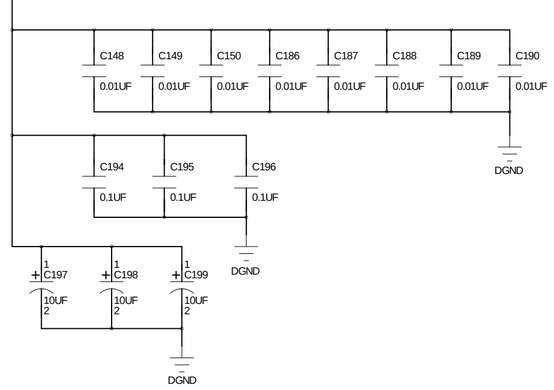
DWG. NO.	SH	REV.
<Drawing Number>	5	3.0

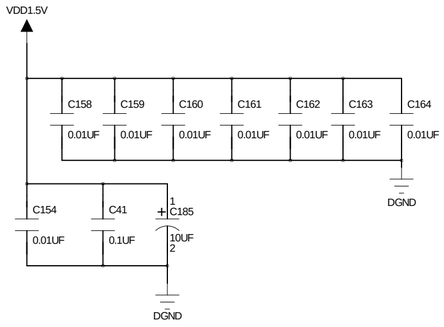
MPC5534 Power

For using internal 1.5V LDO
Load R2 and R89, R88 DNE
For using the external 1.5V supply
Load R88, R2 & R89 DNE









FIDUCIALS

FD1 FD2 FD3 FD4 FD5 FD6

MOUNTING HOLES

MH1 MH2 MH3 MH7

APPROVALS	DATE	COMPRESSOR CONTROLS CORPORATION
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CHECKED <Checked By>	<Checked Date>	SHEET5-MPC5534_POWER
ENGINEER VAIBHAV DOSHI		SIZE C · DWG. NO. <Drawing Number> · SHEET 5 of 14 · PROD REV. 3.0 · FILE CCCNGP_MPC5534_BOARD_REV3.0.sch · SCALE <Scale>

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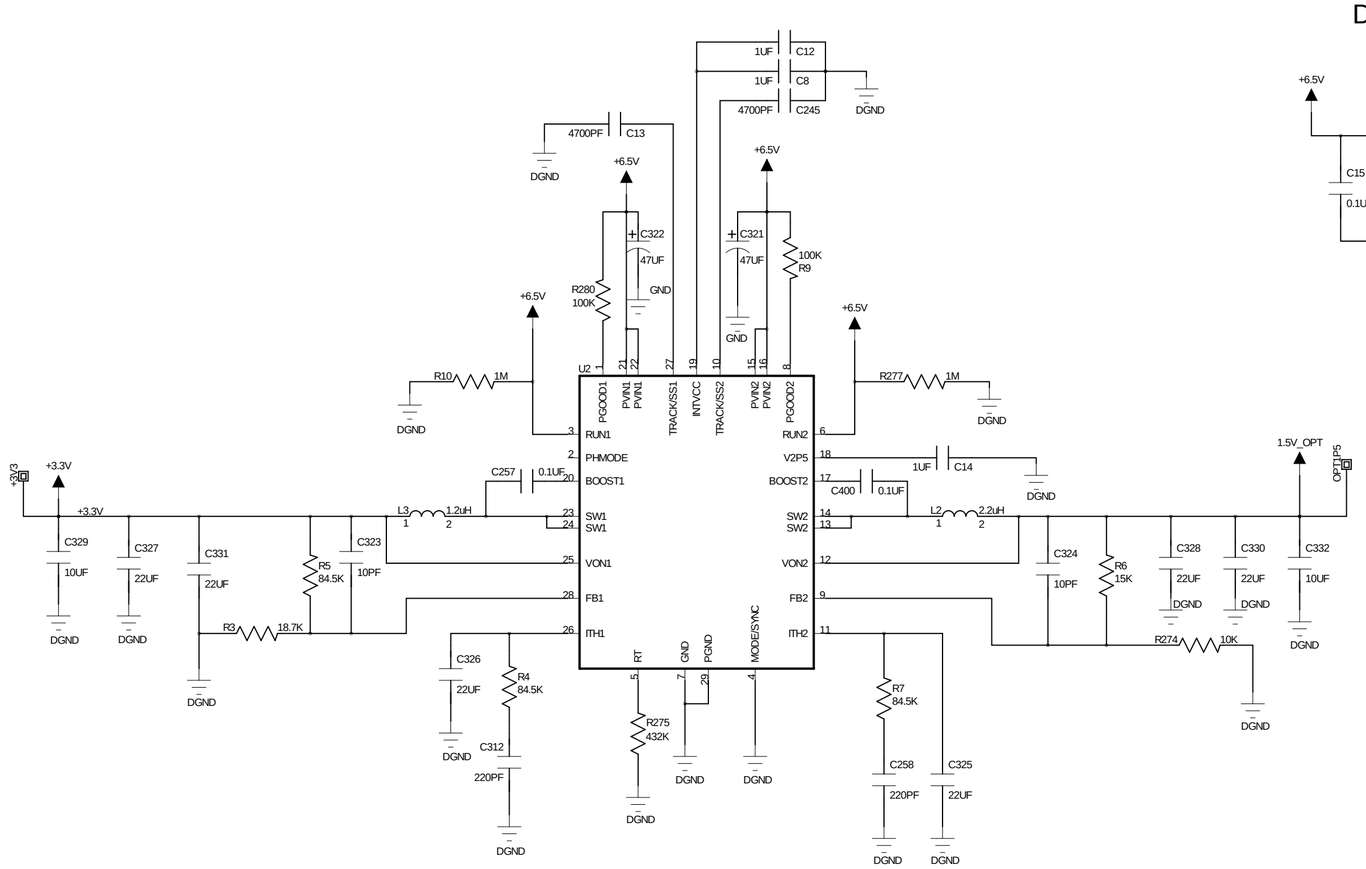
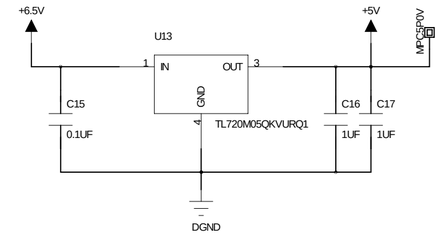
<Drawing Number>	6	3.0

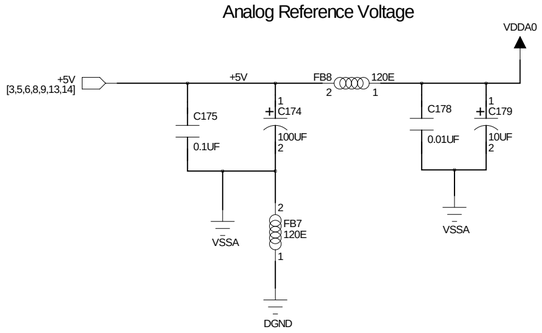
DC-DC Converter-3.3v,1.5v



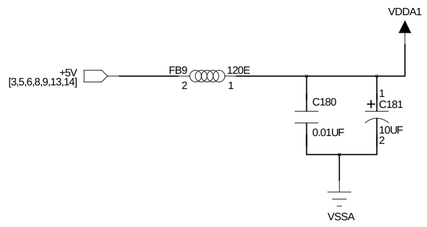
DC-DC Converter-5V



Analog Reference Voltage



Analog Reference Voltage



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CHECKED <Checked By>	<Checked Date>	SHEET6-POWER_SUPPLY
ENGINEER VAIBHAV DOSHI		SIZE C · DWG. NO. <Drawing Number> · SHEET 6 of 14 · PROD REV. 3.0 · FILE CCCNGP_MPC5534_BOARD_REV3.0.sch · SCALE <Scale>

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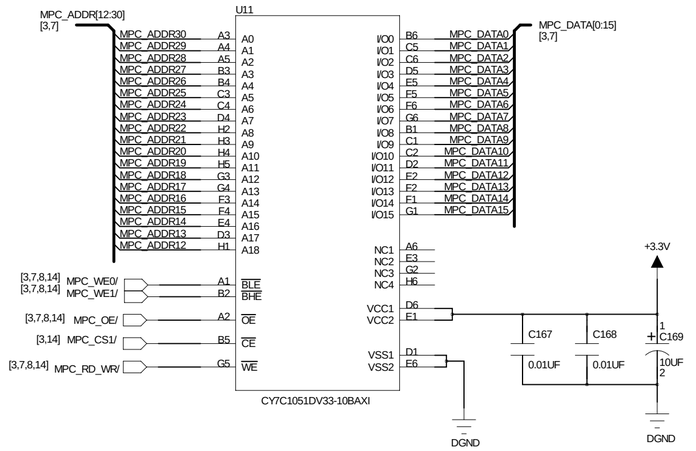
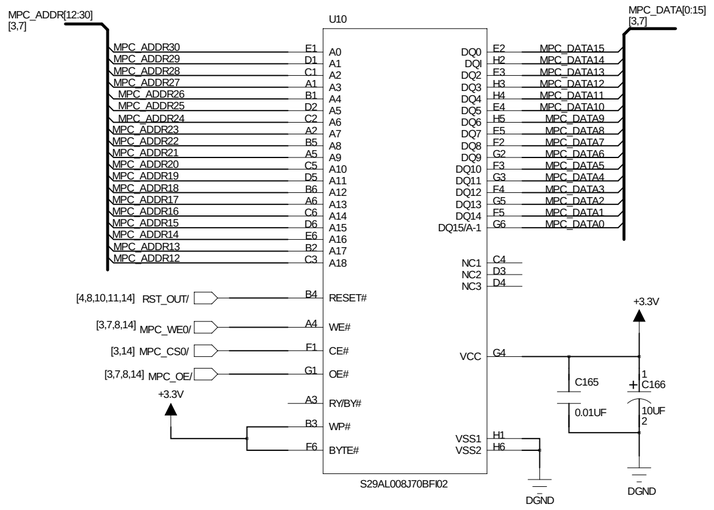
DWG. NO.	SH	REV.
<Drawing Number>	7	3.0

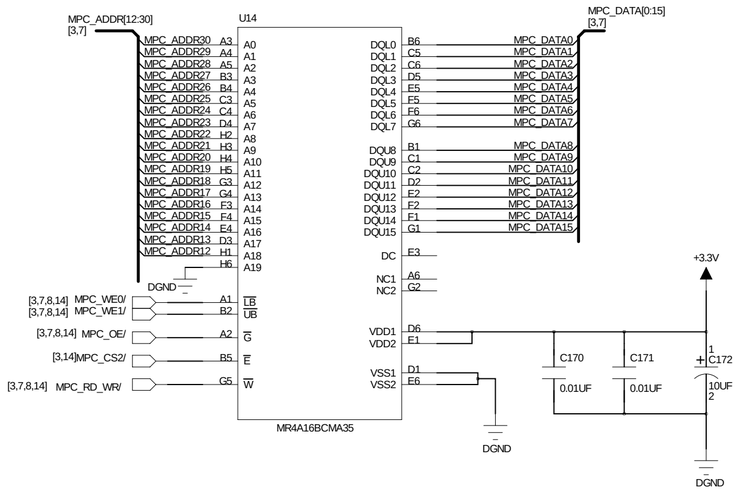
SRAM



NOR-FLASH



MRAM



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DRAWN VAIBHAV DOSHI	11-07-2012	4725 121st Street - Des Moines, Iowa 50323
CHECKED <Checked By>	<Checked Date>	SHEET7-NOR_FLASH,SRAM,MRAM
ENGINEER VAIBHAV DOSHI		SIZE C · DWG. NO. <Drawing Number> · SHEET 7 of 14 · PROD REV. 3.0 · FILE CCCNGP_MPC5534_BOARD_REV3.0.sch · SCALE <Scale>

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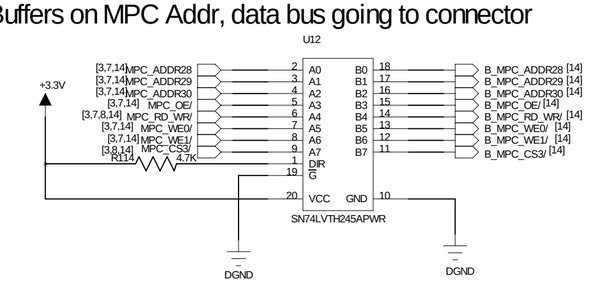
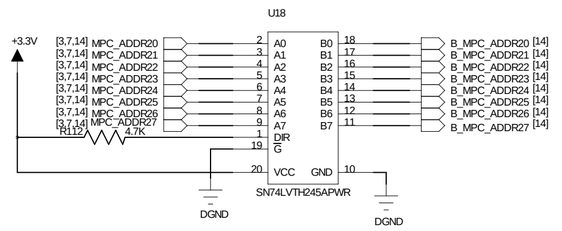
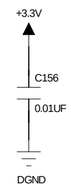
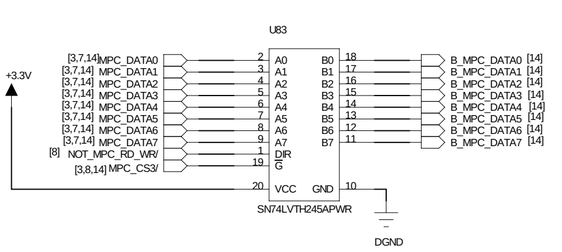
DWG. NO.	SH	REV.
<Drawing Number>	8	3.0

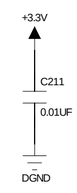
Buffers on MPC Addr, data bus going to connector

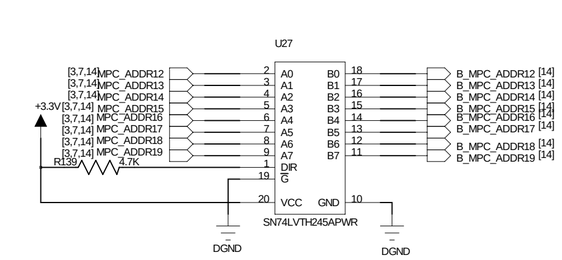


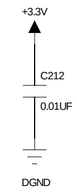


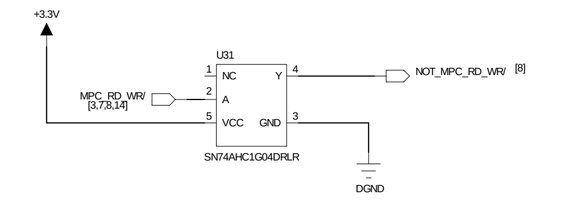


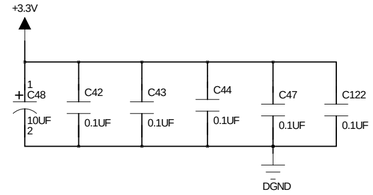




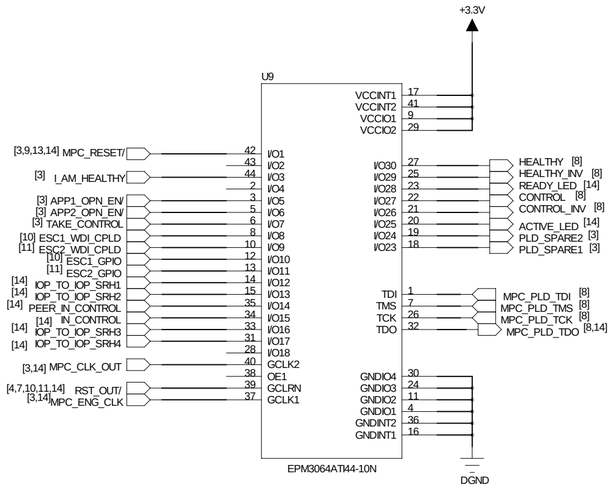




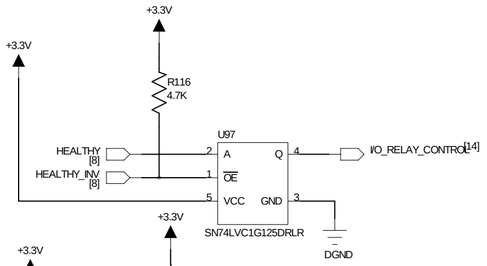


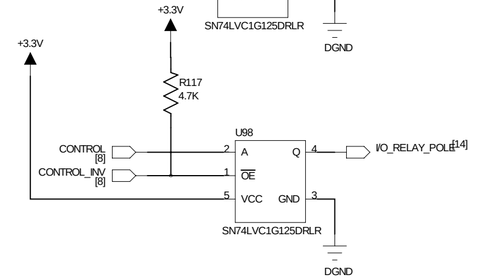


Health monitor CPLD

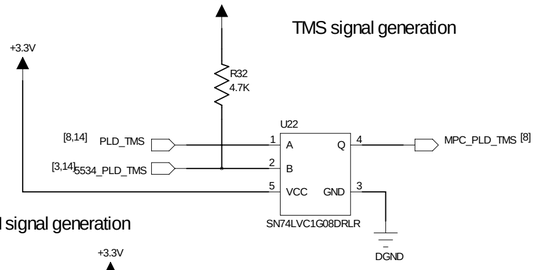


Buffers for Health signals

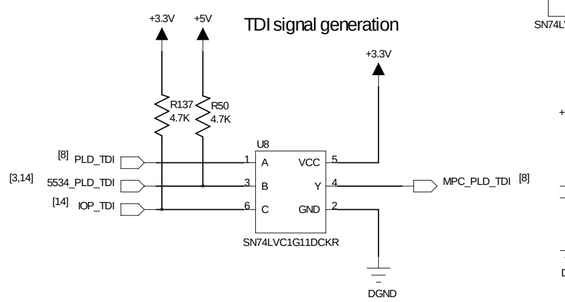




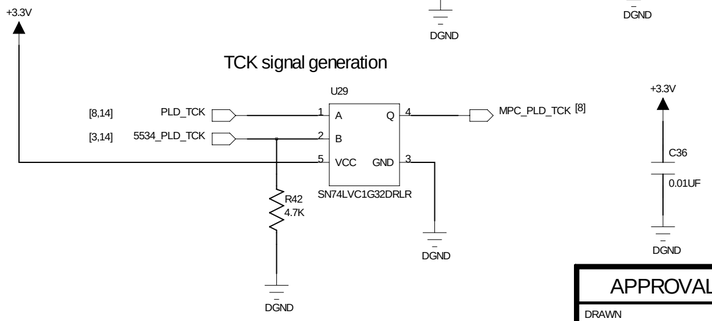
TMS signal generation



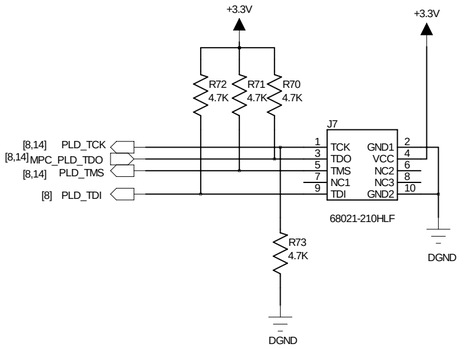
TDI signal generation



TCK signal generation



JTAG programming for CPLD



APPROVALS	DATE
DRAWN VAIBHAV DOSHI	11-07-2012
CHECKED <Checked By>	<Checked Date>
ENGINEER VAIBHAV DOSHI	

COMPRESSOR CONTROLS CORPORATION
4725 121st Street - Des Moines, Iowa 50323

SHEET8-CPLD,EBI_BUFFERS

SIZE	DWG. NO.	SHEET	PROD REV.
C	<Drawing Number>	8 of 14	
	FILE: CCCNGP_MPC5534_BOARD_REV3.0.sch	SCALE: <Scale>	3.0

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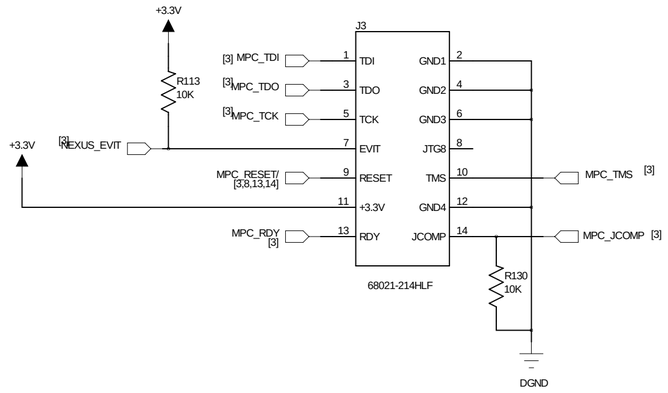
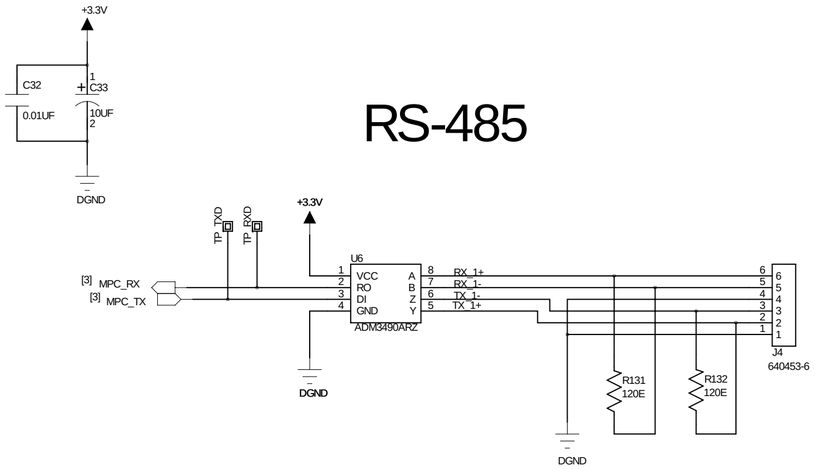
DWG. NO.	SH	REV.
<Drawing Number>	9	3.0

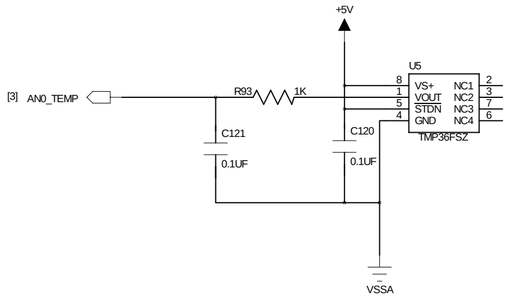
JTAG/NEXUS



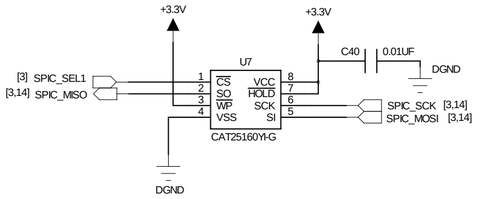
RS-485



Temperature Sensor



SPI-EEPROM1



APPROVALS	DATE	COMPRESSOR CONTROLS CORPORATION
DRAWN VAIBHAV DOSHI	11-07-2012	4725 121st Street - Des Moines, Iowa 50323
CHECKED <Checked By>	<Checked Date>	SHEET9-JTAG,RS485,TEMP_SENSOR,
ENGINEER VAIBHAV DOSHI		SIZE C · DWG. NO. <Drawing Number> · SHEET 9 of 14 · PROD REV. 3.0 · FILE CCCNGP_MPC5534_BOARD_REV3.0.sch · SCALE <Scale>

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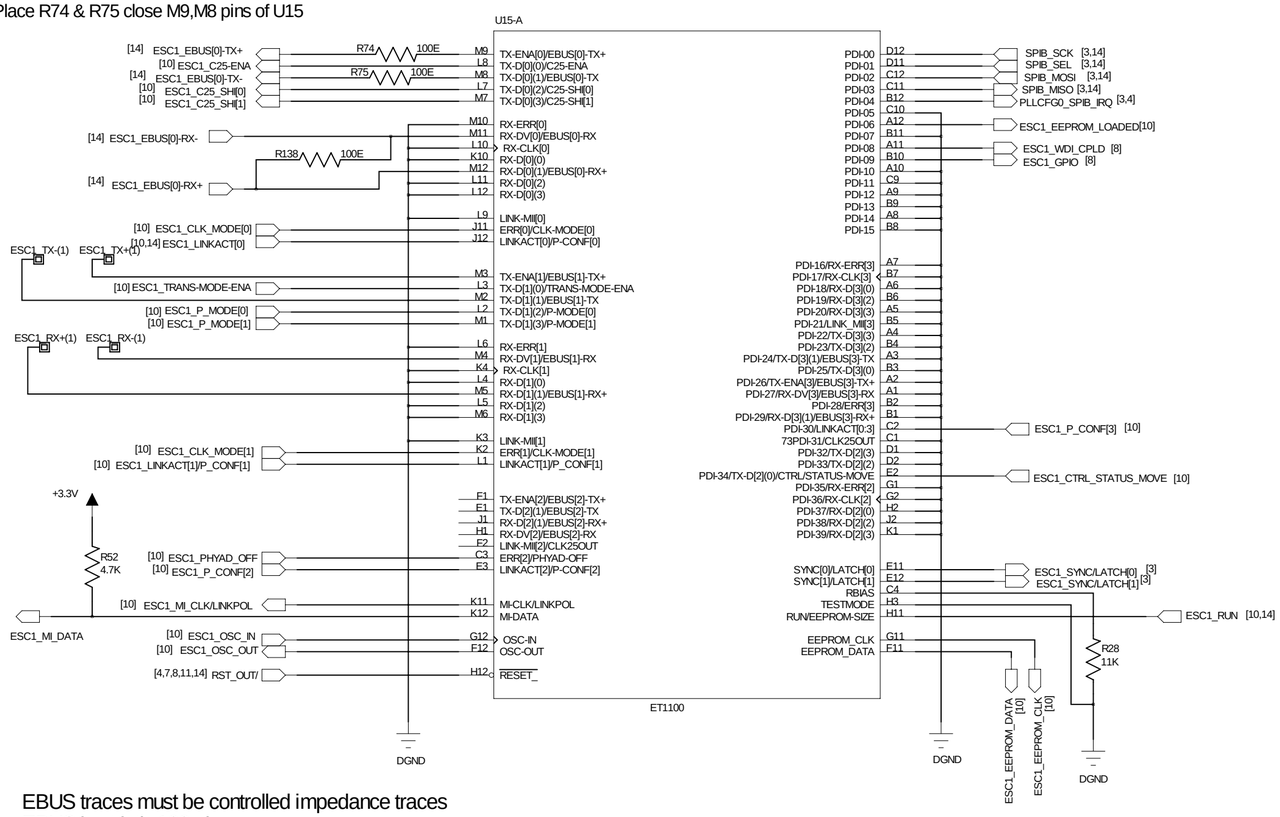
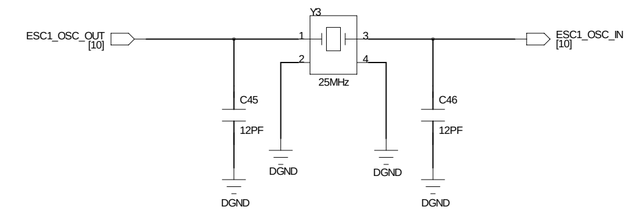
DWG. NO.	SH	REV.
<Drawing Number>	10	3.0

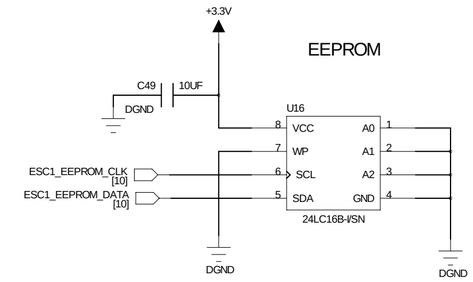
EtherCAT Slave Controller 1

Place R74 & R75 close M9,M8 pins of U15



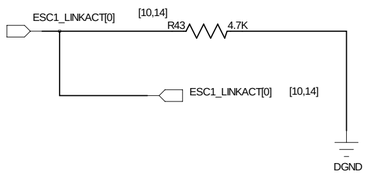
EBUS traces must be controlled impedance traces
EBUS is strictly 100 ohm
use thin traces for these signals



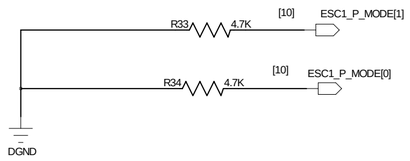


Keep I2C lines as short as possible

P_CONF[0]= 9 (Port0 = EBUS)

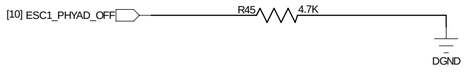


2 EtherCAT Ports enabled (P_MODE[1:0] = 00)

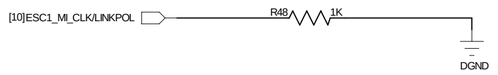


E²PPROM-Size = 0 (16 kBit)

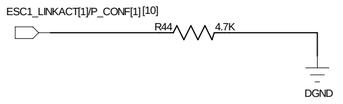
PHY offset address = 0 (unused)



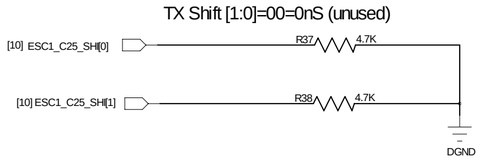
Link Polarity = 0 (unused)



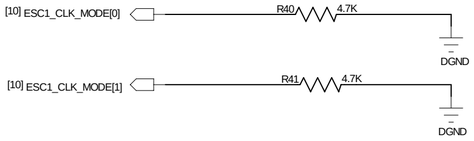
P_CONF[1]= 0 (Port1= EBUS)(unused)



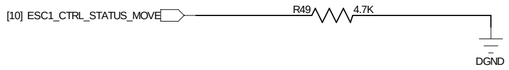
TX Shift [1:0]=00=0nS (unused)



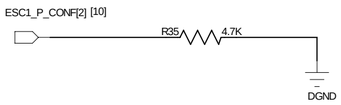
CPU_CLK_MODE [1:0]=00=OFF
(config for PDI[7])



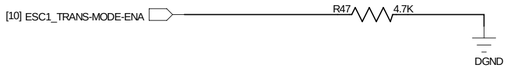
Digital I/O control status signals not moved (unused)



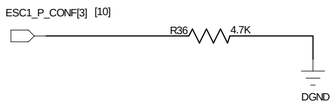
P_CONF[2]= 0 (unused)



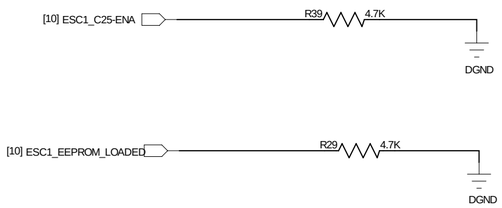
Transparent Mode disabled (TRANS_MODE_ENA = 0)



P_CONF[3]= 0 (unused)



CLK25OUT2 (PDI31) disabled



APPROVALS	DATE
DRAWN VAIBHAV DOSHI	11-07-2012
CHECKED <Checked By>	<Checked Date>
ENGINEER VAIBHAV DOSHI	

COMPRESSOR CONTROLS CORPORATION
4725 121st Street - Des Moines, Iowa 50323

SHEET10-ESC-1

SIZE	DWG. NO.	SHEET	PROD REV.
C	<Drawing Number>	10 of 14	3.0
	FILE: CCCNGP_MPC5534_BOARD_REV3.0.sch	SCALE: <Scale>	

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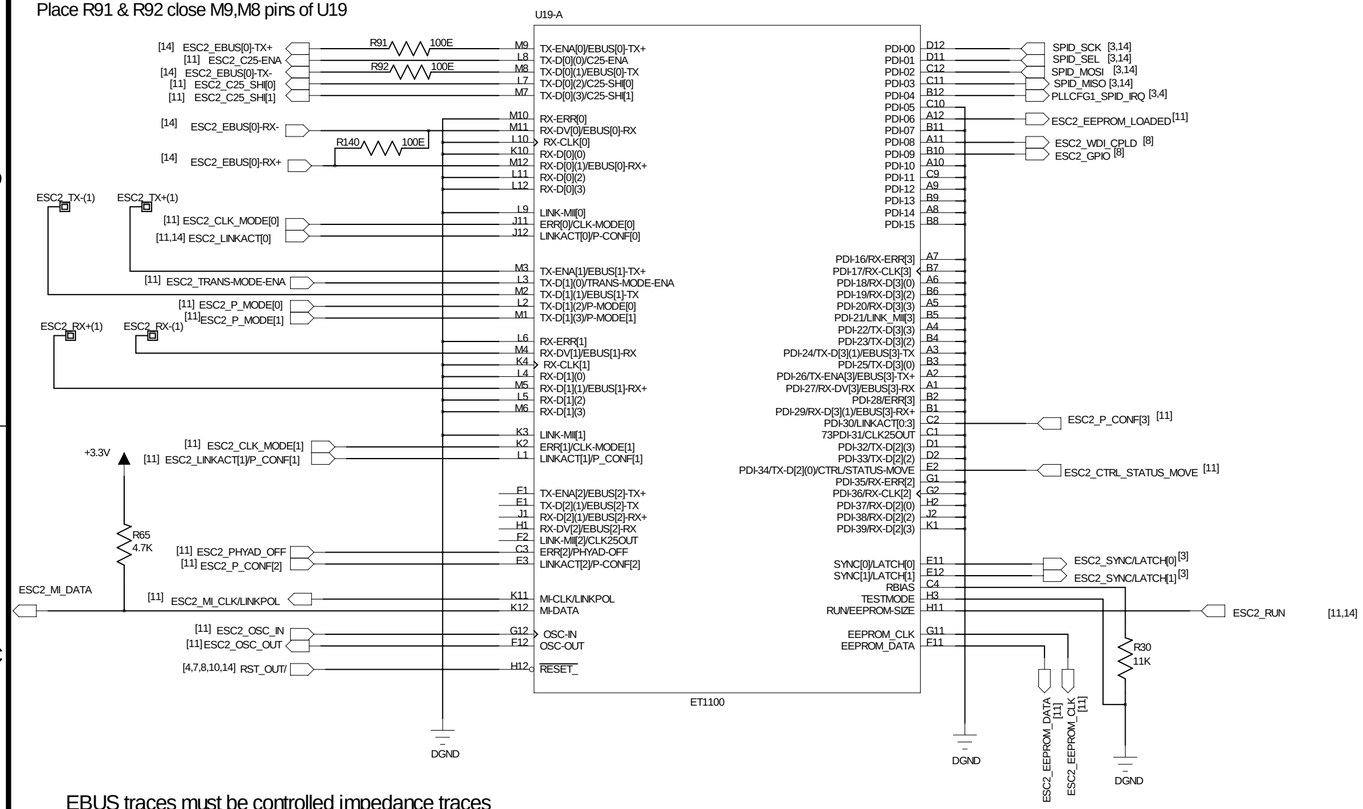
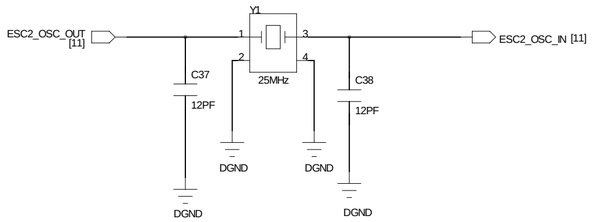
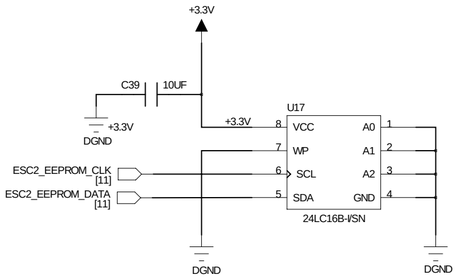
DWG. NO.	SH	REV.
<Drawing Number>	11	3.0

EtherCAT Slave Controller 2

Place R91 & R92 close M9,M8 pins of U19



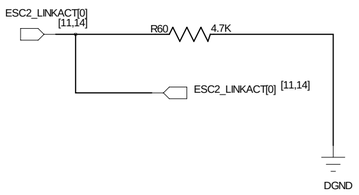




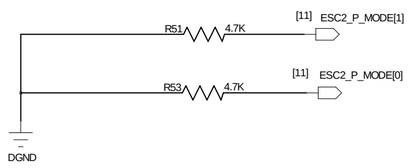
Keep I2C lines as short as possible

EBUS traces must be controlled impedance traces
EBUS is strictly 100 ohm use thin traces for these signals

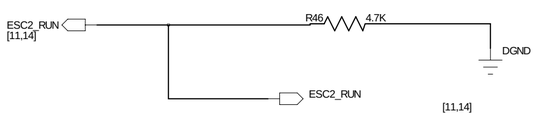
P_CONF[0]= 9 (Port0 = EBUS)



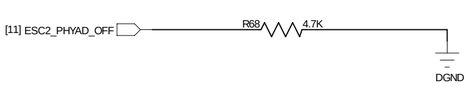
2 EtherCAT Ports enabled (P_MODE[1:0] = 00)



E²PPROM-Size = 0 (16 kBit)

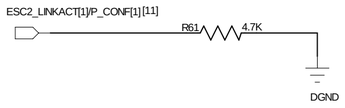


PHY offset address = 0 (unused)

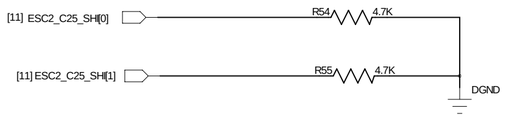


Link Polarity = 0 (unused)

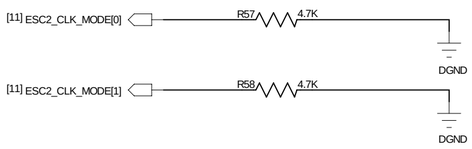
P_CONF[1]= 0 (Port1= EBUS)(unused)



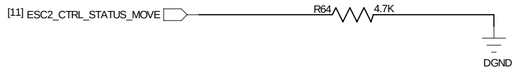
TX Shift [1:0]=00=0nS (unused)



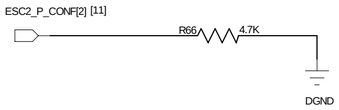
CPU_CLK_MODE [1:0]=00=OFF (config for PDI[7])



Digital I/O control status signals not moved (unused)



P_CONF[2]= 0 (unused)



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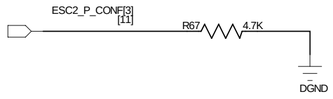
P_CONF[3]= 0 (unused)



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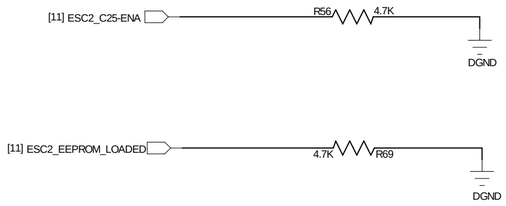

APPROVALS	DATE
DRAWN VAIBHAV DOSHI	11-07-2012
CHECKED <Checked By>	<Checked Date>
ENGINEER VAIBHAV DOSHI	

COMPRESSOR CONTROLS CORPORATION
4725 121st Street - Des Moines, Iowa 50323

SHEET11-ESC-2

SIZE	DWG. NO.	SHEET	PROD REV.
C	<Drawing Number>	11 of 14	3.0
	FILE CCCNGP_MPC5534_BOARD_REV3.0.sch	SCALE <Scale>	

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DWG. NO.	SH	REV.
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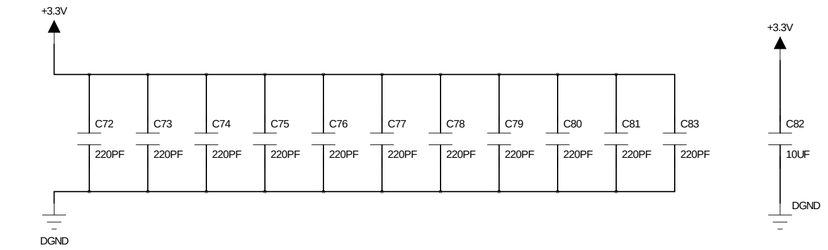
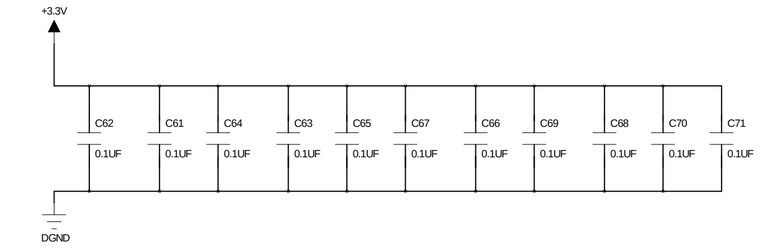
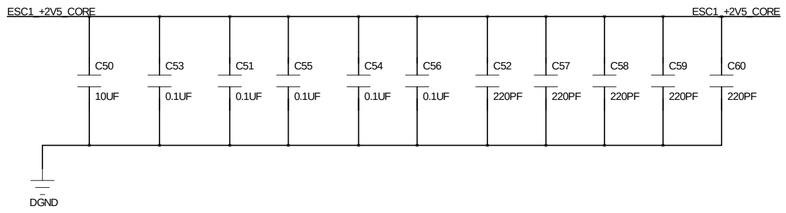
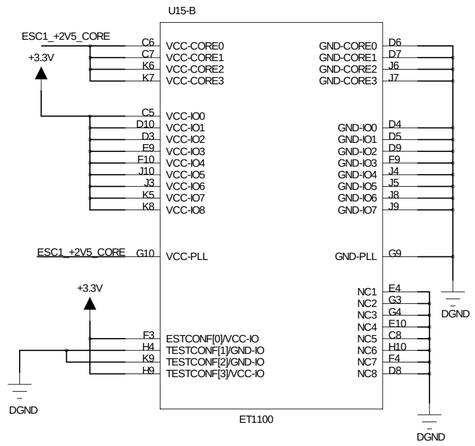
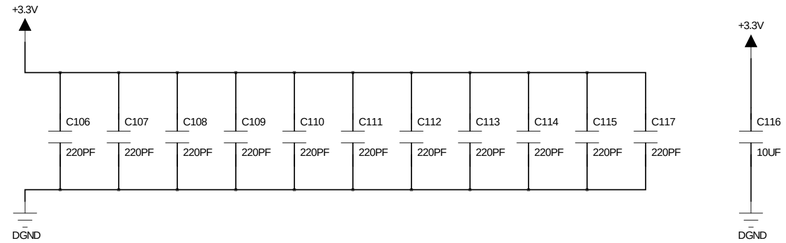


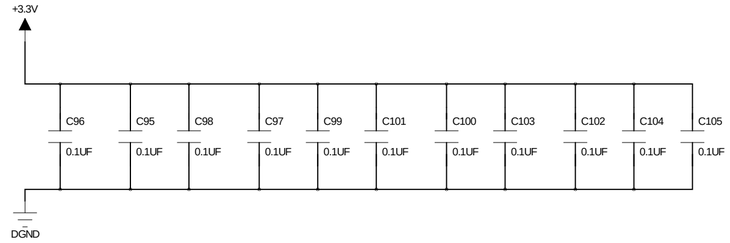


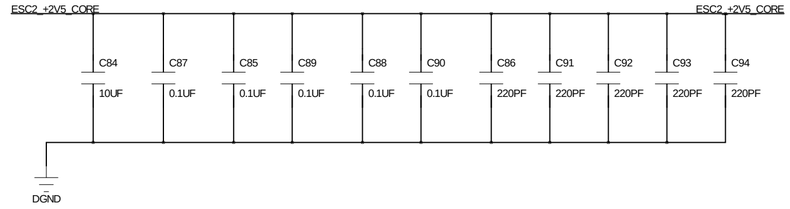


EtherCAT Slave Controller 1- Power

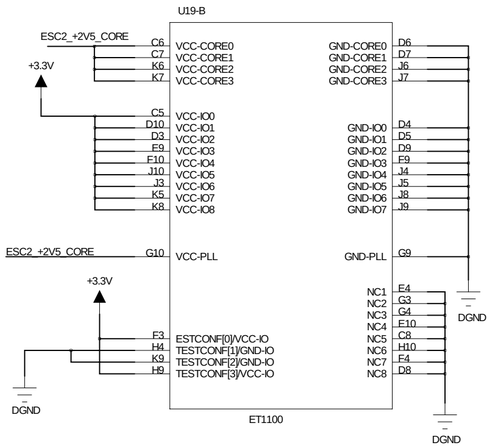








EtherCAT Slave Controller 2- Power



APPROVALS	DATE	COMPRESSOR CONTROLS CORPORATION
DRAWN VAIBHAV DOSHI	11-07-2012	4725 121st Street - Des Moines, Iowa 50323
CHECKED <Checked By>	<Checked Date>	SHEET12-ESC_POWER
ENGINEER VAIBHAV DOSHI		SIZE C · DWG. NO. <Drawing Number> · SHEET 12 of 14 · PROD REV. 3.0 · FILE CCCNGP_MPC5534_BOARD_REV3.0.sch · SCALE <Scale>

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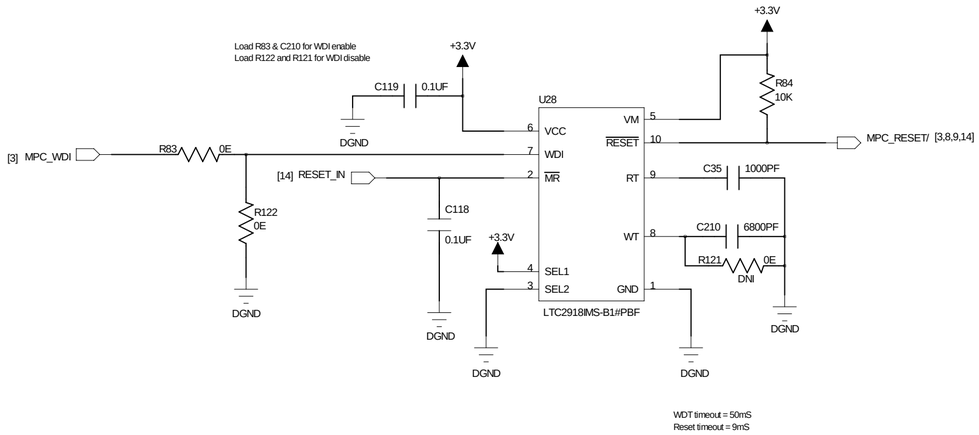
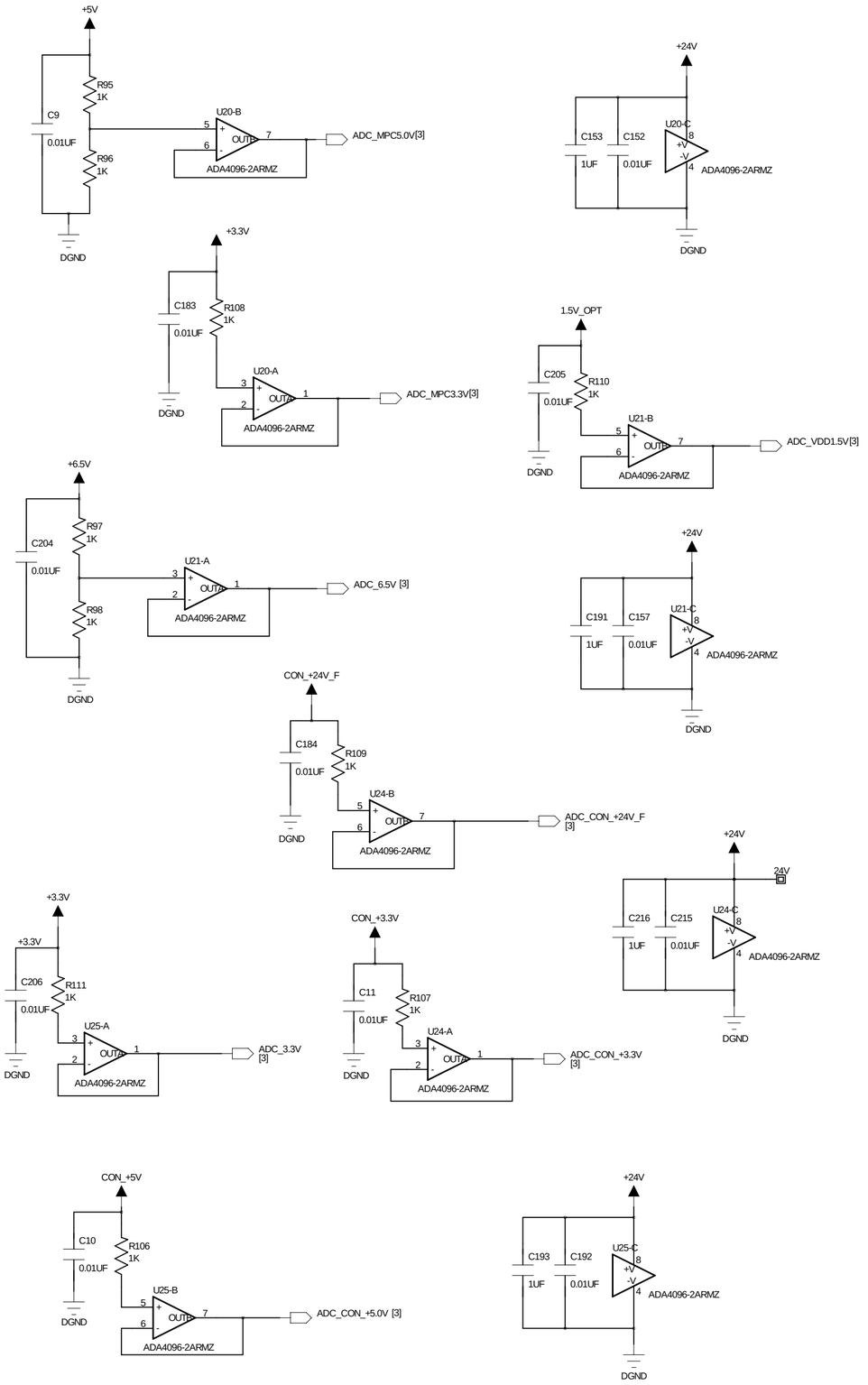
DWG. NO.	SH	REV.
<Drawing Number>	13	3.0

RESET circuit



Unit gain OPAMP for Voltage monitor



APPROVALS	DATE	COMPRESSOR CONTROLS CORPORATION
DRAWN VAIBHAV DOSHI	11-07-2012	4725 121st Street - Des Moines, Iowa 50323
CHECKED <Checked By>	<Checked Date>	SHEET13-RESET,POWER
ENGINEER VAIBHAV DOSHI		SIZE C · DWG. NO. <Drawing Number> · SHEET 13 of 14 · PROD REV. 3.0 · FILE CCCNGP_MPC5534_BOARD_REV3.0.sch · SCALE <Scale>

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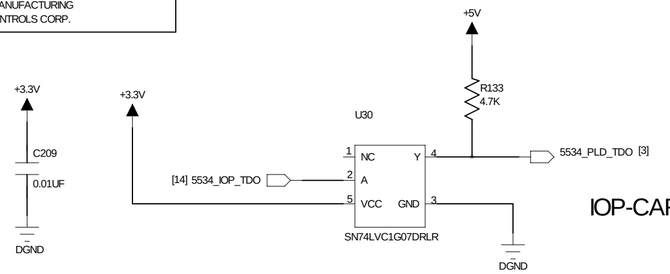
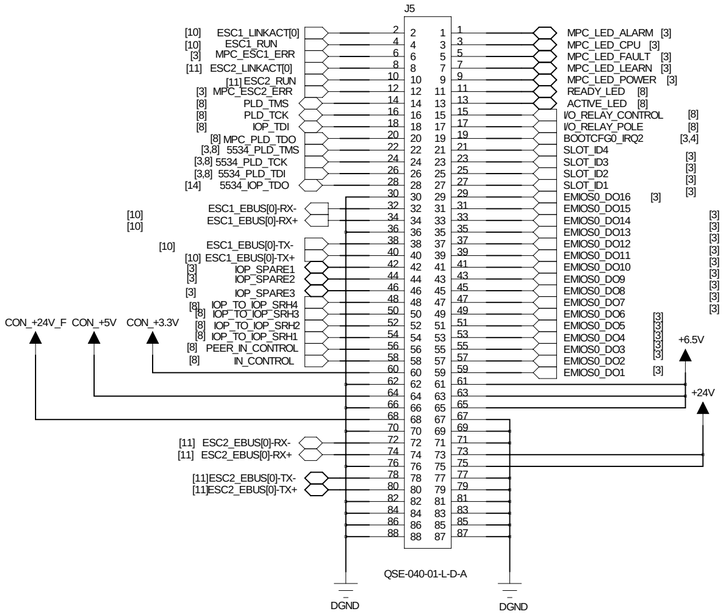
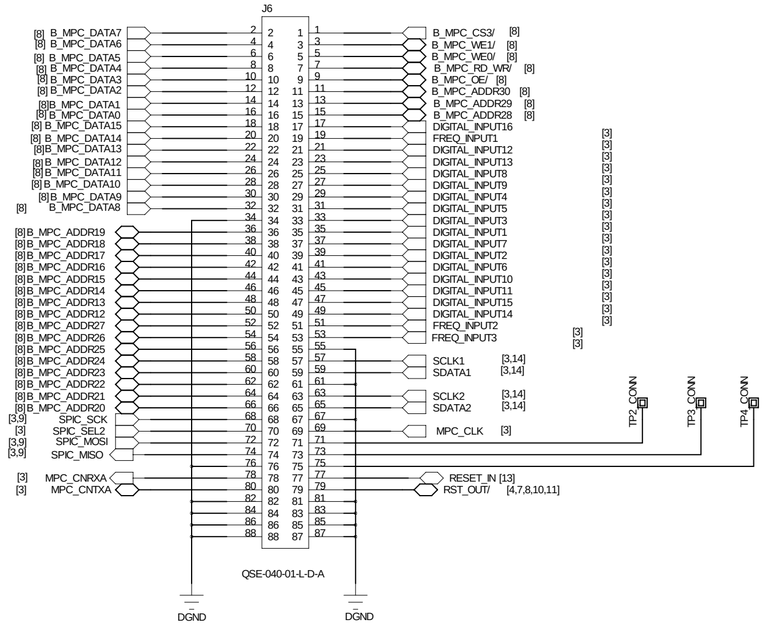
DWG. NO.	SH	REV.
<Drawing Number>	14	3.0

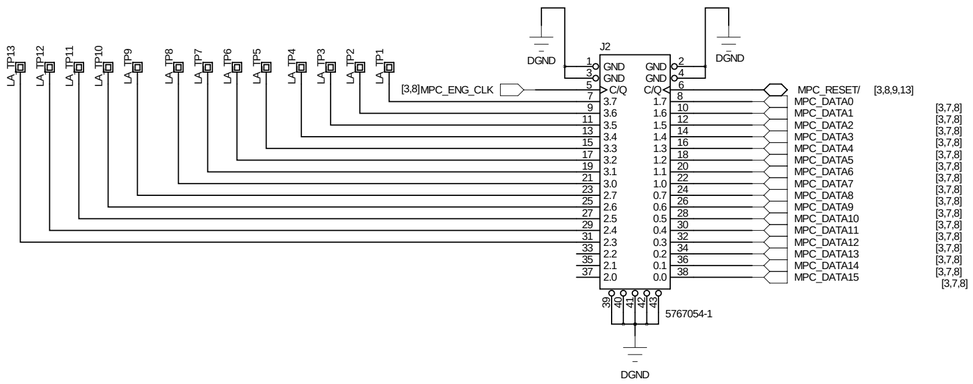
IOP-CARD_CONNECTOR

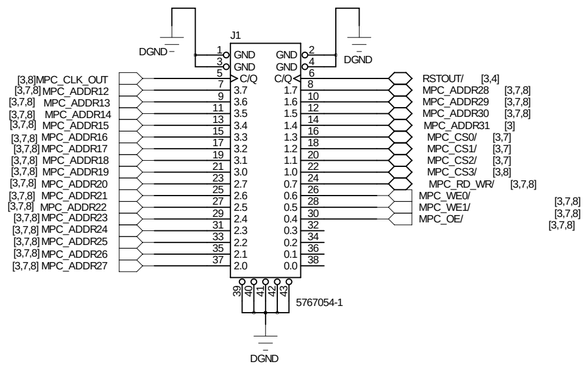


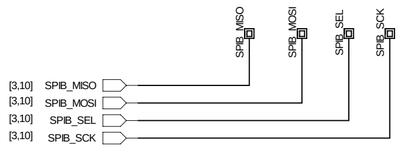


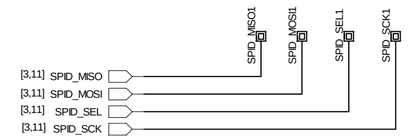


MICTOR_CONNECTORS

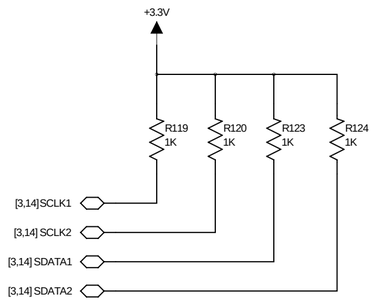








Pull-Ups for I2C bus



APPROVALS	DATE	COMPRESSOR CONTROLS CORPORATION
DRAWN VAIBHAV DOSHI	11-07-2012	4725 121st Street - Des Moines, Iowa 50323
CHECKED <Checked By>	<Checked Date>	SHEET14-CONNECTOR
ENGINEER VAIBHAV DOSHI		SIZE C · DWG. NO. <Drawing Number> · SHEET 14 of 14 · PROD REV. 3.0 · FILE CCCNGP_MPC5534_BOARD_REV3.0.sch · SCALE <Scale>