

Mango Communications FMC-BB-4DA  
Quad-DAC FMC Module  
Rev 1.0

- 1 - Table of Contents
- 2 - FMC HPC Connector
- 3 - D/A Converters
- 4 - Misc

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FMC HPC Bank LA		
LA00_N_CC	G7	DAC1_SCLK
LA00_P_CC	G6	DAC1_RESET
LA01_N_CC	D9	DAC1_DB12
LA01_P_CC	D8	DAC1_CSN
LA02_N	H8	DAC1_DB13
LA02_P	H7	DAC1_SDIO
LA03_N	G10	DAC1_DB10
LA03_P	G9	DAC1_DB11
LA04_N	H11	DAC1_DB7
LA04_P	H10	DAC1_DB9
LA05_N	D12	DAC1_DB3
LA05_P	D11	DAC1_DB6
LA06_N	C11	DAC1_DB5
LA06_P	C10	DAC1_DB8
LA07_N	H14	DAC1_DB0
LA07_P	H13	DAC1_DB2
LA08_N	G13	DAC1_DB1
LA08_P	G12	DAC1_DB4
LA09_N	D15	DAC1_CLK
LA09_P	D14	LA_AVAIL29
LA10_N	C15	LA_AVAIL18
LA10_P	C14	LA_AVAIL11
LA11_N	H17	DAC2_RESET
LA11_P	H16	LA_AVAIL31
LA12_N	G16	LA_AVAIL4
LA12_P	G15	LA_AVAIL19
LA13_N	D18	LA_AVAIL12
LA13_P	D17	LA_AVAIL17
LA14_N	C19	LA_AVAIL0
LA14_P	C18	LA_AVAIL32
LA15_N	H20	DAC2_DB13
LA15_P	H19	DAC2_SDIO
LA16_N	G19	DAC2_CSN
LA16_P	G18	DAC2_SCLK
LA17_N_CC	D21	LA_AVAIL3
LA17_P_CC	D20	LA_AVAIL2
LA18_N_CC	C23	LA_AVAIL33
LA18_P_CC	C22	LA_AVAIL1
LA19_N	H23	DAC2_DB9
LA19_P	H22	DAC2_DB11
LA20_N	G22	DAC2_DB10
LA20_P	G21	DAC2_DB12
LA21_N	H26	DAC2_DB5
LA21_P	H25	DAC2_DB7
LA22_N	G25	DAC2_DB8
LA22_P	G24	LA_AVAIL9
LA23_N	D24	LA_AVAIL7
LA23_P	D23	LA_AVAIL8
LA24_N	H29	LA_AVAIL14
LA24_P	H28	DAC2_DB3
LA25_N	G28	LA_AVAIL30
LA25_P	G27	DAC2_DB4
LA26_N	D27	LA_AVAIL13
LA26_P	D26	DAC2_DB6
LA27_N	C27	LA_AVAIL15
LA27_P	C26	LA_AVAIL16
LA28_N	H32	DAC2_CLK
LA28_P	H31	DAC2_DB0
LA29_N	G31	DAC2_DB1
LA29_P	G30	DAC2_DB2
LA30_N	H35	LA_AVAIL21
LA30_P	H34	LA_AVAIL22
LA31_N	G34	LA_AVAIL23
LA31_P	G33	LA_AVAIL24
LA32_N	H38	LA_AVAIL25
LA32_P	H37	LA_AVAIL26
LA33_N	G37	LA_AVAIL27
LA33_P	G36	LA_AVAIL28

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FMC HPC Bank HB		
DAC1_DB0	DAC1_DB0	DAC1_DB0
DAC1_DB1	DAC1_DB1	DAC1_DB1
DAC1_DB2	DAC1_DB2	DAC1_DB2
DAC1_DB3	DAC1_DB3	DAC1_DB3
DAC1_DB4	DAC1_DB4	DAC1_DB4
DAC1_DB5	DAC1_DB5	DAC1_DB5
DAC1_DB6	DAC1_DB6	DAC1_DB6
DAC1_DB7	DAC1_DB7	DAC1_DB7
DAC1_DB8	DAC1_DB8	DAC1_DB8
DAC1_DB9	DAC1_DB9	DAC1_DB9
DAC1_DB10	DAC1_DB10	DAC1_DB10
DAC1_DB11	DAC1_DB11	DAC1_DB11
DAC1_DB12	DAC1_DB12	DAC1_DB12
DAC1_DB13	DAC1_DB13	DAC1_DB13
DAC1_RESET	DAC1_RESET	DAC1_RESET
DAC1_SCLK	DAC1_SCLK	DAC1_SCLK
DAC1_SDIO	DAC1_SDIO	DAC1_SDIO
DAC1_CSn	DAC1_CSn	DAC1_CSn
DAC1_CLK	DAC1_CLK	DAC1_CLK
DAC2_CLK	DAC2_CLK	DAC2_CLK
DAC2_RESET	DAC2_RESET	DAC2_RESET
DAC2_SCLK	DAC2_SCLK	DAC2_SCLK
DAC2_SDIO	DAC2_SDIO	DAC2_SDIO
DAC2_CSn	DAC2_CSn	DAC2_CSn
DAC2_DB0	DAC2_DB0	DAC2_DB0
DAC2_DB1	DAC2_DB1	DAC2_DB1
DAC2_DB2	DAC2_DB2	DAC2_DB2
DAC2_DB3	DAC2_DB3	DAC2_DB3
DAC2_DB4	DAC2_DB4	DAC2_DB4
DAC2_DB5	DAC2_DB5	DAC2_DB5
DAC2_DB6	DAC2_DB6	DAC2_DB6
DAC2_DB7	DAC2_DB7	DAC2_DB7
DAC2_DB8	DAC2_DB8	DAC2_DB8
DAC2_DB9	DAC2_DB9	DAC2_DB9
DAC2_DB10	DAC2_DB10	DAC2_DB10
DAC2_DB11	DAC2_DB11	DAC2_DB11
DAC2_DB12	DAC2_DB12	DAC2_DB12
DAC2_DB13	DAC2_DB13	DAC2_DB13

FMC HPC Bank HB		
HB00_N_CC	K26	HB00_N_CC
HB00_P_CC	K25	HB00_P_CC
HB01_N	J25	HB01_N
HB01_P	J24	HB01_P
HB02_N	F23	HB02_N
HB02_P	F22	HB02_P
HB03_N	E22	HB03_N
HB03_P	E21	HB03_P
HB04_N	F26	HB04_N
HB04_P	F25	HB04_P
HB05_N	E25	HB05_N
HB05_P	E24	HB05_P
HB06_N_CC	K29	HB06_N_CC
HB06_P_CC	K28	HB06_P_CC
HB07_N	J28	HB07_N
HB07_P	J27	HB07_P
HB08_N	F29	HB08_N
HB08_P	F28	HB08_P
HB09_N	E28	HB09_N
HB09_P	E27	HB09_P
HB10_N	K32	HB10_N
HB10_P	K31	HB10_P
HB11_N	J31	HB11_N
HB11_P	J30	HB11_P
HB12_N	F32	HB12_N
HB12_P	F31	HB12_P
HB13_N	E31	HB13_N
HB13_P	E30	HB13_P
HB14_N	K35	HB14_N
HB14_P	K34	HB14_P
HB15_N	J34	HB15_N
HB15_P	J33	HB15_P
HB16_N	F35	HB16_N
HB16_P	F34	HB16_P
HB17_N_CC	K38	HB17_N_CC
HB17_P_CC	K37	HB17_P_CC
HB18_N	J37	HB18_N
HB18_P	J36	HB18_P
HB19_N	E34	HB19_N
HB19_P	E33	HB19_P
HB20_N	F37	HB20_N
HB20_P	F36	HB20_P
HB21_N	E37	HB21_N
HB21_P	E36	HB21_P

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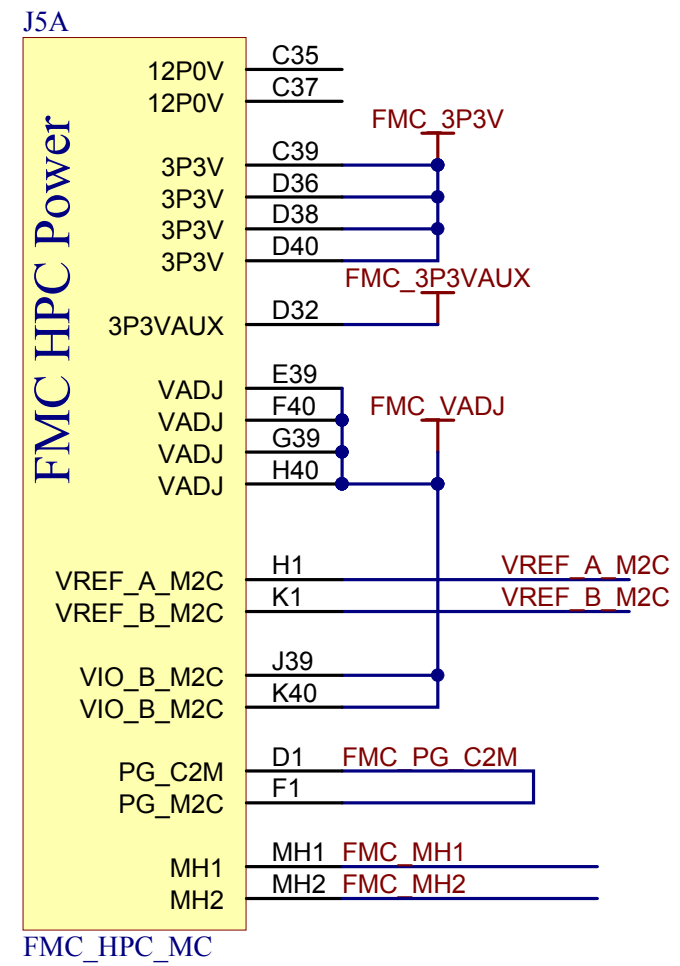
FMC HPC Bank HA		
HA00_N_CC	F5	HA00_N_CC
HA00_P_CC	F4	HA00_P_CC
HA01_N_CC	E3	HA01_N_CC
HA01_P_CC	E2	HA01_P_CC
HA02_N	K8	HA02_N
HA02_P	K7	HA02_P
HA03_N	J7	HA03_N
HA03_P	J6	HA03_P
HA04_N	F8	HA04_N
HA04_P	F7	HA04_P
HA05_N	E7	HA05_N
HA05_P	E6	HA05_P
HA06_N	K11	HA06_N
HA06_P	K10	HA06_P
HA07_N	J10	HA07_N
HA07_P	J9	HA07_P
HA08_N	F11	HA08_N
HA08_P	F10	HA08_P
HA09_N	E10	HA09_N
HA09_P	E9	HA09_P
HA10_N	K14	HA10_N
HA10_P	K13	HA10_P
HA11_N	J13	HA11_N
HA11_P	J12	HA11_P
HA12_N	F14	HA12_N
HA12_P	F13	HA12_P
HA13_N	E13	HA13_N
HA13_P	E12	HA13_P
HA14_N	J16	HA14_N
HA14_P	J15	HA14_P
HA15_N	F17	HA15_N
HA15_P	F16	HA15_P
HA16_N	E16	HA16_N
HA16_P	E15	HA16_P
HA17_N_CC	K17	HA17_N_CC
HA17_P_CC	K16	HA17_P_CC
HA18_N	J19	HA18_N
HA18_P	J18	HA18_P
HA19_N	F20	HA19_N
HA19_P	F19	HA19_P
HA20_N	E19	HA20_N
HA20_P	E18	HA20_P
HA21_N	K20	HA21_N
HA21_P	K19	HA21_P
HA22_N	J22	HA22_N
HA22_P	J21	HA22_P
HA23_N	K23	HA23_N
HA23_P	K22	HA23_P

FMC\_HPC\_MC

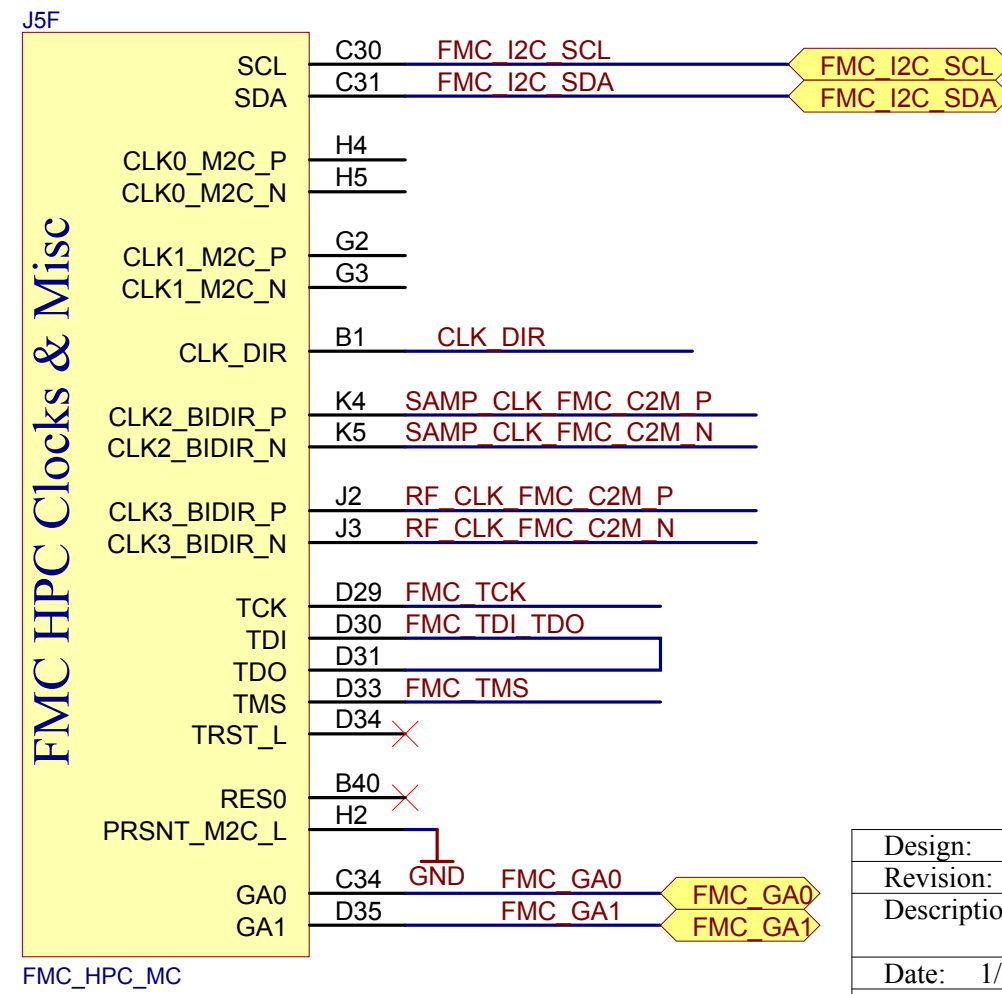
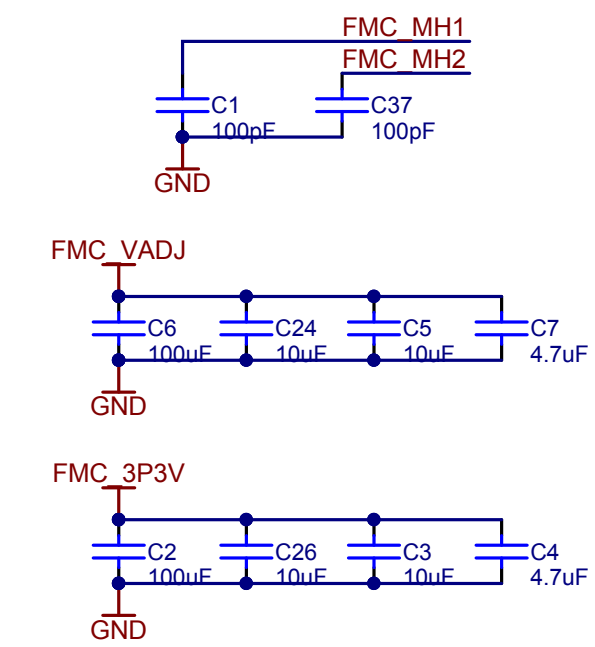
A few HPC HA IO tied to ground for easier placement of vias for LPC grounds

FMC HPC MGTs			
GBTCLK0_M2C_P	D4	GBTCLK0_M2C_N	D5
GBTCLK1_M2C_P	B20	GBTCLK1_M2C_N	B21
DP0_C2M_P	C2	DP0_C2M_N	C3
DP0_M2C_P	C6	DP0_M2C_N	C7
DP1_C2M_P	A22	DP1_C2M_N	A23
DP1_M2C_P	A2	DP1_M2C_N	A3
DP2_C2M_P	A26	DP2_C2M_N	A27
DP2_M2C_P	A6	DP2_M2C_N	A7
DP3_C2M_P	A30	DP3_C2M_N	A31
DP3_M2C_P	A10	DP3_M2C_N	A11
DP4_C2M_P	A34	DP4_C2M_N	A35
DP4_M2C_P	A14	DP4_M2C_N	A15
DP5_C2M_P	A38	DP5_C2M_N	A39
DP5_M2C_P	A18	DP5_M2C_N	A19
DP6_C2M_P	B36	DP6_C2M_N	B37
DP6_M2C_P	B16	DP6_M2C_N	B17
DP7_C2M_P	B32	DP7_C2M_N	B33
DP7_M2C_P	B12	DP7_M2C_N	B13
DP8_C2M_P	B28	DP8_C2M_N	B29
DP8_M2C_P	B8	DP8_M2C_N	B9
DP9_C2M_P	B24	DP9_C2M_N	B25
DP9_M2C_P	B4	DP9_M2C_N	B5

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FMC Rule 5.91: PG\_M2C low when VREF\_x\_M2C or VIO\_B\_M2C are invalid. This module doesn't drive VREF, and VIO is tied to VADJ, so M2C is valid when C2M is valid.



FMC\_HPC\_MC

Design: FMC-BB-4DA  
Revision: v1.0  
Description: FMC HPC Connector

Date: 1/25/2013 Sheet 2 of 4  
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