

EM4C Pin Specification			SoM-iMX6M			
EM4C Interface	EM4C Pin Number	EM4C Pin Name	iMX6	Port Line	BGA Pin#	Comment
Gig Ethernet A	E4_2	GBE_A_MDIO+	TXRXA_P	N/A	2	KSZ9031 Pin
	E4_3	GBE_A_MDIO-	TXRXA_N	N/A	3	KSZ9031 Pin
	E4_5	GBE_A_MD1+	TXRXB_P	N/A	5	KSZ9031 Pin
	E4_6	GBE_A_MD1-	TXRXB_N	N/A	6	KSZ9031 Pin
	E3_2	GBE_A_MD2+	TXRXC_P	N/A	7	KSZ9031 Pin
	E3_3	GBE_A_MD2-	TXRXC_N	N/A	8	KSZ9031 Pin
	E3_5	GBE_A_MD3+	TXRXD_P	N/A	10	KSZ9031 Pin
	E3_6	GBE_A_MD3-	TXRXD_N	N/A	11	KSZ9031 Pin
	E3_7	LED0_A_ACT_A#	LED1/PHYAD0	N/A	17	KSZ9031 Pin
	E4_9	LED1_A_LINK1000#	N/C			
E4_8	LED2_A_LINK100#	LED2/PHYAD1	N/A	15	KSZ9031 Pin	
Gig Ethernet B	106	GBE_B_MDIO+	N/C			
	108	GBE_B_MDIO-	N/C			
	110	GBE_B_MD1+	N/C			
	112	GBE_B_MD1-	N/C			
	116	GBE_B_MD2+	N/C			
	118	GBE_B_MD2-	N/C			
	120	GBE_B_MD3+	N/C			
	122	GBE_B_MD3-	N/C			
	134	LED0_B_ACT#	N/C			
	136	LED1_B_LINK1000#	N/C			
138	LED2_B_LINK100#	N/C				
USB 2.0	70	USB_C_D+	N/C			
	72	USB_C_D-	N/C			
	64	USB_D_OTG_D+	USB_OTG_DP	N/A	A6	
	68	USB_D_OTG_D-	USB_OTG_DN	N/A	B6	
	84	OTG_PWR_EN	GPIO1	GPIO1_IO01	T4	
	161	USB_OTG_VBUS	USB_OTG_VBUS	N/A	E9	
155	USB_OTG_ID	USB_OTG_ID	GPIO1_IO24	W23		
USB 3.0	167	USB_A_SS_RX+	N/C			
	169	USB_A_SS_RX-	N/C			
	173	USB_A_SS_TX+	N/C			
	175	USB_A_SS_TX-	N/C			
	181	USB_A_D+	USBDP_DN1		2	USB2512 Pin
	179	USB_A_D-	USBDM_DN1		1	USB2512 Pin
	163	USB_PWR_EN	PRT_PWR1   PRT_PWR2	N/A	12   16	USB2512 Pin OR'd
	183	USB_VBUS	USB_H1_VBUS			
	139	USB_HUB_RESET	RESET_N		26	USB2512 Pin
	165	USB_OC_A	OCS_N1		13	USB2512 Pin
	141	USB_OC_B	OCS_N2		17	USB2512 Pin
	143	USB_B_SS_RX+	N/C			
	145	USB_B_SS_RX-	N/C			
	149	USB_B_SS_TX+	N/C			
	151	USB_B_SS_TX-	N/C			
157	USB_B_D+	USBDP_DN2		4	USB2512 Pin	
159	USB_B_D-	USBDM_DN2		3	USB2512 Pin	
Serial Ports	243	UART_A_TXD	UART2_TX_DATA	GPIO3_IO26	E24	
	245	UART_A_RXD	UART2_RX_DATA	GPIO3_IO27	E25	
	247	UART_A_RTS	UART2_RTS_B	GPIO3_IO29	J19	
	241	UART_A_CTS	UART2_CTS_B	GPIO3_IO28	G23	
	236	UART_B_TXD	UART1_TX_DATA	GPIO5_IO28	M1	
	238	UART_B_RXD	UART1_RX_DATA	GPIO5_IO29	M3	
	240	UART_B_RTS	UART1_CTS_B	GPIO3_IO19	G21	
	234	UART_B_CTS	UART1_RTS_B	GPIO3_IO20	G20	
	242	UART_B_DCD	UART1_DCD_B	GPIO3_IO23	D25	
	244	UART_B_DSR	UART1_DSR_B	GPIO3_IO25	G22	
	246	UART_B_DTR	UART1_DTR_B	GPIO2_IO24	F22	
	248	UART_B_RI	UART1_RI_B	GPIO2_IO31	F23	
	140	UART_C_TXD	UART4_TX_DATA	GPIO5_IO30	M2	
	142	UART_C_RXD	UART4_RX_DATA	GPIO5_IO31	L1	
	144	UART_C_RTS	UART4_RTS_B	GPIO6_IO02	M6	
	146	UART_C_CTS	UART4_CTS_B	GPIO6_IO03	L3	
	150	UART_D_TXD	UART5_TX_DATA	GPIO6_IO00	M4	
	152	UART_D_RXD	UART5_RX_DATA	GPIO6_IO01	M5	
156	UART_D_RTS	UART5_RTS_B	GPIO6_IO04	M6		
158	UART_D_CTS	UART5_CTS_B	GPIO6_IO05	L6		
Camera Serial Interface	162	CSI_CLK+	CSI_CLK0_P	N/A	F3	
	160	CSI_CLK-	CSI_CLK0_N	N/A	F4	
	168	CSI_DATA0+	CSI_DATA0_P	N/A	E3	
	164	CSI_DATA0-	CSI_DATA0_N	N/A	E4	
	172	CSI_DATA1+	CSI_DATA1_P	N/A	D2	
	170	CSI_DATA1-	CSI_DATA1_N	N/A	D1	
	176	CSI_DATA2+	CSI_DATA2_P	N/A	E2	
	174	CSI_DATA2-	CSI_DATA2_N	N/A	E1	
	180	CSI_DATA3+	CSI_DATA3_P	N/A	F1	
178	CSI_DATA3-	CSI_DATA3_N	N/A	F2		
Touch Screen	36	TOUCH_X+	X+		D5	TSC2005 Pin
	38	TOUCH_X-	X-		F4	TSC2005 Pin
	40	TOUCH_Y+	Y+		E5	TSC2005 Pin
	44	TOUCH_Y-	Y-		F3	TSC2005 Pin
System	252	ON_OFF	ONOFF	N/A	D12	
	251	S3	N/C			
	253	S5	N/C			
	74	BOOT_0	BOOT_MODE0		C12	
	76	BOOT_1	BOOT_MODE1		F12	
	276	BOOT_2	TBD			Connected To Logic
	278	BOOT_3	TBD			Connected To Logic
	254	RESET_IN#	POR_B		C11	
	182	RESET_OUT#	POR_B		C11	Buffered Output
279	WP#	TBD			Serial Flash Pin	
SDIO / MMC	203	SDIO_A_CD	SD2_CD_B	GPIO1_IO4	R6	
	205	SDIO_A_CMD	SD2_CMD	GPIO1_IO11	F19	
	206	SDIO_A_CLK	SD2_CLK	GPIO1_IO10	C21	
	212	SDIO_A_DAT0	SD2_DATA0	GPIO1_IO15	A22	
	209	SDIO_A_DAT1	SD2_DATA1	GPIO1_IO14	E20	
	214	SDIO_A_DAT2	SD2_DATA2	GPIO1_IO13	A23	
	211	SDIO_A_DAT3	SD2_DATA3	GPIO1_IO12	B22	
	216	SDIO_B_DAT0	SD4_DATA0	GPIO2_IO08	D18	
	213	SDIO_B_DAT1	SD4_DATA1	GPIO2_IO09	B19	
	218	SDIO_B_DAT2	SD4_DATA2	GPIO2_IO10	F17	
	215	SDIO_B_DAT3	SD4_DATA3	GPIO2_IO11	A20	
	210	SDIO_B_CMD	SD4_CMD	GPIO7_IO09	B17	
	208	SDIO_B_CLK	SD4_CLK	GPIO7_IO10	E16	

	207	SDIO_B_CD	SD4_VSELECT	GPIO6_IO14	C16	
SPI	222	SPI_A_MOSI	ECSPI1_MOSI	GPIO5_IO23	P2	
	224	SPI_A_MISO	ECSPI1_MISO	GPIO5_IO24	N4	
	226	SPI_A_CLK	ECSPI1_SCLK	GPIO5_IO22	N1	
	228	SPI_A_CS0#	TBD			
	230	SPI_A_CS1#	TBD			
	114	SPI_A_CS2#	TBD			
	219	SPI_B_MOSI	ECSPI3_MOSI	GPIO4_IO22	P22	
	221	SPI_B_MISO	ECSPI3_MISO	GPIO4_IO23	P23	
	223	SPI_B_CLK	ECSPI3_SCLK	GPIO4_IO21	P24	
	225	SPI_B_CS0#	TBD			
227	SPI_B_CS1#	TBD				
280	SPI_B_CS2#	TBD				
I2S / SPDIF	187	I2S_A_RXD	AUD4_RXD	GPIO5_IO17	W24	
	189	I2S_A_TXFS	UAD4_TXFS	GPIO5_IO16	V24	
	191	I2S_A_TXD	AUD4_TXD	GPIO5_IO15	T20	
	193	I2S_A_TXC	AUD4_TXC	GPIO5_IO14	U22	
	195	I2S_A_CLK	CLK_OUT		3	ASFLMB-12.288MHZ Pin
	186	I2S_B_RXD	AUD6_RXD	GPIO4_IO20	P25	
	188	I2S_B_TXFS	AUD6_TXFS	GPIO4_IO19	N20	
	190	I2S_B_TXD	AUD6_TXD	GPIO4_IO18	N25	
	192	I2S_B_TXC	AUD6_TXC	GPIO4_IO17	N21	
	194	I2S_B_CLK	CLK_OUT		3	ASFLMB-12.288MHZ Pin
196	SPDIF_OUT	SPDIF_OUT	GPIO3_IO22	E23		
CAN	200	CAN_A_TX	FLEXCAN1_TX	GPIO1_IO07	R3	
	202	CAN_A_RX	FLEXCAN1_RX	GPIO1_IO08	R5	
	197	CAN_B_TX	FLEXCAN2_TX	GPIO4_IO14	T6	
	199	CAN_B_RX	FLEXCAN2_RX	GPIO4_IO15	V5	
JTAG	46	JTAG_MOD	JTAG_MOD	N/A	H6	
	50	JTAG_TCK	JTAG_TCK	N/A	H5	
	52	JTAG_TDI	JTAG_TDI	N/A	G5	
	56	JTAG_TDO	JTAG_TDO	N/A	G6	
	58	JTAG_TMS	JTAG_TMS	N/A	C3	
	62	JTAG_TRSTB	JTAG_TRST	N/A	C2	
PCIe	85	PCIe_A_CLK+	CLK1_P	N/A	D7	
	87	PCIe_A_CLK-	CLK1_N	N/A	C7	
	91	PCIe_A_TX+	PCIe_TX_P	N/A	B3	
	93	PCIe_A_TX-	PCIe_TX_N	N/A	A3	
	97	PCIe_A_RX+	PCIe_RX_P	N/A	B2	
	99	PCIe_A_RX-	PCIe_RX_N	N/A	B1	
	113	PCIe_A_CLK_OE	GPIO2_IO00	N/A	A18	
	79	PCIe_B_CLK+	N/C			
	81	PCIe_B_CLK-	N/C			
	103	PCIe_B_TX+	N/C			
	105	PCIe_B_TX-	N/C			
	109	PCIe_B_RX+	N/C			
	111	PCIe_B_RX-	N/C			
	115	PCIe_B_CLK_OE	N/C			
	119	PCIe_RST#	POR#	N/A	C11	
107	PCIe_PRES#	GPIO2_IO01	N/A	C17		
117	PCIe_WAKE#	GPIO2_IO02	N/A	F16		
SATA	123	SATA_RX+	SATA_PHY_RX_P	N/A	B14	
	125	SATA_RX-	SATA_PHY_RX_N	N/A	A14	
	135	SATA_TX+	SATA_PHY_TX_P	N/A	A12	
	137	SATA_TX-	SATA_PHY_TX_N	N/A	B12	
	133	SATA_ACT#	GPIO6_IO10	N/A	B16	
		E3_10				
LVDS	E3_9	LVDS_D0+	LVDS0_DATA0_P	N/A	U1	
	5	LVDS_D0-	LVDS0_DATA0_N	N/A	U2	
	3	LVDS_D1+	LVDS0_DATA1_P	N/A	U3	
	11	LVDS_D1-	LVDS0_DATA1_N	N/A	U4	
	9	LVDS_D2+	LVDS0_DATA2_P	N/A	V1	
	17	LVDS_D2-	LVDS0_DATA2_N	N/A	V2	
	15	LVDS_D3+	LVDS0_DATA3_P	N/A	W1	
	23	LVDS_D3-	LVDS0_DATA3_N	N/A	W2	
	21	LVDS_CLK+	LVDS0_CLK_P	N/A	V3	
	27	LVDS_CLK-	LVDS0_CLK_N	N/A	V4	
	29	LVDS_BL_CTRL	NAND_CS2_B	GPIO6_IO15	A17	
	31	LVDS_EN	NAND_CS3_B	GPIO6_IO16	D16	
	39	LVDS_VDD_EN	EIM_BCLK	GPIO6_IO31	N22	
	37	LVDS_I2C_SCL	TBD			
			LVDS_I2C_SDA	TBD		
HDMI	43	HDMI_CLK+	HDMI_TX_CLK_P	N/A	J6	
	45	HDMI_CLK-	HDMI_TX_CLK_N	N/A	J5	
	49	HDMI_D0+	HDMI_TX_DATA0_P	N/A	K6	
	51	HDMI_D0-	HDMI_TX_DATA0_N	N/A	K5	
	55	HDMI_D1+	HDMI_TX_DATA1_P	N/A	J4	
	57	HDMI_D1-	HDMI_TX_DATA1_N	N/A	J3	
	61	HDMI_D2+	HDMI_TX_DATA2_P	N/A	K4	
	63	HDMI_D2-	HDMI_TX_DATA2_N	N/A	K3	
	67	HDMI_HPD	HDMI_TX_HPD	N/A	K1	
	69	HDMI_CAD	NAND_WP_B	GPIO6_IO09	E15	
71	HDMI_CEC	HDMI_TX_CEC_LINE	GPIO5_IO02	H19		
73	HDMI_I2C_SCL	HDMI_DDC_SCL	GPIO4_IO12	U5		
75	HDMI_I2C_SDA	HDMI_DDC_SDA	GPIO4_IO13	T7		
Battery Control	92	PMIC_I2C_SCL	TBD			
	90	PMIC_I2C_SDA	TBD			
	86	PMIC_BATLOW#	NAND_DATA03	GPIO2_IO03	D17	
	96	PMIC_CHARGE#	NAND_DATA04	GPIO2_IO04	A19	
	98	PMIC_CHARGE_DET#	NAND_DATA05	GPIO2_IO05	B18	
	102	PMIC_TEST#	NAND_DATA06	GPIO2_IO06	E17	
104	PMIC_SLEEP#	NAND_DATA07	GPIO2_IO07	C18		
GPIO	2	GPIO0/PWM0	PWM1_OUT	GPIO4_IO29	R22	
	4	GPIO1/PWM1	PWM2_OUT	GPIO4_IO30	T25	
	8	GPIO2/PWM2	PWM3_OUT	GPIO1_IO17	C20	
	10	GPIO3/PWM3	PWM4_OUT	GPIO1_IO18	B21	
	14	GPIO4/TC1	GPT_CAPTURE1	GPIO1_IO16	A21	
	16	GPIO5/TC2	GPT_CLKIN	GPIO1_IO20	D20	
	20	GPIO6		GPIO5_IO05	T23	
	22	GPIO7		GPIO5_IO06	T24	
	26	GPIO8		GPIO5_IO07	R20	
	28	GPIO9		GPIO5_IO08	U25	
	32	GPIO10		GPIO5_IO10	T21	
	34	GPIO11		GPIO5_IO18	P1	
	255	GPIO12		GPIO5_IO19	P4	
	256	GPIO13		GPIO5_IO20	P3	
	257	GPIO14		GPIO5_IO21	N2	
	258	GPIO15		GPIO3_IO21	H20	
259	GPIO16	SPDIF_IN	GPIO4_IO09	U6		

	260	GPIO17	ECSPi3_RDY	GPIO4_IO28	R24	
	261	GPIO18		GPIO2_IO23	H24	
	262	GPIO19		GPIO2_IO24	J23	
	263	GPIO20		GPIO2_IO25	J24	
	264	GPIO21		GPIO1_IO06	T3	
I2C	231	I2C_A_SCL	I2C1_SCL	GPIO5_IO27	N5	
	233	I2C_A_SDA	I2C1_SDA	GPIO5_IO26	N6	
	235	I2C_B_SCL	I2C2_SCL	GPIO2_IO30	E22	
	237	I2C_B_SDA	I2C2_SDA	GPIO3_IO16	C25	
HSIC	272	HSIC_A_STRB	N/C			
	274	HSIC_A_DATA	N/C			
	275	HSIC_B_STRB	N/C			
	277	HSIC_B_DATA	N/C			
DSI	267	DSI_CLK+	DSI_CLK0_P	N/A	H4	
	269	DSI_CLK-	DSI_CLK0_N	N/A	H3	
	268	DSI_D0+	DSI_DATA0_P	N/A	G1	
	270	DSI_D0-	DSI_DATA0_N	N/A	G2	
	271	DSI_D1+	DSI_DATA1_P	N/A	H1	
	273	DSI_D1-	DSI_DATA1_N	N/A	H2	
ADC	78	ADC_1	CH0		1	MCP3204 Pin
	80	ADC_2	CH1		2	MCP3204 Pin
	82	ADC_3	CH2		3	MCP3204 Pin
	33	ADC_4	CH3		4	MCP3204 Pin
	35	ADC_VREF	VREF		13	MCP3204 Pin
Power	E1_1	5V_VSB	5V_VCC		42	MMPF0100 Pin
	E2_1	5V_VSB	5V_VCC			
	281	VCC_RTC	VCC_RTC			
	E1_1	5V_VCC	5V_VCC			
	E2_2	5V_VCC	5V_VCC			
	E1_3	5V_VCC	5V_VCC			
	E2_3	5V_VCC	5V_VCC			
	E1_4	5V_VCC	5V_VCC			
	E2_4	5V_VCC	5V_VCC			
	E1_5	5V_VCC	5V_VCC			
	E2_5	5V_VCC	5V_VCC			
	E1_6	5V_VCC	5V_VCC			
	E2_6	5V_VCC	5V_VCC			
	E1_7	5V_VCC	5V_VCC			
	E2_7	5V_VCC	5V_VCC			
	E1_8	5V_VCC	5V_VCC			
	E2_8	5V_VCC	5V_VCC			
	E1_9	5V_VCC	5V_VCC			
	E2_9	5V_VCC	5V_VCC			
	E1_10	5V_VCC	5V_VCC			
	E2_10	5V_VCC	5V_VCC			
	266	GND	GND			
	265	GND	GND			
	250	GND	GND			
	249	GND	GND			
	239	GND	GND			
	232	GND	GND			
	229	GND	GND			
	220	GND	GND			
	217	GND	GND			
	204	GND	GND			
	201	GND	GND			
	198	GND	GND			
	185	GND	GND			
	184	GND	GND			
	177	GND	GND			
	166	GND	GND			
	154	GND	GND			
	153	GND	GND			
	148	GND	GND			
	171	GND	GND			
	147	GND	GND			
	124	GND	GND			
	121	GND	GND			
	101	GND	GND			
	100	GND	GND			
	95	GND	GND			
	94	GND	GND			
	89	GND	GND			
	88	GND	GND			
	83	GND	GND			
	77	GND	GND			
	66	GND	GND			
	65	GND	GND			
	60	GND	GND			
	59	GND	GND			
	54	GND	GND			
	53	GND	GND			
	48	GND	GND			
	47	GND	GND			
	42	GND	GND			
	41	GND	GND			
	30	GND	GND			
	25	GND	GND			
	24	GND	GND			
	19	GND	GND			
	18	GND	GND			
	13	GND	GND			
	12	GND	GND			
	7	GND	GND			
	6	GND	GND			
	1	GND	GND			
	E4_10	GND	GND			
	E3_8	GND	GND			
	E4_7	GND	GND			
	E4_4	GND	GND			
	E3_4	GND	GND			
	E4_1	GND	GND			
	E3_1	GND	GND			
No Connect	132	N/C	N/C	N/C	N/C	
	131	N/C	N/C	N/C	N/C	
	130	N/C	N/C	N/C	N/C	
	129	N/C	N/C	N/C	N/C	
	128	N/C	N/C	N/C	N/C	
	127	N/C	N/C	N/C	N/C	

	126	N/C	N/C	N/C	N/C	
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