

## 6 CARRIER BOARD INTERFACE

The UCM-iMX8M-Plus CoM/SoM carrier board interface uses 2 x 100 Pin carrier board connectors. The SoM pinout is detailed in the table below.

### 6.1 Connectors Pinout

**Table 44 Connector P1**

Pin #	UCM-iMX8M-Plus Signal Name	Ref.	Pin #	UCM-iMX8M-Plus Signal Name	Ref.
2	SYS_RST_PMIC		1	USB2_VBUS	
4	GND		3	USB2_DP	
6	USB1_RX_P		5	USB2_DN	
8	USB1_RX_N		7	USB2_RX_P	
10	GND		9	USB2_RX_N	
12	USB1_DP		11	V_SOM	
14	USB1_DN		13	USB2_TX_P	
16	USB1_TX_P		15	USB2_TX_N	
18	USB1_TX_N		17	RESERVED	
20	GND		19	UART1_RXD ECSP13_SCLK GPIO5_IO22	M0.11
22	RESERVED		21	UART3_RXD UART1_CTS_B CAN2_TX GPIO5_IO26	M0.4
24	USB1_VBUS		23	HDMI_TXCP	
26	SAI3_TXD0 SAI5_RXD3 GPIO5_IO1	M0.11	25	HDMI_TXCN	
28	SAI3_RXD0 SAI5_RXD0 UART2_RTS_B UART2_RTS_B GPIO4_IO30	M0.17	27	V_SOM	
30	SAI3_MCLK SAI5_MCLK PWM4_OUT GPIO5_IO2	M0.15	29	HDMI_TX0P	
32	SAI3_RXC SAI5_RXC UART2_CTS_B GPIO4_IO29	M0.19	31	HDMI_TX0N	
34	SAI3_RXFS SAI5_RXFX SAI3_RXD1 GPIO4_IO28	M0.23	33	SAI5_TXD3 CAN2_TX GPIO4_IO26	M1.8
36	SAI3_TXC SAI5_RXD2 UART2_TXD GPIO5_IO0	M0.13	35	EARC_N_HPD	
38	SAI3_TXFS SAI5_RXD1 SAI3_TXD1 UART2_RXD GPIO4_IO31	M0.21	37	EARC_P_UTIL	
40	GND		39	HDMI_TX1P	
42	LVDS0_D0_P		41	HDMI_TX1N	
44	LVDS0_D0_N		43	V_SOM	
46	LVDS0_D1_P		45	HDMI_TX2P	
48	LVDS0_D1_N		47	HDMI_TX2N	
50	LVDS0_D2_P		49	SAI3_MCLK CAN2_RX GPIO4_IO27	M1.10
52	LVDS0_D2_N		51	SAI5_TXD2 CAN1_RX GPIO4_IO25	M1.12

54	GND		53	SAI5_TXC UART1_RXD CAN1_TX GPIO4_IO22	M1.14
56	LVDS0_D3_P		55	PHY_2P5	
58	LVDS0_D3_N		57	V_SOM	
60	GPIO4_IO19		59	GPIO1_IO00	
62	AVDD33_ETH		61	UART3_TXD UART1_RTS_B CAN2_RX GPIO5_IO27	M0.2
64	GND		63	HDMI_DDC_SDA I2C5_SDA CAN1_RX GPIO3_IO27	M1.31
66	PMIC_STBY_REQ		65	JTAG_TMS	
68	PMIC_ON_REQ		67	JTAG_TDO	
70	HDMI_DDC_SCL I2C5_SCL CAN1_TX GPIO3_IO26	M1.29	69	V_SOM	
72	UART1_TXD ECSP13_MOSI GPIO5_IO23	M0.9	71	JTAG_TDI	
74	UART2_TXD ECSP13_SS0 GPIO5_IO25	M0.1	73	JTAG_TCK	
76	UART2_RXD ECSP13_MISO GPIO5_IO24	M0.3	75	JTAG_MOD	
78	GND		77	SPDIF_EXT_CLK PWM1_OUT GPIO5_IO5	M0.5
80	LVDS0_CLK_P		79	SPDIF_RX I2C5_SDA PWM2_OUT CAN1_RX GPIO5_IO4	spdif
82	LVDS0_CLK_N		81	SPDIF_TX I2C5_SCL PWM3_OUT CAN1_TX GPIO5_IO3	spdif
84	UART4_RXD I2C6_SCL UART2_CTS_B GPIO5_IO28	M0.10	83	V_SOM	
86	UART4_TXD I2C6_SDA UART2_RTS_B GPIO5_IO29	M0.8	85	HDMI_CEC I2C6_SCL CAN2_TX GPIO3_IO28	M1.33
88	GND		87	SAI5_RXFS I2C6_SCL PWM4_OUT GPIO3_IO19	M1.2
90	ALT_BOOT		89	SAI5_RXC I2C6_SDA PWM3_OUT GPIO3_IO20	M1.4
92	HDMI_HPD I2C6_SDA CAN2_RX GPIO3_IO29	M1.25	91	I2C3_SDA ECSP12_MOSI PWM3_OUT GPIO5_IO19	M0.34
94	I2C3_SCL ECSP12_SCLK PWM4_OUT GPIO5_IO18	M0.33	93	VCC_RTC	
96	SAI5_MCLK I2C5_SDA PWM1_OUT CAN2_RX GPIO3_IO25	M1.1	95	QSPI_BOOT_EN_3P3	M1.28
98	PWM1_OUT GPIO1_IO1	M0.14	97	SYS_I2C_SDA	M1.5

100	SAI5_RXD0 I2C5_SCL PWM2_OUT GPIO3_IO21	M0.14	99	SYS_I2C_SCL	M1.5
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**Table 45 Connector P2**

Pin #	UCM-iMX8M-Plus Signal Name	Ref.	Pin #	UCM-iMX8M-Plus Signal Name	Ref.
2	MIPI_CSI1_CLK_N		1	MIPI_DSII_D0_N	
4	MIPI_CSI1_CLK_P		3	MIPI_DSII_D0_P	
6	MIPI_CSI1_D0_N		5	MIPI_DSII_D2_N	
8	MIPI_CSI1_D0_P		7	MIPI_DSII_D2_P	
10	GND		9	V_SOM	
12	MIPI_CSI2_CLK_N		11	MIPI_DSII_D3_N	
14	MIPI_CSI2_CLK_P		13	MIPI_DSII_D3_P	
16	GND		15	MIPI_DSII_D1_N	
18	MIPI_CSI2_D0_N		17	MIPI_DSII_D1_P	
20	MIPI_CSI2_D0_P		19	V_SOM	
22	GND		21	MIPI_DSII_CLK_N	
24	MIPI_CSI2_D1_N		23	MIPI_DSII_CLK_P	
26	MIPI_CSI2_D1_P		25	MIPI_CSI1_D2_N	
28	GND		27	MIPI_CSI1_D2_P	
30	PCIE_RXN_N		29	V_SOM	
32	PCIE_RXN_P		31	MIPI_CSI1_D1_N	
34	GND		33	MIPI_CSI1_D1_P	
36	PCIE_TXN_N		35	MIPI_CSI1_D3_N	
38	PCIE_TXN_P		37	MIPI_CSI1_D3_P	
40	GND		39	V_SOM	
42	PCIE_REF_CLKP		41	SD1_DATA2 I2C4_SCL UART2_TXD ENET1_RGMII_RD0 GPIO2_IO4	M0.21
44	PCIE_REF_CLKN		43	SD1_DATA3 I2C4_SDA UART2_RXD ENET1_RGMII_RD1 GPIO2_IO5	M0.23
46	GND		45	ENET1_RGMII_RD2 GPIO4_IO8	M0.25
48	MIPI_CSI2_D2_N		47	ENET1_RGMII_RD3 GPIO4_IO9	M0.27
50	MIPI_CSI2_D2_P		49	SD2_WP GPIO2_IO20	M0.
52	SAI5_MCLK GPIO4_IO20	M1.32	51	SD2_RESET_B GPIO2_IO19	M1.16
54	GND		53	SAI5_TXFS ENET1_RGMII_RX_CTL GPIO4_IO10	M0.19
56	MIPI_CSI2_D3_N		55	SAI5_TXC ENET1_RGMII_RXC GPIO4_IO11	M0.29
58	MIPI_CSI2_D3_P		57	V_SOM	
60	SAI5_TXD0 ENET1_RGMII_TD0 GPIO4_IO12	M1.34	59	SD1_DATA1 I2C6_SDA UART1_CTS_B ENET1_RGMII_TD0 GPIO2_IO3	M0.22
62	SD1_RESET_B I2C3_SCL UART3_RTS_B GPIO2_IO10	M0.13	61	SD1_DATA0 I2C6_SCL UART1_RTS_B ENET1_RGMII_TD1 GPIO2_IO2	M0.24
64	PWRBTN		63	SAI5_TXD2 ENET1_RGMII_TD2 GPIO4_IO14	M0.26
66	POR_B_3P3		65	SAI5_TXD3 ENET1_RGMII_TD3 GPIO4_IO15	M0.28

68	SD1_CLK I2C5_SCL UART1_TXD ENET_MDC GPIO2_IO0	M0.15	67	ENET1_RGMII_TX_CTL GPIO4_IO16	M0.20
70	SD1_CMD I2C5_SDA UART1_RXD ENET_MDIO GPIO2_IO1	M0.17	69	ENET1_RGMII_TXC GPIO4_IO17	M0.30
72	GND		71	V_SOM	
74	ETH0_MDI0P ENET_TX_CTL GPIO1_IO22	eth	73	ETH0_MDI0N ENET_TD3 GPIO1_IO18	eth
76	SAI5_TXD1 UART1_CTS_B GPIO4_IO24	M0.12	75	ETH0_LINK-LED_1000 ENET_TD0 GPIO1_IO21	eth
78	ETH0_MDI1P ENET_TD1 GPIO1_IO20	eth	77	ENET_TD2 GPIO1_IO19	?
80	ETH0_MDI1N ENET_RXC SAI7_TXC GPIO1_IO25	eth	79	ETH0_MDI2P ENET_RX_CTL SAI7_TX_SYNC GPIO1_IO24	eth
82	GND		81	ETH0_MDI2N ENET_TXC SAI7_TXD0 GPIO1_IO23	eth
84	ETH0_MDI3P ENET_RD2 SAI7_RXC GPIO1_IO28	eth	83	ETH0_LED_ACT ENET_RD1 SAI7_RXFS GPIO1_IO27	eth
86	ETH0_LINK-LED_10_100 ENET_RD0 SAI7_RXD0 GPIO1_IO26	eth	85	ETH0_MDI3N ENET_RD3 SAI7_MCLK GPIO1_IO29	eth
88	SAI5_TXFS SAI5_TXD1 UART1_TXD GPIO4_IO21	M0.18?	87	V_SOM	
90	I2C4_SCL ECSP12_MISO PWM2_OUT PCIE_CLKREQ_B GPIO5_IO20	M1.20	89	ECSP12_MISO SAI7_MCLK I2C4_SCL UART4_CTS_B GPIO5_IO12	?
92	SD2_CD_B GPIO2_IO12	?	91	ECSP12_SS0 I2C4_SDA UART4_RTS_B GPIO5_IO13	?
94	SD2_DATA2 ECSP12_SS0 GPIO2_IO17	?	93	ECSP12_SCLK SAI7_TXC I2C3_SCL UART4_RXD GPIO5_IO10	?
96	SD2_CLK UART4_RXD ECSP12_SCLK GPIO2_IO13	?	95	ECSP12_MOSI SAI7_TXD0 I2C3_SDA UART4_TXD GPIO5_IO11	?
98	SD2_DATA3 ECSP12_MISO GPIO2_IO18	?	97	SD2_DATA0 I2C4_SDA UART2_RXD GPIO2_IO15	?
100	SD2_CMD UART4_TXD ECSP12_MOSI GPIO2_IO14	?	99	SD2_DATA1 I2C4_SCL UART2_TXD GPIO2_IO16	?