

PicoCoreMX8MM GPIO Reference Card

V1.2
19.01.2021

Pin layout for Board Rev. 1.20

J1	Function	Device	GPIO	Mode	/sys/class/gpio/gpio#	PicoCoreBBDSD V1.20
1	I2C_B_IRQ	GPIO	GPIO4_IO31	IO	127	J15-5/J13-26
2	GPIO_J1_2	GPIO	GPIO1_IO00	IO	0	J11-18
3	I2C_B_SCL ⁽¹⁾	I2C2	GPIO5_IO16	IO	144	J15-3/J13-27
4	I2C_A_SCL ⁽¹⁾	I2C1	GPIO5_IO14	IO	142	J11-16 ⁽³⁾
5	I2C_B_SDA ⁽¹⁾	I2C2	GPIO5_IO17	IO	145	J15-2/J13-25
6	I2C_A_SDA ⁽¹⁾	I2C1	GPIO5_IO15	IO	143	J11-17 ⁽³⁾
7	GPIO_J1_7	GPIO	GPIO1_IO01	IO	1	J13-28
8	GND					
9	BL_ON ⁽²⁾	GPIO	GPIO5_IO03	IO	131	J14-2
10	NC					
11	BL_PWM ⁽²⁾	PWM2	GPIO5_IO04	IO	132	J14-3
12	NC					
13	VLCD_ON ⁽²⁾	GPIO	GPIO4_IO28	IO	124	J14-1
14	UART_A_RTS	UART1	GPIO4_IO24	IO	120	
15	GND					
16	UART_A_CTS	UART1	GPIO4_IO23	IO	119	
17	DSI_A_CLK_N	MIPI-DSI				
18	UART_A_RXD ⁽⁵⁾	UART1	GPIO5_IO22	IO	150	
19	DSI_A_CLK_P	MIPI-DSI				
20	UART_A_TXD	UART1	GPIO5_IO23	IO	151	
21	GND			IO		
22	UART_B_RTS	UART2	GPIO4_IO30	IO	126	
23	DSI_A_DATA0_P	MIPI-DSI				
24	UART_B_CTS	UART2	GPIO4_IO29	IO	125	
25	DSI_A_DATA0_N	MIPI-DSI				
26	UART_B_RXD ⁽⁵⁾	UART2	GPIO5_IO24	IO	152	
27	GND					
28	UART_B_TXD	UART2	GPIO5_IO25	IO	153	
29	DSI_A_DATA1_P	MIPI-DSI				
30	UART_C_RXD ⁽⁵⁾	UART4	GPIO5_IO28	IO	156	
31	DSI_A_DATA1_N	MIPI-DSI				
32	UART_C_TXD	UART4	GPIO5_IO29	IO	157	
33	GND					
34	UART_D_RXD ⁽⁵⁾	UART3	GPIO5_IO26	IO	154	
35	DSI_A_DATA2_P	MIPI-DSI				
36	UART_D_TXD	UART3	GPIO5_IO27	IO	155	
37	DSI_A_DATA2_N	MIPI-DSI				
38	GND					
39	GND					
40	I2C_C_SCL ⁽¹⁾	I2C3	GPIO5_IO18	IO	146	
41	DSI_A_DATA3_P	MIPI-DSI				
42	I2C_C_SDA ⁽¹⁾	I2C3	GPIO5_IO19	IO	147	
43	DSI_A_DATA3_N	MIPI-DSI				

J1	Function	Device	GPIO	Mode	/sys/class/gpio/gpio#	PicoCoreBBDSD V1.20
44	GPIO_J1_44	GPIO	GPIO1_IO08	IO	8	J12-11
45	GND					
46	GPIO_J1_46	GPIO	GPIO1_IO09	IO	9	
47	NC					
48	I2C_D_SCL ⁽¹⁾⁽⁴⁾	I2C4				J12-13
49	NC					
50	I2C_D_SDA ⁽¹⁾⁽⁴⁾	I2C4				J12-14
51	NC					
52	GPIO_J1_52	GPIO	GPIO1_IO10	IO	10	J15-4
53	NC					
54	GPIO_J1_54	GPIO	GPIO1_IO11	IO	11	J11-8
55	NC					
56	SPI_B_SS0	ECSPI2	GPIO5_IO13	IO	141	J11-4
57	GND					
58	SPI_B_MISO	ECSPI2	GPIO5_IO12	IO	140	J11-5
59	NC					
60	SPI_B_MOSI	ECSPI2	GPIO5_IO11	IO	139	J11-6
61	NC					
62	SPI_B_SCLK	ECSPI2	GPIO5_IO10	IO	138	J11-3
63	GND					
64	SPI_A_SS0	ECSPI1	GPIO5_IO09	IO	137	
65	NC					
66	SPI_A_MISO	ECSPI1	GPIO5_IO08	IO	136	
67	NC					
68	SPI_A_MOSI	ECSPI1	GPIO5_IO07	IO	135	
69	GND					
70	SPI_A_SCLK	ECSPI1	GPIO5_IO06	IO	134	
71	NC					
72	GND					
73	NC					
74	CSI_CLK_P	MIPI-CSI				J12-9
75	GND					
76	CSI_CLK_N	MIPI-CSI				J12-8
77	MPCIE_CTX_P	PCIE				
78	GND					
79	MPCIE_CTX_N	PCIE				
80	CSI_DATA0_P	MIPI-CSI				J12-3
81	GND					
82	CSI_DATA0_N	MIPI-CSI				J12-2
83	MPCIE_CRX_P	PCIE				
84	GND					
85	MPCIE_CRX_N	PCIE				
86	CSI_DATA1_P	MIPI-CSI				J12-6

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87	GND					
88	CSI_DATA1_N	MIPI-CSI				J12-5
89	MPCIE_CLK_P	PCIE				
90	GND					
91	MPCIE_CLK_N	PCIE				
92	CSI_DATA2_P	MIPI-CSI				
93	GND					
94	CSI_DATA2_P	MIPI-CSI				
95	MPCIE_PERST	GPIO	GPIO3_IO21	IO	85	
96	GND					
97	MPCIE_WAKE	GPIO	GPIO3_IO22	IO	86	
98	CSI_DATA3_P	MIPI-CSI				
99	GND					
100	CSI_DATA3_N	MIPI-CSI				

- (1) Onboard Pull-Up 2.49k
- (2) Used from DS12LVDS chip if equipped
- (3) Optional, see hardware documentation
- (4) Used internally
- (5) Onboard Pull-Up 100k

PicoCoreMX8MM GPIO Reference Card

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Pin layout for Board Rev. 1.20

J2	Function	Device	GPIO	Mode	/sys/class/gpio/gpio#	PCoreBBDSI V1.20
1	ETH_A_D1P ⁽¹⁾	ETH				
2	AUDIO_A_VCC	AUDIO				
3	ETH_A_D1N ⁽¹⁾	ETH				
4	AUDIO_A_GND	AUDIO				
5	ETH_A_D2P	ETH				
6	AUDIO_A_LOUT_L	AUDIO				
7	ETH_A_D2N	ETH				
8	AUDIO_A_LOUT_R	AUDIO				
9	ETH_A_D3P	ETH				
10	AUDIO_A_MIC	AUDIO				
11	ETH_A_D3N	ETH				
12	AUDIO_A_LIN_L	AUDIO				
13	ETH_A_D4P	ETH				
14	AUDIO_A_LIN_R	AUDIO				
15	ETH_A_D4N	ETH				
16	GND					
17	ETH_A_LED	LED				
18	AUDIO_A_HP_L	AUDIO				
19	GND					
20	AUDIO_A_HP_R	AUDIO				
21	NC					
22	AUDIO_A_HP_GND	AUDIO				TP1
23	NC					
24	+V5S					
25	NC					
26	+V5S					
27	NC					
28	+V5S					
29	NC					
30	GND					
31	NC					
32	GND					
33	NC					
34	GND					
35	NC					
36	VDD_VBAT					
37	NC					
38	VDD_SNVS					
39	GND					
40	+V3.3S					
41	USB_HOST_VBUS	USB2				
42	RESETINN					
43	USB_HOST_DP	USB2				

J2	Function	Device	GPIO	Mode	/sys/class/gpio/gpio#	PCoreBBDSI V1.20
44	PMIC_STBY					
45	USB_HOST_DN	USB2				
46	PMIC_ON_REQ					
47	USB_HOST_PWRN	GPIO	GPIO1_IO14	IO	14	
48	ON_OFF					
49	GND					
50	BOOTSEL					
51	USB_OTG_VBUS	USB1				
52	SD_A_VCC					
53	USB_OTG_PWRN	GPIO	GPIO1_IO12	IO	12	
54	SD_A_VSEL	GPIO	GPIO1_IO03	IO	3	
55	USB_OTG_ID	USB1				
56	SD_A_RST	SD1				
57	USB_OTG_DP	USB1				
58	SD_A_WP	SD1	GPIO1_IO07	IO	7	
59	USB_OTG_DN	USB1				
60	SD_A_CD	SD1	GPIO1_IO6	IO	6	
61	GND					
62	SD_A_CMD ⁽⁵⁾	SD1	GPIO2_IO01	IO	33	
63	PWM	PWM1	GPIO5_IO05	IO	133	
64	SD_A_CLK	SD1	GPIO2_IO00	IO	32	
65	USB_OTG_TYPEC_EN	SAI3	GPIO5_IO02	IO	130	
66	SD_A_DATA0	SD1	GPIO2_IO02	IO	34	
67	USB_OTG_TYPEC_ALERT	SAI3	GPIO4_IO09	IO	105	
68	SD_A_DATA1 ⁽⁵⁾	SD1	GPIO2_IO03	IO	35	
69	USB_OTG_TYPEC_SEL	SAI3	GPIO5_IO00	IO	128	
70	SD_A_DATA2	SD1	GPIO2_IO04	IO	36	
71	GND					
72	SD_A_DATA3	SD1	GPIO2_IO05	IO	37	
73	USB_OTG_SS_RXN	SAI3	GPIO5_IO01	IO	129	
74	SD_A_DATA4	SD1	GPIO2_IO06	IO	38	
75	USB_OTG_SS_RXP	SAI2	GPIO4_IO27	IO	123	
76	SD_A_DATA5	SD1	GPIO2_IO07	IO	39	
77	USB_OTG_SS_TXN	SAI2	GPIO4_IO26	IO	122	
78	SD_A_DATA6	SD1	GPIO2_IO08	IO	40	
79	USB_OTG_SS_TXP	SAI2	GPIO4_IO21	IO	117	
80	SD_A_DATA7	SD1	GPIO2_IO09	IO	41	
81	GND					
82	GND					
83	USB_OTG_TYPEC_VACK	SAI2	GPIO4_IO22	IO	118	
84	SD_B_RST ⁽⁵⁾	SD2	GPIO2_IO19	IO	51	
85	USB_OTG_SS_SDA	SAI2	GPIO4_IO25	IO	121	
86	SD_B_WP	SD2	GPIO2_IO20	IO	52	

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87	USB_OTG_SS_SCL	SAI5	GPIO3_IO25	IO	89	
88	SD_B_CD	SD2	GPIO2_IO12	IO	44	
89	USB_OTG_SS_INT	SAI5	GPIO3_IO19	IO	83	
90	SD_B_CMD ⁽⁵⁾	SD2	GPIO2_IO14	IO	46	
91	GND					
92	SD_B_CLK	SD2	GPIO2_IO13	IO	45	
93	JTAG_TCK	JTAG				J7-4
94	SD_B_DATA0 ⁽⁵⁾	SD2	GPIO2_IO15	IO	47	J11-29
95	JTAG_TMS	JTAG				J7-2
96	SD_B_DATA1	SD2	GPIO2_IO16	IO	48	J11-28
97	JTAG_TDI	JTAG				J7-8
98	SD_B_DAT2	SD2	GPIO2_IO17	IO	49	J11-25
99	JTAG_TDO	JTAG				J7-6
100	SD_B_DATA3	SD2	GPIO2_IO18	IO	50	J11-23

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