

Pin layout for Board Rev. 1.10

J1	Function	Device	GPIO	Mode	/sys/class/gpio/gpio#	PCoreBBDSDI V1.40
1	I2C_B_IRQ	GPIO	GPIO2_IO15	IO		J15-5/J13-26
2	GPIO_J1_2	GPIO	GPIO2_IO19	IO		J15-4
3	I2C_B_SCL ⁽¹⁾	I2C8	GPIO2_IO13	IO		J15-3/J13-27/J12-20/J22-20
4	I2C_A_SCL	I2C1	GPIO1_IO00	IO		J11-16
5	I2C_B_SDA ⁽¹⁾	I2C8	GPIO2_IO12	IO		J15-2/J13-25
6	I2C_A_SDA	I2C1	GPIO1_IO01	IO		J11-17
7	GPIO_J1_7	GPIO	GPIO2_IO14	IO		J13-28
8	GND					
9	DISP_BL_EN ⁽⁵⁾	GPIO	P0_5 (Exp.)	IO		J14-2
10	CAN_A_RX	CAN-FD	GPIO1_IO09	IO		J11-24/(J7-3)
11	DISP_BL_PWM	TPM5	GPIO2_IO18	IO		J14-3
12	CAN_A_TX	CAN-FD	GPIO1_IO08	IO		J11-26/(J7-4)
13	DISP_VDD_EN ⁽⁵⁾	GPIO	P0_5 (Exp.)	IO		J14-1
14	UART_A_RTS	UART7	GPIO2_IO11	IO		J11-36
15	GND					
16	UART_A_CTS	UART7	GPIO2_IO10	IO		J11-38
17	DSI_CLK_P	MIPI-DSI1				J13-9
18	UART_A_RXD ⁽⁴⁾	UART7	GPIO2_IO09	IO		(J9-3)
19	DSI_CLK_N	MIPI-DSI1		IO		J13-8
20	UART_A_TXD	UART7	GPIO2_IO08	IO		(J9-5)
21	GND			IO		
22	UART_B_BT_RTS ⁽²⁾	UART6	GPIO2_IO07	IO		(J10-4)
23	DSI_D0_P	MIPI-DSI1				J13-2
24	UART_B_BT_CTS ⁽²⁾	UART6	GPIO2_IO06	IO		(J10-6)
25	DSI_D0_N	MIPI-DSI1				J13-1
26	UART_B_BT_RXD ^{(2) (4)}	UART6	GPIO2_IO05	IO		(J10-3)
27	GND					
28	UART_B_BT_TXD ⁽²⁾	UART6	GPIO2_IO04	IO		(J10-5)
29	DSI_D1_P	MIPI-DSI1				J13-4
30	UART_C_RXD ⁽⁴⁾	UART1	GPIO1_IO04	IO		(J8-3)
31	DSI_D1_N	MIPI-DSI1				J13-3
32	UART_C_TXD	UART1	GPIO1_IO05	IO		(J8-5)
33	GND					
34	UART_D_RXD ⁽⁴⁾	UART2	GPIO1_IO06	IO		J11-15
35	DSI_D2_P	MIPI-DSI1				J13-6
36	UART_D_TXD	UART2	GPIO1_IO07	IO		J11-13
37	DSI_D2_N	MIPI-DSI1				J13-5
38	GND					
39	GND					
40	I2C_C_SCL ⁽¹⁾	I2C5	GPIO2_IO23	IO		J18-30
41	DSI_D3_P	MIPI-DSI1				J13-11
42	I2C_C_SDA ⁽¹⁾	I2C5	GPIO2_IO22	IO		J18-32
43	DSI_D3_N	MIPI-DSI1				J13-10

J1	Function	Device	GPIO	Mode	/sys/class/gpio/gpio#	PCoreBBDSDI V1.40
44	GPIO_J1_44 ⁽⁵⁾	GPIO	P1_6(Exp.) / GPIO2_IO25 ⁽²⁾	IO		TP30
45	GND					
46	GPIO_J1_46 ⁽⁵⁾	GPIO	P1_7(Exp.) / GPIO2_IO27 ⁽²⁾	IO		TP31
47	LVDS_CLK_P	LVDS				J13-21
48	I2C_D_SCL ⁽¹⁾	I2C2	GPIO1_IO02	IO		
49	LVDS_CLK_N	LVDS				J13-20
50	I2C_D_SDA ⁽¹⁾	I2C2	GPIO1_IO03	IO		
51	GND					
52	GPIO_J1_52 ⁽⁵⁾	GPIO	P0_7(Exp.)	IO		J11-18
53	LVDS_D0_P	LVDS				J13-13
54	GPIO_J1_54 ⁽⁵⁾	GPIO	P1_0(Exp.)	IO		J11-8
55	LVDS_D0_N	LVDS				J13-12
56	SPI_B_SS0	LPSP11	GPIO1_IO11	IO		J11-4
57	GND					
58	SPI_B_MISO	LPSP11	GPIO1_IO12	IO		J11-5
59	LVDS_D1_P	LVDS				J13-16
60	SPI_B_MOSI	LPSP11	GPIO1_IO14	IO		J11-6
61	LVDS_D1_N	LVDS				J13-15
62	SPI_B_SCLK	LPSP11	GPIO1_IO13	IO		J11-3
63	GND					
64	SPI_A_CS0	LPSP16	GPIO2_IO00	IO		J23-5
65	LVDS_D2_P	LVDS				J13-19
66	SPI_A_MISO ⁽⁶⁾	LPSP16	GPIO2_IO01	IO	152	J23-4
67	LVDS_D2_N	LVDS				J13-18
68	SPI_A_MOSI ⁽⁶⁾	LPSP16	GPIO2_IO02	IO	151	J23-3
69	GND					
70	SPI_A_SCLK	LPSP16	GPIO2_IO03	IO	150	J23-2
71	LVDS_D3_P	LVDS				J13-23
72	GND					
73	LVDS_D3_N	LVDS				J13-22
74	CSI_CLK_P	MIPI-CSI1				J12-8
75	GND					
76	CSI_CLK_N	MIPI-CSI1				J12-9
77	MPCIE_CTX_P ⁽⁷⁾	PCIE				
78	GND					
79	MPCIE_CTX_N ⁽⁷⁾	PCIE				
80	CSI_DATA0_P	MIPI-CSI1				J12-14
81	GND					
82	CSI_A_D0_N	MIPI-CSI1				J12-15
83	MPCIE_CRX_P ⁽⁷⁾	PCIE				
84	GND					
85	MPCIE_CRX_N ⁽⁷⁾	PCIE				
86	CSI_D1_P	MIPI-CSI1				J12-11

J1	Function	Device	GPIO	Mode	/sys/class/gpio/gpio#	PCoreBBDSDI V1.40
87	GND					
88	CSI_D1_N	MIPI-CS11				J12-12
89	MPCIE_CLK_P ⁽⁷⁾	PCIE				
90	GND					
91	MPCIE_CLK_N ⁽⁷⁾	PCIE				
92	CSI_A_DATA2_P ⁽⁷⁾	MIPI-CS11				
93	GND					
94	CSI_A_DATA2_N ⁽⁷⁾	MIPI-CS11				
95	MPCIE_PERST ⁽⁷⁾	GPIO				
96	GND					
97	MPCIE_WAKE ⁽⁷⁾	GPIO				
98	CSI_A_DATA3_P ⁽⁷⁾	MIPI-CS11				
99	GND					
100	CSI_A_DATA3_N ⁽⁷⁾	MIPI-CS11				

- (1) Onboard Pull-Up 2.49k
- (2) Optional, see hardware documentation
- (3) Used internally
- (4) Onboard Pull-Up 100k
- (5) GPIO expander
- (6) Exchanged MISO and MOSI
- (7) Not connected

Pin layout for Board Rev. 1.10

J2	Function	Device	GPIO	Mode	/sys/class/gpio/gpio#	PCoreBBDSI V1.40
1	ETH_A_D1P	ETH_A				
2	VDD_AU_EXT	AUDIO				
3	ETH_A_D1N	ETH_A				
4	AU_GND	AUDIO				
5	ETH_A_D2P	ETH_A				
6	AU_LOUT_L ⁽²⁾	AUDIO				J11-49
7	ETH_A_D2N	ETH_A				
8	AU_LOUT_R ⁽²⁾	AUDIO				J11-45
9	ETH_A_D3P	ETH_A				
10	AU_MIC ⁽²⁾	AUDIO				J11-41
11	ETH_A_D3N	ETH_A				
12	AU_LIN_L ⁽²⁾	AUDIO				J11-48
13	ETH_A_D4P	ETH_A				
14	AU_LIN_R	AUDIO				J11-44
15	ETH_A_D4N	ETH_A				
16	GND					
17	ETH_A_LED ⁽²⁾⁽⁵⁾	ETH_A	P0_1(Exp.)	IO		
18	AU_HP_L ⁽²⁾⁽³⁾	AUDIO	GPIO2_IO21	IO		(J4-2)
19	GND					
20	AU_HP_R ⁽²⁾⁽³⁾	AUDIO	GPIO2_IO20	IO		(J4-3)
21	ETH_B_LED ⁽²⁾⁽⁵⁾	ETH_B	GPIO2_IO29	IO		
22	AU_HP_GND	AUDIO				
23	ETH_B_D1P ⁽²⁾	ETH_B				
24	+V5S					
25	ETH_B_D1N ⁽²⁾	ETH_B				
26	+V5S					
27	ETH_B_D2P ⁽²⁾	ETH_B				
28	+V5S					
29	ETH_B_D2N ⁽²⁾	ETH_B				
30	GND					
31	ETH_B_D3P ⁽²⁾	ETH_B				
32	GND					
33	ETH_B_D3N ⁽²⁾	ETH_B				
34	GND					
35	ETH_B_D4P ⁽²⁾	ETH_B				
36	VDD_VBAT					
37	ETH_B_D4N ⁽²⁾	ETH_B				
38	Reserved	NC				
39	GND					
40	VDD_V3.3					
41	USB_HOST_VBUS	USB2				
42	RESETIn					
43	USB_HOST_DP	USB2				
44	PMIC_STBY					

J2	Function	Device	GPIO	Mode	/sys/class/gpio/gpio#	PCoreBBDSI V1.40
45	USB_HOST_DN	USB2				
46	PMIC_ON_REQ					
47	USB_HOST_PWRn ⁽⁶⁾	GPIO	P0_2(Exp.)	IO		
48	ON_OFF					
49	GND					
50	BOOTSEL					
51	USB_OTG_VBUS	USB1				
52	SD_A_VCC ⁽⁶⁾	1V8/3V3				
53	USB_OTG_PWRn	GPIO	P0_3(Exp.)	IO		
54	SD_A_VSEL	SD2	GPIO3_IO019	IO		
55	USB_OTG_ID	USB1				TP25
56	SD_A_RST	SD2	GPIO3_IO07	IO		
57	USB_OTG_DP	USB1				
58	SD_A_WP					
59	USB_OTG_DN	USB1				
60	SD_A_CD	SD2	GPIO3_IO00	IO		
61	GND					
62	SD_A_CMD	SD2	GPIO3_IO02	IO		
63	PWM	TPM3	GPIO2_IO24	IO		J11-34
64	SD_A_CLK	SD2	GPIO3_IO01	IO		
65	GPIO_J2_65	GPIO	P1_1(Exp.)	IO		J11-10
66	SD_A_D0	SD2	GPIO3_IO03	IO		
67	GPIO_J2_67	GPIO	P1_2(Exp.)	IO		J11-12
68	SD_A_D1	SD2	GPIO3_IO04	IO		
69	GPIO_J2_69	GPIO	P1_3(Exp.)	IO		J11-14
70	SD_A_D2	SD2	GPIO3_IO05	IO		
71	GND					
72	SD_A_D3	SD2	GPIO3_IO06	IO		
73	MX93_ADC_0	ADC		I		J11-7
74	SD_A_D4					
75	MX93_ADC_1	ADC		I		J11-9
76	SD_A_D5					
77	MX93_ADC_2	ADC		I		TP27
78	SD_A_D6					
79	MX93_ADC_3	ADC		I		TP28
80	SD_A_D7					
81	GND					
82	GND					
83	GPIO_J2_83	GPIO	P1_4(Exp.)	IO		
84	MX93_CLKIN1 ⁽⁶⁾	CLK		O		J11-35
85	GPIO_J2_85	GPIO	P1_5(Exp.)	IO	144	
86	MX93_CLKIN1 ⁽⁶⁾	CLK		O		J11-33
87	TAMPER0			I		J11-6
88	SD_B_CD					

J2	Function	Device	GPIO	Mode	/sys/class/gpio/gpio#	PCoreBBDISI V1.40
89	TAMPER1			I		J11-3
90	SD_B_CMD ⁽²⁾	SD3	GPIO3_IO21	IO		J11-31
91	GND					
92	SD_B_CLK ⁽²⁾	SD3	GPIO3_IO20	IO		J11-30
93	JTAG_TCK	JTAG	GPIO3_IO30	IO		
94	SD_B_DATA0 ⁽²⁾	SD3	GPIO3_IO22	IO		J11-29
95	JTAG_TMS	JTAG	GPIO3_IO29	IO		
96	SD_B_DATA1 ⁽²⁾	SD3	GPIO3_IO23	IO		J11-28
97	JTAG_TDI	JTAG	GPIO3_IO28	IO		
98	SD_B_DAT2 ⁽²⁾	SD3	GPIO3_IO24	IO		J11-25
99	JTAG_TDO	JTAG	GPIO3_IO31	IO		
100	SD_B_DATA3 ⁽²⁾	SD3	GPIO3_IO25	IO		J11-23

- (1) Onboard Pull-Up 2.49k
- (2) Optional, see hardware documentation
- (3) Used internally
- (4) Onboard Pull-Up 100k
- (5) Onboard Pull-Up 10k
- (6) Depends on level of SD_A_VSEL, low = 3.3V, high = 1V8, default: 3.3V