PicoCoreMX6UL GPIO Reference Card V1.3 22.03.2024

Pin layout for Board Rev. 1.1x, 1.2x

J1	Function	Device	GPIO	Mode	/sys/class/gpio/gpio#	PcoreBBRGB 1.20
1	GPIO_J1_1(1)	GPIO	GPIO4_IO12	IO	108	J10_33
2	GPIO_J1_2(1)	GPIO	GPIO4_IO11	IO	107	J10_29
3	GPIO_J1_3(1)	GPIO	GPIO4_IO15	IO	111	J10_35
4	GPIO_J1_4(1)	GPIO	GPIO4_IO13	IO	109	J10_31
5	UART_B_RXD	UART3	GPIO1_IO25	IO	25	(J8_3)
6	UART_A_RXD	UART1	GPIO1_IO17	IO	17	(J7_3)
7	UART_B_TXD	UART3	GPIO1_IO24	IO	24	(J8_5)
8	UART_A_TXD	UART1	GPIO1_IO16	IO	16	(J7_5)
9	UART_C_CTS	UART5	GPIO4_IO23	IO	119	J9_6
10	CAN_A_RX	FLEXCAN2	GPIO1_IO23	IO	23	(J6_3 / J6_4)
11	UART_C_RTS	UART5	GPIO4_IO24	IO	120	J9_4
12	CAN_A_TX	FLEXCAN2	GPIO1_IO22	IO	22	(J6_3 / J6_4)
13	UART_C_RXD	UART5	GPIO4_IO22	IO	118	J9_3
14	SPI_A_SS0	SPI2	GPIO1_IO29	IO	29	J10_14
15	UART_C_TXD	UART5	GPIO4_IO21	IO	117	J9_5
16	SPI_A_MISO	SPI2	GPIO1_IO31	IO	31	J10_17
17	UART_D_RXD	UART6	GPIO4_IO18	IO	114	J10_15
18	SPI_A_MOSI	SPI2	GPIO1_IO31	IO	31	J10_16
19	UART_D_TXD	UART6	GPIO4_IO17	IO	113	J10_13
20	SPI_A_SCLK	SPI2	GPIO1_IO28	IO	28	J10_12
21	I2C_A_SCL	I2C2	GPIO4_IO20	IO	116	
22	GPIO_J1_22	GPIO	GPIO4_IO25	IO	121	J10_5
23	I2C_A_SDA	I2C2	GPIO4_IO19	IO	115	
24	GPIO_J1_24	GPIO	GPIO4_IO26	IO	122	J10_3
25	GPIO_J1_25	GPIO	GPIO4_IO28	IO	124	J10_26
26	GPIO_J1_26	GPIO	GPIO4_IO27	IO	123	J10_4
27	GPIO_J1_27	GPIO	GPIO5_IO05	IO	133	J10_25
28	GPIO_J1_28	GPIO	GPIO5_IO04	IO	132	J14_5
29	GPIO_J1_29	GPIO	GPIO4_IO16	IO	112	J10_24
30	GPIO_J1_30	GPIO	GPIO5_IO06	IO	134	J10_6
31	GPIO_J1_31	GPIO	GPIO1_IO26	IO	26	J10_23
32	GPIO_J1_32	GPIO	GPIO1_IO27	IO	27	J10_7
33						
34						
35						
36						
37						
38						
39	I2C_B_IRQ	GPIO	GPIO5_IO00	IO	128	J11_5 / J14_49
40						
41	I2C_B_SCL	I2C4	GPIO1_IO20	IO	20	J11_3 / J14_50
42	PMIC_ON_REQ					
43	I2C_B_SDA	I2C4	GPIO1_IO21	IO	21	J11_2 / J14_48
44	ON_OFF					
45	GND					
46	GND					
47	LCD_R0	LCDIF	GPIO3_IO05	IO	69	J14_12
48	BKLT_PWM	BKLT	GPIO1_IO08	IO	8	J14_1
49	LCD_R1	LCDIF	GPIO3_IO06	IO	70	J14_11
50	LCD_PCLK	LCDIF	GPIO3_IO00	IO	64	J14_20
51	LCD_R2	LCDIF	GPIO3_IO07	IO	71	J14_24
52	GND					
53	LCD_R3	LCDIF	GPIO3_IO08	IO	72	J14_25
54	VLCD_EN	VLCD	GPIO3_IO04	IO	68	
55	LCD_R4	LCDIF	GPIO3_IO09	IO	73	J14_26
56	LCD_DE	LCDIF	GPIO3_IO01	IO	65	J14_45
57	LCD_R5	LCDIF	GPIO3_IO10	IO	74	J14_29
58	LCD_HSYNC	LCDIF	GPIO3_IO02	IO	66	J14_21
59	LCD_R6	LCDIF	GPIO3_IO11	IO	75	J14_28
60	LCD_VSYNC	LCDIF	GPIO3_IO03	IO	67	J14_22
61	LCD_R7	LCDIF	GPIO3_IO12	IO	76	J14_29
62	GND					
63	GND					
64	LCD_B0	LCDIF	GPIO3_IO21	IO	85	J14_16
65	LCD_G0	LCDIF	GPIO3_IO13	IO	77	J14_13
66	LCD_B1	LCDIF	GPIO3_IO22	IO	86	J14_15
67	LCD_G1	LCDIF	GPIO3_IO14	IO	78	J14_14
68	LCD_B2	LCDIF	GPIO3_IO23	IO	87	J14_38
69	LCD_G2	LCDIF	GPIO3_IO15	IO	79	J14_31
70	LCD_B3	LCDIF	GPIO3_IO24	IO	88	J14_39
71	LCD_G3	LCDIF	GPIO3_IO16	IO	80	J14_32
72	LCD_B4	LCDIF	GPIO3_IO25	IO	89	J14_40
73	LCD_G4	LCDIF	GPIO3_IO17	IO	81	J14_33
74	LCD_B5	LCDIF	GPIO3_IO26	IO	90	J14_41
75	LCD_G5	LCDIF	GPIO3_IO18	IO	82	J14_34
76	LCD_B6	LCDIF	GPIO3_IO27	IO	91	J14_42
77	LCD_G6	LCDIF	GPIO3_IO19	IO	83	J14_35
78	LCD_B7	LCDIF	GPIO3_IO28	IO	92	J14_43
79	LCD_G7	LCDIF	GPIO3_IO20	IO	84	J14_36
80	GND					

(1) GPIO only available if NAND is not equipped

Remark: The GPIO Reference Card is a software development tool. It just lists the numbers needed for accessing GPIO ports in Linux. Please refer to the PicoCoreMX6UL Hardware Documentation for hardware development.

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J2	Function	Device	GPIO	Mode	/sys/class/gpio/gpio#	PcoreBBRGB 1.20
1	ETH_A_D1P	ETH1				
2	+V5S					
3	ETH_A_D1N	ETH1				
4	+V5S					
5	ETH_A_D2P	ETH1				
6	+V5S					
7	ETH_A_D2N	ETH1				
8	GND					
9						
10	GND					
11						
12	GND					
13						
14	ETH_A_LEDn	ETH1				
15						
16	ETH_B_LEDn	ETH2				
17	GND					
18	JTAG_TCK / (I2S_DIN)(2)	JTAG / AUDIO	GPIO1_IO14	IO	14	J17_4
19	ETH_B_D1P	ETH2				
20	JTAG_TMS / (I2S_MCLK)(2)	JTAG / AUDIO	GPIO1_IO11	IO	11	J17_2
21	ETH_B_D1N	ETH2				
22	JTAG_TDI / (I2S_SCLK)(2)	JTAG / AUDIO	GPIO1_IO13	IO	13	J17_8
23	ETH_B_D2P	ETH2				
24	JTAG_TDO / (I2S_LRCLK)(2)	JTAG / AUDIO	GPIO1_IO12	IO	12	J17_6
25	ETH2_D2N	ETH2				
26	SD_A_VCC	SD1				
27						
28	SD_A_VSEL	SD1	GPIO5_IO01	IO	129	
29						
30	/SD_A_RST	SD1	GPIO1_IO09	IO	9	
31						
32	SD_A_WP	SD1	GPIO1_IO18	IO	18	
33						
34	SD_A_CD	SD1	GPIO1_IO19	IO	19	
35	GND					
36	SD_A_CMD	SD1	GPIO2_IO16	IO	48	J12_3
37	USB_OTG_VBUS	USB_OTG1				
38	SD_A_CLK	SD1	GPIO2_IO17	IO	49	J12_5

J2	Function	Device	GPIO	Mode	/sys/class/gpio/gpio#	PcoreBBRGB 1.20
39	USB_OTG_PWRn	USB_OTG1	GPIO5_IO03	IO	131	J2_1
40	SD_A_DATA0	SD1	GPIO2_IO18	IO	50	J12_7
41	USB_OTG_ID	USB_OTG1	GPIO1_IO00	IO	0	J4_4
42	SD_A_DATA1	SD1	GPIO2_IO19	IO	51	J12_8
43	USB_OTG_DP	USB_OTG1				J4_3
44	SD_A_DATA2	SD1	GPIO2_IO20	IO	52	J12_1
45	USB_OTG_DN	USB_OTG1				J4_2
46	SD_A_DATA3	SD1	GPIO2_IO21	IO	53	J12_2
47	GND					
48	VDD_VBAT					
49						
50	VDD_SNVS					
51						
52	+V3.3S					
53						
54	/RESETIN					
55						
56	PMIC_STBY					
57	GND					
58						
59	USB_H_VBUS	USB_OTG2				
60						
61	USB_H_DN	USB_OTG2				
62	ADC_H	GPIO	GPIO1_IO04	IO	4	
63	USB_H_DP	USB_OTG2				
64	ADC_G	GPIO	GPIO1_IO02	IO	2	
65	USB_H_PWRn	USB_OTG2	GPIO5_IO02	IO	130	
66	ADC_F	GPIO	GPIO1_IO03	IO	3	
67	AUDIO_A_VCC	AUDIO				
68	ADC_E	GPIO	GPIO1_IO01	IO	1	
69	AUDIO_A_GND	AUDIO				
70						
71	AUDIO_A_OUT_L	AUDIO				
72	BOOTSEL					
73	AUDIO_A_OUT_R	AUDIO				
74	GND					
75	AUDIO_A_ MIC	AUDIO				
76	AUDIO_A_ HP_L	AUDIO				
77	AUDIO_A_LIN_L	AUDIO				
78	AUDIO_A_ HP_R	AUDIO				
79	AUDIO_A_LIN_R	AUDIO				

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J2	Function	Device	GPIO	Mode	/sys/class/gpio/gpio#	PcoreBBRGB 1.20
80	AUDIO_A_HP_GND					

(2) JTAG is default, Audio is only available as a hardware option

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