QBlissA9r2 GPIO Reference Card V1.1 20.03.2020

Board Rev 1.00+1.10

Main Connector (Goldfinger)

Pin	Function	Device	GPIO	/sys/class/gpio/gpio#
1	GND			
2	GND			
3	ETH_A_MDI3_N	ETH	-	-
4	ETH_A_MDI2_N	ETH	-	-
5	ETH_A_MDI3_P	ETH	-	-
6	ETH_A_MDI2_P	ETH	-	-
7	ETH_A_LINK100#	ETH	-	-
8	ETH_A_LINK1000#	ETH	-	-
9	ETH_A_MDI1_N	ETH	-	-
10	ETH_A_MDI0_N	ETH	-	-
11	ETH_A_MDI1_P	ETH	-	-
12	ETH_A_MDI0_P	ETH	-	-
13	ETH_A_LINK#	ETH	-	-
14	ETH_A_ACT#	ETH	-	-
15	-	-	-	-
16	SUS_S5#/PMIC_ON	Power	GPIO3_IO01	65
17	WAKE#	Power	GPIO3_IO09	73
18	SUS_S3#/PMIC_STBY	Power	GPIO3_IO00	64
19	SUS_STAT#	Power	GPIO3_IO02	66
20	PWR_BTN#	Power	GPIO3_IO03	67
21	SLP_BTN#	Power	GPIO3_IO05	69
22	LID_BTN#	Power	GPIO3_IO04	68
23	GND			
24	GND			
25	GND			
26	PWGIN	Power	-	-
27	BATLOW#	Power	GPIO3_IO06	70
28	RST_BTN#	Power	-	-
29	SATA_A_TX_P	SATA	-	-
30	-	-	-	-
31	SATA_A_TX_N	SATA	-	-
32	-	-	-	-
33	SATA_ACT#	SATA	GPIO3_IO13	77
34	GND			
35	SATA_A_RX_P	SATA	-	-
36	-	-	-	-
37	SATA_A_RX_N	SATA	-	-
38	-	-	-	-
39	GND			
40	GND			
41	BOOT_ALT#	BOOT	-	-
42	SD_A_CLK#	SD	GPIO1_IO10	10
43	SD_A_CD#	SD	GPIO1_IO04	4
44	-	-	-	-
45	SD_A_CMD	SD	GPIO1_IO11	11
46	SD_A_WP	SD	GPIO1_IO02	2
47	SD_A_PWR#	SD	GPIO3_IO14	78
48	SD_A_DAT1	SD	GPIO1_IO14	14
49	SD_A_DAT0	SD	GPIO1_IO15	15
50	SD_A_DAT3	SD	GPIO1_IO12	12
51	SD_A_DAT2	SD	GPIO1_IO13	13
52	-	-	-	-
53	-	-	-	-
54	-	-	-	-
55	-	-	-	-
56	USB_OTG_PWR	USB	GPIO3_IO22	86
57	GND			
58	GND			
59	AC97_SYNC/I2S_TXFS	Audio	GPIO5_IO16	144
60	I2C_B_SCL	I2C	GPIO4_IO12	108
61	AC97_RST#/I2S_RST#	Audio	GPIO5_IO12	140
62	I2C_B_SDA	I2C	GPIO4_IO13	109
63	AC97_BITCLK/I2S_CLK	Audio	GPIO5_IO14	142
64	I2C_B_IRQ#	I2C	GPIO1_IO30	30
65	AC97_SDI/I2S_DIN	Audio	GPIO5_IO17	145
66	I2C_A_SCL	I2C	GPIO1_IO03	3
67	AC97_SDO/I2S_DOUT	Audio	GPIO5_IO15	143
68	I2C_A_SDA	I2C	GPIO7_IO11	203
69	THRM#	GPIO	GPIO3_IO07	71
70	WDTRIG#	GPIO	GPIO3_IO11	75

QBlissA9r2 GPIO Reference Card V1.1 20.03.2020

Pin	Function	Device	GPIO	/sys/class/gpio/gpio#
71	THRMTRIP#	GPIO	GPIO3_IO08	72
72	WDOUT	GPIO	GPIO3_IO10	74
73	GND			
74	GND			
75	-	-	-	-
76	-	-	-	-
77	-	-	-	-
78	-	-	-	-
79	-	-	-	-
80	USB_E_F_OC#	USB	-	-
81	-	-	-	-
82	USB_E_DN	USB	-	-
83	-	-	-	-
84	USB_E_DP	USB	-	-
85	USB_C_D_OC#	USB	-	-
86	USB_A_B_OC#	USB	-	-
87	USB_D_DN	USB	-	-
88	USB_C_DN	USB	-	-
89	USB_D_DP	USB	-	-
90	USB_C_DP	USB	-	-
91	USB_OTG_VBUS	USB	-	-
92	USB_OTG_ID	USB	GPIO1_IO24	24
93	USB_OTG_DN	USB	-	-
94	USB_A_DN	USB	-	-
95	USB_OTG_DP	USB	-	-
96	USB_A_DP	USB	-	-
97	GND			
98	GND			
99	LVDS_A_DATA0_P	LVDS	-	-
100	LVDS_B_DATA0_P	LVDS	-	-
101	LVDS_A_DATA0_N	LVDS	-	-
102	LVDS_B_DATA0_N	LVDS	-	-
103	LVDS_A_DATA1_P	LVDS	-	-
104	LVDS_B_DATA1_P	LVDS	-	-
105	LVDS_A_DATA1_N	LVDS	-	-
106	LVDS_B_DATA1_N	LVDS	-	-
107	LVDS_A_DATA2_P	LVDS	-	-

Pin	Function	Device	GPIO	/sys/class/gpio/gpio#
108	LVDS_B_DATA2_P	LVDS	-	-
109	LVDS_A_DATA2_N	LVDS	-	-
110	LVDS_B_DATA2_N	LVDS	-	-
111	LVDS_PPEN	LVDS	GPIO2_IO11	43
112	LVDS_BLEN	LVDS	GPIO2_IO08	40
113	LVDS_A_DATA3_P	LVDS	-	-
114	LVDS_B_DATA3_P	LVDS	-	-
115	LVDS_A_DATA3_N	LVDS	-	-
116	LVDS_B_DATA3_N	LVDS	-	-
117	GND			
118	GND			
119	LVDS_A_CLK_P	LVDS	-	-
120	LVDS_B_CLK_P	LVDS	-	-
121	LVDS_A_CLK_N	LVDS	-	-
122	LVDS_B_CLK_N	LVDS	-	-
123	LVDS_BLT_CTRL	LVDS / PWM	GPIO2_IO09	41
124	HDMI_CEC	HDMI	GPIO5_IO02	130
125	LVDS_DID_DAT	LVDS / I2C	GPIO2_IO15	47
126	LVDS_BLC_DAT	LVDS / I2C	GPIO5_IO08	136
127	LVDS_DID_CLK	LVDS / I2C	GPIO2_IO14	46
128	LVDS_BLC_CLK	LVDS / I2C	GPIO5_IO09	137
129	CAN_A_TX	CAN	GPIO4_IO10	106
130	CAN_A_RX	CAN	GPIO4_IO11	107
131	HDMI_CLK_P	HDMI/DVI	-	-
132	-	-	-	-
133	HDMI_CLK_N	HDMI/DVI	-	-
134	-	-	-	-
135	GND			
136	GND			
137	HDMI_DATA1_P	HDMI/DVI	-	-
138	-	-	-	-
139	HDMI_DATA1_N	HDMI/DVI	-	-
140	-	-	-	-
141	GND			
142	GND			
143	HDMI_DATA0_P	HDMI/DVI	-	-
144	-	-	-	-

QBlissA9r2 GPIO Reference Card V1.1 20.03.2020

Pin	Function	Device	GPIO	/sys/class/gpio/gpio#
145	HDMI_DATA0_N	HDMI/DVI	-	-
146	-	-	-	-
147	GND			
148	GND			
149	HDMI_DATA2_P	HDMI/DVI	-	-
150	HDMI_CTRL_DAT	HDMI/DVI / I2C	GPIO5_IO10	138
151	HDMI_DATA2_N	HDMI/DVI	-	-
152	HDMI_CTRL_CLK	HDMI/DVI / I2C	GPIO5_IO11	139
153	HDMI_HPD#	HDMI/DVI	-	-
154	-	-	-	-
155	PCIE_CLK_P	PCIE	-	-
156	PCIE_WAKE#	PCIE	GPIO6_IO16	176
157	PCIE_CLK_N	PCIE	-	-
158	PCIE_RST#	PCIE	GPIO6_IO14	174
159	GND			
160	GND			
161	UART_D_RXD(1)	UART	GPIO3_IO25(1)	89(1)
162	UART_D_CTS(1)	UART	GPIO3_IO31(1)	95(1)
163	UART_D_TXD(1)	UART	GPIO3_IO24(1)	88(1)
164	UART_D_RTS(1)	UART	GPIO3_IO30(1)	94(1)
165	GND			
166	GND			
167	-	-	-	-
168	-	-	-	-
169	-	-	-	-
170	-	-	-	-
171	UART_A_TXD	UART	GPIO3_IO26	90
172	UART_A_RTS	UART	GPIO3_IO28	92
173	-	-	-	-
174	-	-	-	-
175	-	-	-	-
176	-	-	-	-
177	UART_A_RXD	UART	GPIO3_IO27	91
178	UART_A_CTS	UART	GPIO3_IO29	93
179	PCIE_A_TX_P	PCIE	-	-
180	PCIE_A_RX_P	PCIE	-	-
181	PCIE_A_TX_N	PCIE	-	-

Pin	Function	Device	GPIO	/sys/class/gpio/gpio#
182	PCIE_A_RX_N	PCIE	-	-
183	GND			
184	GND			
185	UART_C_RXD	UART	GPIO4_IO09	105
186	UART_C_TXD	UART	GPIO4_IO08	104
187	UART_C_CTS	UART	GPIO4_IO14	110
188	UART_C_RTS	UART	GPIO4_IO15	111
189	-	-	-	-
190	-	-	-	-
191	-	-	-	-
192	-	-	-	-
193	VCC_RTC	Power	-	-
194	SPKR	PWM	GPIO4_IO29	125
195	FAN_TACHOIN	GPIO	GPIO3_IO12	76
196	FAN_PWMOUT	PWM	GPIO2_IO10	42
197	GND			
198	GND			
199	SPI_A_MOSI	SPI	GPIO2_IO24	56
200	SPI_A_CS0#	SPI	GPIO2_IO26	58
201	SPI_A_MISO	SPI	GPIO2_IO25	57
202	SPI_A_CS1#	SPI	GPIO2_IO27	59
203	SPI_A_SCK	SPI	GPIO2_IO23	55
204	-	-	-	-
205	VCC_5V_SB	Power	-	-
206	VCC_5V_SB	Power	-	-
207	-	-	-	-
208	UART_B_RXD	UART	GPIO4_IO07	105
209	UART_B_TXD	UART	GPIO4_IO06	104
210	-	-	-	-
211	-	-	-	-
212	-	-	-	-
213	-	-	-	-
214	-	-	-	-
215	-	-	-	-
216	-	-	-	-
217	-	-	-	-
218	-	-	-	-

QBlissA9r2 GPIO Reference Card V1.1 20.03.2020

Pin	Function	Device	GPIO	/sys/class/gpio/gpio#
219	VCC	Power		
220	VCC	Power		
221	VCC	Power		
222	VCC	Power		
223	VCC	Power		
224	VCC	Power		
225	VCC	Power		
226	VCC	Power		
227	VCC	Power		
228	VCC	Power		
229	VCC	Power		
230	VCC	Power		

(1) If WLAN/Bluetooth is not equipped, pins 161-164 can also be used as an additional UART_D. This is a hardware option.

Remark

The GPIO Reference Card is a software development tool. It lists the numbers needed for accessing GPIO ports in Linux under `/sys/class/gpio`. Pin names are given from the software point of view. Ports are numbered with letters A, B, C while in the Qseven standard they are numbered with digits 0, 1, 2. This is to stay consistent between different F&S board families. All comments and configuration options in Linux use these letters, too, for example in the device tree. Please refer to the QBlissA9r2 Hardware Documentation for hardware development.