NetDCUA9 GPIO Reference Card V1.0 10.11.2017

Pin Layout for Board Rev. 1.10

Power/Networking Connector J1

J1	Function	Device	Mode	GPIO	/sys/class/gpio/gpio#	SINTF14
1	ETH_A_RX+	ETH	-	-	-	J1B_3
2	ETH_A_RX-	ETH	-	-	-	J1B_5
3	UART_A_RTS(1)	UART	O (IO)	GPIO2_IO14	46	J1F_A_7
4	UART_A_RXD(2)	UART	I (IO)	GPIO2_IO12	44	J1F_A_2
5	UART_A_CTS(2)	UART	I (IO)	GPIO2_IO13	45	J1F_A_8
6	UART_A_TXD(1)	UART	O (IO)	GPIO2_IO15	47	J1F_A_3
7	ETH_A_TX+	ETH	-	-	-	J1B_1
8	ETH_A_TX-	ETH	-	-	-	J1B_2
9	V5 (output)					
10	GND					
11	CAN_A_TX(3)	CAN	IO	GPIO4_IO14	110	(J1D_3/4)
12	CAN_A_RX(3)	CAN	IO	GPIO4_IO15	111	(J1D_3/4)
13	CAN_B_TX(3)	CAN	IO	GPIO4_IO10	106	(J1E_3/4)
14	CAN_B_RX(3)	CAN	IO	GPIO4_IO11	107	(J1E_3/4)
15	ETH_B_RX+	ETH	-	-	-	J1C_3
16	ETH_B_RX-	ETH	-	-	-	J1C_5
17	ETH_B_TX+	ETH	-	-	-	J1C_1
18	ETH_B_TX-	ETH	-	-	-	J1C_2
19	VCFL (input)					J1A_1
20	UART_C_RS485+	UART	-	-	-	-
21	V5 (input)					J1A_2
22	V5 (input)					J1A_2
23	VBAT (input)					J1A_3
24	UART_C_RS485-	UART	-	-	-	-
25	GND					J1A_4
26	GND					J1A_4

(1) If the RS232 level shifter is mounted, this pin can theoretically be used as General Purpose Output only and carries RS232 level then; if the level shifter is not mounted, it can be Input and Output and uses 3.3V level

(2) If the RS232 level shifter is mounted, this pin can theoretically be used as General Purpose Input only and expects RS232 level then; if the level shifter is not mounted, it can be Input and Output and uses 3.3V level

(3) Pin has internal level shifter and uses 5V level!

LCD Connector J3

J3	Function	Device	Mode	GPIO	/sys/class/gpio/gpio#	SINTF14
1	LCD_R0	LCD	IO	GPIO5_IO10	138	J3A_1
2	LCD_R1	LCD	IO	GPIO5_IO11	139	J3A_2
3	LCD_G0	LCD	IO	GPIO4_IO29	125	J3A_3
4	LCD_G1	LCD	IO	GPIO4_IO30	126	J3A_4
5	LCD_B0	LCD	IO	GPIO4_IO21	117	J3A_5
6	LCD_B1	LCD	IO	GPIO4_IO22	118	J3A_6
7	GND					
8	LCD_R3	LCD	IO	GPIO5_IO13	141	J3A_8
9	LCD_R2	LCD	IO	GPIO5_IO12	140	J3A_9
10	LCD_G7	LCD	IO	GPIO5_IO09	137	J3A_10
11	LCD_G6	LCD	IO	GPIO5_IO08	136	J3A_11
12	LCD_G5	LCD	IO	GPIO5_IO07	135	J3A_12
13	LCD_G4	LCD	IO	GPIO5_IO06	134	J3A_13
14	GND					
15	LCD_B5	LCD	IO	GPIO4_IO26	122	J3A_15
16	LCD_B4	LCD	IO	GPIO4_IO25	121	J3A_16
17	LCD_B3	LCD	IO	GPIO4_IO24	120	J3A_17
18	LCD_B2	LCD	IO	GPIO4_IO23	119	J3A_18
19	LCD_G3	LCD	IO	GPIO5_IO05	133	J3A_19
20	LCD_G2	LCD	IO	GPIO4_IO31	127	J3A_20
21	LCD_B7	LCD	IO	GPIO4_IO28	124	J3A_21
22	LCD_B6	LCD	IO	GPIO4_IO27	123	J3A_22
23	GND					
24	VEEK	BACKLIGHT	-	-	-	J3A_24
25	LCD_CLK	LCD	IO	GPIO4_IO16	112	J3A_25
26	LCD_VSYNC	LCD	IO	GPIO4_IO19	115	J3A_26
27	LCD_DE	LCD	IO	GPIO4_IO17	113	J3A_27
28	LCD_HSYNC	LCD	IO	GPIO4_IO18	114	J3A_28
29	LCD_DIGON	LCD	-	-	-	J3A_29
30	GND					
31	VLCD	LCD	-	-	-	J3A_31
32	-	-	-	-	-	J3A_32
33	-	-	-	-	-	J3A_33
34	GND	LCD				
35	-	-	-	-	-	J3A_35
36	VCFL	BACKLIGHT	-	-	-	J3A_36

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J3	Function	Device	Mode	GPIO	/sys/class/gpio/gpio#	SINTF14
37	LCD_R4	LCD	IO	GPIO5_IO14	142	J3A_37
38	LCD_R5	LCD	IO	GPIO5_IO15	143	J3A_38
39	LCD_R6	LCD	IO	GPIO5_IO16	144	J3A_39
40	LCD_R7	LCD	IO	GPIO5_IO17	145	J3A_40
41	GND					
42	GND					
43	-	-	-	-	-	J8_1
44	-	-	-	-	-	J8_2
45	-	-	-	-	-	J8_3
46	-	-	-	-	-	J8_13
47	-	-	-	-	-	J8_14
48	-	-	-	-	-	

FSBUS-Connector J4

J4	Function	Device	Mode	GPIO	/sys/class/gpio/gpio#	SINTF14
1	FSBUS_DATA0(1)	FSBUS	-	-	-	-
2	FSBUS_DATA1(1)	FSBUS	-	-	-	-
3	FSBUS_DATA2(1)	FSBUS	-	-	-	-
4	FSBUS_DATA3(1)	FSBUS	-	-	-	-
5	FSBUS_DATA4(1)	FSBUS	-	-	-	-
6	FSBUS_DATA5(1)	FSBUS	-	-	-	-
7	FSBUS_DATA6(1)	FSBUS	-	-	-	-
8	FSBUS_DATA7(1)	FSBUS	-	-	-	-
9	FSBUS_VCC(1)	FSBUS				-
10	FSBUS_RW(1)	FSBUS	O	GPIO2_IO26		-
11	FSBUS_CS(1)	FSBUS	O	GPIO2_IO23		-
12	FSBUS_ADE(1)	FSBUS	O	GPIO3_IO12		-
13	FSBUS_IRQ(1)	FSBUS	I	GPIO3_IO11		-
14	RESET_IN	RESET	-	-	-	-
15	PWM_A	PWM	O	GPIO2_IO10		-
16	GND					

(1) FSBUS may be configured for 3.3V (default) or 5V. This is a hardware option.

I/O-Connector J5

J5	Function	Device	Mode	GPIO	/sys/class/gpio/gpio#	SINTF14
1	EINT	GPIO	IO	GPIO3_IO10	74	J5A_1
2	ROW7	KEYBD	IO	GPIO6_IO06	166	J5A_2
3	ROW6	KEYBD	IO	GPIO2_IO16	48	J5A_3
4	ROW5	KEYBD	IO	GPIO2_IO17	49	J5A_4
5	ROW4	KEYBD	IO	GPIO2_IO18	50	J5A_5
6	ROW3	KEYBD	IO	GPIO2_IO19	51	J5A_6
7	ROW2	KEYBD	IO	GPIO2_IO20	52	J5A_7
8	ROW1	KEYBD	IO	GPIO2_IO21	53	J5A_8
9	ROW0	KEYBD	IO	GPIO2_IO22	54	J5A_9
10	SPI_MISO / COL8 / I2C_SDA	SPI / KEYBD / I2C	IO / IO / IO	GPIO5_IO24 GPIO1_IO06	152 / 152 / 6	J5A_10
11	SPI_MOSI / COL9 / I2C_SCL	SPI / KEYBD / I2C	IO / IO / IO	GPIO5_IO23 GPIO1_IO05	151 / 151 / 5	J5A_11
12	UART_B_RXD(2)	UART	I (IO)	GPIO4_IO07	103	J1F_B_2
13	SPI_CS0 / COL10	SPI / KEYBD	IO / IO	GPIO5_IO25	153	J5A_13
14	UART_B_TXD(1)	UART	O (IO)	GPIO4_IO06	102	J1F_B_3
15	SPI_CLK / COL11	SPI / KEYBD	IO / IO	GPIO5_IO22	150	J5A_15
16	GND					
17	COL7	KEYBD	IO	GPIO2_IO29	61	J5A_17
18	COL6	KEYBD	IO	GPIO2_IO28	60	J5A_18
19	COL5	KEYBD	IO	GPIO5_IO00	128	J5A_19
20	COL4	KEYBD	IO	GPIO6_IO31	191	J5A_20
21	COL3	KEYBD	IO	GPIO2_IO31	63	J5A_21
22	COL2	KEYBD	IO	GPIO2_IO30	62	J5A_22
23	COL1	KEYBD	IO	GPIO5_IO02	130	J5A_23
24	COL0	KEYBD	IO	GPIO5_IO04	132	J5A_24
25	V5					J5A_25
26	V3.3					J5A_26

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Audio/USB/Touch-Connector J7

J7	Function	Device	Mode	GPIO	/sys/class/gpio/gpio#	SINTF14
1	LINE_OUT_L	AUDIO	-	-	-	J7C_B5
2	LINE_OUT_R	AUDIO	-	-	-	J7C_B2
3	GND					
4	LINE_IN_L	AUDIO	-	-	-	J7C_A5
5	LINE_IN_R	AUDIO	-	-	-	J7C_A2
6	GND					
7	MIC_IN	AUDIO	-	-	-	J7C_C5
8	MIC_BIAS	AUDIO	-	-	-	-
9	UART_C_RXD(2) ADC_C	UART ADC	I (IO) -	GPIO4_IO09 -	105 -	J19_A2 J7A_5
10	UART_C_TXD(1) ADC_D	UART ADC	O (IO) -	GPIO4_IO08 -	104 -	J19_A3 J7A_6
11	ADC_A	ADC	-	-	-	J7A_3
12	ADC_B	ADC	-	-	-	J7A_4
13	V5.0_OUT					
14	GND					
15	TOUCH_X+	TOUCH	-	-	-	J7B_3
16	TOUCH_Y+	TOUCH	-	-	-	J7B_4
17	TOUCH_X-	TOUCH	-	-	-	J7B_5
18	TOUCH_Y-	TOUCH	-	-	-	J7B_6
19	V3.3_OUT					
20	GND					
21	USBH_DN	USB	-	-	-	J7D_2
22	USBH_DP	USB	-	-	-	J7D_3
23	USB_OTG_DN	USB	-	-	-	J7E_2
24	USB_OTG_DP	USB	-	-	-	J7E_3
25	USBH_VBUS	USB	-	-	-	J7D_1
26	USB_OTG_VBUS	USB	-	-	-	J7E_1

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LVDS-Connector J12

J12	Function	Device	Mode	GPIO	/sys/class/gpio/gpio#	SINTF14
1	VLCD_LVDS					-
2	VLCD_LVDS					-
3	GND					
4	GND					
5	LVDS_A_DATA0-	LVDS	-	-	-	-
6	LVDS_A_DATA0+	LVDS	-	-	-	-
7	GND					
8	LVDS_A_DATA1-	LVDS	-	-	-	-
9	LVDS_A_DATA1+	LVDS	-	-	-	-
10	GND					
11	LVDS_A_DATA2-	LVDS	-	-	-	-
12	LVDS_A_DATA2+	LVDS	-	-	-	-
13	GND					
14	LVDS_A_CLK-	LVDS	-	-	-	-
15	LVDS_A_CLK+	LVDS	-	-	-	-
16	GND					
17	LVDS_A_DATA3-	LVDS	-	-	-	-
18	LVDS_A_DATA3+	LVDS	-	-	-	-
19	GND					
20	GND					
21	GND					
22	GND					
23	VLCD_LVDS					-
24	VCFL_ON	LCD/LVDS	IO	GPIO2_IO08	40	(J3A_36)
25	BKLT_PWM	PWM	IO	GPIO2_IO09	41	(J3A_24)