

C12 Board Specification Sheet

Model No. C12 (Part No.:C12--778AC1--)

Main Feature:

- ◎ Support vertical refresh rate up to 75Hz for VGA~SXGA+ (1400X1050) and 60Hz for higher resolution of VESA standard timing
- ◎ Support Power Delivery (PD) sink mode : 5V/3A,9V/3A,15V/3A and 20V/3A
- ◎ Supply single pixel(24bits) or dual pixel(48bits) digital RGB output
- ◎ Compatible with VGA up to Full HD (1920x1200) LCD panel
- ◎ Support stereo audio amplifier function: 2Wx2 (Optional)
- ◎ Support USB (Type C) input : PD+DP+USB2.0
- ◎ Support USB HUB output : USB 2.0 x 4
- ◎ Operating temperature : -30 °C to +80 °C
- ◎ Storage temperature : -40 °C to +80 °C
- ◎ Support RS232 (Optional)
- ◎ Output : LVDS or eDP
- ◎ DC 12V input (Optional)
- ◎ RoHS compliant

Support Timing Table:

Mode	Resolution	H Frequency (KHz)	V Frequency (Hz)
1	640*350@70	31.469	70.087
2	640*480@60	31.469	59.940
3	640*480@72	37.861	72.809
4	640*480@75	37.500	75
5	720*400@70	31.469	70.087
6	800*600@56	35.156	56.250
7	800*600@60	37.879	60.317
8	800*600@72	48.077	72.188
9	800*600@75	46.875	75
10	1024*768@60	48.363	60.004
11	1024*768@70	56.476	70.069
12	1024*768@72	58.038	71.918
13	1024*768@75	60.023	75.029
14	1280*720@50	36.91	49.82
15	1280*720@60	44.62	59.81
16	1280*1024@60	63.980	60
17	1280*1024@70	74.882	69.853
18	1280*1024@75	79.976	75.025
19	1360*768@60	47.72	59.799
20	1440*900@60	55.935	59.887
21	1680*1050@60	65.3	60
22	1920*1080@50	56.25	50
23	1920*1080@60	66.6	60
24	1920*1200@60	74.556	59.885

Connector Description:

Connector List:

Connector	Description	Note
J1	eDP Panel Connector	PH 1.25mm. 30Pin.90°
J2	LVDS Panel Connector	PH 2.0mm. 32Pin.90°
J3	USB-C Connector	24Pin. USB Type C
CON3	UART Connector	PH 2.0mm. 5Pin.90°
CON6	IR Connector	PH 2.0mm. 3Pin.90°
CON7	Key Pad Connector	PH 2.0mm. 10Pin.90°
CON10	ISP/ADC Connector	PH 1.25mm. 6Pin.180°
CON11	Speak R Connector	PH 2.0mm. 2Pin.90°
CON13	Speaker L Connector	PH 2.0mm. 2Pin.90°
CON14	Power Input Connector	PH 2.0mm. 4Pin.90°
CON15	Inverter Connector	PH 2.0mm. 8Pin.90°
JA1~JA4	USB HUB 2.0 Output Connector	PH 1.25mm. 5Pin.180°
JP1	3.3V/5V/12V Selector	PH 2.0mm. 2x3Pin.180°

Pin Definition of Connector:

J1: eDP Panel Connector (1.25 mm 30 Pin SMD)

Pin	Description	Note
1	NC	No contact
2	NC	No contact
3	GND	Ground
4	TXAUXN R	Complement signal Auxiliary Channel
5	TXAUXP R	True signal Auxiliary Channel
6	GND	Ground
7	TX0N R	Complement signal link lane0
8	TX0P R	True signal link lane0
9	GND	Ground
10	TX1N R	Complement signal link lane1
11	TX1P R	True signal link lane1
12	GND	Ground
13	TX2N R	Complement signal link lane2
14	TX2P R	True signal link lane2
15	GND	Ground
16	TX3N R	Complement signal link lane3
17	TX3P R	True signal link lane3
18	GND	Ground
19	3.3V or 5V or 12V	+3.3V or +5V or +12V Panel power
20	3.3V or 5V or 12V	+3.3V or +5V or +12V Panel power
21	DP_HPDP	HPD Signal in

22	BKLT_EN	Backlight enable
23	BKLT_ADJ	Backlight adjustment
24	GND	Ground
25	GND	Ground
26	12V	+12V Power supply
27	12V	+12V Power supply
28	12V	+12V Power supply
29	12V	+12V Power supply
30	NC	No contact

J2: LVDS Panel Connector (2.0 mm 32 Pin DIP):

Pin	Description (8 bit)	Note
1,2,3,4	VDD	3.3V/5V/12V Panel power supply
5	GND	Ground
6	GND	Ground
7	RXEIN3-	EvenTx3- Data Pin
8	RXEIN3+	EvenTx3+ Data Pin
9	RXEINC-	EvenTx- Clock Pin
10	RXEINC+	EvenTx+ Clock Pin
11	RXEIN2-	EvenTx2- Data Pin
12	RXEIN2+	EvenTx2+ Data Pin
13	RXEIN1-	EvenTx1- Data Pin
14	RXEIN1+	EvenTx1+ Data Pin
15	RXEIN0-	EvenTx0- Data Pin
16	RXEIN0+	EvenTx0+ Data Pin
17	RXOIN3-	OddTx3- Data Pin
18	RXOIN3+	OddTx3+ Data Pin
19	RXOINC-	OddTx- Clock Pin
20	RXOINC+	OddTx+ Clock Pin
21	RXOIN2-	OddTx2- Data Pin
22	RXOIN2+	OddTx2+ Data Pin
23	RXOIN1-	OddTx1- Data Pin
24	RXOIN1+	OddTx1+ Data Pin
25	RXOIN0-	OddTx0- Data Pin
26	RXOIN0+	OddTx0+ Data Pin
27	N.C.	Not connect
28	N.C.	Not connect
29	N.C.	Not connect
30	N.C.	Not connect
31	GND	Ground
32	GND	Ground

J3: USB-C Connector (24Pin USB Type C SMD)

Pin	Description	Note
A1	GND	
A2	Type C_TX1+	Super speed differential#1 TX +
A3	Type C_TX1-	Super speed differential#1 TX -
A4	Type C_VBUS	V _{BUS}
A5	Type C_CC1_1	Configuration channel
A6	Type C_D+	USB 2.0 differential position +
A7	Type C_D-	USB 2.0 differential position -
A8	Type C_SBU1_1	Sideband use (SBU)
A9	Type C_VBUS	V _{BUS}
A10	Type C_RX2-	Super speed differential#2 RX -
A11	Type C_RX2+	Super speed differential#2 RX +
A12	GND	
B1	GND	
B2	Type C_TX2+	Super speed differential#2 TX +
B3	Type C_TX2-	Super speed differential#2 TX -
B4	Type C_VBUS	V _{BUS}
B5	Type C_CC2_1	Configuration channel
B6	Type C_D+	USB 2.0 differential position +
B7	Type C_D-	USB 2.0 differential position -
B8	Type C_SBU2_1	Sideband use (SBU)
B9	Type C_VBUS	V _{BUS}
B10	TypeC_RX1-	Super speed differential#1 RX -
B11	TypeC_RX1+	Super speed differential#1 RX +
B12	GND	

CON3: UART Connector (2.0 mm 5Pin SMD):

Pin	Description	Note
1	5V	Output +5VDC
2	Key2	
3	Tx	
4	Rx	
5	GND	Ground

CON6: IR Connector (2.0 mm 3Pin SMD):

Pin	Description	Note
1	5V	Output +5VDC
2	IR	Interrupt input
3	GND	Ground

CON7: Key Pad Connector (2.0 mm 10Pin SMD):

Pin	Description	Note
1	SEL+(RIGHT)	
2	SEL-(LEFT)	
3	AUTO	
4	MENU	
5	POWER	
6	LED-G	Green LED (Power ON)
7	LED-R	Red LED (Power saving)
8	GND	Ground
9	CH-	Not connect
10	ADC_3	Not connect

CON10: ISP/ADC Connector (1.25mm 6Pin SMD)

Pin	Description	Note
1	3.3V	
2	ADC_1	
3	ADC_2	
4	DDCSDA	
5	DDCSCL	
6	GND	

CON11: Speaker Connector (2.0 mm 2Pin SMD)

Pin	Description	Note
1	R-	
2	R+	

CON13: Speaker Connector (2.0 mm 2Pin SMD)

Pin	Description	Note
1	L-	
2	L+	

CON14: Power Connector (2.0 mm 4Pin SMD):

Pin	Description	Note
1,4	DC 12V	Input +12VDC
2,3	GND	Ground

CON15: Inverter Connector (2.0mm 8 Pin SMD):

Pin	Description	Note
1,2	12V Input	
4,6	GND	
3	Brightness Control	PWM 0-100%
5	ON/OFF Control	5V ON;0V OFF
7,8	5V	

Note : 2.0mm 5 pin connector(Pin1~5) is used on standard 12V input and standalone Inverter .

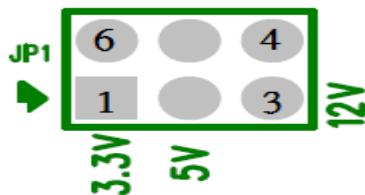
2.0mm 3 pin connector (Pin6~8) is used on 2-in-1 power supply with 5V input .

JA1~JA4: USB HUB Output Connector (1.25 mm 5Pin SMD)

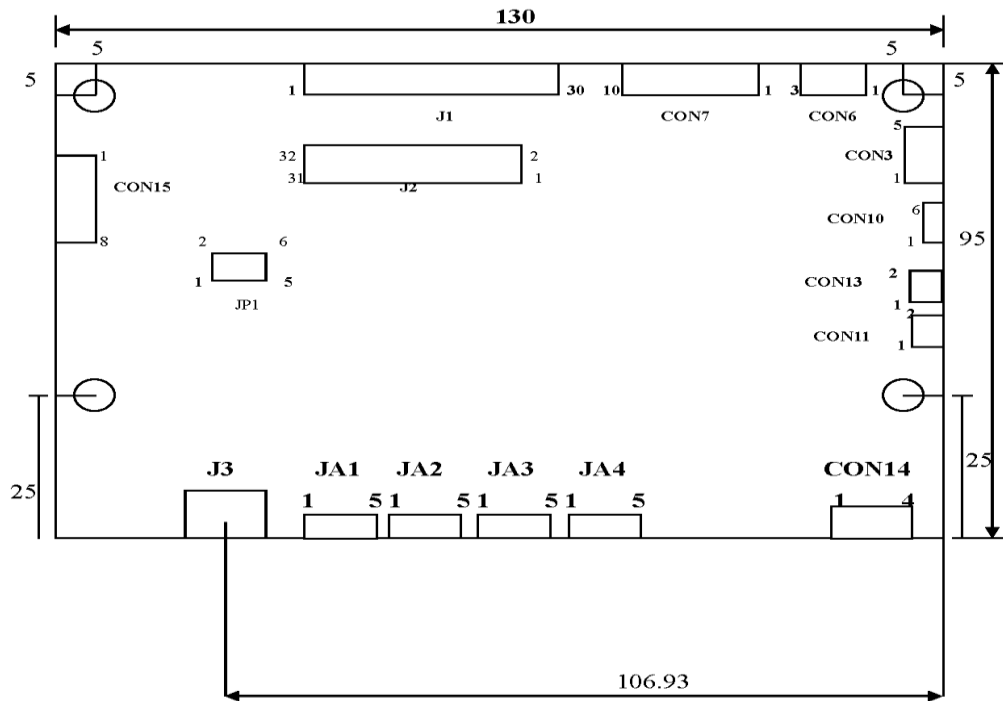
Pin	Description	Note
1	5V	HUB5V
2	DATA-	USB DATA-
3	DATA+	USB DATA+
4	GND	
5	GND_EARTH	

JP1: 3.3V/5V/12V Selector (2.0 mm 2x3 Pin SMD):

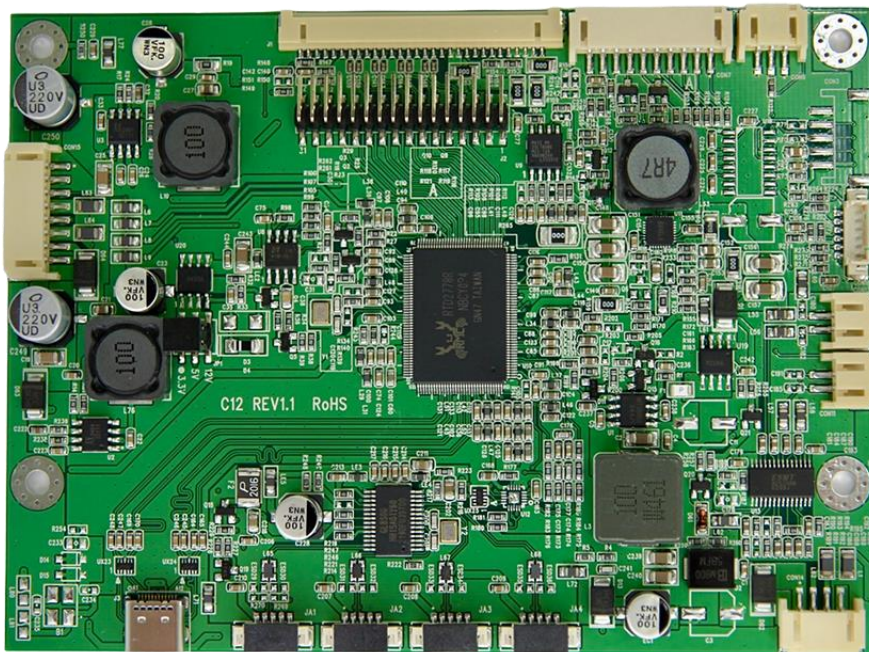
Pin	Description	Note
1 - 6	3.3V	Power supply of +3.3VDC
2 - 5	5V	Power supply of +5VDC
3 - 4	12V	Power supply of +12VDC



Board Dimension :130mm*95mm



Board Photo:



※Specifications and product design are subject to change without notice.