

C03 Board Specification Sheet

Model No. C03 (Part No.:C03--778APH--)

Main Feature:

- ◎ Support vertical refresh rate up to 75Hz for VGA~SXGA+ (1400X1050) and 60Hz for higher resolution of VESA standard timing
- ◎ Supply single pixel(24bits) or dual pixel(48bits) digital RGB output
- ◎ Support USB output : USB2.0 + Resistor touch control (Optional)
- ◎ Support Power Delivery (PD) source mode : 5V/3A and 9V/3A
- ◎ Compatible with VGA up to Full HD (1920x1200) LCD panel
- ◎ Support stereo audio amplifier function: 2Wx2 or 10Wx2
- ◎ Support USB (Type C) input : DP+USB2.0
- ◎ Operating temperature : 0 °C to +50 °C
- ◎ Storage temperature : -40 °C to +60 °C
- ◎ Support Display Port input
- ◎ Support RS232 (Optional)
- ◎ Support HDMI input
- ◎ RoHS compliant
- ◎ DC 12V input

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@60	44.62	59.81
15	1280*800@60	49.702	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
CN1	Power Connector	ϕ 2.5
CN2	HDMI Connector	
CN3	Display Port Connector	
CN4	USB Input Connector	4 Pin USB Type B
CN5	Audio Line-in Connector	ϕ 3.5
CON1	12V Input Connector	PH 2.0mm. 4Pin.180°
CON2	Inverter Connector	PH 2.0mm. 8Pin.180°
CON3	UART/ABL Connector	PH 2.0mm. 5Pin.180°
CON4	USB Output Connector	PH 1.25mm. 5Pin.90°
CON5	Resistive Touch Connector	PH 2.0mm. 5Pin.180°
CON6	IR Connector	PH 2.0mm. 3Pin.180°
CON7	Key Pad Connector	PH 2.0mm. 10Pin.180°
CON8	USB Output Connector	PH 2.0mm. 9Pin.180°
CON9	Speaker Connector	PH 2.0mm. 4Pin.180°
J1	eDP Panel Connector	PH 1.25mm. 30Pin.90°
J2	LVDS Panel Connector	PH 2.0 2*16 Pin.90°
J3	USB-C Connector	24Pin. USB Type C
JP1	Panel 3.3V/5V Selector	PH 2.5mm. 3Pin.180°
JP2	AMP 5V/12V Selector	PH 2.5mm. 3Pin.180°

Pin Definition of Connector:

CN1: Power Connector (2.5 ϕ 3Pin DIP):

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

CN2: HDMI Connector:

Pin	Description	Note
1	DATA2+	TMDS Data2+
2	GND	Ground
3	DATA2-	TMDS Data2-
4	DATA1+	TMDS Data1+
5	GND	Ground
6	DATA1-	TMDS Data1-
7	DATA0+	TMDS Data0+
8	GND	Ground

9	DATA0-	TMDS Data0–
10	CLK+	TMDS Clock+
11	GND	Ground
12	CLK-	TMDS Clock–
13	CEC	CEC
14	Reserved	Not connect
15	SCL	I ² C serial clock for DDC
16	SDA	I ² C serial data for DDC
17	DDC/CEC	Ground
18	+5V	+5 V Power
19	H-PLUG-DET	Hot Plug Detecting

CN3: Display Port Connector:

Pin	Description	Note
1	ML_LANE3N	Lane 3 (-)
2	GND	Ground
3	ML_LANE3P	Lane 3 (+)
4	ML_LANE2N	Lane 2 (-)
5	GND	Ground
6	ML_LANE2P	Lane 2 (+)
7	ML_LANE1N	Lane 1 (-)
8	GND	Ground
9	ML_LANE1P	Lane 1 (+)
10	ML_LANE0N	Lane 0 (-)
11	GND	Ground
12	ML_LANE0P -	Lane 0 (+)
13	GND	Ground
14	GND	Ground
15	AUX_CHP	Auxiliary channel (+)
16	GND	Ground
17	AUX_CHN	Auxiliary channel (-)
18	HOT_PLUG	Hot plug detecting
19	RETURN	Return for power
20	DP_PWR	Power of connector (3.3V/500 mA)

CN5 : Audio Line-in Connector (Phone Jack ϕ 3.5)



CON1: 12V Input Connector (2.0 mm 4Pin DIP)

Pin	Description	Note
1,4	+12V	
2,3	GND	

CON2: Inverter Connector (2.0mm 8 Pin DIP):

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 .

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

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

CON4: USB Output Connector (1.25 mm 5Pin SMD)

Pin	Description	Note
1	5V	PC USB 5V
2	DATA-	USB DATA-
3	DATA+	USB DATA+
4	GND	
5	TOUCH	Enable/Disable (Low=Disable)

CON5: Resistive Touch Connector (2.0 mm 5Pin DIP)

Pin	Description	Note
1	Y-/UL	
2	SENSE	
3	Y+/UR	
4	X-/LL	
5	X+/LR	

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

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

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

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	N.C.	Not connect
10	N.C.	Not connect

CON8: USB Output Connector (2.0 mm 9Pin DIP)

Pin	Description	Note
1	5V	
2	Type C DATA-	Billboard USB D-
3	Type C DATA+	Billboard USB D+
4,7	GND	
5	PC_USP_SSRX-	USB3 Differential Signal input
6	PC_USP_SSRX+	USB3 Differential Signal input
8	PC_USP_SSTX-	USB3 Differential Signal output
9	PC_USP_SSTX+	USB3 Differential Signal output

CON9: Speaker Connector (2.0 mm 4Pin DIP)

Pin	Description	Note
1	R-	
2	R+	
3	L-	
4	L+	

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_HPD	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):

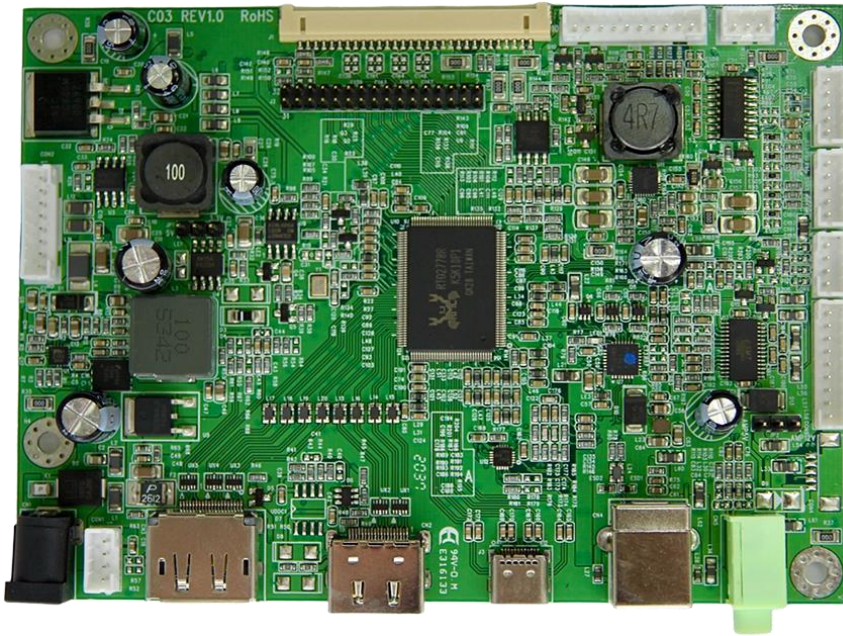
Pin	Description (8 bit)	Note
1,2,3,4	VDD	3.3V/5V/12V Panel power supply
5	GND	Ground
6	GND	Ground
7	RXEIN3-	EvenTx3- Data Pin
8	RXEIN3+	EvenTx3+ Data Pin
9	RXEINC-	EvenTx- Clock Pin

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}

Board Photo:



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