AND-TFT-8LP-KIT

8" TFT LCD
aSi LCD Color Module

The AND-TFT-8LP is a compact full color TFT LCD module, that is suitable for portable products, industrial products, hand-held products, security products, instrument displays and office electronics.

Features

- a-Si Technology Type
- Ultra Compact
- NTSC/PAL/SECAM Video Auto Switch
- Single Operation Voltage +12V
- CVBS / Analog RGB (PC Mode) Signal Input
- All Functions can be controlled UART
- Support Touch Screen Function (Option)
- Digital TFT LCD
- **RoHS complliant**

Mechanical Characteristics

Item	Standard Value	Unit
Screen size	8 inch (diagonal)	inch
Display Format	800 x (R, G, B) x 480	dot
Active Area	176.64 (H) x 99.36 (V)	mm
Pixel Pitch	0.2208 ((H) x 0.2070 (V)	mm
Pixel Configuration	Stripe	–
Outline DImension	192.8 (H) x 116.9 (V) x 6.4 (D)	mm
Surface Treatment	Anti-Glare	–
Weight	TBD	grams

Absolute Maximum Ratings: Driving TFT LCD Panel GND = 0V, Ta = 25ºC

Item	Symbol	Absolute Maximum Rating		Unit	Remarks
		Min.	Max.		
Input Voltage	Vin	9	15	V	
Video Input Signal	Video In	0.5	2.0	Vp-p	@ 75Ω
Analog RB Input Signal	Analog RGB In	0.5	2.0	Vp-p	@ 75Ω
Digital Input Signal	TTL	+0.3	+3.6	V	
Operating Temperature		-20	+70	ºC	
Storage Temperature		-30	+80	ºC	
Operating Temperatue with TSP		-20	+70	ºC	
Storage Temperatue with TSP		-30	+80	ºC	

Product specifications contained herein may be changed without prior notice.
It is therefore advisable to contact Purdy Electronics before proceeding with the design of equipment incorporating this product.

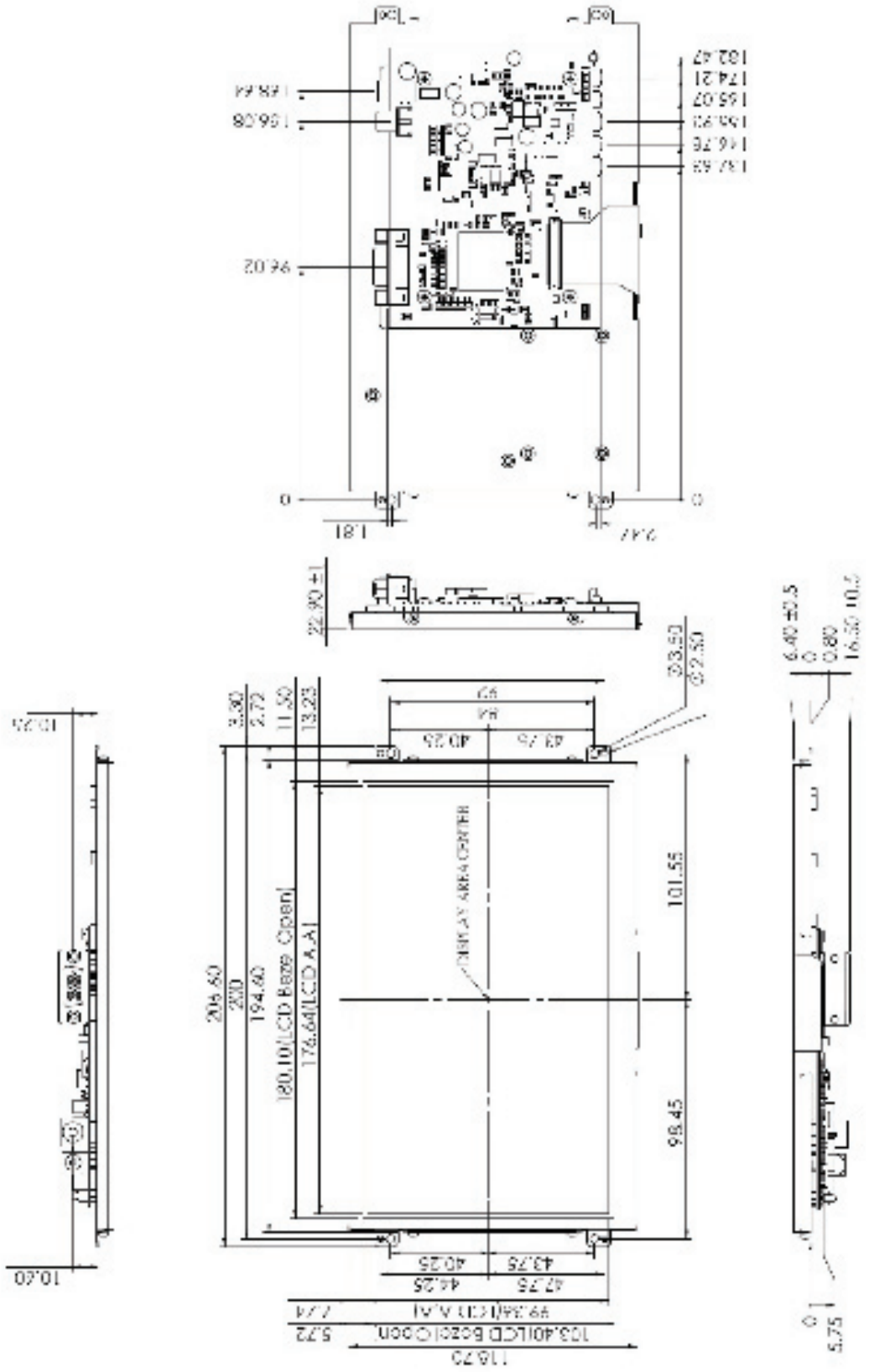
Electrical Characteristics - Recommended Operating Conditions (Ta = 25ºC)

Item	Symbol	I/O	Specifications			Unit	Remark
			Min.	Typ.	Max.		
Input Voltage	Vin	I	+10	+12	+14	V	
Total Current	Iin	I	–	–	–	mA	
Power Consumption	=	I	–	–	–	W	@ +12V
Output Voltage	VDD	O	+3.2	+3.3	+3.4	V	I=10mA
Video Input Signal	Video in	I	–	1.0	–	Vp-p	@ 75 Ω
Analog RGB Input Signal	Analog RGB in	RGB	–	0.7	–	Vp-p	@ 75 Ω

Optical Specifications (Ta = 25 ºC)

Item		Symbol	Remarks	Specifications Min.	Typ.	Max.	Units
Viewing Angle	Horizontal	Left	CR ≥ 10	–	70	–	deg
		Right		–	70	–	
	Vertical	Top		–	70	–	
		Bottom		–	50	–	
Contrast Ratio Luminance when LCD is white Luminance when LCD i black		CR	θ = 0º	400	500	–	–
Response Time	Rise	Tr	θ = 0º	—	10	–	ms
	Fall	Tf	θ = 0º	—	15	–	ms
Brightness		LUM		360	450	–	cd/m^2
Uniformity (%)		U		70	75	–	%
White Chhromaticity		x	θ = 0º	0.26	0.31	0.36	–
		y	θ = 0º	0.28	0.33	0.38	–
LED Life Time			+25º	20,000	—	—	Hr

Dimensional Outline:



Pin Description - J301: LCD Panel I/O Terminals (FPC 50 Pin Pitch 0.5 mm UP Contact Type)

Pin No.	Symbol	I/O	Description
1	VLED+	P	Power for LED Backlight (Anode)
2	VLED+	P	Power for LED Backlight (Anode)
3	VLED-	P	Power for LED Backlight (Cathode)
4	VLED-	P	Power for LED Backlight (Cathode)
5	GND	P	Power Ground
6	VCOM	I	Common Volttage
7	VCC	P	Power for Digital Circuit
8	MODE	I	DE/SYNC Mode Select
9	DE	I	Data Input Enable
10	VS	I	Vertical Sync Input
11	HS	I	Horizontal Sync Input
12	B7	I	Blue Data (MSB)
13	B6	I	Blue Data
14	B5	I	Blue Data
15	B4	I	Blue Data
16	B3	I	Blue Data
17	B2	I	Blue Data
18	B1	I	Blue Data
19	B0	I	Blue Data (LSB)
20	G7	I	Green Data (MSB)
21	G6	I	Green Data
22	G5	I	Green Data
23	G4	I	Green Data
24	G3	I	Green Data
25	G2	I	Green Data
26	G1	I	Green Data
27	G0	I	Green Data (LSB)
28	R7	I	Red Data (MSB)
29	R6	I	Red Data
30	R5	I	Red Data
31	R4	I	Red Data
32	R3	I	Red Data
33	R2	I	Red Data
34	R1	I	Red Data
35	R0	I	Red Data
36	GND	P	Power Ground
37	DCLK	I	Sample Clock
38	GND	P	Power Ground
39	L/R	I	Right/Left Selection
40	U/D	I	Up/Down Selection
41	VGH	P	Gate ON Voltage
42	VGL	P	Gate OFF Voltage
43	AVDD	P	Power for Analog Circui
44	RESET	I	Global Reset Pin
45	NC		No Connection
46	VCOM	I	Common Voltage
47	DITHB	I	Dithering Function
48	GND	P	Power Ground
49	NC		No Connection
50	NC		No Connection

Pin Description - J101B: Pin Assignment of Analog RGB Input (D-Sub 15 Pin)

Pin No.	Symbol	I/O	Description
1	RI+	I	Analog Red Signal
2	GI+	I	Analog Green Signal
3	BI+	I	Analog Blue Signal
4	NC	–	No Connection
5	GND	–	Ground
6	AGND	–	Analog Ground
7	AGND	–	Analog Ground
8	AGND	–	Analog Ground
9	VGA5V	–	VGA +5V Input
10	VGA-DET	I	VGA Detect
11	NC	–	No Connection
12	NC	–	No Connection
13	HS_IN	I	TTL Horizontal Sync
14	VS_IN	I	TTL Vertical Sync
15	NC	–	No Connection

Pin Description - J104: Pin Assignment of UART (Pitch 1.25 mm 4 Pin, Top Entry Type)

Pin No.	Symbol	I/O	Description
1	TX	O	UART Transmission Data
2	RX	I	UART Receive Data
3	GND	–	Ground
4	+5VA	O	+5V Output Volttage

Pin Description - DC JACK: Pin Assignment of Power Input (Inside Diameter 2.1 ϕ Outside Diameter 5.5 ϕ Side Entry Type)

Pin No.	Symbol	I/O	Description
1	VIN	I	+12V Input Voltage
2	GND	–	Ground

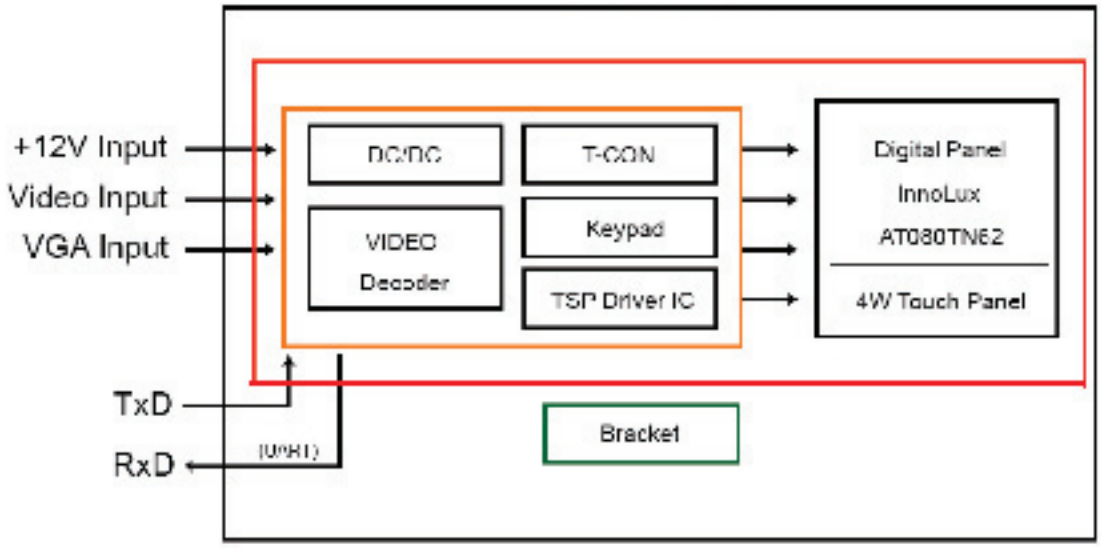
Pin Description - RCA: Pin Assignment of Video INput (RCA JACK Yellow, Side Entry Type)

Pin No.	Symbol	I/O	Description
1	Video	I	Video Input
2	AGND	–	Analog Ground

Pin Description - J401B: Pin Assignment of Touch USB (USBA-Female 2.0mm, Side Entry Type) (Option)

Pin No.	Symbol	I/O	Description
1	DGND	–	Digital Ground
2	D+	–	DATA (+)
3	D-	–	DATA (-)
4	VBUS	–	USB VCC

Block Diagram



Pin Description - D401C: Pin Assignment of Touch RS232 (D-SUB 9 Female) (Option)

Pin No.	Symbol	I/O	Description
1	NC	–	No Connection
2	TXD	–	Transmit Data
3	RXD	–	Receive Data
4	NC	–	No Connection
5	GND	–	Ground
6	NC	–	No Connection
7	NC	–	No Connection
8	NC	–	No Connection
9	NC	–	No Connection