



AND-TFT-070WTP

800 x 480 Pixels LCD Color Monitor

The AND-TFT-070WTP is a compact full color TFT LCD module with CCFL backlight unit. This display is suitable for industrial video monitor, test equipments and medical test equipments monitoring devices.

This device consists of amorphous silicon TFT liquid crystal display with CCFL B/L unit. The display has 800 x 480 pixels on a 7.0 inch diagonal screen. 16:9 wide aspect ratio.

Features

- Wide VGA (800 x 480 pixel) resolution
- 7.0 inch (16 cm) diagonal screen
- Amorphous silicon TFT LCD panel with backlight unit
- Ultra compact
- Single Operation Voltage +12V
- CVBS / S-Video (optional)
- Analog RGB (PC Mode) Signal Input)
- NTSC/PAL/SECAM Video Auto Switch
- Applications: Portable product, industrial, hand-held, security, instrument display, office electronics
- USB Touch panel (optional)
- **RoHS compliant**

Mechanical Characteristics

Item	Specification	Unit
Screen Size	7.0 inch (16.9 cm) diagonal	–
Display Format	800 x (R, G, B) x 480	dot
Display Colors	262,144	
Active Area	152.4 (W) x 91.44 (H)	mm
Pixel Pitch	0.1905 (W) x 0.1905 (H)	mm
Pixel Configuration	stripe	–
Outline Dimension	166.3 (W) x 104.0 (H) x 6.2 (D)	mm
Weight	175 ± 10	g
Backlight	CCFL, 1 tube	–
Surface Treatment	Anti-glare and Wide View Film	–
Display Mode	Normally white	–

Absolute Maximum Ratings

Item	Symbol	Remarks	Specifications		Unit
			Min.	Max.	
Input Voltage	V _{in}		+9	+15	V
Video Input Signal	Video in	@75Ω	0.5	2.0	V _{p-p}
S-Video Input Signal	S-Video in	@75Ω	0.5	2.0	V _{p-p}
Analog RGB Input Signal	Analog RGB in	@75Ω	0.5	2.0	V _{p-p}
Digital Input Signal	TTL		+0.3	+3.6	V
Operating Temperature	–		-10	+60	°C
Storage Temperature	–		-20	+70	°C

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

Item	Symbol	I/O	Specifications			Unit	Note	
			Min.	Typ.	Max.			
Input Voltage	Vin	I	+10	+12	+14	V		
Total Current	Iin	I	-	557	-	mA		
Power Consumption		I	-	6.684	-	W	@ +12V	
Output Voltage	VDD	O	+3.2	+3.3	+3.4	V	I = 10 mA	
Video Input Signal	Video in	I	-	1.0	-	Vp-p	@ 75 Ω	
S-Video Input Signal	S-Video in	Y	I	-	0.7	-	vp-p	@ 75 Ω
		C	I	-	0.286	-	Vp-p	@ 75 Ω
Analog RGB Input Signal	Analog RGB in	RGB	I	-	0.7	-	Vp-p	@ 75 Ω

VGA Mode Characteristics

Dots per inch	Horizontal	Unit	Polarity	Vertical	unit	Polarity
640 * 480	31.469	KHz	Negative	59.941	Hz	Negative
800 * 600	37.879	KHz	Positive	60.317	Hz	Positive
1024 * 768	48.363	KHz	Negative	60.004	Hz	Negative
1280 * 1024	63.981	KHz	Positive	60.020	Hz	Positive

Panel Backlight Data

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Lamp Voltage	VL	520	580	638	Vrms	IL = 6 mA, (± 10%)
Lamp Current	IL	4	6	7	mA	

Inverter Test Data

Parameter	Symbol	Min.	Typ.	Max.	Unit
Lamp Voltage	IL	-	6	-	mA
Lamp Current	VI	-	575	-	Vrms

Pin Description: J403A: Pin Assignment of Signal Input (Pitch 1.25 mm 8 Pin, Side Entry Type)

Pin #.	Symbol	I/O	Description
1	VCC12V	-	+12V Input Voltage
2	VCC12V		+12V Input Voltage
3	GND_D		Ground
4	GND_D		Ground

Pin #.	Symbol	I/O	Description
5	VIDEO1	I	Video 1 Input Signal
6	GND_!		Ground for Video 1
7	VIDEO2	I	Video 2 Input Signal
8	GND_A		Ground for Video 2

Pin Description: J401B: Pin Assignment of Inverter (Pitch 1.25 mm 6 Pin, Side Entry Type)

Pin #.	Symbol	I/O	Description
1	DC-IN	-	Inverter Power (+12V)
2	DC-IN		Inverter Power (+12V)
3	DIMMER	O	Backlight Brightness Adjust

Pin #.	Symbol	I/O	Description
4	ENABLE	O	Inverter Enable (0: Enable 1: Disable)
5	GND		Power Ground
6	GND		Power Ground

Pin Description: CN3: LCD Panel I/O Terminals

Pin #.	Symbol	I/O	Description
1	DIO1	I/O	Horizontal Start Pulse Signal Input or Output
2	VSS1	I	Ground
3	VDD1	I	Power Ground
4	CLK	I	Horizontal Shift Clock
5	VSS1	I	Ground
6	R/L	I	Red Data
7	R0	I	Red Data (LSB)
8	R1	I	Red Data
9	R2	I	Red Data
10	R3	I	Red Data
11	R4	I	Red Data
12	R5	I	Red Data (MSB)
13	VSS1	I	Ground
14	G0	I	Green Data (LSB)
15	G1	I	Green Data

Pin #.	Symbol	I/O	Description
16	G2	I	Green Data
17	G3	I	Green Data
18	G4	I	Green Data
19	G5	I	Green Data (MSB)
20	VSS1	I	Ground
21	B0	I	Blue Data (LSB)
22	B1	I	Blue Data
23	B2	I	Blue Data
24	B3	I	Blue Data
25	B4	I	Blue Data
26	B5	I	Blue Data (MSB)
27	LD	I	Load Output Signal
28	REV	I	Data Invert Control
29	POL	I	Polarity Selection
30	DIO2	I/O	Horizontal Start Pulse Signal Input or Output

(FPC 30 Pin Below Contact Type)
Optical Characteristics: Ta = 25°C

Item	Symbol	Condition	Specifications			Unit	
			Min.	Typ.	Max.		
Viewing Angle	Horizontal	Left	55	60	–	deg.	
		Right	55	60	–	deg.	
	Vertical	Top	35	40	–	deg.	
		Bottom	50	55	–	deg.	
Contrast Ratio		CR	at optimized viewing angle	250	400	–	–
Response Time	Rise	Tr	$\theta = 0^\circ$	–	15	30	ms
	Fall	Tf		–	25	50	ms
Brightness		L		350	400	–	cd/m ²
Luminance Uniformity		U	–	70	75	–	%
White Chromaticity		x	$\theta = 0^\circ$	0.27	0.30	0.33	–
		y		0.297	0.327	0.357	–
Lamp Life Time		–	–	25,000	–	–	hr

Pin Description: CN4: LCD Panel I/O Terminals

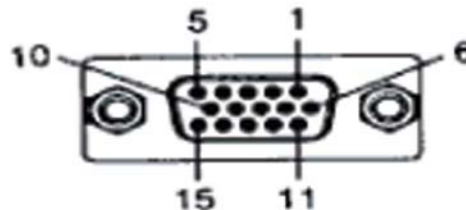
Pin #.	Symbol	I/O	Description
1	VSS2	I	Ground
2	V1	I	Gamma Voltage Level 1
3	V2	I	Gamma Voltage Level 2
4	V3	I	Gamma Voltage Level 3
5	V4	I	Gamma Voltage Level 4
6	V5	I	Gamma Voltage Level 5
7	V6	I	Gamma Voltage Level 6
8	V7	I	Gamma Voltage Level 7
9	VSS2	I	Ground
10	V8	I	Gamma Voltage Level 8
11	V9	I	Gamma Voltage Level 9
12	V10	I	Gamma Voltage Level 10
13	V11	I	Gamma Voltage Level 11
14	V12	I	Gamma Voltage Level 12
15	V13	I	Gamma Voltage Level 13

Pin #.	Symbol	I/O	Description
16	V14	I	Gamma Voltage Level 14
17	VSS2	I	Ground
18	VDD2	I	Voltage for Analog Circuit
19	VCOM	I	Common Voltage
20	XON	I	NC
21	OE	I	Output Enable
22	U/D	I	U/Down Selection
23	CKV	I	Vertical Shift Clock
24	STVU	I/O	Vertical Shift Pulse Signal Input or Output
25	STVD	I/O	Vertical Shift Pulse Signal INput or Output
26	VGG	I	Gate on Voltage
27	GND	I	Ground
28	VCC	I	Voltage for Logic Circuit
29	GND	I	Ground
30	VEE	I	Gate off Voltage

(FPC 30 Pin Below Contact Type)
Pin Description: J402B: Pin Assignment of Analog RGB Input (D-Sub 15 Pin)

Pin #.	Symbol	I/O	Description
1	R1+	I	Analog Red Signal
2	G1+	I	Analog Green Signal
3	Bi1	I	Analog Blue Signal
4	NC		No Connection
5	GND		Ground
6	AGND		Analog Ground
7	AGND		Analog Ground
8	AGND		Analog Ground

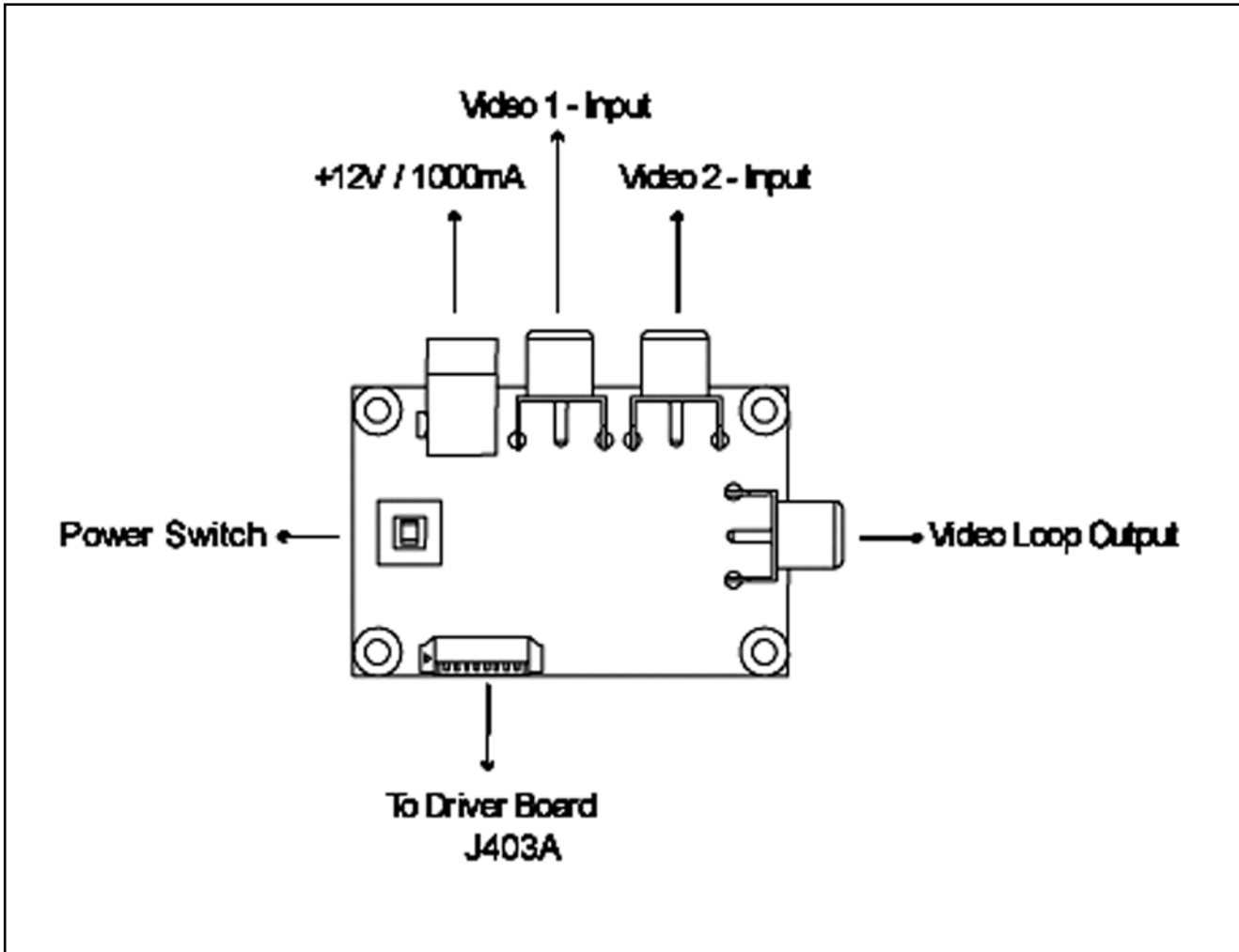
Pin #.	Symbol	I/O	Description
9	VGA5V		VGA +5V Input
10	VGA-Det	I	VGA Detect
11	NC		No Connection
12	NC		No Connection
13	HS_IN	I	TTL Horizontal sync
14	VS_IN	I	TTL Vertical sync
15	NC		No Connection


Pin Description: J405 Pin Assignment of Key (Pitch 1.25 mm 9 Pin, Side Entry Type)

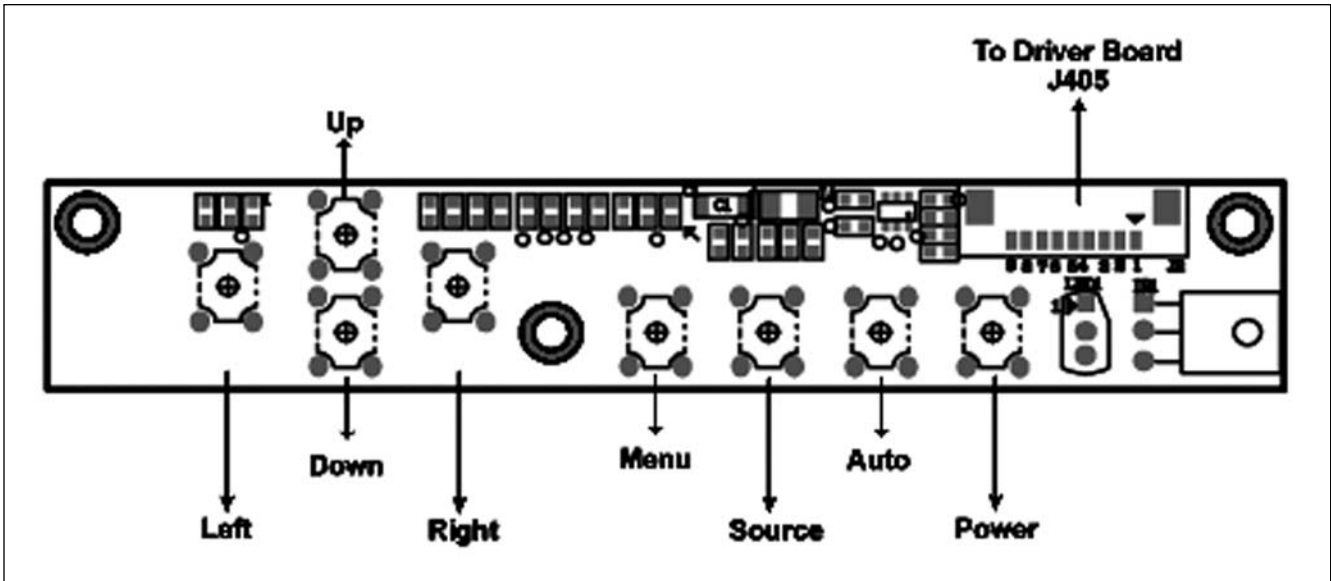
Pin #.	Symbol	I/O	Description
1	N.C.		No Connection
2	KEY-ADC1	I	KEY ADC Input 1
3	KEY-ADC0	I	KEY ADC Input 0
4	GND		Ground
5	VDD		+3.3V Output Voltage

Pin #.	Symbol	I/O	Description
6	IR_DATA	I	DATA of IR Receiver
7	LED-R	O	Index Red LED for power off control
8	LED-G	O	Index Green LED for power on control
9	GND		Ground

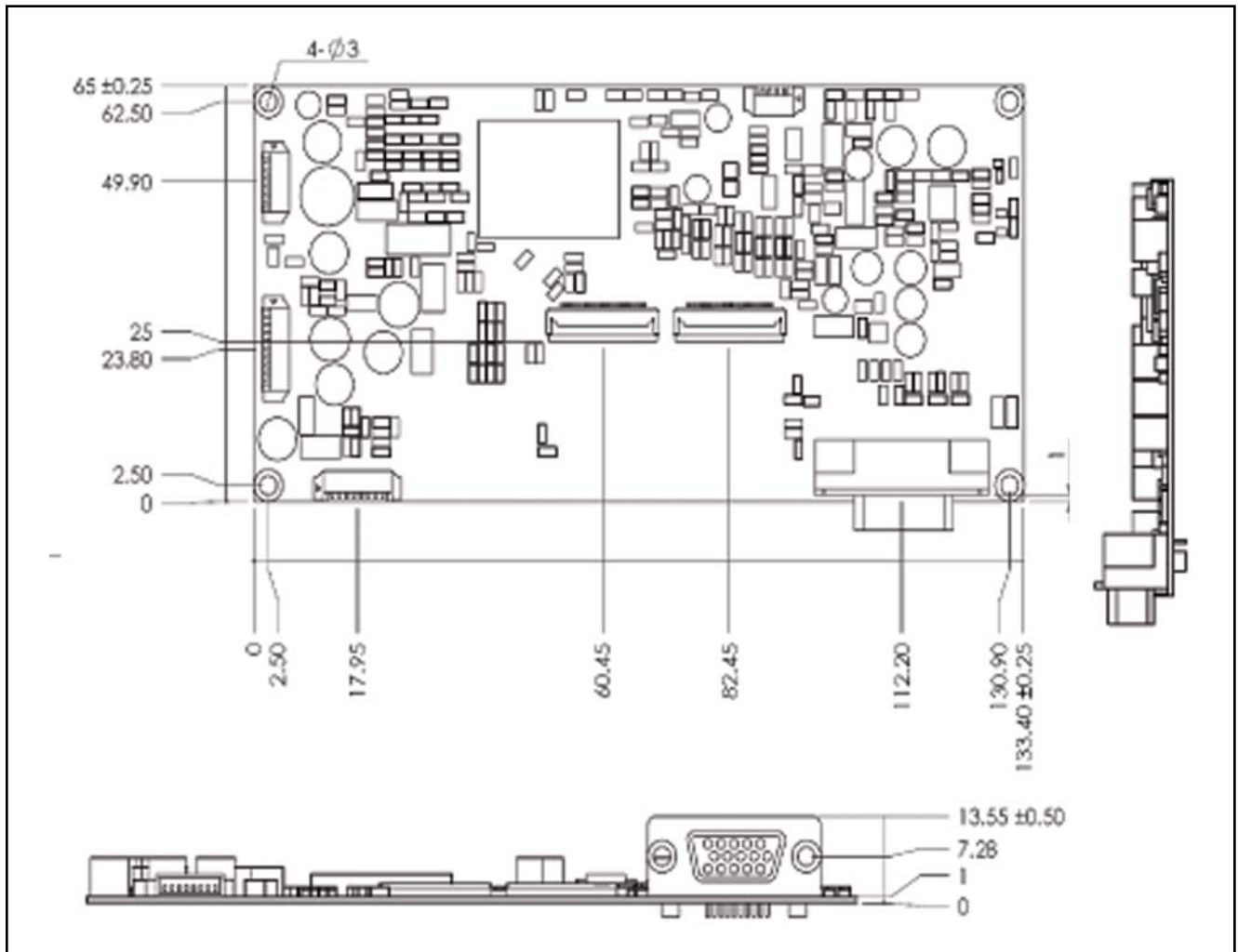
Simple Demo Board Manual (Optional)



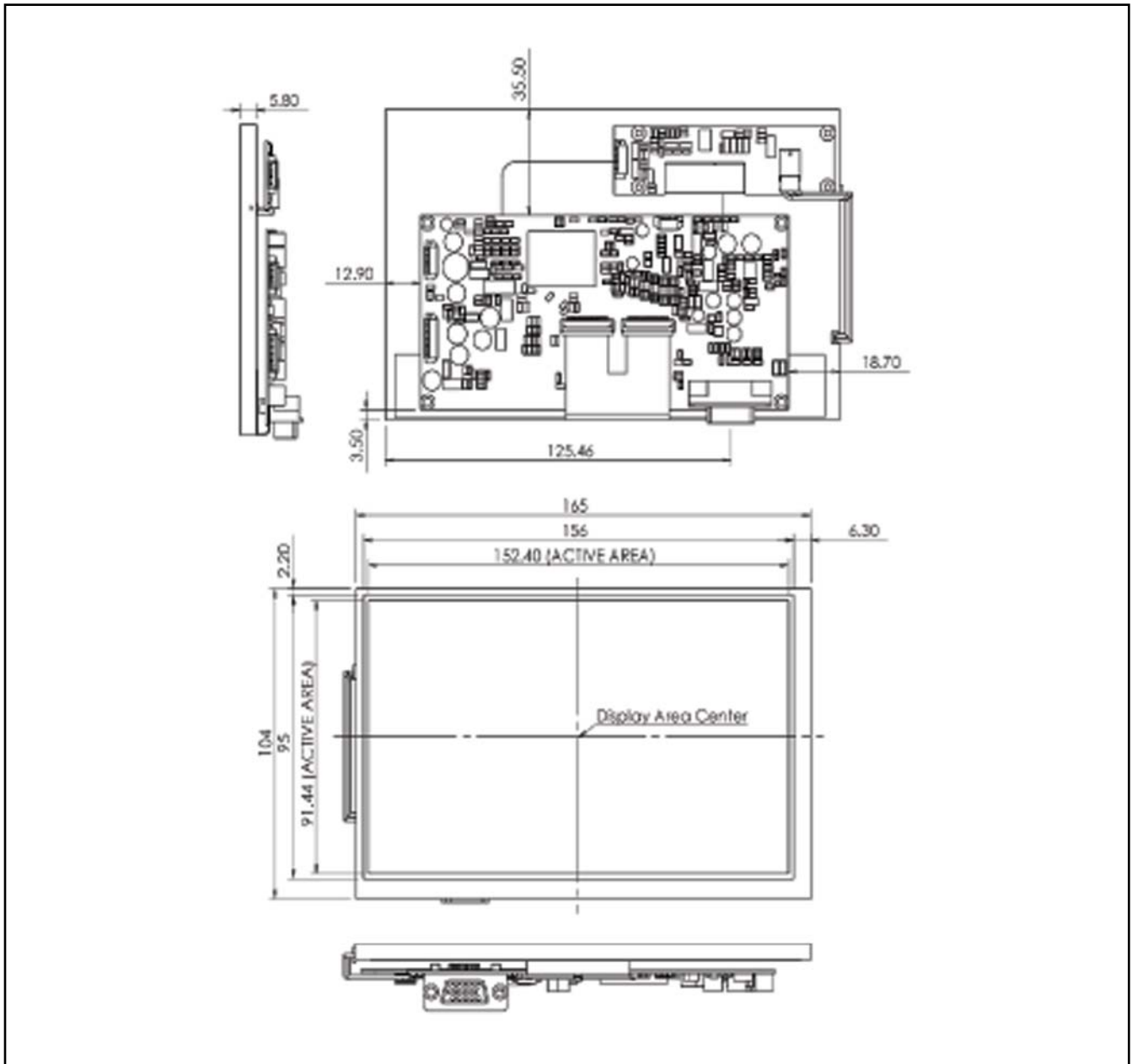
Keyboard Manual



Driver Board - Built-in Female D-SUB 15



Module



Application Schematic Diagram: Application Circuit

