



§ SPECIFICATION APPROVAL SHEET §

Fdt Tech Module No	LP080S4Pxx-FxR
Description:	8" Digital TFT-LCD Module
SPEC No.:	SAS-0909001
Version:	0.0
Issue Date:	December 18, 2009

※ This approval sheet contains 38 pages including the cover and appendix.

Customer:	APPROVED BY:
Date: / / 09	

APPROVED BY:

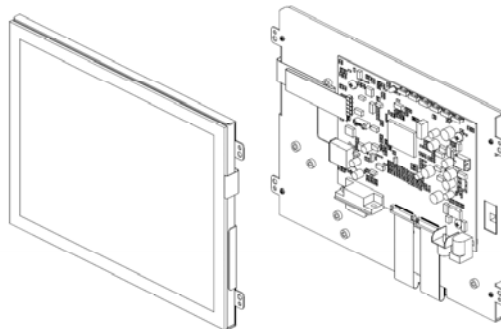
CHECKED BY:

DESIGNED BY:



FLAT DISPLAY TECHNOLOGY

8" Digital TFT-LCD Module



■ LP080S4Pxx-FxR

1. General Descriptions

1.1 Features

- PVI PD080SX4 Digital TFT LCD
- Ultra Compact
- NTSC/PAL/SECAM Video Auto Switch
- Single Operation Voltage +12V
- CVBS / Analog RGB (PC Mode) Signal Input
- All Functions can be controlled by UART
- Support Touch Screen Function (Option)

1.2 Applications

- Portable product
- Industrial
- Hand-held
- Security
- Instrument Display
- Office Electronics

1.3 Application Precautions

Do not use the products herein for the following equipment which demands extremely high performance in terms of functionality, reliability, or accuracy.

- Aerospace equipment
- Communication equipment for trunk lines.
- Control equipment for the nuclear power industry.
- Medical equipment related to life support, etc.

The other application that demands high reliability and functionality should first contact a sales representative.

FLAT DISPLAY TECHNOLOGY

■ LP080S4Pxx-FxR V0.0



2. Contents

Contents	Page
1. General Description.....	1
1.1 Features	1
1.2 Applications	1
1.3 Application Precautions	1
2. Contents.....	2-3
3. Block Diagram.....	4
3.1 Block Diagram	4
4. TFT-LCD Information.....	5
4.1 TFT-LCD Mechanical Specifications	5
4.2 TFT-LCD Optical Characteristics	5
5. Order Information.....	6-8
5.1 Unit	6
5.2 Unit (4W Touch)	7
5.3 Unit (5W Touch)	8
5-1. PC Only Order Information.....	9-11
5-1.1 Unit	9
5-1.2 Unit (4W Touch)	10
5-1.3 Unit (5W Touch)	11
6. Dimension Information.....	12-21
6.1 Unit Bracket (LP080S4PB1-FNR)	12
6.2 Unit Bracket (LP080S4PB4-FNR)	13
6.3 Unit Bracket (LP080S4PB5-FNR)	14
6.4 Unit Bracket (LP080S4PBV-FNR)	15
6.5 Unit Bracket (LP080S4PBU-FNR)	16
6.6 Unit Bracket (LP080S4PC1-FNR)	17
6.7 Unit Bracket (LP080S4PC4-FNR)	18
6.8 Unit Bracket (LP080S4PC5-FNR)	19
6.9 Unit Bracket (LP080S4PCV-FNR)	20
6.10 Unit Bracket (LP080S4PCU-FNR)	21
7. Pin Description.....	22-25
7.1 CN1 : TFT-LCD Panel I/O Terminals (FPC 30 Pin Below Contact Type)	22
7.2 CN2 : TFT-LCD Panel I/O Terminals (FPC 30 Pin Below Contact Type)	23
7.3 J405: Pin Assignment of VGA Input (D-Sub15)	24
7.4 J101: Pin Assignment of UART (Pitch 1.25mm 4Pin, Side Entry Type)	24
7.5 DC JACK: Pin Assignment of Power Input (Inside Diameter:2.1 ϕ Outside Diameter:5.5 ϕ Side Entry Type)	25
7.6 RCA: Pin Assignment of Video Input (RCA JACK Yellow, Side Entry Type)	25
7.7 J601 : Pin Assignment of Touch USB (USBA-Female 2.0mm, Side Entry Type)(Option)	25

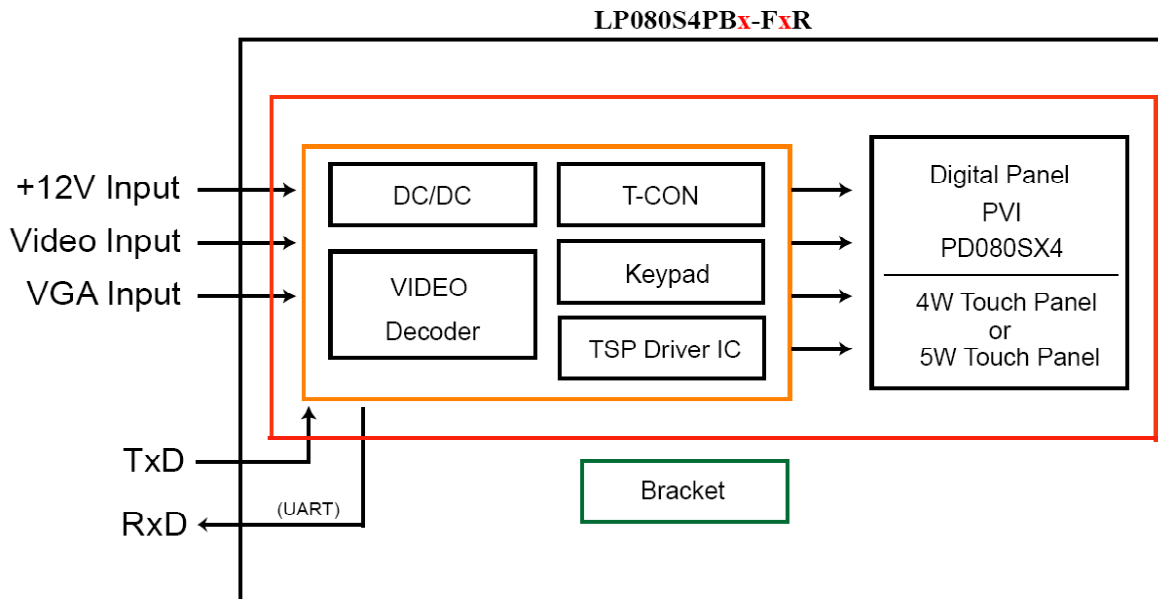
FLAT DISPLAY TECHNOLOGY

■ LP080S4Pxx-FxR V0.0 

7.8 DB601 : Pin Assignment of Touch RS232 (D-SUB 9 FEMALE)(Option)	25
8. Absolute Maximum Ratings	26
8.1 Absolute Maximum Ratings	26
9. Recommended Operating Conditions	27
9.1 Electrical Characteristics	27
9.2 VGA Mode Characteristics	27
9.3 Panel Backlight Data	27
9.4 Optics Sample Test Data	27
10. 4W Resistance Touch Panel Characteristics	28-29
10.1 Pin assignment	28
10.2 Electrical Performance	28
10.3 Optical Performance	28
10.4 Mechanical Performance	28
10.5 Durability Performance	29
10.6 Environmental	29
10.7 Reliability Test Procedure	29
11. 5W Resistance Touch Panel Characteristics	30-31
11.1 Pin assignment	30
11.2 Electrical Performance	30
11.3 Optical Performance	30
11.4 Mechanical Performance	30
11.5 Durability Performance	31
11.6 Environmental	31
11.7 Reliability Test Procedure	31
12. Operation Manual	32
12.1 Driver Board Manual	32
13. Packing List	33
14. Key Function by OSD	34-37
14.1 Menu Operation	34-36
14.2 Operations	37

3. Block Diagram

3.1 Block Diagram



Tenta

4. TFT-LCD Information

4.1 TFT-LCD Mechanical Specifications

Parameter	Specifications	Unit
Screen Size	8.0 (diagonal)	inch
Display Format	800 x (R.G.B) x 600	dot
Active Area	162(W) x 121.5(H)	mm
Pixel Pitch	0.2025(W) x 0.2025(H)	mm
Pixel Configuration	Stripe	
Outline Dimension	183(W) x 141(H) x 6.3(D)	mm
Surface Treatment	Anti – Glare + EWW	
Weight	280±15	g

4.2 TFT-LCD Optical Characteristics

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Remark
Viewing Angle	Horizontal	Left	70	80	---	deg	
		Right	70	80	---	deg	
	Vertical	Top	50	60	---	deg	
		Bottom	60	70	---	deg	
Contrast Ratio	CR	$\theta = 0^\circ$	800	900	---	---	
Response time	Rise Fall	Tr	---	15	30	ms	
		Tf	---	25	50	ms	
Uniformity	U	$\theta = 0^\circ$	70	75	---	%	
Brightness	L	$\theta = 0^\circ$	350	400	---	Cd/m ²	
White Chromaticity	x	$\theta = 0^\circ$	0.27	0.31	0.35		
	y	$\theta = 0^\circ$	0.32	0.36	0.40		
LED Life Time		+25°	20000	30000		Hrs	

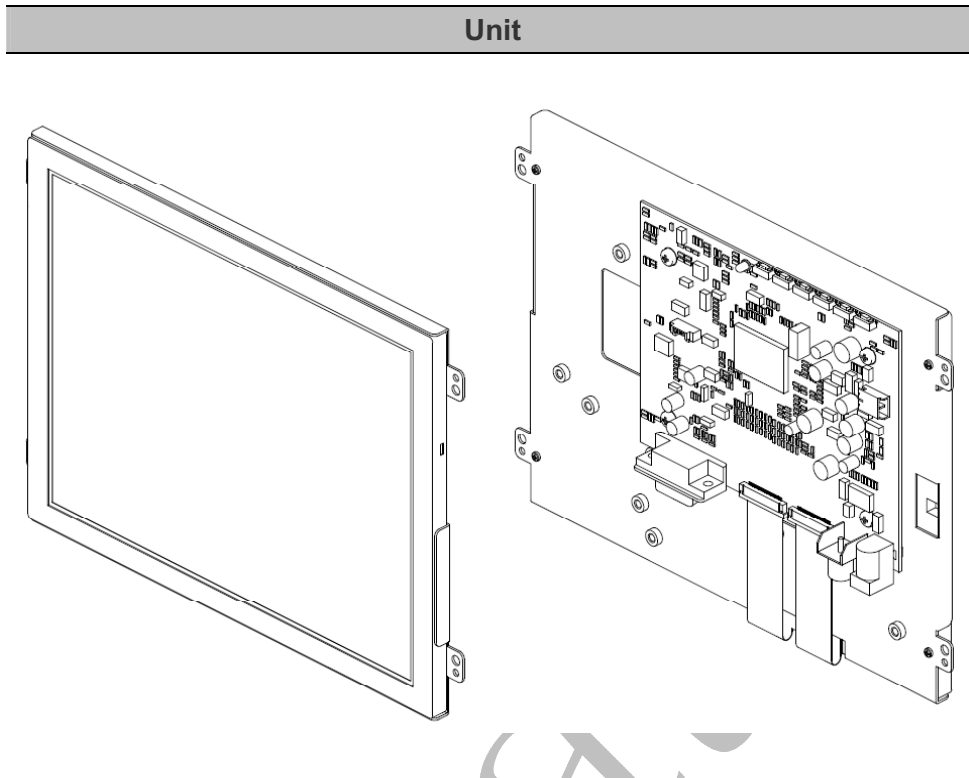
FLAT DISPLAY TECHNOLOGY

■ LP080S4Pxx-FxR V0.0



5. Order Information

5.1 Unit



Parameter	LP080S4PB1-FBR	LP080S4PB1-FNR	Unit
CVBS	1	1	
VGA (D-Sub15 / 2.0mm 14Pin)	D-Sub15	D-Sub15	
AC to DC Adapter 12V/2.5A (LASTD12025-FDR)	⊙	-	
Power Cord Plug Type B for USA (LAAC818000-FDR)	⊙	-	
Video Cable (LAVDO18000-FDR)	⊙	-	
VGA Cable (LAVGA16000-FDR)	⊙	-	

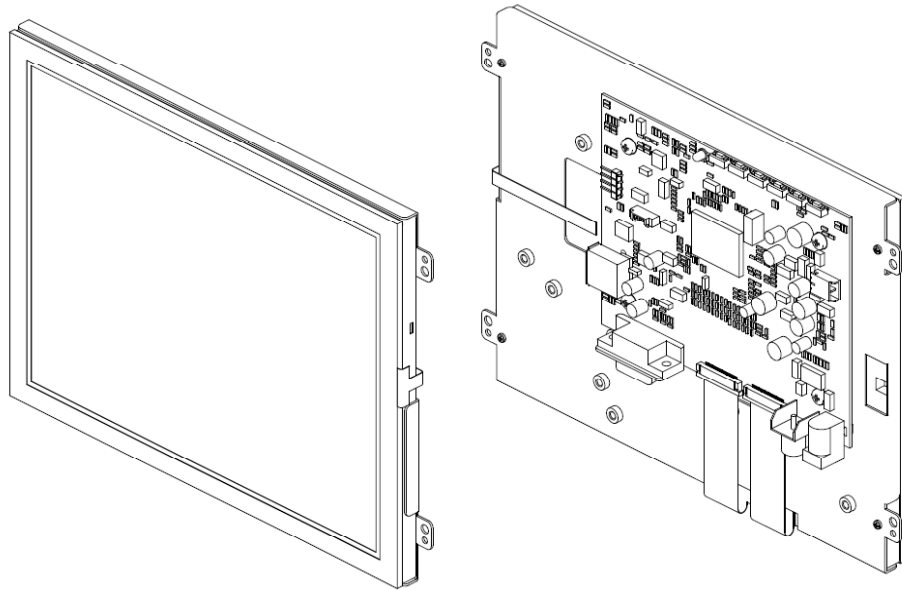
FLAT DISPLAY TECHNOLOGY

■ LP080S4Pxx-FxR V0.0



5.2 Unit (4W Touch)

Unit



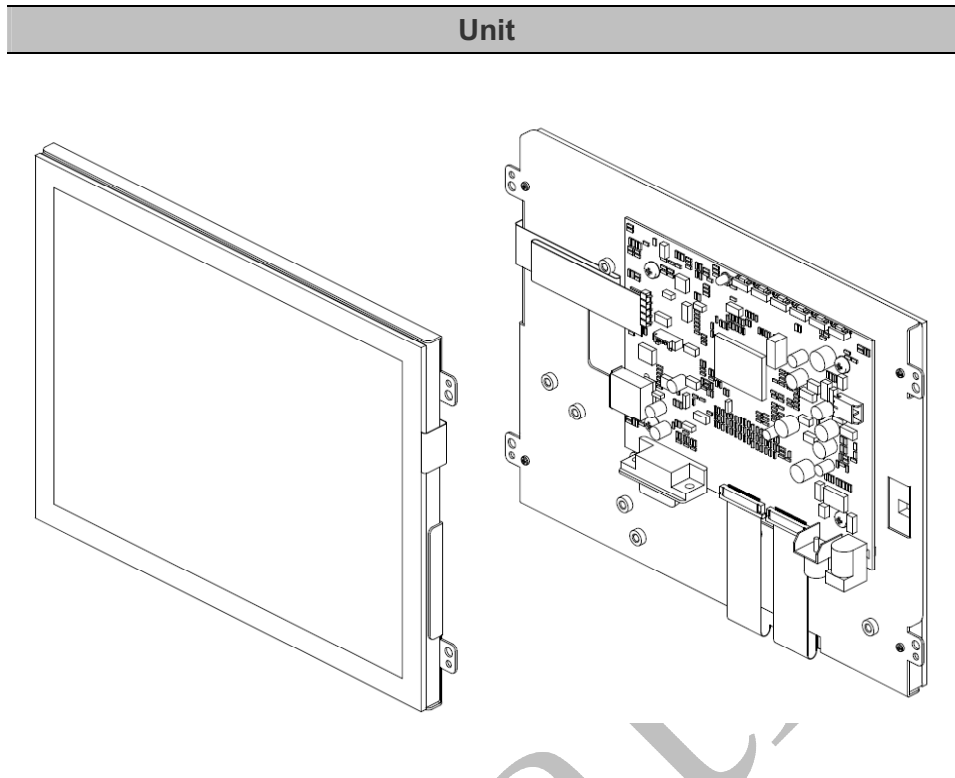
Parameter	LP080S4PB4-FBR	LP080S4PB5-FBR	LP080S4PB4-FNR	LP080S4PB5-FNR	Unit
CVBS	1	1	1	1	
VGA (D-Sub15 / 2.0mm 14Pin)	D-Sub15	D-Sub15	D-Sub15	D-Sub15	
Touch Panel Type	4W Resistive	4W Resistive	4W Resistive	4W Resistive	
Touch Screen Interface	USB	RS232	USB	RS232	
AC to DC Adapter 12V/2.5A (LASTD12025-FDR)	⊙	⊙	-	-	
Power Cord					
Plug Type B for USA (LAAC818000-FDR)	⊙	⊙	-	-	
Video Cable (LAVDO18000-FDR)	⊙	⊙	-	-	
VGA Cable (LAVGA16000-FDR)	⊙	⊙	-	-	
USB Cable (LAUSB18000-FDR)	⊙	-	-	-	
RS-232 Cable (LARS218000-FDR)	-	⊙	-	-	
Touch Screen Driver CD Disk	⊙	⊙	-	-	

FLAT DISPLAY TECHNOLOGY

■ LP080S4Pxx-FxR V0.0



5.3 Unit (5W Touch)



Parameter	LP080S4PBV-FBR	LP080S4PBU-FBR	LP080S4PBV-FNR	LP080S4PBU-FNR	Unit
CVBS	1	1	1	1	
VGA (D-Sub15 / 2.0mm 14Pin)	D-Sub15	D-Sub15	D-Sub15	D-Sub15	
Touch Panel Type	5W Resistive	5W Resistive	5W Resistive	5W Resistive	
Touch Screen Interface	USB	RS232	USB	RS232	
AC to DC Adapter 12V/2.5A (LASTD12025-FDR)	⊙	⊙	-	-	
Power Cord					
Plug Type B for USA (LAAC818000-FDR)	⊙	⊙	-	-	
Video Cable (LAVDO18000-FDR)	⊙	⊙	-	-	
VGA Cable (LAVGA16000-FDR)	⊙	⊙	-	-	
USB Cable (LAUSB18000-FDR)	⊙	-	-	-	
RS-232 Cable (LARS218000-FDR)	-	⊙	-	-	
Touch Screen Driver CD Disk	⊙	⊙	-	-	

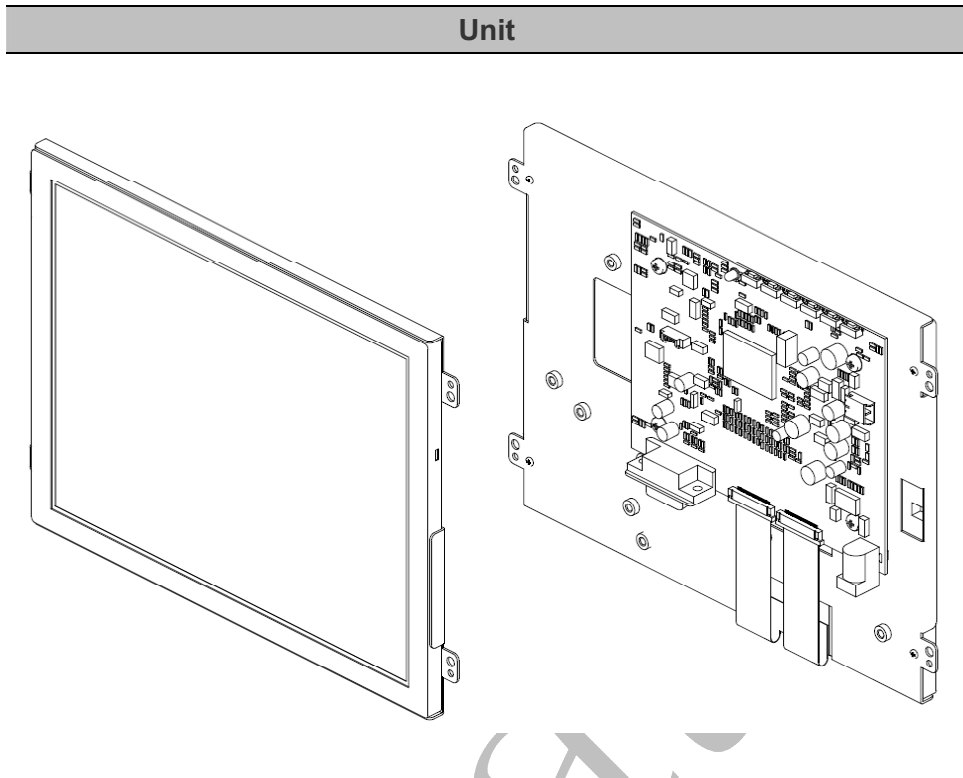
FLAT DISPLAY TECHNOLOGY

■ LP080S4Pxx-FxR V0.0



5-1. PC Only Order Information

5-1.1 Unit



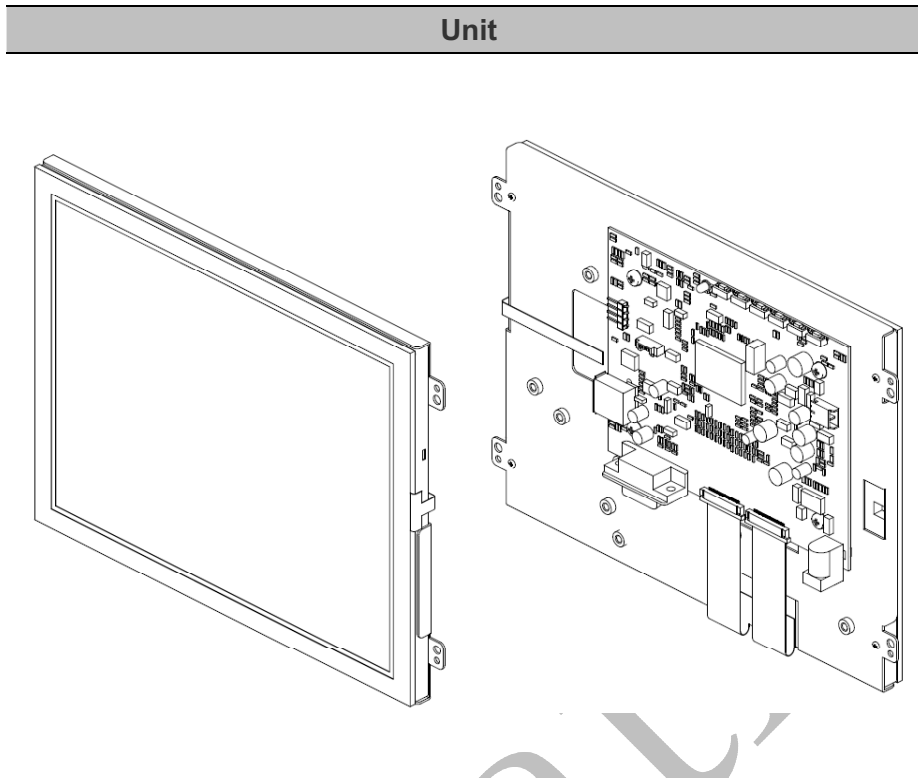
Parameter	LP080S4PC1-FBR	LP080S4PC1-FNR	Unit
CVBS	-	-	
VGA (D-Sub15 / 2.0mm 14Pin)	D-Sub15	D-Sub15	
AC to DC Adapter 12V/2.5A (LASTD12025-FDR)	⊙	-	
Power Cord Plug Type B for USA (LAAC818000-FDR)	⊙	-	
VGA Cable (LAVGA16000-FDR)	⊙	-	

FLAT DISPLAY TECHNOLOGY

■ LP080S4Pxx-FxR V0.0



5-1.2 Unit (4W Touch)



Parameter	LP080S4PC4-FBR	LP080S4PC5-FBR	LP080S4PC4-FNR	LP080S4PC5-FNR	Unit
CVBS	-	-	-	-	
VGA (D-Sub15 / 2.0mm 14Pin)	D-Sub15	D-Sub15	D-Sub15	D-Sub15	
Touch Panel Type	4W Resistive	4W Resistive	4W Resistive	4W Resistive	
Touch Screen Interface	USB	RS232	USB	RS232	
AC to DC Adapter 12V/2.5A (LASTD12025-FDR)	⊙	⊙	-	-	
Power Cord Plug Type B for USA (LAAC818000-FDR)	⊙	⊙	-	-	
VGA Cable (LAVGA16000-FDR)	⊙	⊙	-	-	
USB Cable (LAUSB18000-FDR)	⊙	-	-	-	
RS-232 Cable (LARS218000-FDR)	-	⊙	-	-	
Touch Screen Driver CD Disk	⊙	⊙	-	-	

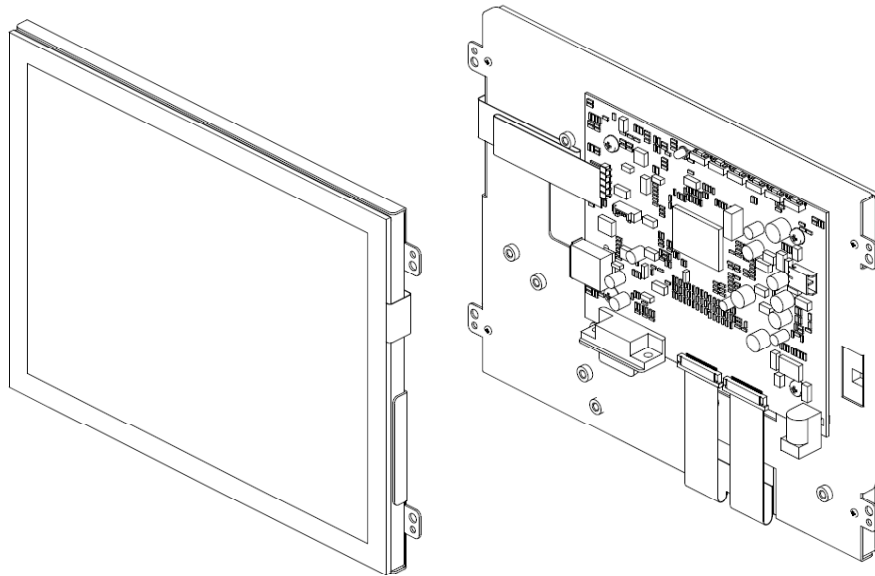
FLAT DISPLAY TECHNOLOGY

■ LP080S4Pxx-FxR V0.0



5-1.3 Unit (5W Touch)

Unit



Parameter	LP080S4PCV-FBR	LP080S4PCU-FBR	LP080S4PCV-FNR	LP080S4PCU-FNR	Unit
CVBS	-	-	-	-	
VGA (D-Sub15 / 2.0mm 14Pin)	D-Sub15	D-Sub15	D-Sub15	D-Sub15	
Touch Panel Type	5W Resistive	5W Resistive	5W Resistive	5W Resistive	
Touch Screen Interface	USB	RS232	USB	RS232	
AC to DC Adapter 12V/2.5A (LASTD12025-FDR)	⊙	⊙	-	-	
Power Cord Plug Type B for USA (LAAC818000-FDR)	⊙	⊙	-	-	
VGA Cable (LAVGA16000-FDR)	⊙	⊙	-	-	
USB Cable (LAUSB18000-FDR)	⊙	-	-	-	
RS-232 Cable (LARS218000-FDR)	-	⊙	-	-	
Touch Screen Driver CD Disk	⊙	⊙	-	-	

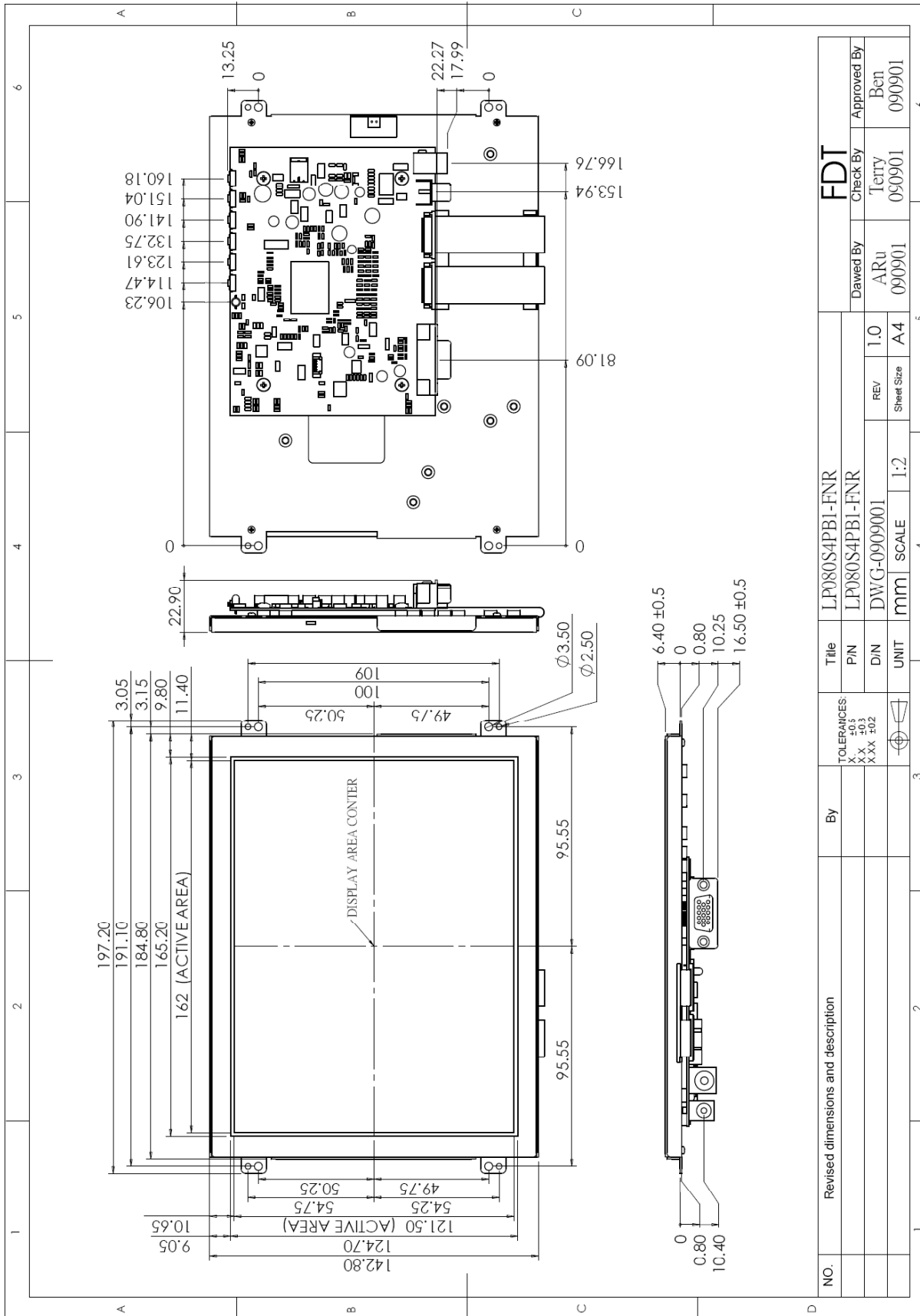
FLAT DISPLAY TECHNOLOGY

■ LP080S4Pxx-FxR V0.0



6. Dimension Information

6.1 Unit (LP080S4PBI-FNR)

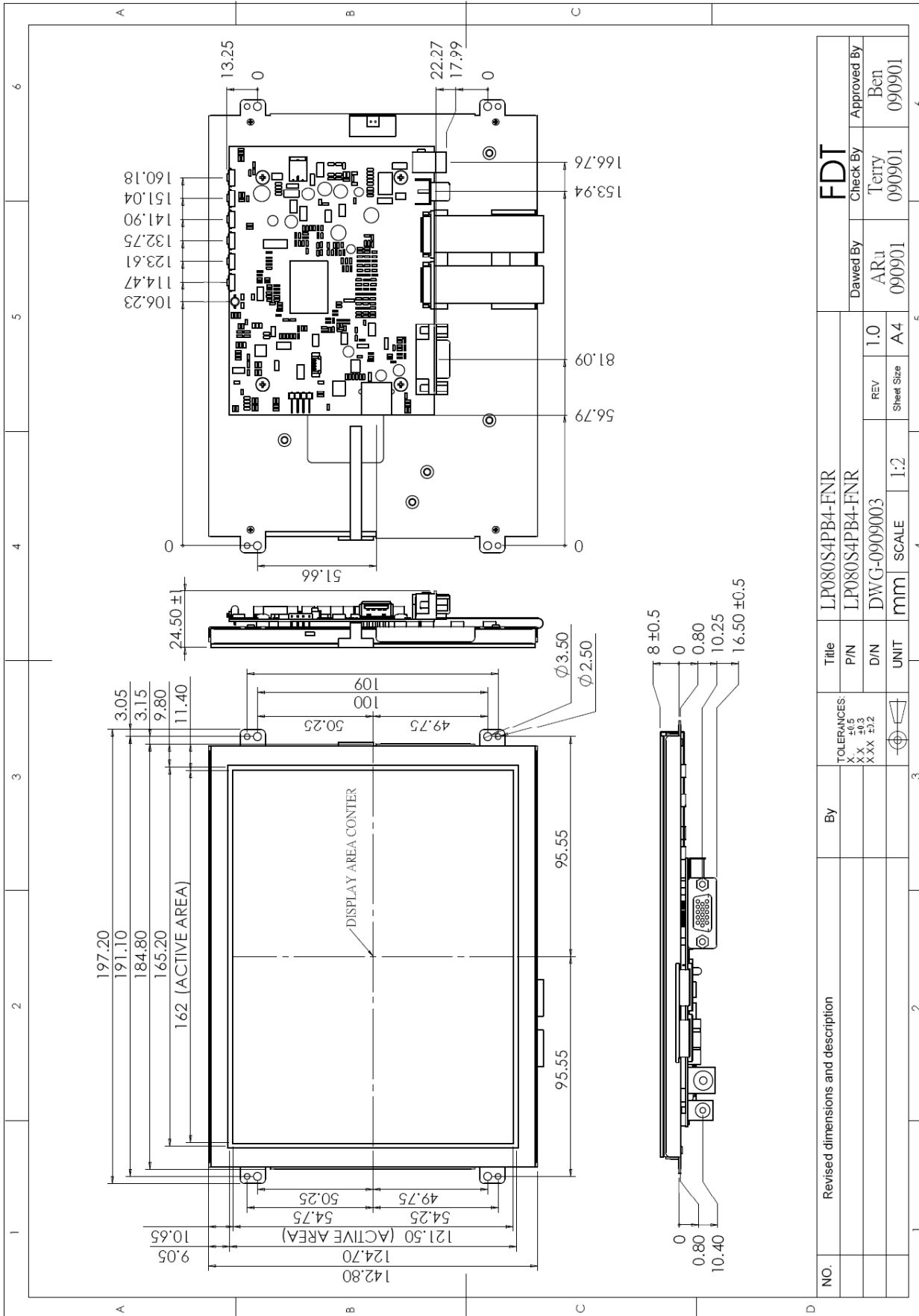


FLAT DISPLAY TECHNOLOGY

■ LP080S4Pxx-FxR V0.0



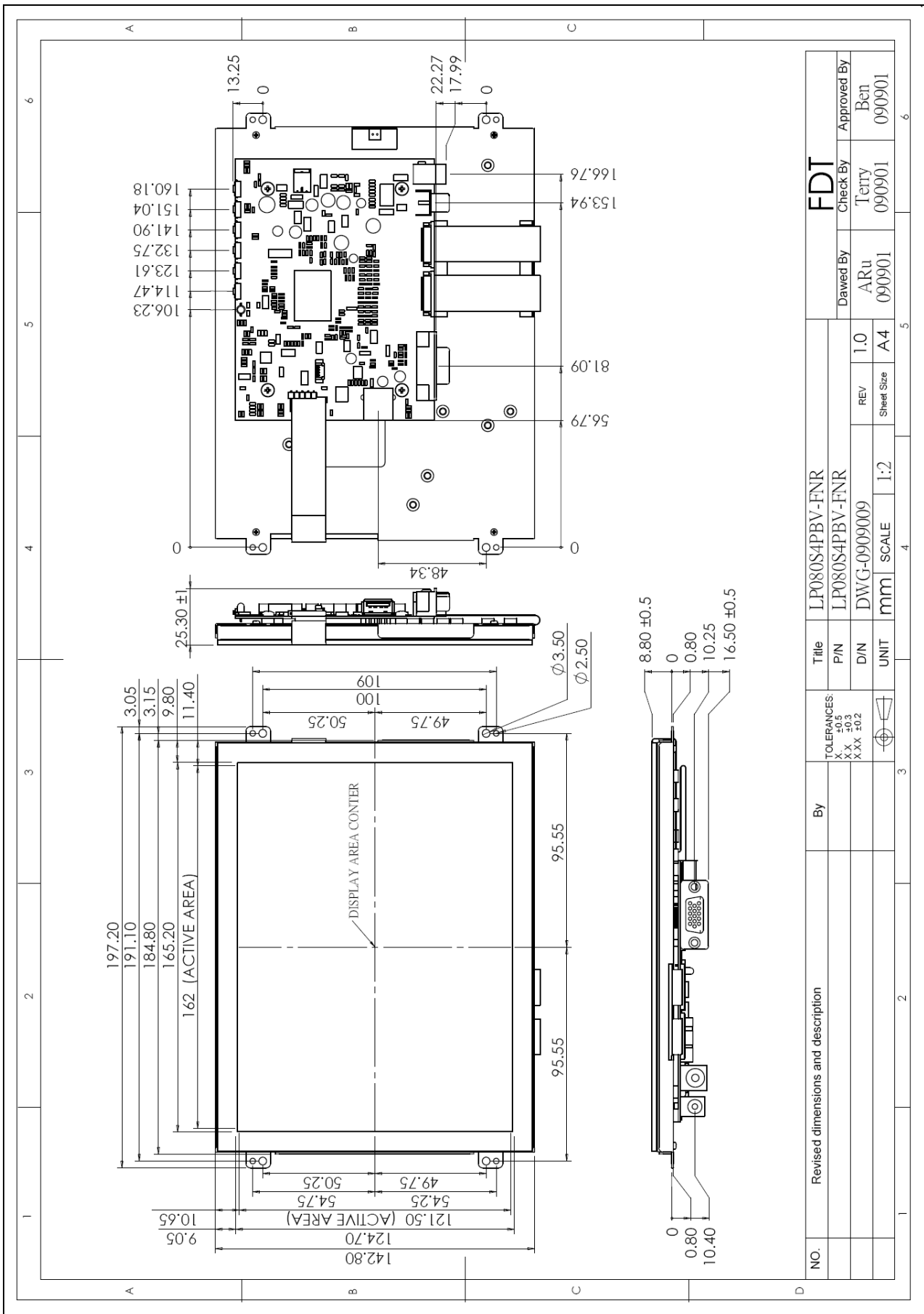
6.2 Unit (LP080S4PB4-FNR)



FLAT DISPLAY TECHNOLOGY

■ LP080S4Pxx-FxR V0.0 

6.4 Unit (LP080S4PBV-FNR)

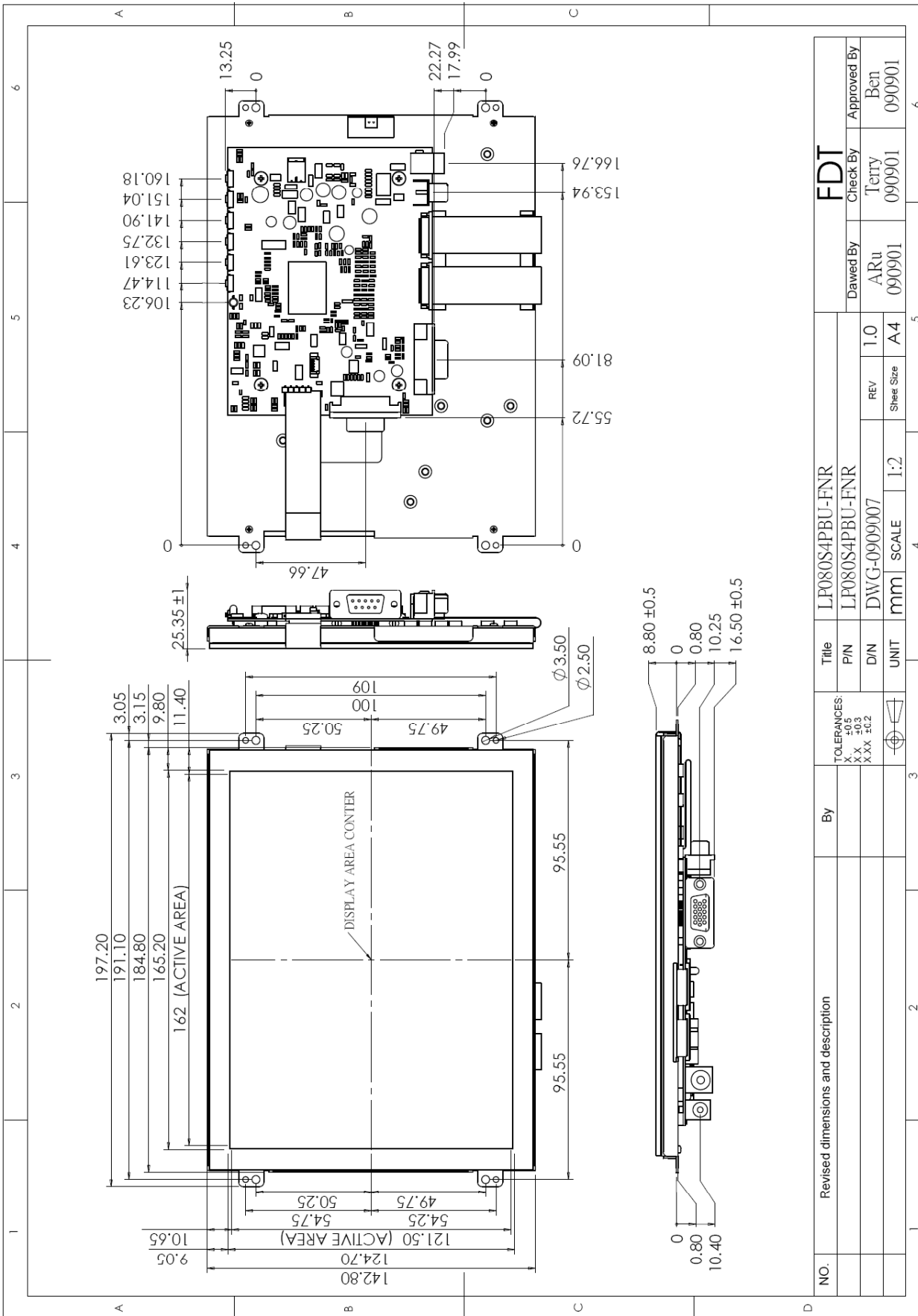


FLAT DISPLAY TECHNOLOGY

■ LP080S4Pxx-FxR V0.0



6.5 Unit (LP080S4PBU-FNR)

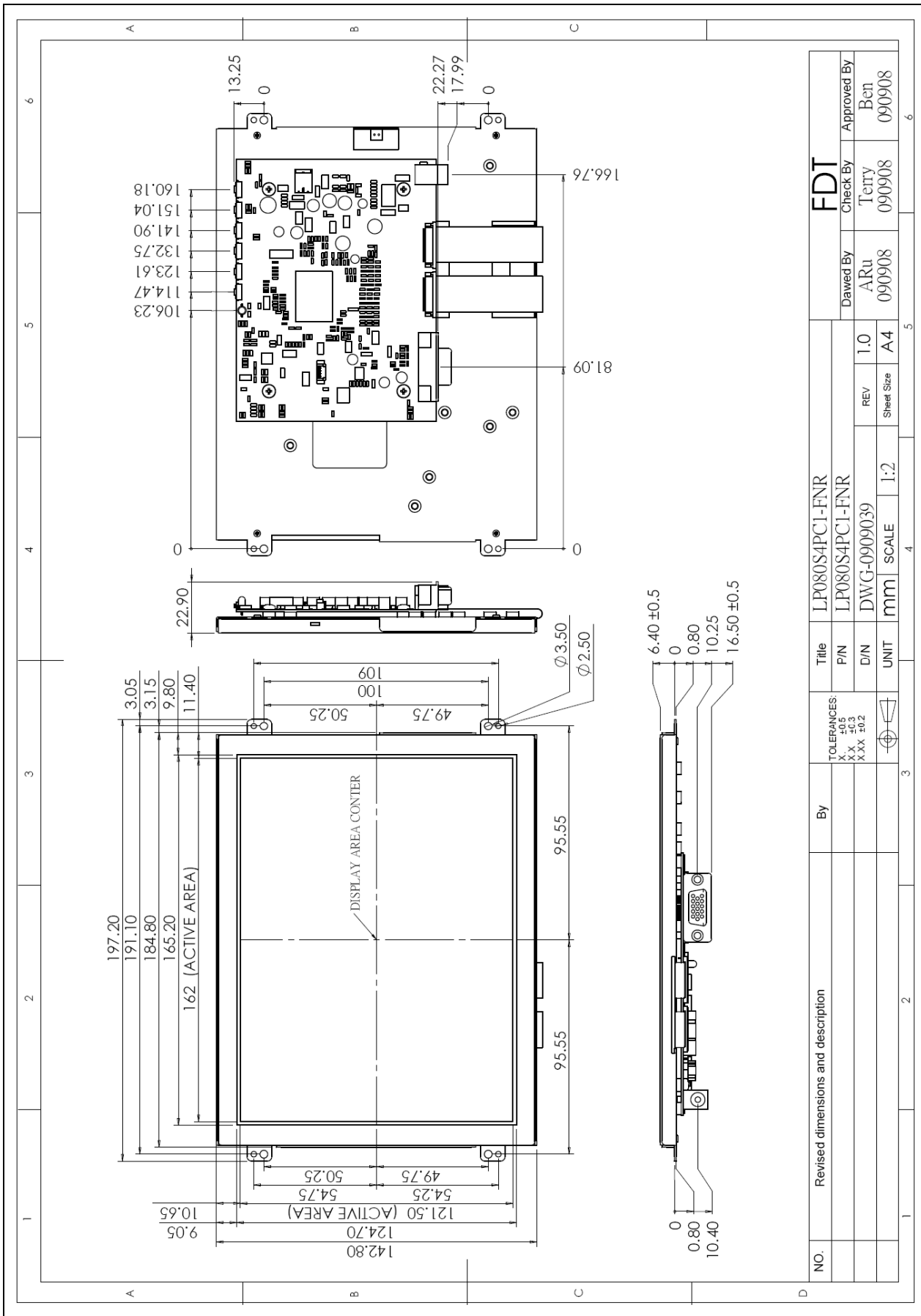


FLAT DISPLAY TECHNOLOGY

■ LP080S4Pxx-FxR V0.0



6.6 Unit (LP080S4PCI-FNR)

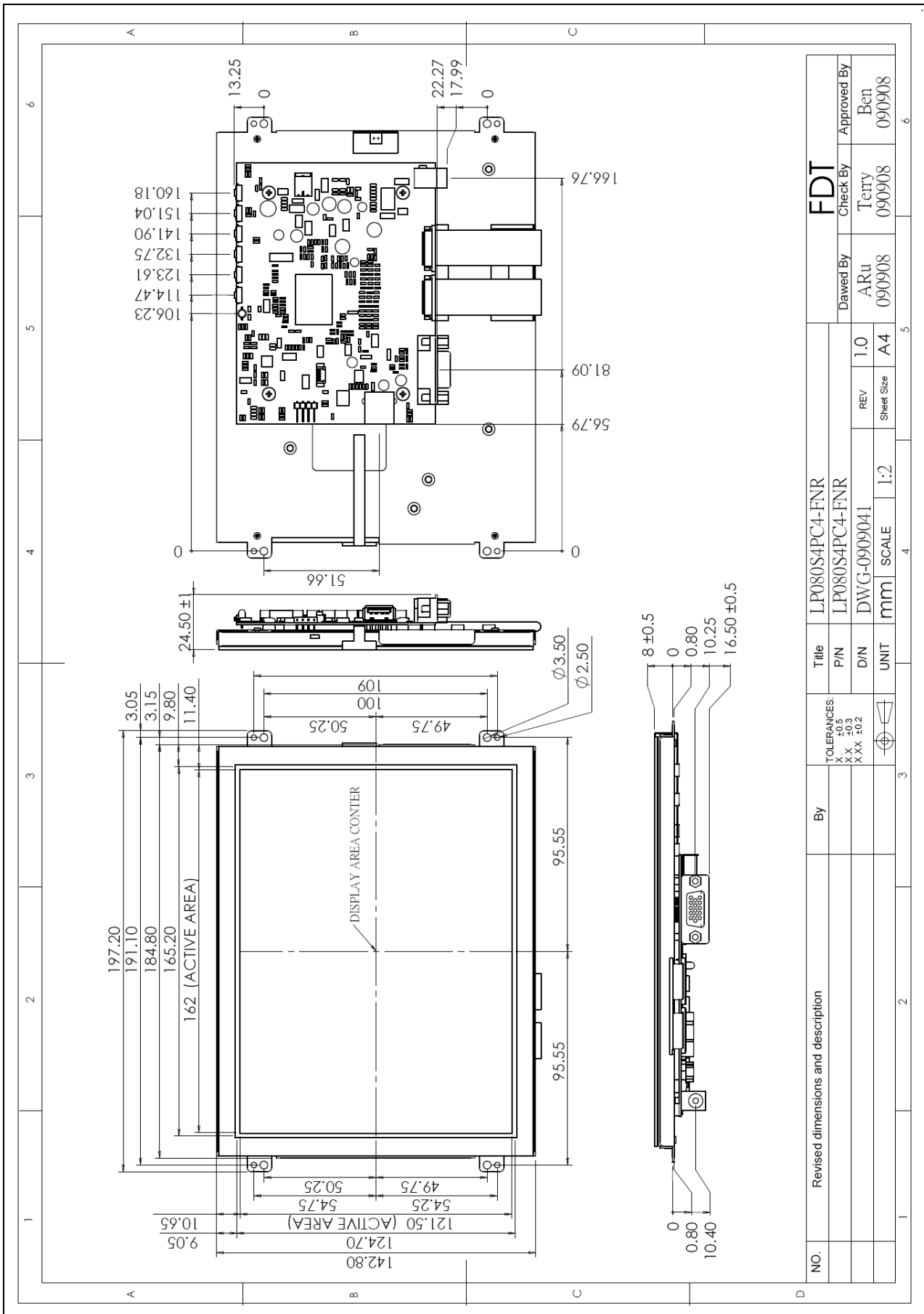


FLAT DISPLAY TECHNOLOGY

■ LP080S4Pxx-FxR V0.0



6.7 Unit (LP080S4PC4-FNR)

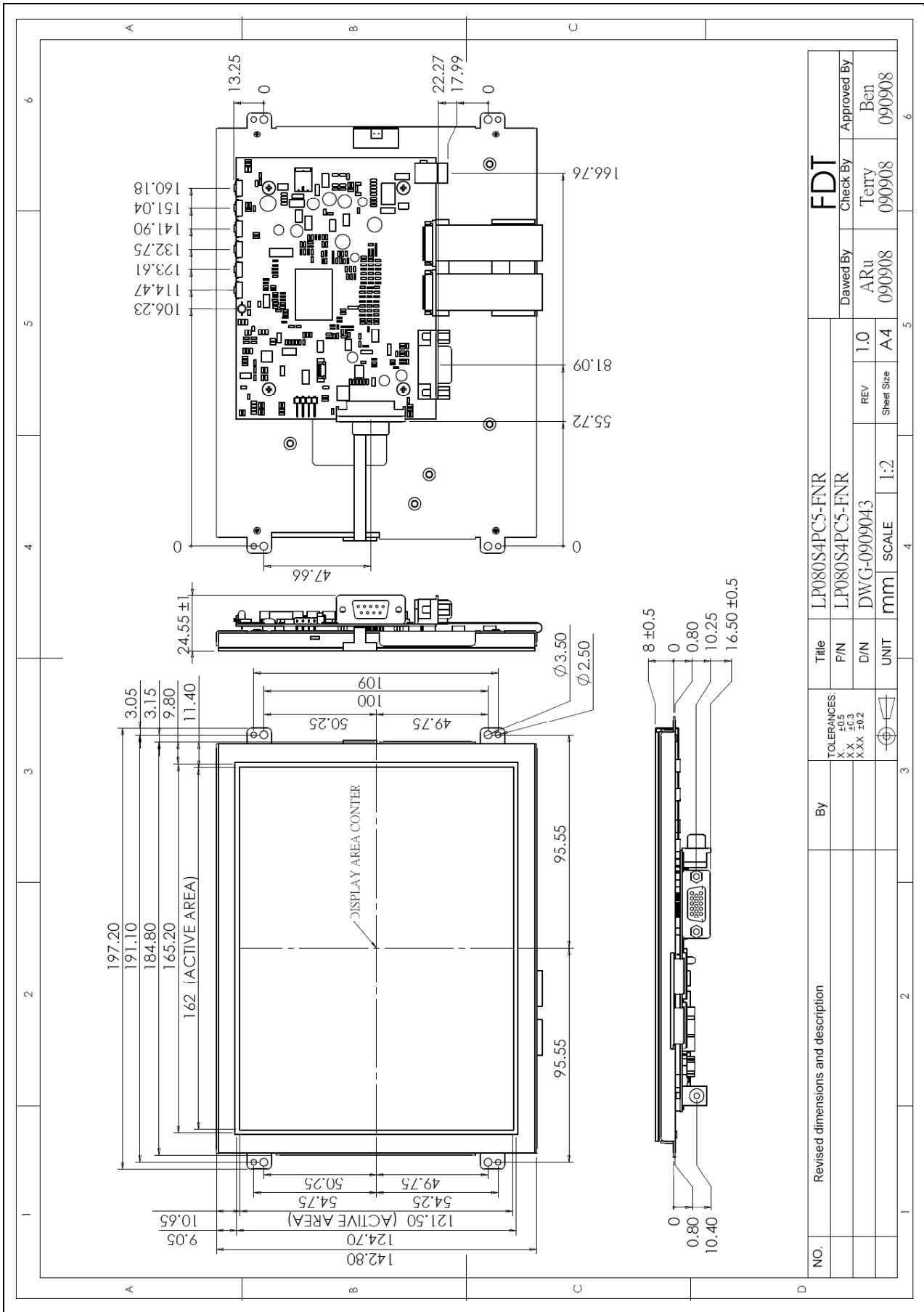


FLAT DISPLAY TECHNOLOGY

LP080S4Pxx-FxR V0.0



6.8 Unit (LP080S4PC5-FNR)

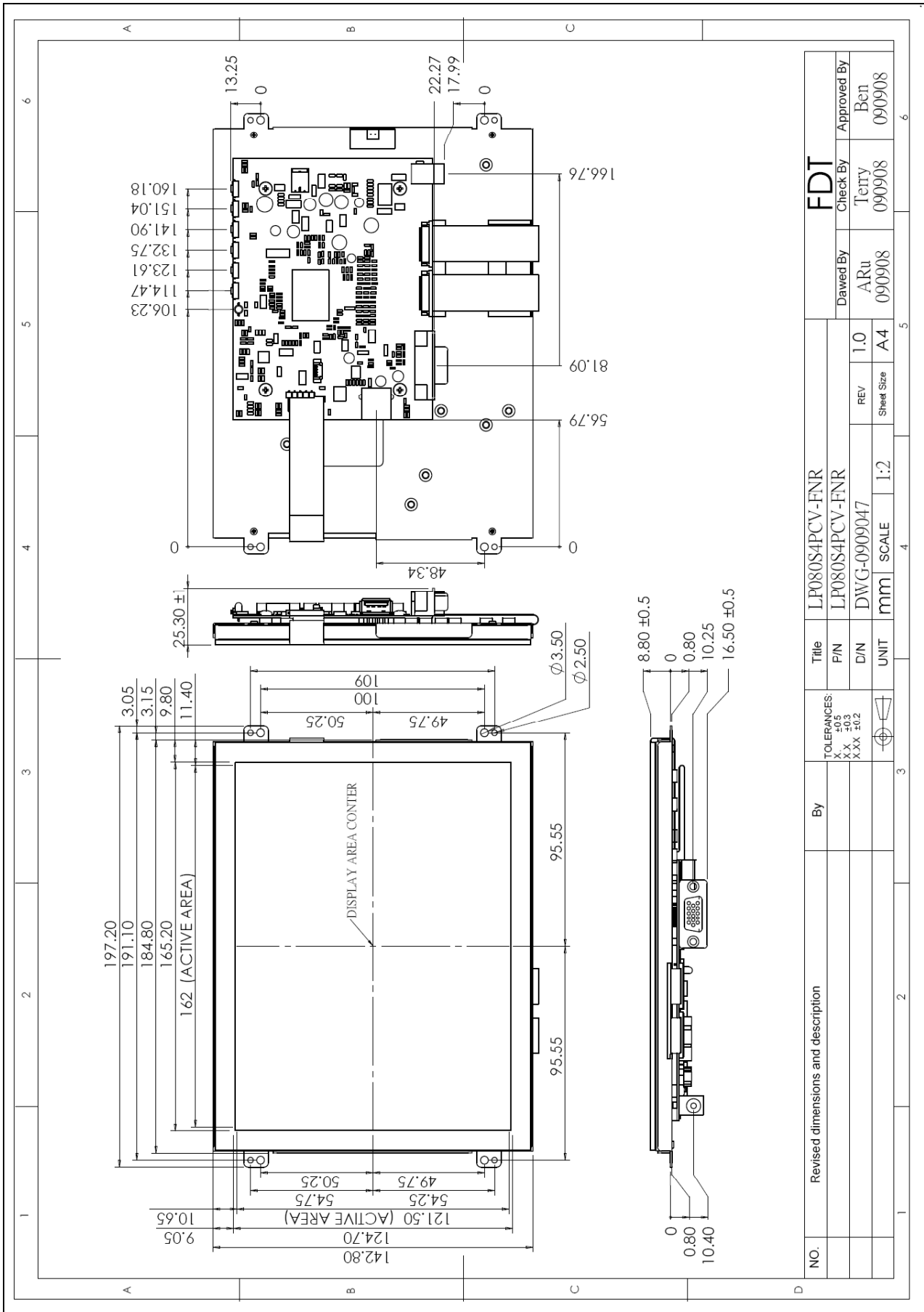


FLAT DISPLAY TECHNOLOGY

LP080S4Pxx-FxR V0.0



6.9 Unit (LP080S4PCV-FNR)

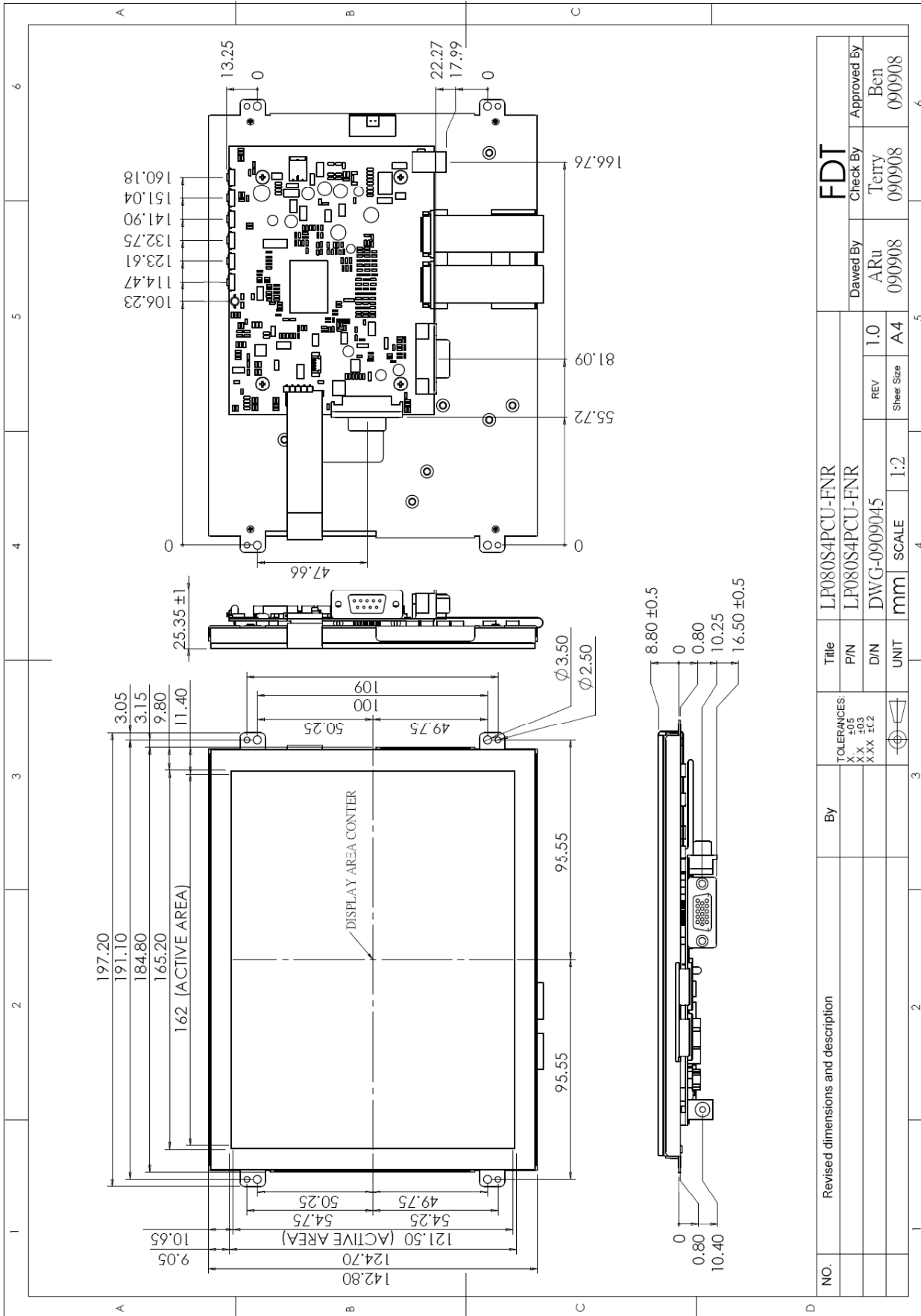


FLAT DISPLAY TECHNOLOGY

■ LP080S4Pxx-FxR V0.0



6.10 Unit (LP080S4PCU-FNR)



FLAT DISPLAY TECHNOLOGY

■ LP080S4Pxx-FxR V0.0



7. Pin Description

7.1 CNI : TFT-LCD Panel I/O Terminals (FPC 30 Pin Below Contact Type)

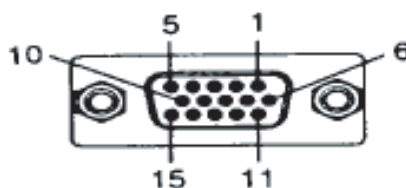
Pin No	Symbol	I/O	Description	Remark
1	POL	I	Polarity Selection	
2	STVD	I/O	Vertical Shift Pulse Signal Input or Output	
3	OEV	I	Output Enable	
4	CKV	I	Vertical Shift Clock	
5	STVU	I/O	Vertical Shift Pulse Signal Input or Output	
6	GND	P	Power Ground	
7	N.C	-	NC	
8	Vcc	P	Power Supply For Digital Circuit	
9	V9	I	Gamma Voltage Level 9	
10	V _{GL}	P	Gate OFF Voltage	
11	V2	I	Gamma Voltage Level 2	
12	V _{GH}	P	Gate ON Voltage	
13	V6	I	Gamma Voltage Level 6	
14	U/D	I	Up / Down Selection	
15	V _{COM}	I	Common Voltage	
16	GND	P	Power Ground	
17	AV _{DD}	P	Power Supply For Analog Circuit	
18	V14	I	Gamma Voltage Level 14	
19	V11	I	Gamma Voltage Level 11	
20	V8	I	Gamma Voltage Level 8	
21	V5	I	Gamma Voltage Level 5	
22	V3	I	Gamma Voltage Level 3	
23	GND	P	Power Ground	
24	R5	I	Red Data (MSB)	
25	R4	I	Red Data	
26	R3	I	Red Data	
27	R2	I	Red Data	
28	R1	I	Red Data	
29	R0	I	Red Data (LSB)	
30	GND	P	Power Ground	

7.2 CN2 : TFT-LCD Panel I/O Terminals (FPC 30 Pin Below Contact Type)

Pin No	Symbol	I/O	Description	Remark
1	GND	P	Power Ground	
2	G5	I	Green Data (MSB)	
3	G4	I	Green Data	
4	G3	I	Green Data	
5	G2	I	Green Data	
6	G1	I	Green Data	
7	G0	I	Green Data (LSB)	
8	STHL	I/O	Vertical Shift Pulse Signal Input or Output	
9	REV	I	Data Invert Control	
10	GND	I	Power Ground	
11	DCLK	I	Shift Clock Input	
12	Vcc	P	Power Supply For Digital Circuit	
13	STHR	I/O	Vertical Shift Pulse Signal Input or Output	
14	LD	I	Load Output Signal	
15	B5	I	Blue Data (MSB)	
16	B4	I	Blue Data	
17	B3	I	Blue Data	
18	B2	I	Blue Data	
19	B1	I	Blue Data	
20	B0	I	Blue Data (LSB)	
21	R/L	I	Right / left Selection	
22	V1	I	Gamma Voltage Level 1	
23	V4	I	Gamma Voltage Level 4	
24	V7	I	Gamma Voltage Level 7	
25	V10	I	Gamma Voltage Level 10	
26	V12	I	Gamma Voltage Level 12	
27	V13	I	Gamma Voltage Level 13	
28	AV _{DD}	P	Power Supply For Analog Circuit	
29	GND	P	Power Ground	
30	V _{COM}	I	Common Voltage	

7.3 J405 : Pin Assignment of Analog RGB Input (D-Sub 15Pin)

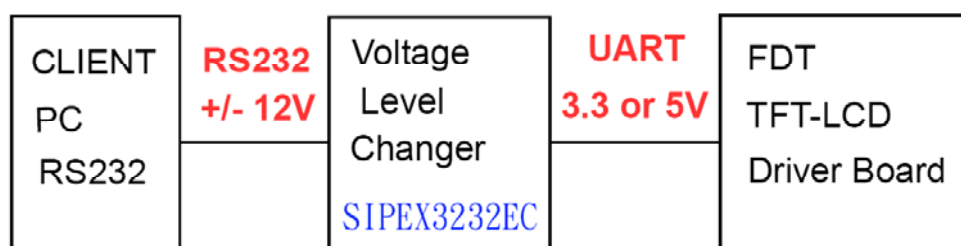
Pin No	Symbol	I/O	Description	Remark
1	RI+	I	Analog Red Signal	
2	GI+	I	Analog Green Signal	
3	BI+	I	Analog Blue Signal	
4	NC	-	No Connection	
5	GND	-	Ground	
6	AGND	-	Analog Ground	
7	AGND	-	Analog Ground	
8	AGND	-	Analog Ground	
9	VGA5V	-	VGA +5V Input	
10	VGA-Det	I	VGA Detect	
11	NC	-	No Connection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




7.4 J101: Pin Assignment of UART (Pitch 1.25mm 4Pin, Side Entry Type)

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

Note: All Functions can be controlled by UART , About UART command list please contact FDT sales.



FLAT DISPLAY TECHNOLOGY

■ LP080S4Pxx-FxR V0.0 

7.5 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	Remark
1	VIN	I	+12V Input Voltage	
2	GND	-	Power Ground	

7.6 RCA: Pin Assignment of Video Input (RCA JACK Yellow, Side Entry Type)

Pin No	Symbol	I/O	Description	Remark
1	Video	I	Video Input	
2	AGND	-	Analog Ground	

7.7 J601 : Pin Assignment of Touch USB (USBA-Female 2.0mm, Side Entry Type)(Option)

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

7.8 DB601 : Pin Assignment of Touch RS232 (D-SUB 9 FEMALE)(Option)

Pin No	Symbol	I/O	Description	Remark
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	

8. Absolute Maximum Ratings

8.1 Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit	Remark
Input Voltage	Vin	9	15	V	
Video Input Signal	Video in	0.5	2.0	Vp-p	@75Ω
Analog RGB Input Signal	Analog RGB in	0.5	2.0	Vp-p	@75Ω
Digital Input Signal	TTL	+0.3	+3.6	V	
Operating Temperature		-10	+60	°C	
Storage Temperature		-20	+70	°C	

Tentative

9. Recommended Operating Conditions

9.1 Electrical Characteristics

Parameter	Symbol	I/O	Min	Typ	Max	Unit	Note
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	@75Ω
Analog RGB Input Signal	Analog RGB in	RGB	I	0.7		Vp-p	@75Ω

9.2 VGA Mode Characteristics

Dots per inch	H	Unit	Polarity	V	Unit	Polarity	Note
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	

9.3 Panel Backlight Data

Parameter	Symbol	Min	Typ	Max	Unit	Note
LED Backlight Voltage	VLED	--	--	10.5	Vrms	ILED=20mA, (±10%)
LED Backlight Current	ILED	--	20	--	mA	

9.4 Optics Sample Test Data

Parameter	White Window	Red	Green	Blue	Remark
S/N : 001 x	-	-	-	-	
.y	-	-	-	-	±15%
L(cd/m ²)	-	-	-	-	
TC(°K)	-	-	-	-	

Note: 1. Luminance Meter : BM-7 FAST(TOPCON)

2.Video Pattern Generator: FLUKE PM54200

3. Measurement Distance : 500mm±50mm

4. TOPCON BM-7 Luminance Meter 2° filed of view is used in the testing

(After 10min ~20min operation)

FLAT DISPLAY TECHNOLOGY

■ LP080S4Pxx-FxR V0.0



10. 4W Resistance Touch Panel Characteristics

10.1 Pin assignment

Pin No	Symbol	Description	Remark
1	YD	Upper Electrode Y (Down Side)	
2	XL	Lower Electrode X (Left Side)	
3	YU	Upper Electrode Y (Upper Side)	
4	XR	Lower Electrode X (Right Side)	

10.2 Electrical Performance

Parameter	Symbol	Min	Typ	Max	Unit	Remark
Terminal Resistance	X	300		1100	Ω	
	Y	150		650	Ω	
Linearity		-	-	1.5	%	
Insulation Impedance		20	-	-	M Ω	DC 25V
Response Time		-	-	10	ms	

10.3 Optical Performance

Parameter	Specifications
Light Transmittance	82% Typ.
Haze	5.0% Typ.

10.4 Mechanical Performance

Parameter	Specifications
Input Method	Finger or stylus pen
Operating Force	$\leq 50g$
Surface Hardness	3H or more

10.5 Durability Performance

Parameter	Specifications
Hitting Durability	≥ 1000000 times, with R8.0 mm silicon rubber, 200g, 5Hz
Sliding Durability	≥ 100000 words, with R0.8 mm polyacetal stylus, 250g, 60 mm / sec

10.6 Environmental

Parameter	Specifications
Operating Temp.	-10°C~60°C (Except dew condensation)
Storage Temp.	-30°C~70°C (Except dew condensation)

10.7 Reliability Test Procedure

Parameter	Specifications
High temperature storage test	70°C for 240 hours.
Low temperature storage test	-30°C for 240 hours.
Thermal Cycling	-30°C (30 min)~70°C (30 min) for 50 cycles.
High temperature and high humidity	40°C, 95%RH for 240 hours.

11. 5W Resistance Touch Panel Characteristics

11.1 Pin assignment

Pin No	Symbol	Description	Remark
1	RT	Right & Top electrode	
2	RL	Right & Lower electrode	
3	SG	Signal Ground	
4	LT	Left & Top electrode	
5	LL	Left & Lower electrode	

11.2 Electrical Performance

Parameter	Symbol	Min	Typ	Max	Unit	Remark
Loop Resistance	X	20	-	500	Ω	
	Y	20	-	500	Ω	
Linearity		-	-	1.5	%	
Insulation Impedance		20	-	-	M Ω	DC 25V
Response Time		-	-	15	ms	

11.3 Optical Performance

Parameter	Specifications
Transparency	80%
Haze	9.5%±2%

11.4 Mechanical Performance

Parameter	Specifications
Input Method	Finger or stylus pen
Operating Force	≅ 50gf
Surface Hardness	≅ 3H

11.5 Durability Performance

Parameter	Specifications
Knock Test	35,000,000 times

11.6 Environmental

Parameter	Specifications
Operating Temp.	-10°C~70°C (Except dew condensation)
Storage Temp.	-40°C~80°C (Except dew condensation)
Operating Humidity (Non Condensing)	20% RH~ 90%RH
Storage Humidity (Non Condensing)	10% RH~ 90%RH

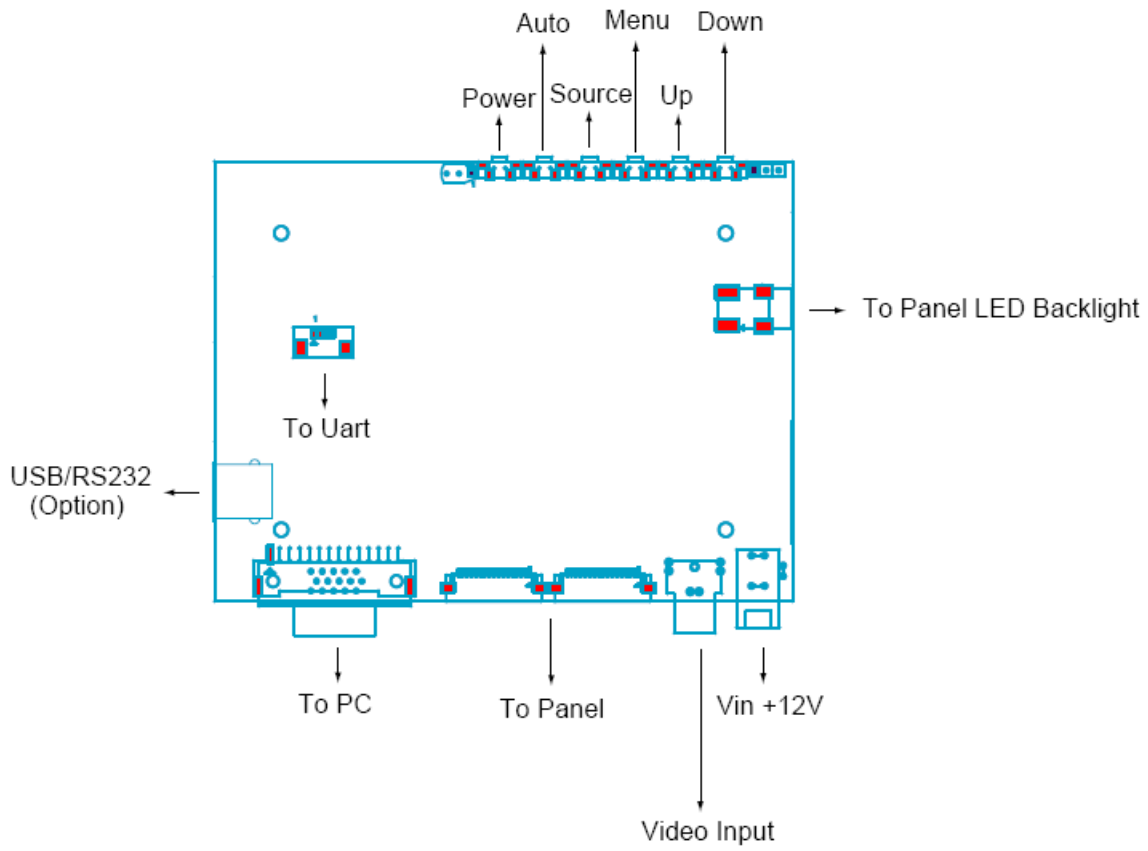
11.7 Reliability test procedure

Parameter	Specifications
High temperature storage test	70°C for 500 hours.
Low temperature storage test	-40°C for 500 hours.
Thermal Cycling	-40°C (1 hr each)~80°C (1 hr each) for 100 cycles.
High temperature and high humidity	70°C, 80%RH for 500 hours.



12. Operation Manual

12.1 Driver Board Manual



FDT



13. Packing List

Before you begin installing the KIT, please make sure that the following materials have been shipped:



A. LASTD12025-FDR



B. LAAC818000-FDR



C. LAVDO18000-FDR



D. LAVGA16000-FDR



E. LAUSB18000-FDR



F. LARS218000-FDR



G.

- A. AC to DC Adapter (100-240VAC 50-60Hz to +12VDC @ 2.5A)
- B. Power Cord (Plug Type B for USA)
- C. Video Cable
- D. VGA Cable
- E. USB Cable
- F. RS-232 Cable
- G. Touch Screen Driver CD Disk / User Manual

If any of these items are missing or damaged, contact your distributor or sales representative immediately.

FLAT DISPLAY TECHNOLOGY

■ LP080S4Pxx-FxR V0.0



14. Key Function by OSD

14.1 Menu Operation

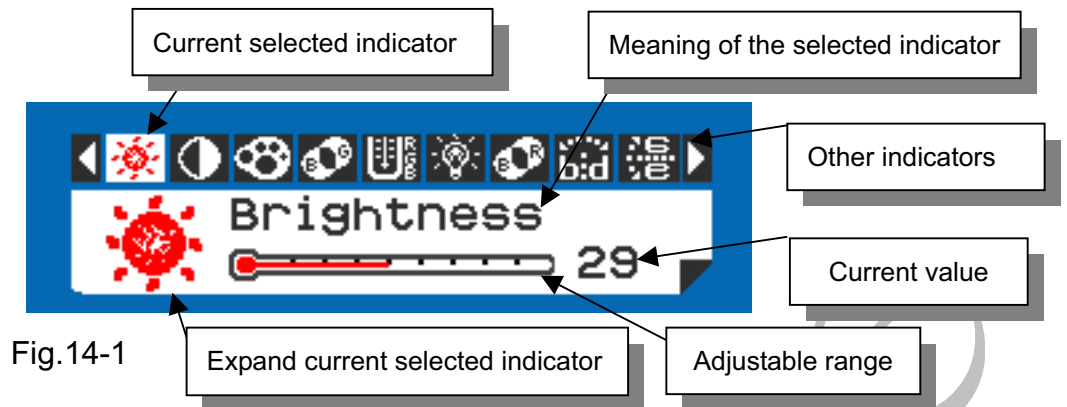
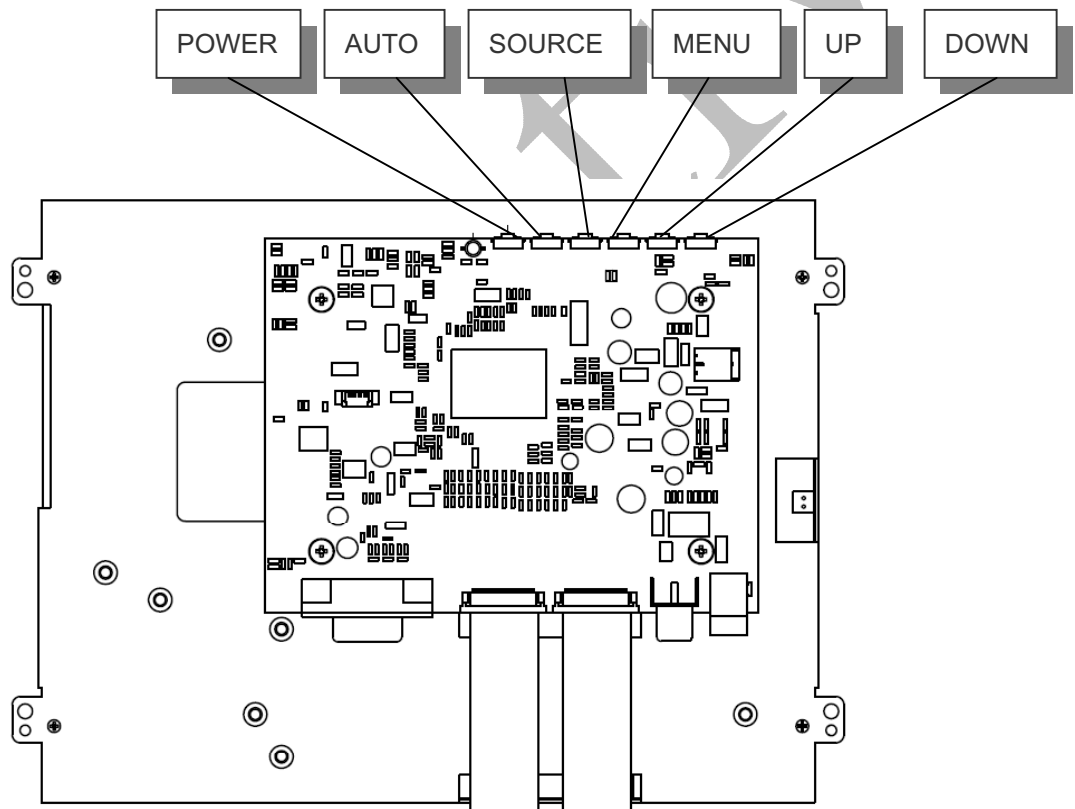


Fig.14-1



Operations of key board :


















1. To navigate the menu, press [MENU]. (Fig.14-1)
2. The indicator lighting up in white color is the selected adjustment item.
3. To Next Item of the menu, press [MENU] again.
4. The operations below are only available when "Menu" is started.
5. Press [UP] / [DOWN] to adjust the value of the selected item.

FLAT DISPLAY TECHNOLOGY

■ LP080S4Pxx-FxR V0.0 

Overview of the menu :

Firmware Version must be \geq VER 0.26

Indicator	Meaning	Adjustable range	For	Remark
	Brightness	0 ~ 64	AV / VGA	Adjust-Bar
	Contrast	0 ~ 64	AV / VGA	Adjust-Bar
	Color	0 ~ 64	AV	Adjust-Bar
	Tint	0 ~ 32	AV	Adjust-Bar
	Sharpness	0 ~ 16	AV	Adjust-Bar
	Dimmer	0 ~ 9	AV / VGA	
	Color Tone	Normal / Warm / Cool	AV / VGA	
	Mirror	OFF / ON	AV / VGA	
	Flip	OFF / ON	AV / VGA	
	H-Position	-25 ~ +25	AV / VGA	Balance-Bar
	V-Position	-10 ~ +10	AV / VGA	Balance-Bar
	Auto		VGA	
	Scan	Over Scan / Under Scan	AV	
	Information		AV / VGA	Fig.14-2
	Setup		AV / VGA	Fig.14-3
	Factory Set		AV / VGA	
	Exit		AV / VGA	

FLAT DISPLAY TECHNOLOGY

■ LP080S4Pxx-FxR V0.0 

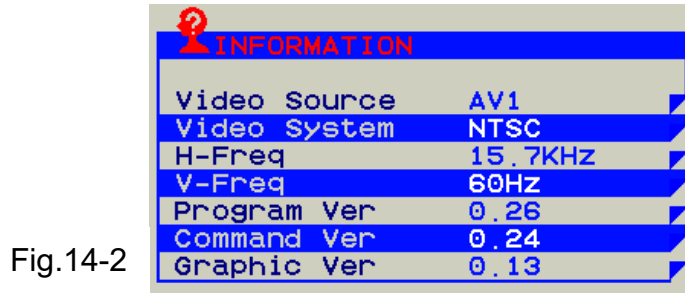


Fig.14-2

Setup Menu :



Fig.14-3

Indicator	Meaning	Adjustable range	Function	Remark
	Show Status	ON / OFF	Show signal status.	ON: Show OFF: Hidden
	Blue Screen	ON / OFF	If loss signal will put on the blue or black screen.	ON: Blue OFF: Black
	Auto Power On	ON / OFF	Power input module will be auto turn on.	ON: Auto OFF: Manual
	Auto Saving	OFF / 3s / 5s / 15s / 30s	If signal lost over setting times will be power off.	ON: Auto OFF: Normal
	Detect Source	ON / OFF	Auto detection which source is existence and change.	ON: Auto OFF: Normal
	Return			

Note : VGA only type don't have Detect Source function.



14.2 Operations

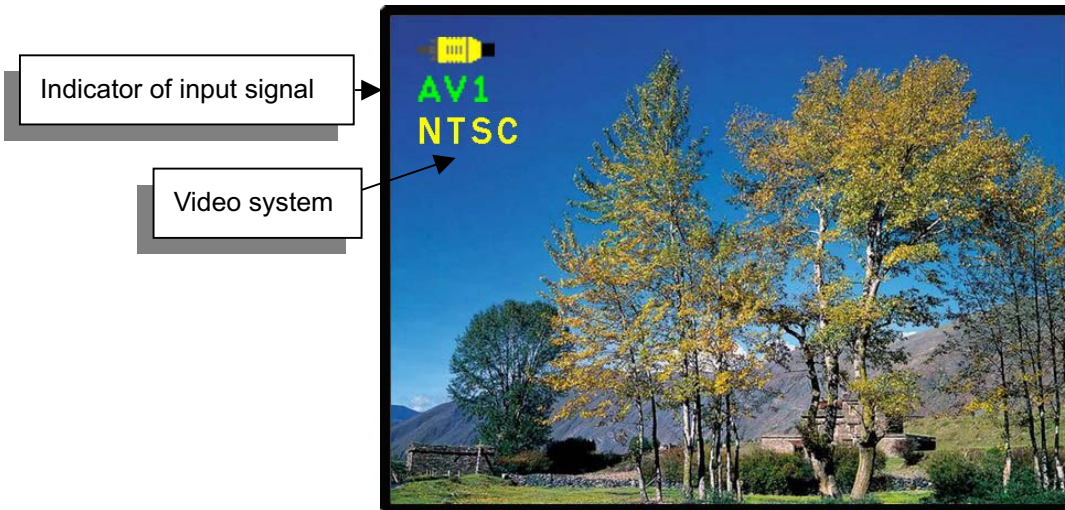



Fig.14-4

[Power] : Monitor power on / off

[Source] : Input signal switch

Overview of input signals :

Indicator	Input signal	Interface	Video system
	VGA	Analog RGB	640x480_60 / 800x600_60 / 1024x768_60