

LCD-Kit03A
VGA Input LCD Kit of
10.4” TFT color 640x480 – 18bits Display

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Contents

1. Introduction.....	2
1.1 Specifications	3
1.2 What You Have	4
2. Installation	5
2.1 LCD-Kit03A Connection Board Layout.....	6
2.2 Dimension Drawing.....	7
3. LCD-Kit03A Connectors.....	8
3.1 LCD-03 Connector Board Layout	8
3.1.1 LCD Connector	9
3.1.2 Backlight Inverter Control	10
3.2 Backlight Connector.....	10
3.3 Touch Panel Power Connector	11
3.4 Brightness Setting Connector.....	11
3.5 AV-6721 Control Board.....	11
4. Appendix	12
Unpacking Precautions	

1

Introduction

Welcome to the LCD-Kit03A 10.4" TFT color LCD. The LCD-Kit03A is an Amorphous Silicon TFT LCD panel with VGA input and OSD (On Screen Display) control. It is made for the system manufacturers, integrators, or VARs that want to provide all the performance, quality and reliability.

The LCD-Kit03A is designed with 640 x 480 resolution and 18-bits display colors, wide view angle, High Contrast and Low Reflection to present a High Image Quality. With its compact size (10.4"), LCD-Kit03A is also the most suitable solution for OA Equipment, Display Terminals, and Industrial portable Workstation LCD monitor.

The LCD-Kit03A comes with specifically designed mounting kit for fast installation. It is also *Plug and Play*, can be directly and easily connected to any VGA port.

1.1 Kit Specifications :

- Single Supply Voltage : +12V
- Outline Dimensions: 269.5mm x 209mm x 57.5mm
- Panel Size : 10.4" Diagonal
- Active Area : 211.2mm x 158.4mm
- Viewing Area : 215.2mm x 162.4mm
- Display Colors : 256k Colors by the combinations of 18 bits data
- Number of Pixels : 640 (W) x 480 (H)
- Pixel Format : 1 pixel = R + G + B dots
- Pixel Arrangement : R, G, B Vertical Strip
- Pixel Pitch : 0.33mm (H) x 0.33mm (V)
- Brightness : 350 cd/m²
- Viewing Direction : 6 o' clock (in direction of max. contrast)
- Viewing Angle : +/- 50° (H), -10° ~ +30° (V)
- Contrast Ratio : > 100 : 1
- Surface Treatment : Anti-glare and Hard Coat 3H
- Backlight: Twin cold-cathode fluorescent lamps for sidelighting
- Operating Temperature : 0~50°C
- LCD MTBF : 50,000 hours
- Backlight MTBF : 25,000 hours (min)
- VGA Input
- OSD built
- RS232 I/F Touch Panel (option)

1.2 What You Have

In addition to this *User's Manual*, the LCD-Kit03A package includes the following items:

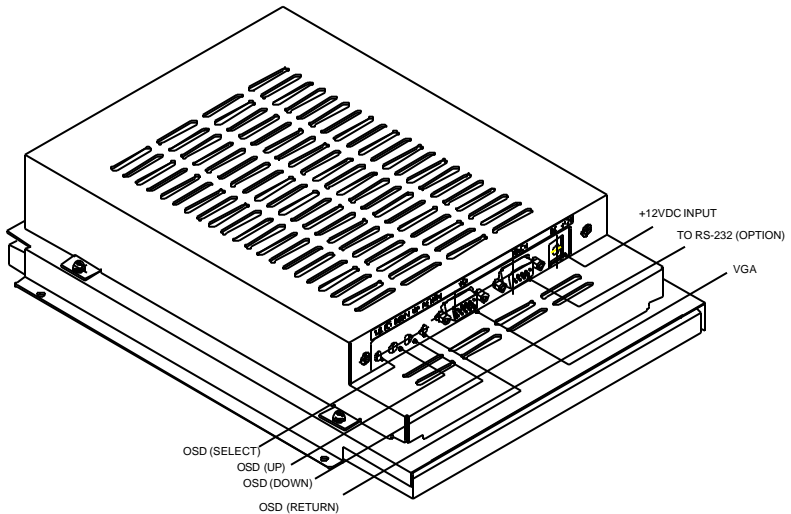
- 6721 User's Manual
- LCD-Kit03A User's Manual
- Power adapter
- AC power cord
- VGA cable (1.8M)

If any of these items is missing or damaged, contact the dealer from whom you purchased the product. Save the shipping materials and carton in case you want to ship or store the product in the future.

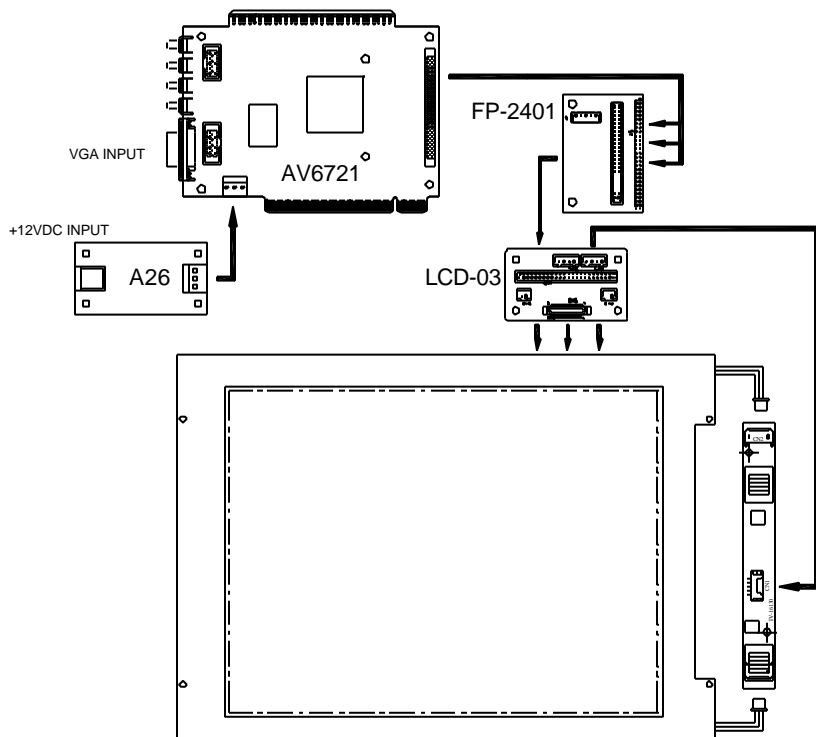
2

Installation

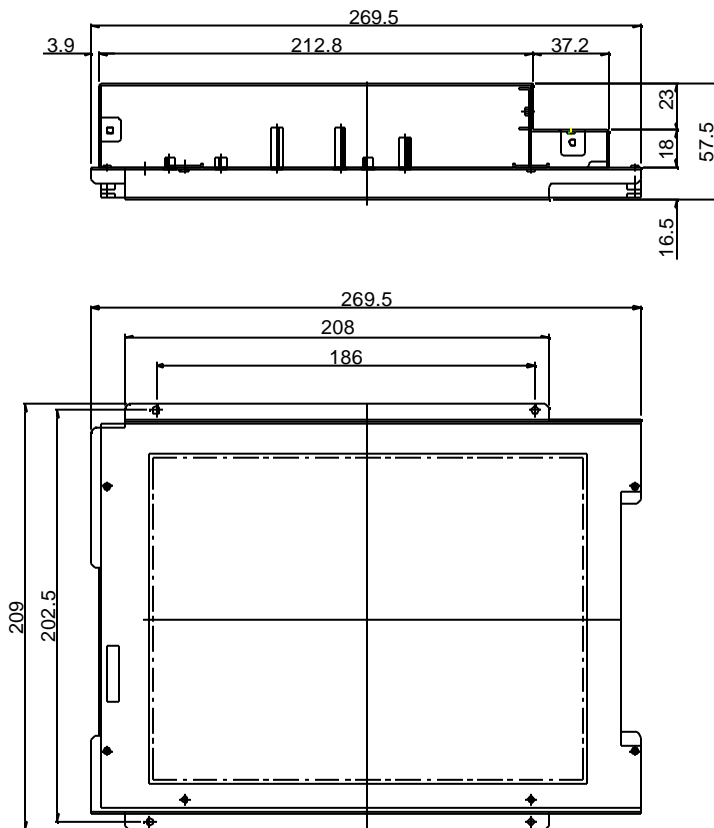
This chapter describes how to install the LCD-Kit03A and include all connections description such as jumpers, connectors and switches setting. The layout of LCD-Kit03A connectors are shown on the next chapter. The reference manual of AV-6721 control board are separated on attached booklet. Also the Unpacking Precautions are shown on appendix that you should be careful with are described on the following page.



2.1 LCD-Kit03A Connection Layout



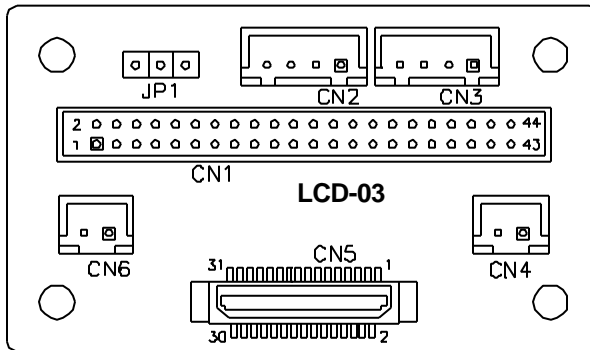
2.2 LCD-Kit03A Dimension Drawing



3

LCD-Kit03A Connectors

3.1 LCD-03 Connection Board Layout



3.1.1 LCD Connector

- **CN1: 22x2 Header/2.0mm LCD Connector**
(connect to LCD Control Card)

PIN NO	FUNCTION	PIN NO	FUNCTION
1	+12V	2	+12V
3	GND	4	GND
5	+5V	6	+5V
7	FPVEE	8	GND
9	P0	10	P1
11	P2	12	P3
13	P4	14	P5
15	P6	16	P7
17	P8	18	P9
19	P10	20	P11
21	P12	22	P13
23	P14	24	P15
25	P16	26	P17
27	P18	28	P19
29	P20	30	P21
31	P22	32	P23
33	GND	34	GND
35	SHFCLK	36	FLM
37	M	38	LP
39	GND	40	ENBKL
41	GND	42	NC
43	+5V	44	+5V

- **CN5: LCD OUTPUT (Hirose DF9-31P-1V) Connector**
(connect to Panel Display)

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	GND	2	SHFCLK
3	GND	4	P18
5	P19	6	P20
7	GND	8	P21
9	P22	10	P23
11	GND	12	P10
13	P11	14	P12
15	GND	16	P13
17	P14	18	P15
19	GND	20	M
21	GND	22	P2
23	P3	24	P4
25	GND	26	P5
27	P6	28	P7
29	GND	30	+5V
31	+5V		

3.1.2 Backlight Inverter Control

- **JP1: Backlight Inverter ON/OFF control - jumper**

PIN NO.	FUNCTION
1-2	USE FPVEE
2-3	USE ENBKL

3.2 Backlight Connector

- **CN2: Backlight Inverter Connector**

PIN NO.	DESCRIPTION
1	Vin
2	ON/OFF
3	GND
4	VR

- **CN4: JST-2Pin/2.5mm Backlight Inverter ON/OFF Switch**

PIN NO.	DESCRIPTION
1	+12V
2	To CN2 pin1

1-2 ON : Backlight Inverter ON

1-2 OFF : Backlight Inverter OFF

3.3 Touch Panel Power Connector

- **CN3: Touch Panel Power Connector**

PIN NO.	DESCRIPTION
1	+12V
2	GND
3	GND
4	+5V

3.4 Brightness Setting Connector

- **CN6: Brightness VR Connector**

PIN NO.	DESCRIPTION
1	Series Resistor to VCC
2	VR
3	GND

Note: Pin1 is reserved for potentiometer

3.5 AV-6721 Control Board

The AV-6721 Control Board is worked for VGA control; all detail as feature and connection information please refer to “AV-6721 User Manual”

Appendix

Unpacking Precaution

- ✓ Some components on LCD-Kit03A are very sensitive to static electric charges and can be damaged by a sudden rush of power. Ground yourself to remove any static charge before touching your LCD-Kit03A. You can do it by using a grounded wrist strap at all times or by frequently touching any conducting materials that is connected to the ground.
- ✓ Do not touch the inner side of LCD panel and the connector/cable of fluorescent lamp/backlight when the power is on. The inverter supplies HIGH VOLTAGE to these parts (~ 550Vrms).
- ✓ Disconnect power supply before handling and doing connection on LCD-Kit03A. Do not plug any connector or jumper while the power is on. It will cause fatal damage to your LCD panel.
- ✓ Make sure that every connector is connected in correct direction. Any incorrect connection may cause smoke or burn of electrical parts or fatal damage of your LCD panel.
- ✓ Be careful with the liquid crystal material. Do not swallow, inhale or have skin contact with this material in case that the LCD panel is broken and the liquid flow out. If you inhale the liquid material, rinse your mouth immediately with water then go to see a doctor. If you have skin contact with the liquid, wash it immediately with alcohol. Be careful, too, with the chips of glass if the panel is broken.

- ✓ For outdoor usage, an ultra-violet ray protect-lens is recommended to apply onto LCD display. It will prevent your LCD from strong sunlight, scratches, dust and water invasion etc. which can cause damage to the LCD display.