

LCD-Kit07
1024x768 – 36bits
LQ150X1DG11 LCD Display

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Introduction

Welcome to the LCD-Kit07 LQ150X1DG11. The LCD-Kit07 is an Amorphous Silicon TFT LCD panel with 1024 x 768 resolution and 36-bits display colors. It is made for the system manufacturers, integrators, or VARs that want to provide all the performance, reliability, and quality at a reasonable price.

The LCD-Kit07 is designed with wide view angle, High Contrast and Low Reflection to present a High Image Quality. With its compact size (15.0"), LCD-Kit07 is also the most suitable solution for OA Equipment, Display Terminals, and Industrial portable Workstation LCD monitor.

The LCD-Kit07 comes with specifically designed mounting kit for fast installation. It is also *Plug and Play*, can be directly and easily connected to JUKI, NOVA, POS,... series main boards which use C&T 65555 chipset as the LCD/CRT interface.

1.1 Specifications :

Supply Voltage : +5V

Outline Dimensions : 331.3mm (W) x 257.9mm (H) x 15.9mm (D)

Panel Size : 15.0" (38cm) Diagonal

Active Area : 304.1mm x 228.1mm

Display Colors : 256k Colors by supplying 36 bit data signal

Number of Pixels : 1024 (W) x 768 (H)

Pixel Format : 1 pixel = R + G + B dots

Pixel Arrangement/Configuration : R,G,B vertical stripe

Brightness : 200 cd/m²

Pixel Pitch : 0.297mm (H) x 0.297mm (V)

Viewing Angle : Vertical = 120°, Horizontal = 140°

Contrast Ratio : 250 -> 300

Surface Treatment : Anti-glare and Hard Coat 2H

Backlight: edge-lighting type with couple of Cold-Cathode

Fluorescent Tube (CCFT)

Operating Temperature : 0~50°C

LCD MTBF : 50,000 hours

Backlight MTBF : 25,000 hours (avr.)

1.2 What You Have

In addition to this *User's Manual*, the LCD-Kit07 package includes the following items:

- one LQ150X1DG11 15.0" LCD Panel with its mounting kit
- one 70cm 20-pin LVDS connection cable
- one BIOS Utility Diskette

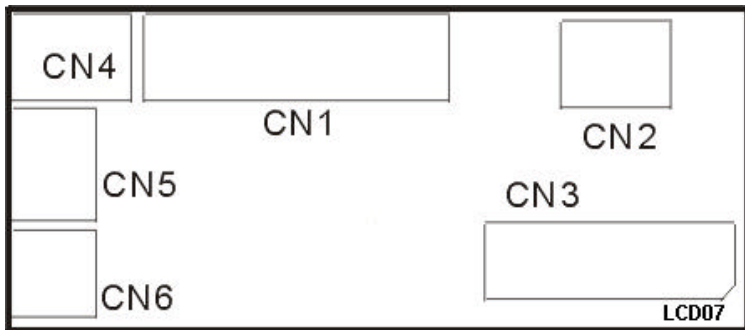
If any of these items is missing or damaged, contact the dealer from whom you purchased the product. Save the shipping materials and carton in case you want to ship or store the product in the future.

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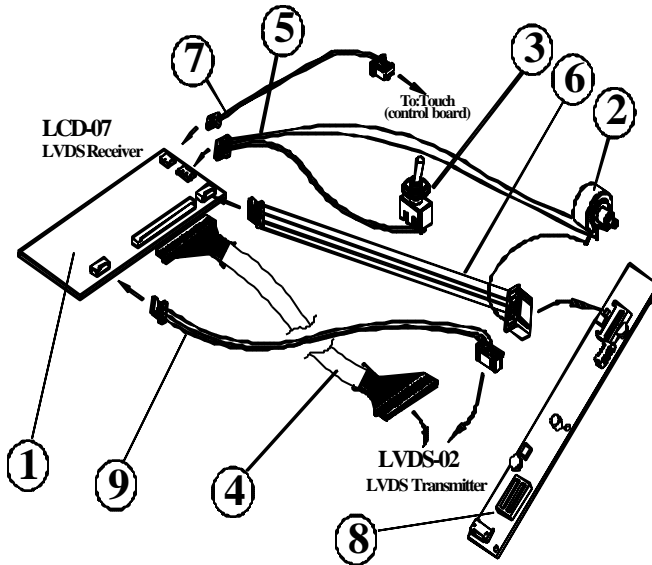
Installation

This chapter describes how to install the LCD-Kit07. The layout of LCD-07 Connection Board is shown on the next page and the Unpacking Precautions that you should be careful with are described on the following page. Also included is the connectors description for this LCD-Kit07.

2.1 LCD-07 Connection Board Layout



2.2 LCD-Kit07 Connection Layout



Note :

- ① LCD-07 Connection Board
- ② Brightness VR, connected to CN5
- ③ Backlight ON/OFF Switch, connected to CN5
- ④ 70cm 20-pin LCD connection cable, connected to LVDS Control Card / LVDS Transmitter
- ⑤ 35cm VR and Switch cable
- ⑥ Backlight Inverter cable, connected to CN4
- ⑦ Touch Panel Power connector, connected to CN6
- ⑧ Backlight Inverter
- ⑨ Transmitter line, connecting CN2 and LVDS Control card / LVDS Transmitter

2.3 Unpacking Precautions

- ✓ Some components on LCD-Kit07 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-Kit07 . 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 (~ 690Vrms).
- ✓ Disconnect power supply before handling and doing connection on LCD-Kit07. 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.

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LCD-Kit07 Connectors

3.1 LCD Connector

- **CN1: LVDS Connector**

(connected to LVDS02 Control Card of SBC)

PIN NO	FUNCTION
1	+5V
2	+5V
3	GND
4	GND
5	RA0-
6	RA0+
7	RB0-
8	RB0+
9	RC0-
10	RC0+
11	RCLK0-
12	RCLK0+
13	RA1-
14	RA1+
15	RB1-
16	RB1+
17	RC1-
18	RC1+
19	RCLK1-
20	RCLK1+

• **CN3: LCD OUTPUT Connector**

(connect to Panel Display, at the back side of the PCB)

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	GND	2	RB0
3	RB1	4	RB2
5	RB3	6	RB4
7	RB5	8	GND
9	GB0	10	GB1
11	GB2	12	GB3
13	GB4	14	GB5
15	GND	16	BB0
17	BB1	18	BB2
19	BB3	20	BB4
21	BB5	22	GND
23	RA0	24	RA1
25	RA2	26	RA3
27	RA4	28	RA5
29	GND	30	GA0
31	GA1	32	GA2
33	GA3	34	GA4
35	GA5	36	GND
37	BA0	38	BA1
39	BA2	40	BA3
41	BA4	42	BA5
43	GND	44	GND
45	GND	46	FLM(VSYNC)
47	LP(HSYNC)	48	M(DE)
49	GND	50	GND
51	SHFCLKA	52	SHFCLKB
53	GND	54	GND
55	GND	56	GND
57	+5V	58	+5V
59	+5V	60	+5V

3.2 Backlight Connector

- **CN2: Backlight Inverter Input Connector**
(connect to LVDS control card)

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

- **CN4: Backlight Inverter Connector** (connect to Inverter)

PIN NO.	DESCRIPTION
1	Vin(+12V)
2	ON/OFF
3	GND
4	VR
5	Potential GND

Note:

Pin5 is serially connected with R4 to GND
(reserved for potentiometer GND)

- **CN5: Backlight Switch and Brightness VR Connector**

PIN NO.	FUNCTION	DESCRIPTION
1	SW	ENBKL
2		To CN4 Pin2
3	BR	VR or Vadj
4		Potential GND

Note:

Pin4 is serially connected with R4 to GND

1-2 ON : BKI operated

1-2 OFF : BKI inoperated

3-4 :If the inverter uses the Ohm (Ω) value to adjust the brightness value, then the R4 is stamped with 0 Ω . Otherwise, R4 is stamped with a preferred value for voltage controlled adjustment.

3.3 Touch Panel Power Connector

• **CN6: Touch Panel Power Connector**

PIN NO.	DESCRIPTION
1	+12V
2	GND

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Voltage and BIOS Setting

After all jumpers and connectors have been set and connected correctly, the next step is to set the Voltage and BIOS for the LCD-Kit07. These settings are done on your SBC.

Voltage Setting

The Supply Voltage for LCD-Kit07 is +5V. You must set the *LCD Voltage Setting* Jumper on your SBC to +5V. Please, refer to SBC User Manual of your SBC or refer to the following tables.

BIOS Setting

The BIOS setting can be done simply in CMOS Setup. Please, refer to the following tables for more detail information.

Note: *To do the above settings, you must have one VGA monitor connected to your SBC because your LCD-Kit07 may not work correctly or even does not show anything before the Voltage and BIOS settings are correct.*

4.1 BIOS and Voltage Setting Table

LCD-Kit07

	BIOS Setup	LCD Volt. Setting
JUKI-710	Standard CMOS Setup: LCD&CRT: Auto or Both Panel & P.M.U. Setup: Panel Type: 7 : 1024x768 TFT Color	JP9: 2-3 > ON 5-6 > ON
JUKI-740E	Peripheral Setup: LCD&CRT Selection : Auto or Both LCD Type : #7 1024x768 TFT	JP39: 2-3 > ON
JUKI-745E	Peripheral Setup: LCD&CRT Selection : Auto or Both LCD Type : #7 1024x768 TFT	JP39: 2-3 > ON
NOVA-600	Peripheral Setup: LCD&CRT Selection : Auto or Both LCD Type : #7 1024x768 TFT	JP10: 2-3 > ON
POS-566	Peripheral Setup: LCD CRT Selection: Auto or Both LCD Type : #7 1024x768 TFT	JP23: 2-3 > ON

