Model No. EFL-0622WHT

6.2inches VGA LCD Monitor

Customer's logo display
on Booting is available

- **Hitachi TFT LCD Panel**
- **Wide Viewing Angle, High Speed Response**
- **Automatic Scanning**
- **Enhanced Video Quality**
- **Power Supply with enhanced Design Margin**
- **Test Pattern for Burn-in & Self Check**

Table of Contents

1. GENERAL DESCRIPTION

1-1. Overview

Effinet open frame LCD Monitor EFL-0622WHT is a high performance TFT LCD monitor providing high quality image from the analog RGB input.
This monitor supports VGA signal input at vertical refresh rate of 60 Hz. It includes integrated signal processing unit, named LSP(LCD Signal Processor), which had all electronic function for user application. It is designed for industrial use with Auto power on and enhanced design margin for reliability

1-2. FCC RF INTERFERENCE STATEMENT

NOTE :

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

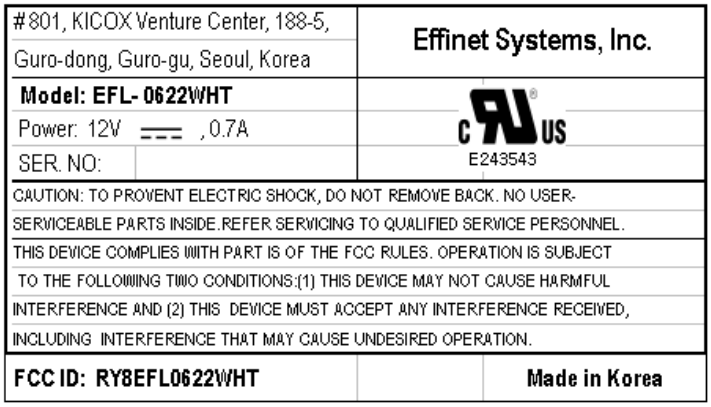
If this equipment does cause harmful interference to radio or television reception which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio, TV technical for help.
- Only shielded interface cable should be used.

Finally, any changes or modifications to the equipment by the user not expressly approved by the grantee or manufacturer could void the users authority to operate such equipment.

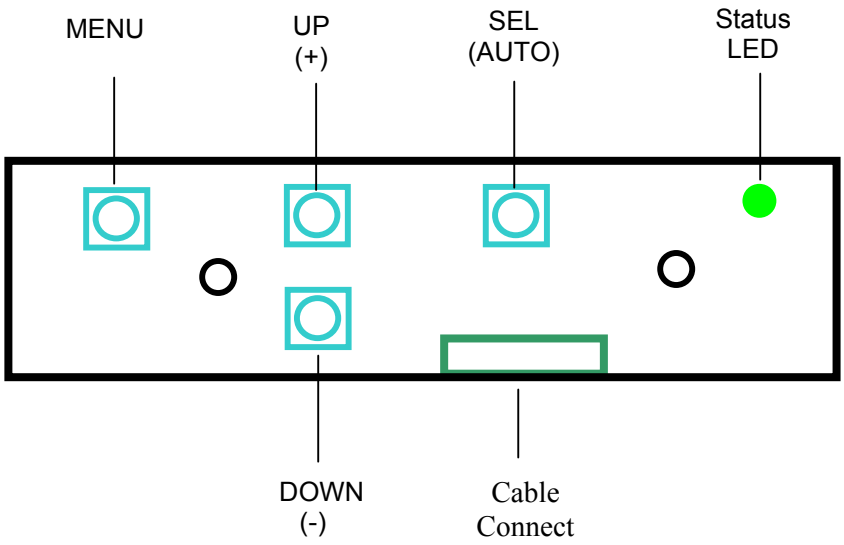
1-3. Quick reference table of Characteristics

Panel	Size	6.2" Diagonal
	Active Display Area	148.8(W) x 53.76(H) mm
	Type No.	Hitachi, TX16D11VM2CAA
	Number of Pixels	640 (H) x 240 (V)
	Pixel Arrangement	RGB Vertical Stripe
	Pixel Pitch	0.2325(W) mm x 0.224(H) mm
	Color Depth	262K Color
	Surface Treatments	Hard Coating (3H), Antiglare treatment
	Viewing Angle (CR≥ 10)	Horizontal : ΘL 60 degrees ΘR 60 degrees Vertical : ΦH 45 degrees ΦL 60 degrees
	Contrast Ratio	Typ. 200 : 1
	Response Time	45ms(Typ.)
	Average Brightness	Typ. 200 cd/ m^2
	Frame Rate	Typ. 60Hz
	Panel Dimension	(WHD) 173.0 x 70.0 x 8.6 mm
	CCFT	1 Lamp
Scanning Frequency	Horizontal	25.3 ~ 36.1KHz
	Vertical	52 ~ 68Hz
Resolution	Prime	640 x 480 @ 60 Hz
	Standard	640x480 @60 Hz
Input Signal	RGB (Video / Sync)	RGB Analog (0.7Vp-p, 75ohms) / H/V Separate(TTL)
Sync	Type	Separate H/V sync
	Level	TTL level (V high ≥ 2.0V, V low ≤ 0.8V)
	Polarity	Positive or Negative
Input Signal Interface	RGB	15pin D-Sub
Power	AC Input	AC 90 ~ 265V @60/50Hz, Universal Power
	max. power dissipation	20Watts

<table>
<tr><td colspan="2">Regulation(Safety , Ergonomics, EMC)</td><td>CUL(UL+CSA), CE, FCC
 
</td></tr>
<tr><td rowspan="2">Environmental Conditions</td><td>Operating</td><td>Temperature : 10 to 50ºC / Humidity : 8 to 80%</td></tr>
<tr><td>Storage</td><td>Temperature : -20 to 60ºC / Humidity : 5 to 90%</td></tr>
<tr><td colspan="2">White Color Temperature</td><td>6500°K : CIE x=0.313±0.015 / y=0.329±0.015</td></tr>
<tr><td colspan="2">Demonstrated MTBF</td><td>More than 20,000 hours</td></tr>
<tr><td rowspan="3">Touch Screen</td><td>Touch Panel</td><td>4 Wire Resistive Type</td></tr>
<tr><td>Controller</td><td>HT-EBU4-1</td></tr>
<tr><td>Controller Interface</td><td>USB</td></tr>
</table>

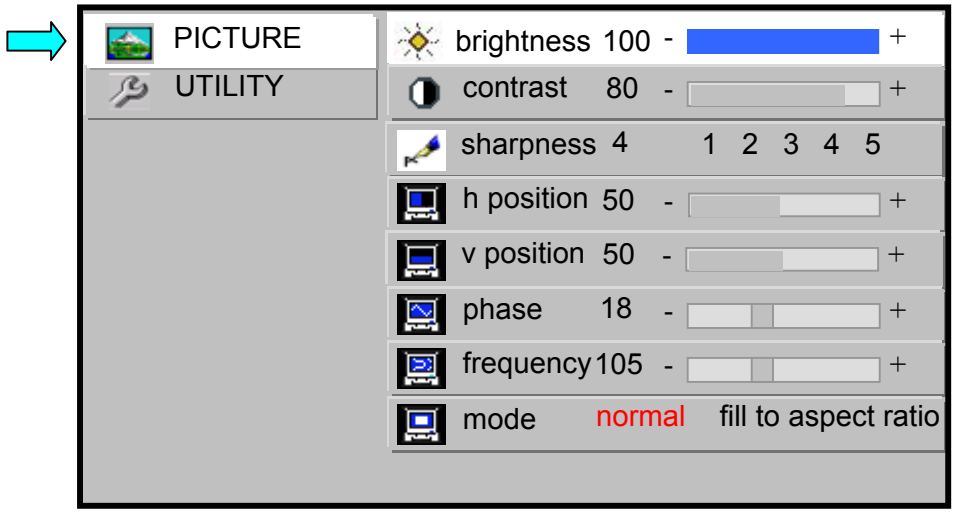
2. USER CONTROL & OSD

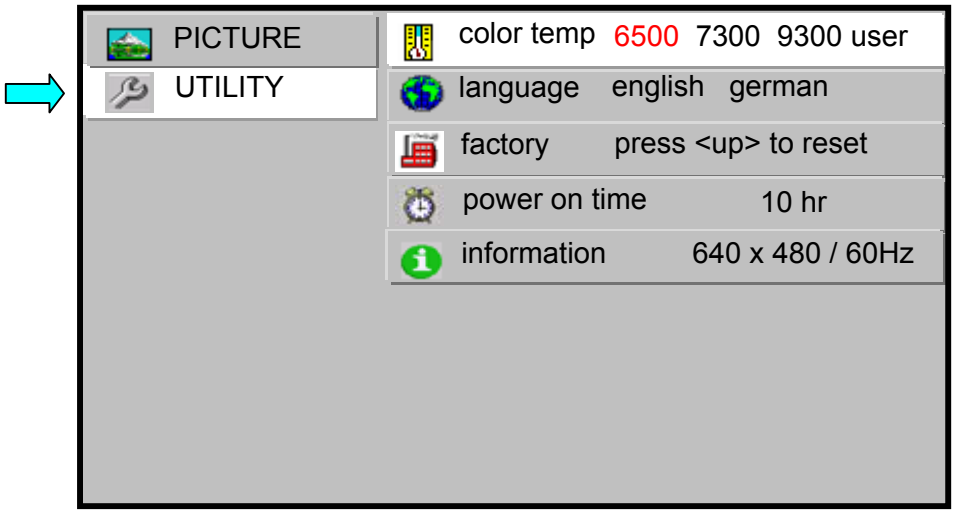
2-1. Key Control Board



SWITCH NAME	SWITCH FUNCTIONS
MENU	▪ Activate / Deactivate the OSD Menu Window. ▪ Move cursor to Sub Menu from Main menu.
SEL (AUTO)	▪ Move cursor in the Sub-Menu(Brightness ↔ Mode) ▪ **Auto Tracking** (Pressing "SEL" key)
UP(+)	▪ Move cursor at Main Menu(Picture / Utility) ▪ Increase the value of the selected function
DOWN(-)	▪ Move cursor at Main Menu(Picture / Utility) ▪ Decrease the value of the selected function.

2-2. OSD Menu Screen



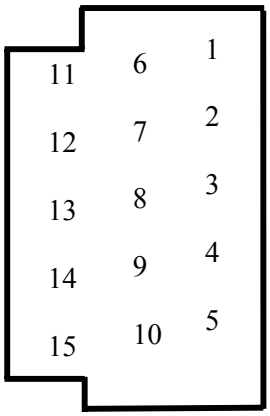


2-3. OSD Control Functions

CONTROL	FUNCTION
Auto Tracking	Automatic screen adjustment process. **If there is any noise on the screen or screen shift, just press " SEL" button.** **Since this monitor is equipped with "Auto Tracking" function, it will automatically configure the monitor setting.**
Brightness	Adjust the brightness level of the Display
Contrast	Adjust the contrast level of the Display.
Sharpness	Adjuust the sharpness level of the Display
H position	Adjust the position of the display horizontally.
V position	Adjust the position of the display vertically.
Phase	Adjust the clock phase of the display.
Frequency	Adjust the clock frequency of the display
Mode	Select the video aspect ratio. It depends on the input video format.
Color Temp	Choose different preset color temperatures (6500/7300/9300) or set your own customized color parameters.
Red /Green / Blue GAIN	Adjust the Red/ Green / Blue Gain
Language	Select the OSD language
Factory	Recall the factory setting value.
Power On time	Displayed the total power on time.
Information	Displayed the resolution of input signal
Self Test Pattern	To enter auto burn-in mode, press "Up" key first and then "Sel" key simultaneously for 3 seconds. On this mode, Red – Green – Blue – White – Black test pattern will be displayed. Press Menu key for returning normal display mode.

3. CONNECTOR PIN DESCRIPTIONS

3-1. 15 Pin D-SUB Connector

Shape and pin number	Pin	Description	Pin	Description
	1	Red	9	No Connection
	2	Green	10	Ground - Sync
	3	Blue	11	No Connection
	4	Ground	12	No Connection
	5	Ground	13	Horizontal Sync
	6	Ground - Red	14	Vertical Sync
	7	Ground - Green	15	No Connection
	8	Ground - Blue		

4. STANDARD DISPLAY MODE

No.	Mode	Resolution	Horizontal		Vertical		Pixel clock
			Frequency	Polarity	Frequency	Polarity	
1	VGA	640 x 480	31.47 KHz	N	60.0 Hz	N	25.175 MHz

5. MECHANICAL STRUCTURE

TBD