

# LCD Controller Board - ST-90 Series

The ST-90 series LCD controller board (A/D board) provides analog and digital connection for wide range of TFT LCD monitor/flat panel display from VGA (640 x 480) to UXGA (1600 x 1200). Embedded with complete signal input ports (computer RGB, DVI). The ST-90 series is an ideal device for the applications of medical equipment, bank industrial, international trade show, transportations, and entertainment.



## Features

- Compatibility with standard VESA mode.
- Support wide variety ranges of TFT LCDs from VGA (640 x 480) to UXGA (1600 x 1200).
- Customization for specific application requirements (ODM).
- Automatic image scaling and contrast enhancement.
- Support color: 6/8 bit TFT LCD.
- Screen Scaling: Up / Down scaling to fit input to panel format.
- Dual Backlight functions: CCFL / LED.

## Model Number

- LCD Controller Board ST-91 (A/D Board, VGA)
- LCD Controller Board ST-95 (A/D Board, VGA & DVI input)
- LCD Controller Board ST-95U5 (A/D Board, VGA & DVI input, USB input / 5-wire Touch Screen)

## Specifications

### Panel Connectivity - Resolution:

TFT VGA 640 x 480  
 TFT SVGA 800 x 600  
 TFT WVGA 800 x 480  
 TFT WSVGA 1024 x 600  
 TFT XGA 1024 x 768  
 TFT WXGA 1280 x 720  
 TFT WXGA 1280 x 768  
 TFT WXGA 1280 x 800  
 TFT WXGA 1366 x 768  
 TFT WXGA+ 1440 x 900  
 TFT SXGA 1280 x 1024  
 TFT WSXGA+ 1680 x 1050  
 TFT UXGA 1600 x 1200

### Input Interface:

Analog RGB: 60Hz at WSXGA+, UXGA  
 75Hz at SXGA, WXGA, XGA, SVGA, VGA  
 DVI-D / HDMI: 60Hz  
 (Please use HDMI to DVI connector/ cable, not support HDCP)

### Color:

6/8 bit TFT LCD

### Function:

On Screen Display (OSD) menu

### Function Control:

External buttons, Infra-Red controls,  
 Serial Port control, Serial port module

### Image Scaling:

Up / Down scaling to fit input to panel format

### Image Control:

Auto configuration, Brightness, Contrast, Clock, Phase,  
 Color temperature, Image position, Saturation, Hue, Black level.

### OSD (On Screen Display):

Auto setup, Factory reset, OSD position, Timeout, Scaling to fill screen  
 and fill to aspect, ACC / ACM-II color enhancement & Contrast adjustment

### Power Requirements:

+12VDC / +24VDC ±5%, 10W

### Panel Power:

Supports 3.3V, 5V, 12V, 18V & 24V panels (Vin must be 18V or 24V)

### Panel Signal:

Dual channel LVDS support

### Panel Connection:

One 30-pin LVDS connector / One 40-pin TTL connector

### Inverter Support:

DPMS Enable pin (3.3V or 5V)

### Plug & Play:

DDC 1,2/b compatible

### Status Indicator:

Dual Color LED support