

Exhibit 5

## 140S Circuit Description

### Introduction:

The 14.1" TFT flat panel monitor is specified as a display peripheral with 14.1" TFT LCD display.

Horizontal scan range is 30 - 60 KHz and refresh range is 56 - 75 Hz.

This scan range allows it to display resolution up to 1024\*768 non-interlaced at 75 Hz refresh rate.

The image can be adjust through OSD control, these adjustments can be stored on an board memory.

### Power supply:

18V AC/DC adapter : input 90-264Vac,50/60+/-2Hz

Power consumption : 45 Watts max.

standby<3W

Power indicator : LED( on :green, standby : amber, new mode: Blinking).

The main power DC 18V is supply from a AC/DC adapter.

One DC/DC converter is used to convert 18V to 5V.

One linear regulator is used to convert 5V to 3.3V.

Panel : 5V

Main board : 5V, 3.3V

Inverter board : 18V

### LCD panel:

Type NR.	: M141X101
Dimensions	: 14.1"
Pitch ( mm )	: 0.279 x 0.279 mm
Color pixel arrangement	: RGB vertical stripes
Display surface	: antiglare with hard coating 3H
Number of color	: 64 gray levels(6 bits)
Backlight	: CCFL edgelight system
Active area(WxH)	: 285.7x214.3mm (14.1" diagonal)

**Input signal:**

Horizontal scan : 31 - 60 Khz

Vertical scan : 56 - 75 Hz

Input signals (15 pins D-sub)

1.Signal input level

Video : 0.7 Vp-p Linear /75 ohms

Sync : H/H+V , V TTL level, composite sync

2.Impedance

Video : Terminated with 75 ohms

Sync : Terminated with 2K2 ohms

**R,G,B signal processing:**

The analog R,G,B signal is convert to digital data signal by AD9884A. The R,G,B gain can be adjust via

IIC bus. AD9884A can generate pixel clock according to H-sync and R,G,B signal. The pixel clock (clock, phase) can also be adjusted via IIC.

**Display data formatting:**

The GMZ2A is used to convert the digital R,G,B digital data to the format that panel can accept.

**Inverter board:**

Inverter board is used to drive the CCFL.

Accept +18V DC voltage and output 640 Vrms AC voltage to CCFL(Cold cathode Fluorescent Tube, backlight).

**Micro control:**

One Philips 380 MCU is used to control the AD9884A, GMZ2A, OSD IC, and backlight brigtness.

**Control panel board:**

This board is used to control power switch and OSD key.

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