

**Exhibit 6**

**BRIEF DESCRIPTION  
OF  
CIRCUIT FUNCTIONS**

# **The introduction of 1501FP**

## **1. General**

The 151AX Potomac 15 " TFT flat panel monitor is specified as a display peripheral with analog and digital video signal dual input and 15"TFT LCD display .Horizontal scanrange is 31 - 60Khz and refresh range is 56 - 75 Hz .This scan range allow it to display resolution up to 024\*768 non-interlaced at 75Hz refresh rate. The image can be adjust through OSD control , these adjustments can be stored in an on-board memory including 14 factory pre-set mode and 5 user definable modes.

## **2. Power supply:**

Main voltage : AC90-135 Vrms and 170-264 Vrms,50/60±2Hz.  
 Power consumption : 56 Watts max. Operating <41W,  
 standby<5W(exclude USB device).  
 Power indicator : LED( on :green, standby : amber, new mode:  
 blinking green).  
 Auto power saving : EPA, Nutek, VESA DPMS.

## **3. Input signal**

Horizontal scan : 31 - 60 Khz  
 Vertical scan : 56 - 75 Hz  
 Input signals EPA, Nutek, VESA DPMS.

## **4. Input signal**

Horizontal scan : 31 - 60 Khz  
 Vertical scan : 56 - 75 Hz  
 Input signals  
     1.Signal input level  
         Video : 0.7 Vp-p Linear /75 ohms  
         Sync : H/H+V , V TTL level,composite sync  
         Digital : TMDS signal.  
     2.Impedance  
         Video : Terminated with 75 ohms  
         Sync : Terminated with 2K2 ohms

Factory preset mode(14 modes)

| Mode | Resolution | H. freq. / V. freq | Standard  |
|------|------------|--------------------|-----------|
| 1.   | 720 x 400  | 31.469Khz/70.087Hz | VGA       |
| 2.   | 640 x 480  | 31.469Khz/59.940Hz | VGA       |
| 3.   | 640 x 480  | 37.500Khz/75.000Hz | VGA       |
| 4.   | 640 x 480  | 37.861Khz/72.809Hz | Macintosh |
| 5.   | 800 x 600  | 37.879Khz/60.317Hz | VESA      |
| 6.   | 800 x 600  | 48.077Khz/72.188Hz | VESA      |
| 7.   | 800 x 600  | 46.875Khz/75.000Hz | VESA      |
| 8.   | 1024 x 768 | 48.363Khz/60.004Hz | VESA      |
| 9.   | 1024 x 768 | 56.476Khz/70.069Hz | VESA      |
| 10.  | 1024 x 768 | 60.023Khz/75.029Hz | VESA      |

#### 4. OSD (On Screen Display) function

Software control functions via OSD/control

- Adjustable functions:

|                          |
|--------------------------|
| MAIN CONTROLS            |
| LANGUAGE                 |
| ADJUST POSITION          |
| BRIGHTNESS & CONTRAST    |
| VIDEO NOISE              |
| ADJUST COLOR             |
| OSD SETTINGS             |
| RESET TO FACTORY SETTING |
| INPUT SELECTION          |
| CLOSE MAIN CONTROLS      |
| MOVE SELECTION CONTROLS  |

LANGUAGE : ENGLISH , ESPANOL , FRANCAIS , DEUTSCH ,  
ITALIANO, JAPANESE

ADJUST POSITION : H-position, V-position, Phase adjustment, Clock  
adjustment

**BRIGHTNESS & CONTRAST:** bright and contrast adjustment.

**VIDEO NOISE** : Phase adjustment, Clock adjustment

**ADJUST COLOR** : original panel color , 9300K for general use , 6500k for image management, user red green blue adjust.

**OSD SETTINGS** : OSD H-position, OSD V-position

**RESET TO FACTORY SETTING** : return to Factory preset timings and settings.

## 6. LCD Panel

Type NR. : LQ150X1DG12  
 Dimensions : 15.0"  
 Pitch(mm) : 0.297mm  
 Color pixel arrangement : RGB vertical stripes.  
 Display surface : low reflection, antiglare with hard coating.  
 Number of color : 64 gray levels (6 bits)  
 Backlight : CCFL edgelight system  
 Active area(WxH) : 304.1x228.1(15.0" diagonal)

## 7. Function block

### ADC: AD9884

- sample the input analog video signal according to its pixel rate to change be digital data then sent the digital signal for format converter IC.

### PLL clock generator: build in the AD9884

- phase lock to the input horizontal sync signal.
- output clock rate controlled by microprocessor equal to the input signal Pixel rate.

### Microprocessor:

- monitor the input horizontal and vertical syn signal to judge input video mode acc.
- send the parameters to format converter IC according to the input mode.
- process the control data listed in the OSD section.

**Front panel switch control:**

- used by OSD function.
- six push button, i.e. confirm, auto, mute and contrast/brightness.
- use push button to switch function.

**Receiver: si1141**

- receive the TMDS signal from PC VGA card then decoder data to format converter.

**Format converter:GMZ2**

- convert the data from ADC to an LCD panel acceptable data format.
- zoom the input video to a full screen display.

**Inverter:**

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

The Power supplier including AC adaptor and DC/DC converter.

The AC power input from 90VAC up to 264VAC, can generate 15V/3A DC power, this power supply to both DC/DC converter and inverter for backlight.

The DC/DC converter generate 5V/3A, 9V/0.5A, 3.3V/3A and 12V/0.5A power for main interface circuit and panel power.