

Exhibit 4

Brief Description of Circuit Functions

Function Description

1. General

The 15" TFT flat panel monitor is specified as a display peripheral with analog video signal inputs and 15" TFT LCD display. Horizontal scan range is 30 - 61 K Hz and the refresh range is 56 - 76 Hz. This scan range allows it to display resolution up to 1024*768 non-interlaces at 75 Hz refresh rate. The image can be adjusted through OSD control. These adjustments can be stored in an onboard memory including 14 factory pre-set modes and 14 user definable modes.

2. Power supply

Main voltage : AC 90 - 264 V rms, 50 - 60 Hz

power consumption: 45 W Max

power indicator : LED (on: green, standby: amber, new mode: blinking green)

Auto power Saving : EPA, Nutek, VESA DPMS

3. Input signal

Horizontal scan : 30 - 61 K Hz

Vertical scan : 56 - 76 Hz

Input signals

1. Signal input level

Video : 0.7 Vp-p linear / 75 ohms

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

2. Impedance

Video : Terminated with 75 ohms

Sync : Terminated with 2K2 ohms

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
PRODUCT INFORMATION
RESET TO FACTORY SETTINGS
CLOSE MAIN CONTROLS
MOVE SELECTION THEN <input type="button" value="ok"/>

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

ADJUST POSITION : horizontal and vertical picture position adjustment.

BRIGHTNESS & CONTRAST: brightness 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 POSITION : OSD H-position, OSD V-position

PRODUCT INFORMATION : show product information

RESET TO FACTORY SETTING : recall to Factory preset settings.

5. LCD panel

Type	: 15" LCD flat panel
Dimensions	: 15.1 inches
Pitch	: 0.300 mm
Color pixel arrangement	: R.G.B. vertical stripes
Display surface	: low reflection, antiglare with hard coating
Number of color	: 16,777,216 color (8 bits)
Backlight	: CCFL edge light system
Active area (W*H)	: 307x230 mm (15.1" diagonal)

6. Function block

Video amplifier

- amplifier the input signal to ADC (analog to digital converter) acceptable range
- brightness control
- contrast control
- R.G.B. sub contrast control

ADC

- sample the input video signal according to its pixel rate to generate a digital data for format converter IC

PLL clock generator

- phase lock to the input horizontal sync signal
- output clock rate controlled by microprocessor according to input signal pixel rate

Microprocessor

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

Front panel switch control

- used by OSD function
- six key push button (auto, left,right,down ,up, OK)

Format converter

- convert the data from ADC to a LCD panel acceptable data format

Inventor

- accept +12 V DC voltage
- output 650 V rms voltage to CCFL (Cold Cathode Fluorescent Tube, backlight)

Power supply

- AC adapter : the AC power input from 90 V AC to 264 V AC, can generate 12 V / 3.7 A DC power
- DC DC converter : convert 5 V & 3.3 V to system