

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 and Intel digital inputs and 15" TFT LCD display. Horizontal scan range is 31 - 61 K Hz and the refresh range is 56 - 75 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 15 user definable modes.

2. Power supply

Main voltage : AC 90 - 264 V rms, 50 - 60 Hz
 Power consumption : 28 W Max
 Power indicator : LED (on: green, standby: amber)
 Auto power Saving : EPA, Nutek, VESA DPMS,E2000

3. Input signal

Horizontal scan : 31 - 61 K Hz
 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, sync on green

2. Impedance

Video : Terminated with 75 ohms
 Sync : Terminated with 5K6 ohms

3. Intel DVI Digital

Single channel TMDS signal

4. OSD (On Screen Display) function

Software control function via OSD/ Control

-Main Controls:

Language-	7 Languages
Adjust position-	Horizontal, Vertical
Brightness & Contrast-	Brightness, Contrast
Video Noise-	Phase, Clock
Adjust Color-	Original Panel Color, 9300K, 6500K, User Preset
OSD Setting-	Horizontal, Vertical
Product Information-	Serial No, Resolution, Video Input
Reset to Factory Settings-	No, Yes
Input Selection-	Analog (D-sub), Digital (DVI)
Exit Main Controls	

5. LCD panel

Type : 15" LCD flat panel
 Dimensions :
 Pitch : 0.279 mm

Color pixel arrangement : R.G.B. vertical stripes
 Display surface : antiglare with hard coating
 Number of color : 16.7 M
 Backlight : CCFL edge light system
 Active area (W*H) : 304.1*228.1 mm

6. Function block

6.1 Scaler board

Scaling (IC SAA6713 including ADC, DVI receiver, Scaler, OSD, T-con functions)

- Monitor the input horizontal and vertical sync signal to judge input video mode
- Sample the input video signal according to its pixel rate to form a digital data for panel
- Auto-adjustment for sampling phase and frequency, picture alignment and color alignment
- Generate the panel timing interfaces (T-con) which are signals to directly drive the row and column drivers of panel itself

Microprocessor

- Send the parameters to format scaler IC according to the input mode
- Process the control data listed in OSD section

DC-to-DC converter for panel power

- To generate 5 sets of DC voltage for panel use

6.2 Front panel switch control board

- Used by OSD function

Seven push buttons (auto, left, right, down, up, ok, power switch)

- Power on/off LED indicator

6.3 Inverter board

- Accept +12 V DC voltage
- Output 800 VAC rms voltage to CCFL (Cold Cathode Fluorescent Tube, backlight)

6.4 AC to DC power supply board

The AC power input from 90 V AC to 264 V AC, can generate 12 V and 3.3 V DC power to supply to inverter board and scaler board.