

Exhibit 4

Function Description for Hudson3-230W5

1. General

The 23" UXGA TFT LCD monitor is specified as a display peripheral with analog, digital (DVI), CVBS, S-video, YPbPr and audio function. Horizontal scan range is 30KHz-94KHz for analog, and 30KHz-91KHz for digital. The refresh range is 56Hz-85Hz in normal mode. This scan range allows it to display resolution up to be 1920*1200@60Hz non-interlace input.

The image can be adjusted by OSD control. These adjustments can be stored in an onboard memory.

2. Power supply

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

Power consumption : 90W Max.

Power indicator : LED(on: blue, standby: amber)

Auto power saving : VESA DPMS

3. Input signal

Horizontal scan : 30-94KHz(for analog), 30-94KHz(for digital)

Vertical scan : 56-85Hz(from VGA to SXGA for analog/digital),

Max. Vsync in UXGA for analog is 75Hz,

Max. Vsync in UXGA for digital is 60Hz,

Max. Vsync in WUXGA for analog and digital is 60Hz.

Input signals :

A. D-sub signal input level

Video : 0.7Vp-p linear/75 ohms

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

B. Analog signal impedance

Video : Terminated with 75 ohms

Sync : Terminated with 2K2 ohms

C. Intel DVI- digital Single channel TMDS signal

D. CVBS

Video : 1Vp-p linear/75 ohms

Sync : composite sync 0.3Vp-p combined with video

E. S-video

Separated Luminance(Y) and Chrominance(C) signals

Y input : 1.0Vp-p/75 ohms

C input : 0.3Vp-p/75 ohms
F. YPbPr :
Separated Luminance(Y) and Chrominance(C) signals
Y input : 700mV , 75 Ohm
Pb, Pr input: +/- 350mV. 75 Ohm

G. Audio Signal :

PC audio lines respectively in Dsub and DVI

L/R audio inputs respectively for CVBS/S and HDTV video

4. OSD(On Screen Display) function

Software control function via OSD

-Main controls:

Language----- 6 Languages

Adjust position-----Horizontal,Vertical

Adjust Size----- Full screen,Native mode,Fill with aspect

Brightness & Contrast-- Brightness, Contrast

Video Noise----- Phase, Clock

Adjust color----- Original panel color,9300K,6500K,User preset

OSD Settings----- Horizontal,Vertical

Product information----- Serial No,Resolution,Signal input

Input selection-----Analog(D-SUB), Analog(DVI_A), Digital(DVI_D),
CVBS, S-Video, HDTV

Reset to factory setting-- No/Yes

Exit Main controls

5. LCD Panel

Type : 23" LCD flat panel

Dimensions : 523(w)*335.6(h)*41(d) (Typ) mm

Pitch : 0.258mmx0.258mm

Color pixel arrangement : RGB vertical stripes

Number of color : 256 gray level (8 bits)

Backlight : 12 CCFL's

Active area (W*H) : 495.36x309.6mm

6. Function block

ADC

- Sample the input video signal according to its pixel rate to form a digital data

TMDSRx

- Convert serial digital signal to parallel digital RGB signal

Video Decoder

- Convert composite video(CVBS) & S-video signal to digital ITU601 format signal with YUV color space.

HDTV

- Convert component video(YPbPr) to digital ITU601 format signal with YUV color space.

Scaler

- Convert the image data from ADC,TMDSRx block or Video Decoder to LCD panel data format.
- Zoom the input video to full screen display.

Audio board

- Provide audio in/out,volume control,earphone

Control Board

- Provide DCSW,/OKOSD,UP/Brightness+,Down/Brightness-,Right/Volume+,Left/Volume-,Auto,INPUT,PIP.

Power supply(Inverter embedded)

- AC adapter : AC power input from 90VAC to 264VAC
can generate +18VDC power
 - DC to DC converter : Convert +18V, +5V and +3.3V
 - Accept +18VDC voltage.(Inverter)
- Provide 750Vrms voltage for CCFL.(Inverter)

7. UCR1.0 (Universal Card Reader)

- UCR(UNIVERSAL CARD READER) module is connected to PC by USB(B-type).
- It's also built-in 3-port USB Hub which can support two USB 1.1/2.0 devices.
- As required by the USB 2.0 specification, the 3-port USB Hub is fully backward compatible with legacy full-speed devices.
- Four type connections is needed:
 - (1) 1*4 in 1 type flash memory card socket, support SMC/MMC/SD/MS/MS Pro card
 - (2) 1* CF type flash memory card socket
 - (3) 3 to USB devices(A-type),
 - (4) one to PC(B-type).

OS supports:

- (1) Windows 98SE, ME, 2000, XP (for USB 2.0)
- (2) MacOS X 10.1 and above (for USB2.0)
- (3) MacOS 9.1 and above (for USB 1.1 only)

PHILIPS ELEC. product specifications

230W5 Block Function

