

Brief Description of Circuit Functions

Function Description for Hudson4 190P5

1. General

190P5 is the newest generation of Hudson 19" TFT Flat Panel Display Monitor. It designed with hyper integrity, LVDS interface feature. The monitor featured with analog signal input interface, and modularized as a display unit with embedded universal AC power supplies inside monitor main body. The power button and display control buttons (tact switch type) are on the bottom side of the monitor. The monitor shall support an internal scaler to automatically enable the monitor to display lower resolution video modes into 1280 x 1024 full screen display. The image can be adjusted through OSD control board. These adjustments can be stored on a board memory including 33 pre-set modes and 15 factory pre-set modes.

2. Power supply

Main voltage : **AC 90 - 135 Vrms and 170 – 264 Vrms, 50/60±2 Hz**
 Power consumption : **Operating < 50W(typical), standby<1W. (Without audio.)**
 Power indicator : LED(ON: Blue, standby: amber)
 Auto power saving : **EPA, Nutek, VESA, DPMS**

3. Input signal

Horizontal scan : 30-82KHz
 Vertical scan : 56-76Hz(from VGA to SXGA for analog/digital),
 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. Intel DVI-D digital Single channel TMDS signal

4. OSD(On Screen Display) function

LANGUAGE	ENGLISH
	ESPANOL
	FRANCAIS
	DEUTSCH
	ITALIANO
	SIMPLE CHINESE
ADJUST POSITION	HORIZONTAL
	VERTICAL
BRIGHTNESS & CONTRAST	BRIGHTNESS
	CONTRAST
VIDEO NOISE	PHASE
	CLOCK
ADJUST COLOR	ORIGINAL PANEL COLOR

	9300K FOR CAD/CAM
	6500K FOR IMAGE MANAGEMENT
	SRGB
	USER PRESET :
	RED
	GREEN
	BLUE
OSD SETTING	HORIZONTAL
	VERTICAL
PRODUCT INFORMATION	SERIAL NO.
	RESOLUTION
	VIDEO INPUT
RESET TO FACTORY SETTING	NO
	YES
INPUT SELECTION	ANALOG
	DIGITAL
Power Saving	ON
	OFF
EXIT MAIN CONTROLS	

5. LCD Panel

Type NR.	: FLC48SXC8V-10-04A (Fujitsu)
Number of Pixels.	: 1280 (H) x 1024 (V)
Physical Size.	: 404.2(w)*330(h)*20(d) mm
Pixel Pitch.	: (0.098x3) x 0.294 mm
Color pixel arrangement.:	RGB vertical stripes
Support Color.	: 16,777,216 colors (RGB 8 bits data)
Display Mode.	: Normal Black
Backlight.	: CCFL edge light system
Active area. (WXH).	: 376.32 x 301.056mm (19" diagonal)
Viewing Angle.	: Vertical 85 degree(min), Horizontal 85 degree(min) (CR=10)
Contrast ratio.	: 700:1 (Typical), 400:1 (Minimum)
Luminance.	: 300 cd/m² (Typical)

6. Function block

Scaler GM5120 (contains following functions):

(1) Analog RGB input

- Support up to SXGA 75Hz
- On chip high-performance PLLs
- High speed triple ADC

(2) TMDSRx input

- Convert serial digital signal to parallel digital RGB signal, it can reduce EMI.

(3) Format converter

- Built in GPIO port, mode detection.
- Convert the image data from ADC, TMDSRx or Video Decoder to LCD panel data format.
- Zoom the input video to full screen display.
- High quality zoom and shrink scaling engine

(4) LVDS interface

- Convert digital image signal to LVDS signal.

(5) On-Screen display (OSD) controller

(6) On-chip micro-controller (OCM)

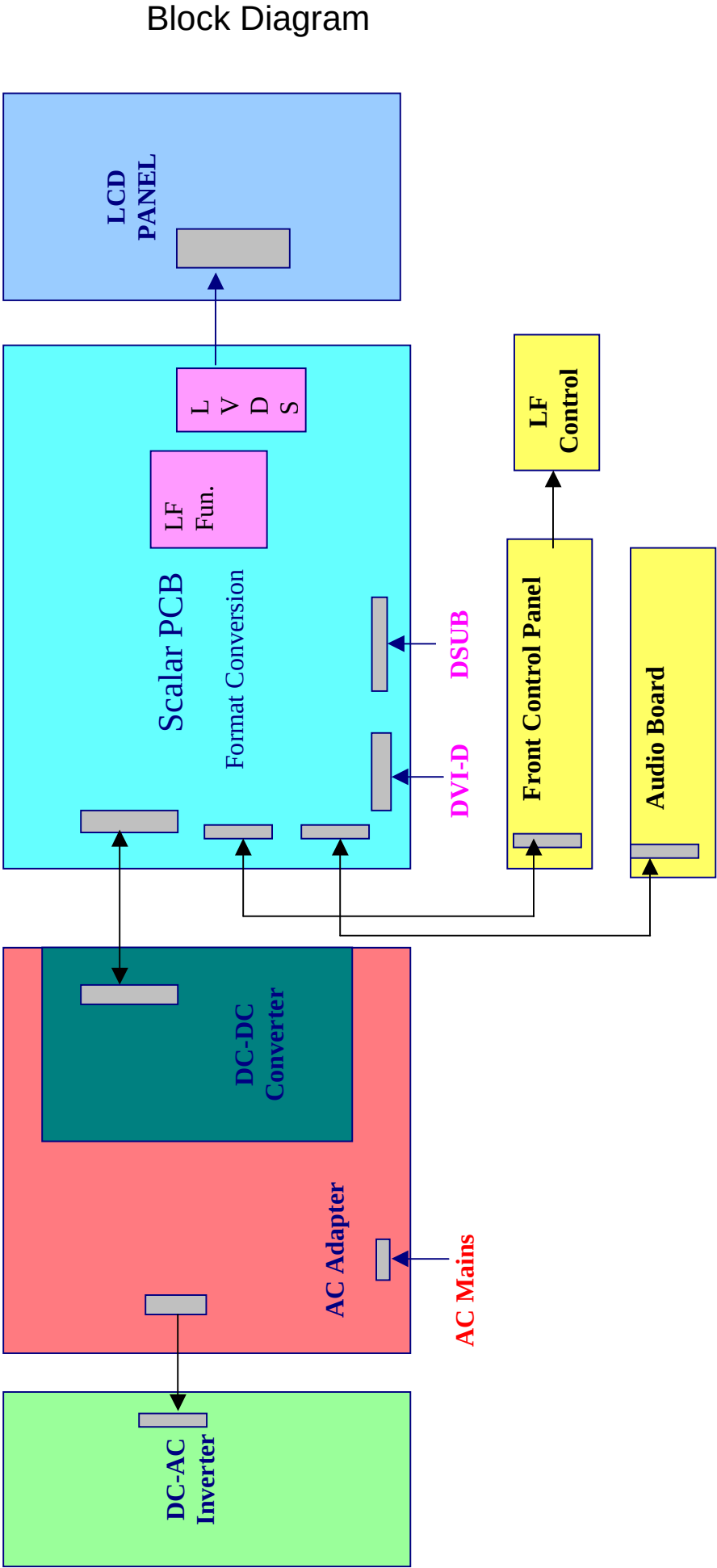
Inverter

- Accept +12VDC voltage.
- Provide 680Vrms voltage for CCFL.

Power supply

- AC adapter : AC power input (from 90VAC to 264VAC) can generate +12VDC 、 +5VDC and +3.3VDC power

HUDSON4 190P5 ARCHITECTURE AND INTERCONNECTION



Hudson4 190P5 CIRCUIT ARCHITETURE

