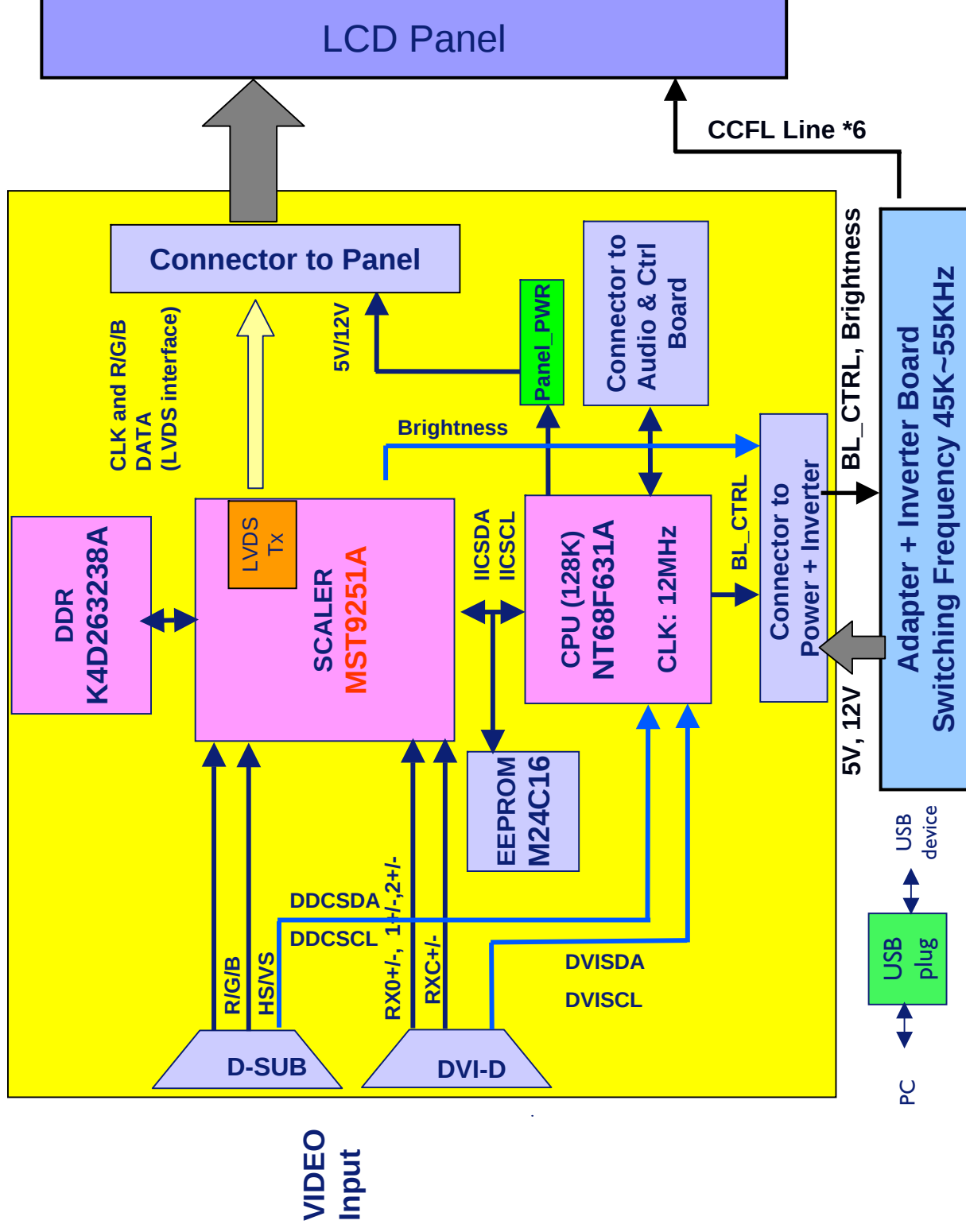




Circuit Description

1. General

200W6 is the 20" Flat Panel Display Monitor. The monitor featured with analog and digital signal input interface, USB plug and modularized as a display unit with embedded universal AC power supplies inside monitor main body. It armed with the compact base that featuring with height adjustment, tilt and swivel functionality. The power button and display control buttons (tact switch type) and USB are in the front of the monitor. The monitor will be TCO03 and Energy Star compliant and incorporate energy saving features described feature in this document. The monitor shall support an internal scalar to automatically enable the monitor to display lower resolution video modes into 1680x1050 full screen display. The monitor shall communicate display data to the host computer using DDC-CI and shall support EDID structure 1.3 for analog and digital signal input.

2. Power supply

Main Voltage:	AC 90 - 135 Vrms and 170 – 264 Vrms, 50/60±2 Hz
Power consumption:	Operating < 68 W (Max. w/o audio), Standby < 1.5W. DC power switch off < 1.5W.
Power cord length:	1.8M
Power cord type:	3 lead with earth plug
Power indicator:	LED (ON: green, Standby: amber)
Auto power saving:	EPA, Nutek, VESA, DPMS, E2000

3. Input signal

Horizontal scan:	30 - 93 KHz
Vertical scan:	56 -85 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 function via OSD/ Control as below:

Analog Signal Input

1. Main Menu	2.1 Sub Menu	2.2 Sub Menu 2
MONITOR SETUP		
Exit		
Brightness & Contrast	Brightness, Contrast	
Color	Original Color, 9300K,6500K, sRGB	
	User Define	Red, Green, Blue
Position	Horizontal, Vertical	
Input Selection	Analog, Digital	
More Settings	Language	English, Spanish, French, German, Italian, S. Chinese
	Phase/ Clock	Phase, Clock
	OSD Setting	Horizontal, Vertical
	Audio Option	Stand-alone (On, Off)
		Mute (On, Off)
Reset	No, Yes	
Serial No.:		
(Serial No.)		
(Timing Mode)		
Move Selection Then ok		

Digital Signal Input

1. Main Menu	2.1 Sub Menu	2.2 Sub Menu 2
MONITOR SETUP		
Exit		
Brightness & Contrast	Brightness, Contrast	
Color	Original Color, 9300K,6500K, sRGB	
	User Define	Red, Green, Blue
Position (Gray out)		
Input Selection	Analog, Digital	
More Settings	Language,	English, Spanish, French, German, Italian, S.Chinese
	Phase/ Clock (Gray out)	Phase, Clock (Gray out)
	OSD Setting	Horizontal, Vertical
	Audio Option	Stand-alone (On, Off)
		Mute (On, Off)
Reset	No, Yes	
Serial No.:		
(Serial No.)		
(Timing Mode)		
Move Selection Then ok		

Remark: Audio Selection - Stand-alone – On: Isolate video and audio control input
Stand-alone – Off: Integrate video and audio control input
Mute – On: Turn off Audio input
Mute – Off: Turn on Audio input

Reset - No: Exit.
Yes: Auto adjustment for displaying timing mode and recall factory preset

5. LCD panel

Type NR.	: LM201W01 (LG.PHILIPS)
Outside dimensions	: 459.4(H)*296.4(V)*23.7(D) (Typ) mm
Pixel Pitch (mm)	: 0.258 mm x 0.258mm
Color pixel arrangement	: RGB vertical stripes
Display surface	: low reflection, antiglare with hard coating
Color depth	: 16.7M colors (8 bits)
Backlight	: Six CCFL's
Active area(WxH)	: 433.44x270.9mm (20.1"W diagonal)
View angle	: Horizontal & Vertical 178 degree (CR>=10)
Contrast ratio	: 600:1 (Typ) ,400 :1 (min)
White luminance	: Panel original color >220nits (min), 300 nits

(Typ)

6. Function block

6.1 Scaler board

Scaling (MST9251A including ADC, Scaler, OSD, LVDS)

Analog

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

Digital

- Monitor DVI input with internal TMDS receiver to judge input video mode
- Sample the input video signal according to its pixel rate to form a digital data for panel.
- Send the parameters to format scaler IC according to the input mode.
- Process the control data listed in OSD section.

MCU NT68F631A

- Control Scaling and all I/Os port of monitor including audio.
- Store the source code into internal Flash ROM and capable of down loading program via ISP.

6.2 Front panel switch control board

- Used for OSD function and power on/off
- 7 push buttons (left, ok, right, up, down, auto, power switch)
- Power on/off LED indicator

6.3 AC to DC Inverter Board board

The AC power input from 90 VAC to 264 VAC, can generate 12V and 5 VDC power to supply to inverter function and scaler board.