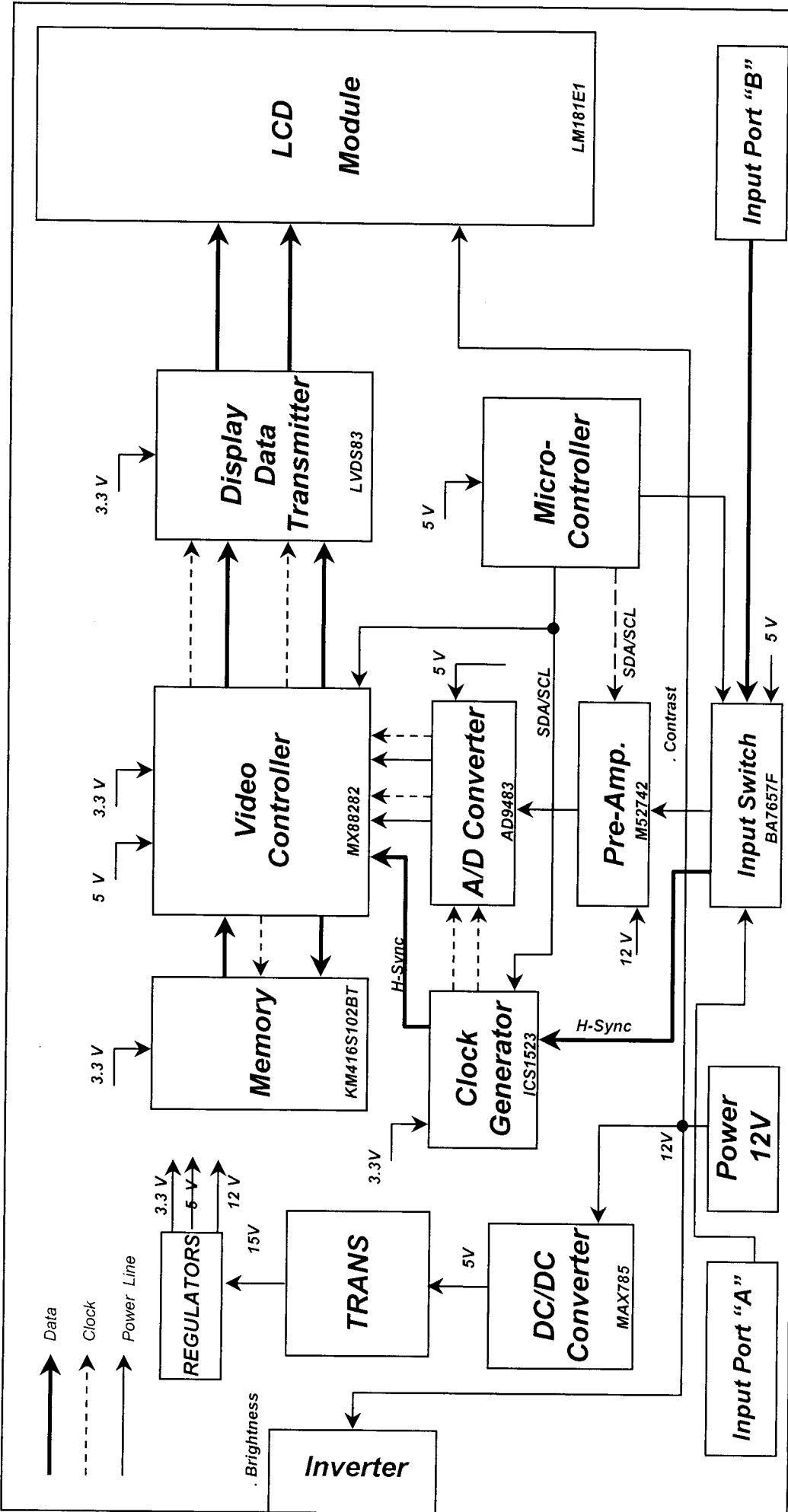
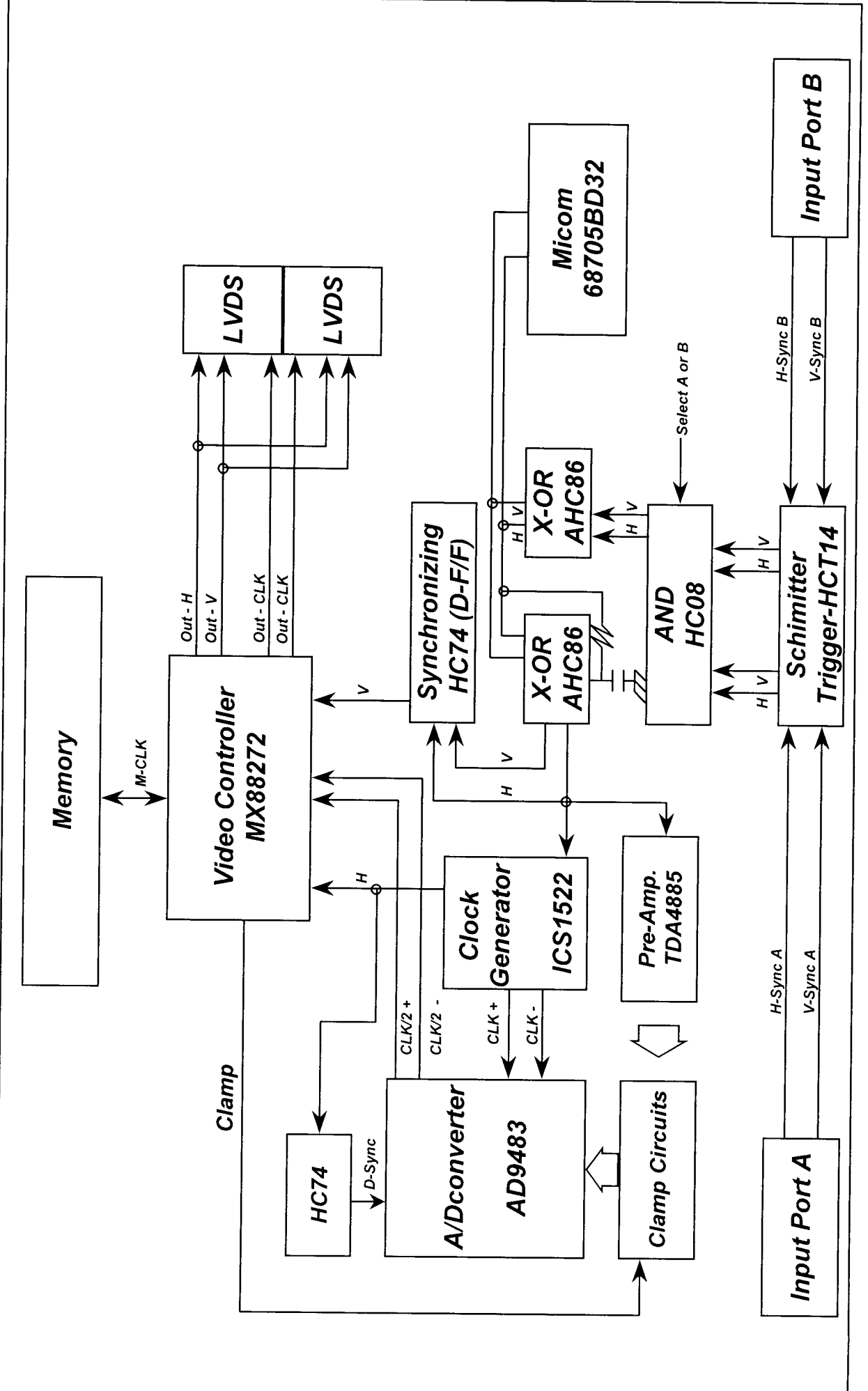


18.1" SXGA LCD Monitor

1. 18.1" Block Diagram



2. H / V Sync Process Block Diagram



DESCRIPTION OF BLOCK DIAGRAM

1. Video Control Circuit

- 1) M52742 receives the video signal from PC and amplifies the levels of video signal(0~0.7V), and controls the contrast.
- 2) The biases of A/D inputs are controlled by the reference output voltage of M52742

2. A/D Converter Circuit

- 1) AD9483 converts R, G, B signals to the Digital signals used by MX88282.
- 2) The status of power down pin is low for normal state and high for power down state.

3. Features of ICS1523 PLL IC

- 1) ICS1523 generates the pixel clock for A/D conversion. It is controlled by micro controller according to video mode.
- 2) The Range of the pixel clock is approximately from 25MHz to 135MHz.

4. Video Processing Circuit

This circuit consists of MX88282 and memories, which convert frame rate of input signal and interpolate the signal.

5. LVDS Circuit

LVDS transmitter delivers digital signal to the receiver of module by the voltage swing of 1V. The peripheral circuitry of transmitter gets the DHS, DVS, DEN, DISP CLK signal and outputs LVDS signal. At the Power Down mode, micro controller lets the power down signal be low and shutdown pin be active low.

6. Input Switch Circuit

This Circuit consists of BA7657 and TTL gates. BA7657 switch analog R, G, B signal to be entered from 15-PIN D-SUB 1 or 2. If signal input of OSD menu is port 1; R, G, B signal and H/V sync are entered from D-SUB 1. If signal input of OSD menu is port 2; R, G, B signal and H/V sync are entered from D-SUB 2. TTL gates switch H/V sync to be entered from D-SUB 1 or 2.

7. System Controller Circuit

This circuit consists of EEPROM IC which stores control data, RESET IC and LED driver Q01 and Q02 indicating power is ON or OFF.

The operating procedures of micro controller and its associated circuit are as follows

1) The micro controller distinguishes the polarity and frequency of horizontal sync and vertical sync from signal cable.

1) Users can adjust screen condition by each OSD function. (H-Position, Clock, Clock Phase, etc.)

8. DDC Circuit

This circuit consists of micro controller and bidirection switching IC

1) Bidirection switching IC switch IIC line for DDC communication by control signal of micro controller.

2) The micro controller has D-SCL, D-SDA line for sending and receiving data through 15 –pin D-sub connector.

3) The data of EDID DDC information is stored in EEPROM IC.

9. Power Circuit

The Power circuit generates 3.3V, 5V and 12V using DC/DC converter, Trans and Regulators from input 12V DC. Standby 5V is generated by regulator from input 12V. From 15V by Trans, 12V, 5V are generated using regulators. From This 5V, 3.3V is generated.