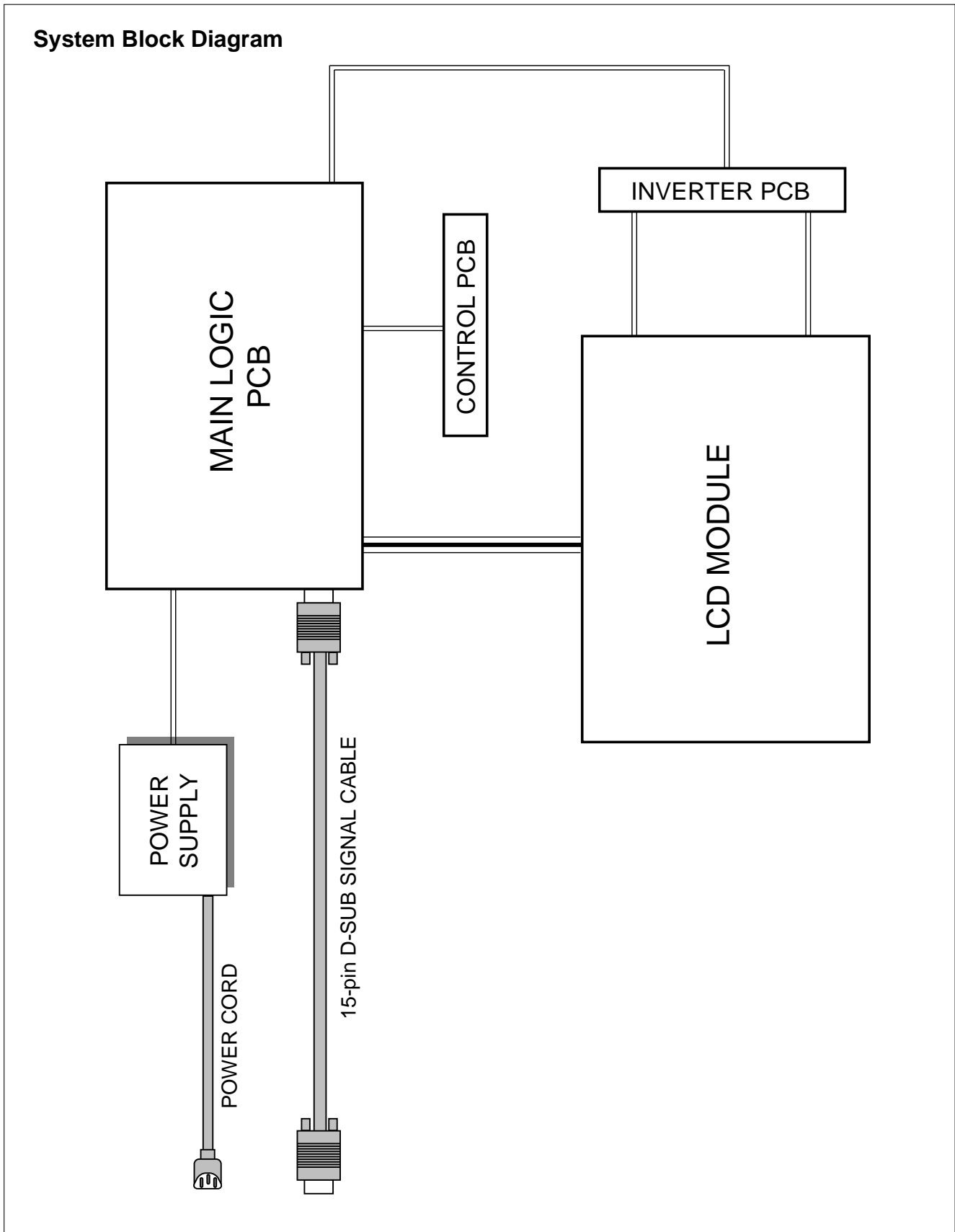
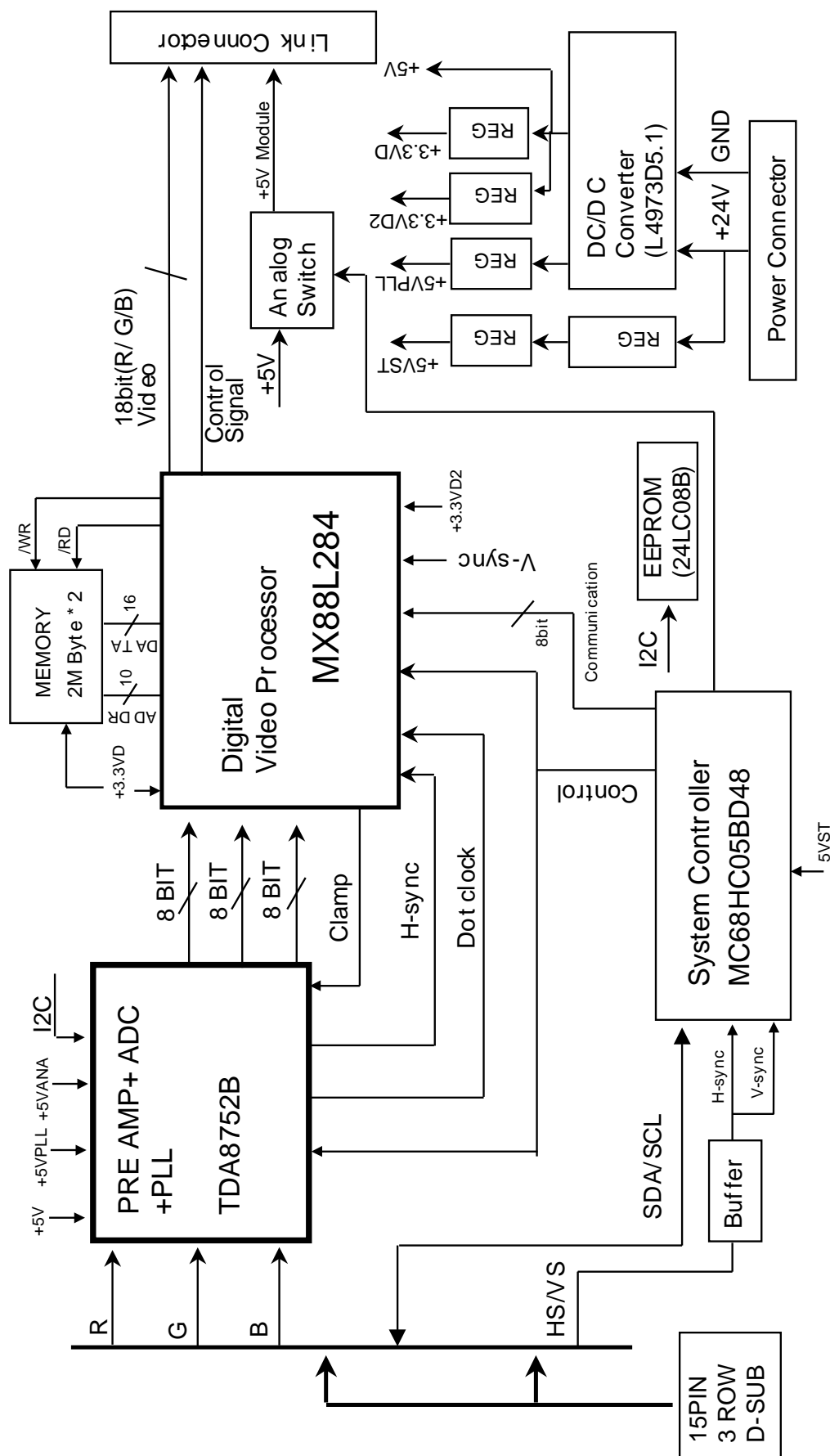


BLOCK DIAGRAM



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DESCRIPTION OF BLOCK DIAGRAM

1. Video Amp & PLL & A/D Converter Circuit

TDA8752 (U1) is one chip IC which it supports three function block of Video Amp, PLL and A/D converter.

Video signal (0.7Vp.p) clamped through C6, 7, 16 inputs to U1's R, G, and B pins. The signal level is 0.7Vac added 3Vdc. This signal is processed as a proper 8 bit digital signal for input of MX88L284 (U5) by U1's amplifying, phase locking, and A/D converting operation.

U1 generates clock and horizontal sync for MX88L284 (U5) with D-sub (J1)'s input horizontal sync signal.

MX88L284 (U5)'s clamp output makes U1 keep video signal's black level constantly regardless of various input video signals.

2. Macronix Circuit (Scaler chip)

The MX88L284 (U5) gets the video signal converted analog to digital from U1, and carries out four function of image processing that interpolates input signal less than 1024x768 resolution to that of 1024x768 resolution, displays one to one image without interpolation, mixes OSD(On Screen Display) signal by interfacing with internal OSD IC, and controls two memories(U6, 7) as frame converter.

U5 outputs signals of HSYNC-OUT, VSYNC-OUT, DEN, CLKA-ODD, and each 8 bit R, G, B to LCD module.

3. Memory Circuit

2M byte SDRAM(U6, 7) is used as a frame converter for supporting up to 85 Hz frame rate and controlled by MX88L284(U5).

The control signals are CKA, CLK, UDOM, LDOM, /WE, /CAS, /RAS, /CS, /BA.

4. System Controller (Microprocessor) Circuit

1) Microprocessor (U4) distinguishes polarity and frequency by calculating horizontal and vertical sync input from signal source.

2) Microprocessor (U4) carries out power control by sending power-down trigger signal to each IC.

U1, U5, and U13 has PD(Power-down) pin which operates at active-low or high.

It also outputs signal to turn inverter on and off for lamp control.

3) Microprocessor (U4) communicates with EEPROM (U3), TDA8752 (U1), and MX88L284 (U5) through IIC(2 lines) or 8 bit bus line. It makes all devices operated properly with communication channel.

4) Microprocessor (U4) let User adjust screen by each OSD function.

5. DC/ DC Converter

This circuit supplies DC power for each device needing DC voltage of +3.3VD, +3.3VD2, +5V, 5VPLL, and 5VST.

L4973D5.1(U13), the DC/DC controller IC converts input 24Vdc into +5Vdc and +3.3Vdc with peripheral circuit composed of Transformer (TRANS1), condensing components (ZD5, D6, C201, C26, C72, C73) and Regulators (U17, U2, U24). 5VST is supplied for Microprocessor through regulators (U10, U11, U22).

+3.3VMOD for LCD module power are switched by U12, switching FET, controlled by Microprocessor.