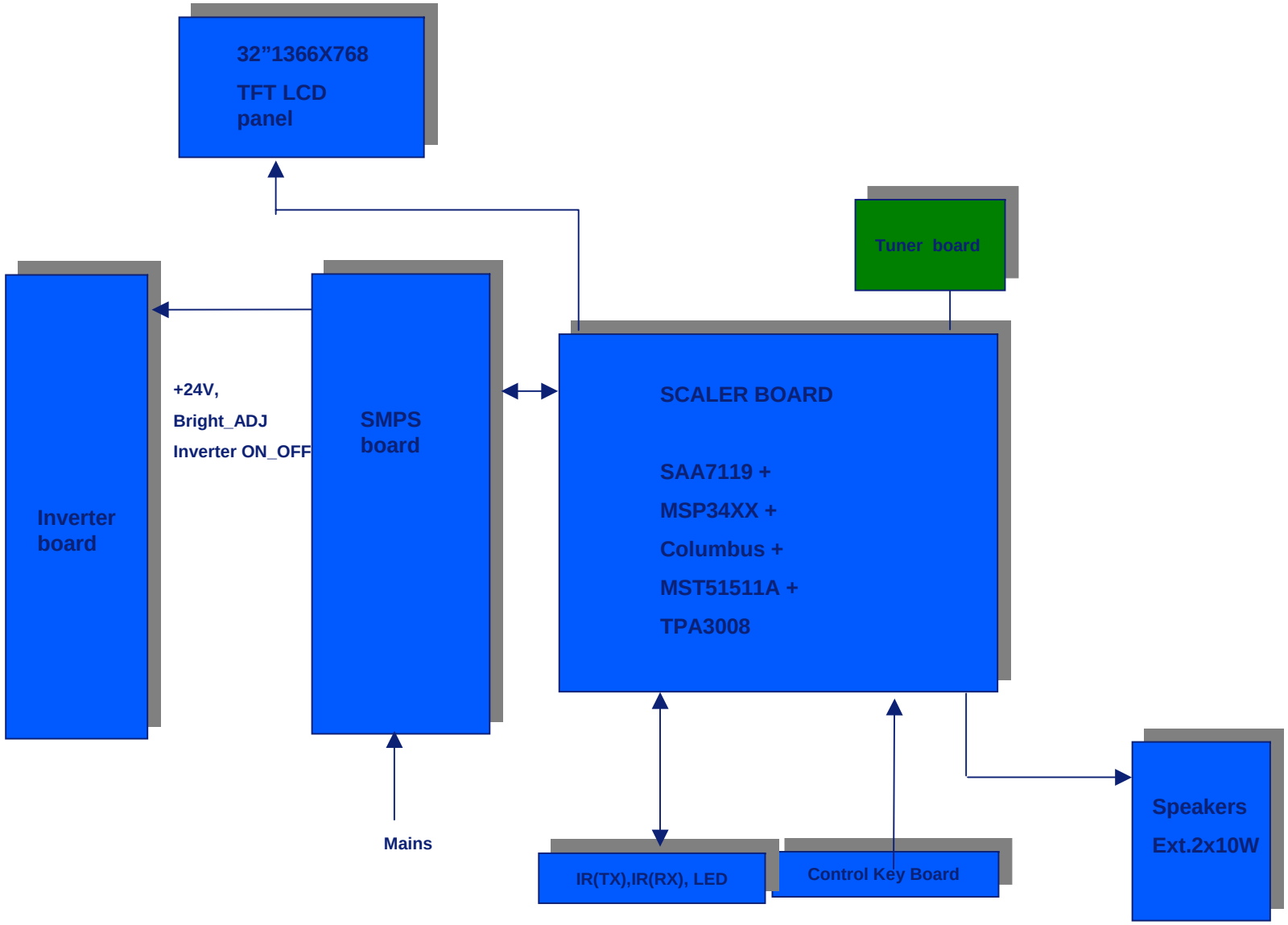
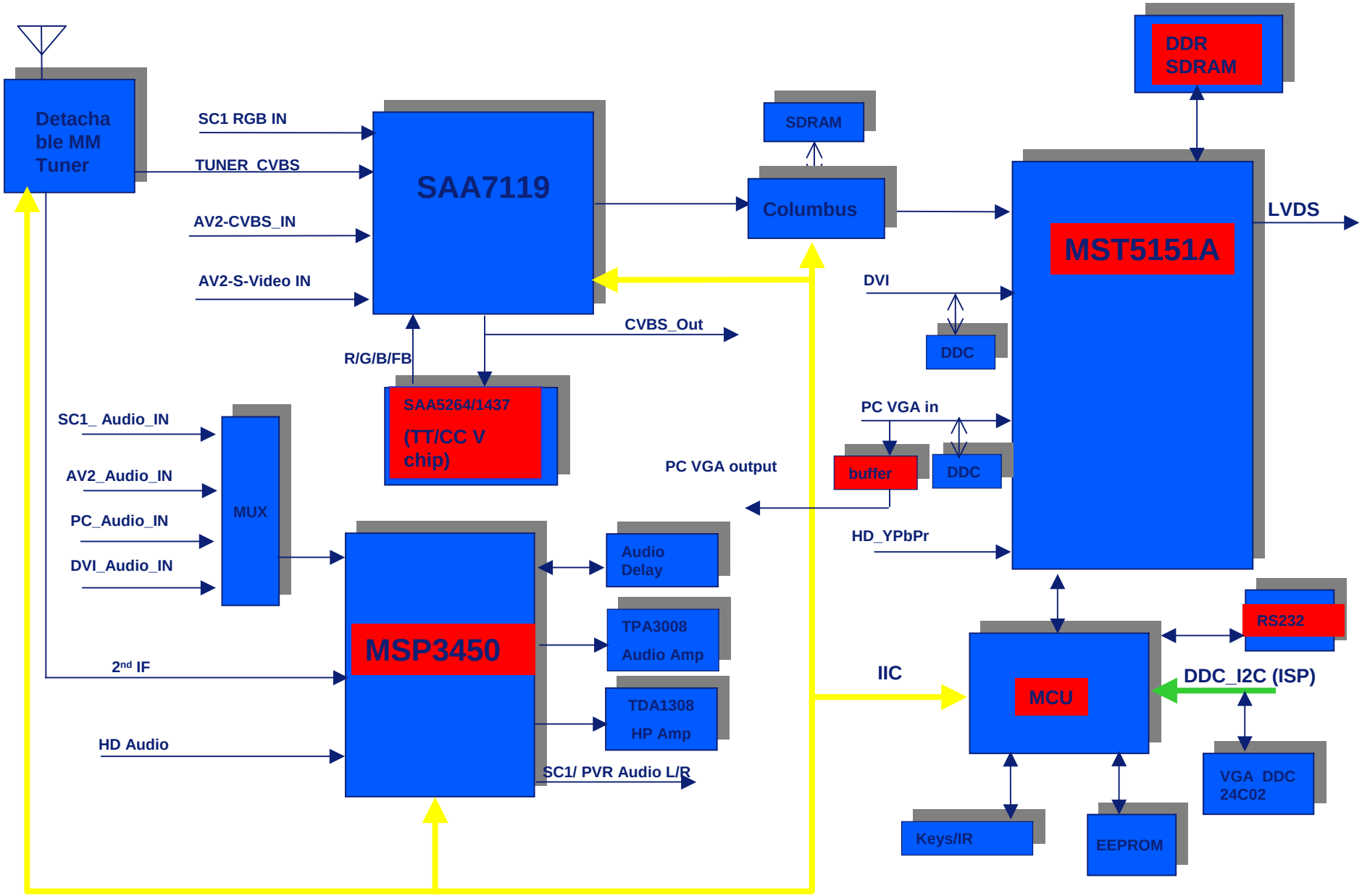
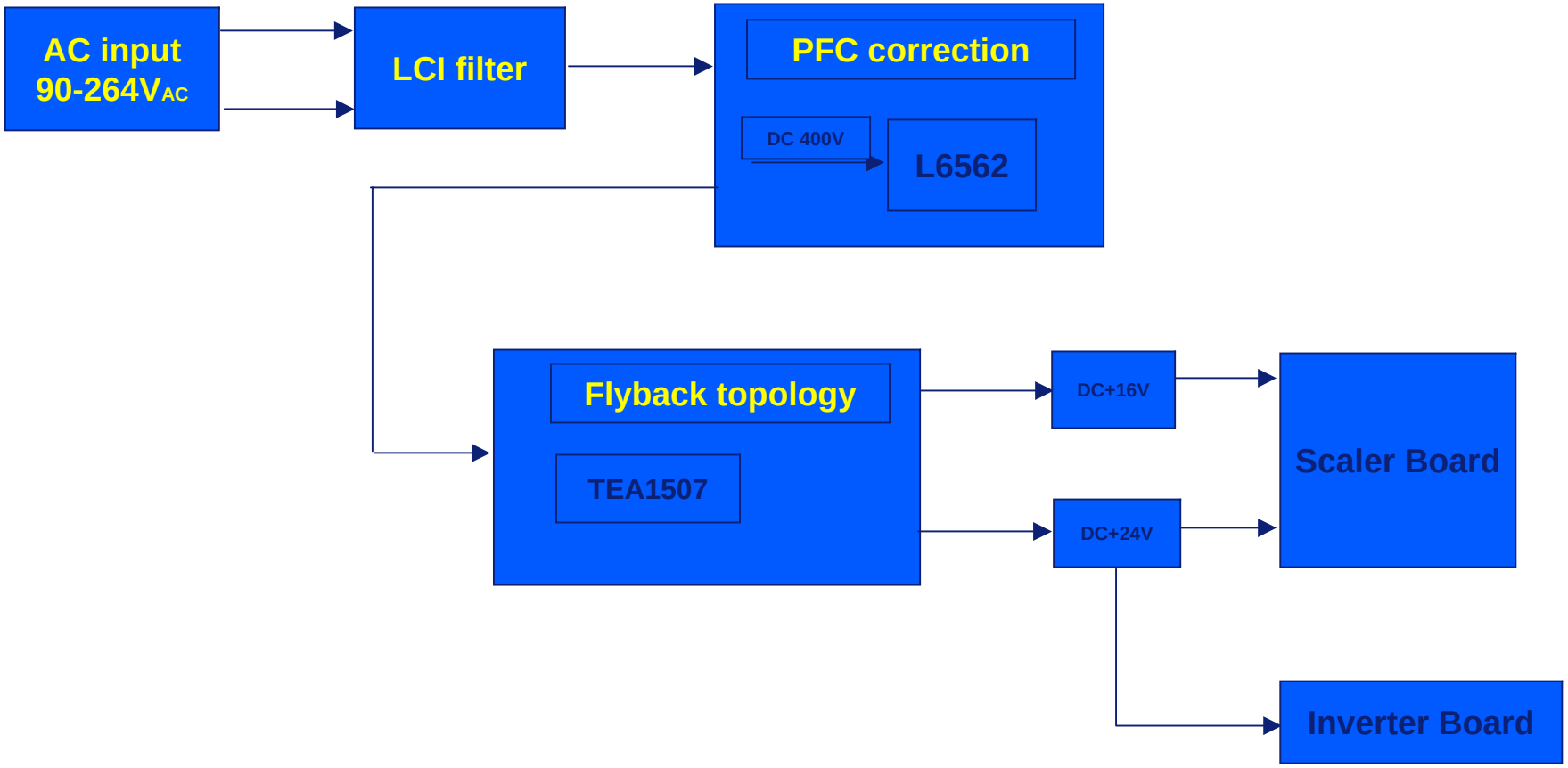
1. Function block for 32”



Scaler Board Functional Block



Power Board Function Block



2.Circuit description

This LCD TV monitor use BDS platform for the video and audio processing.

It can support PC analog, digital signal and TV signal.

It support PIP function that is TV picture on PC graphic or TV picture on DVI (support HDCP).

It's output resolution is up to 1366X768 75Hz for WXGA panel.

It can support DVI HDCP digital signal input and also support TV (RF) , CVBS/ RG B signal (from SCART1 I/O) , YPbPr (from Cinch I/O for SDTV and HDTV) , CVBS/YC (Audio shared) , It has one headphone output.

The Y Pb Pr signal input (from Cinch I/O) support 480I, 480P, 720P, 1080i 60Hz and 576I, 576P, 720P, 1080I 50Hz HDTV input.

It also have PVR output function , support and monitor all the CVBS signal output with L/R sound.

This LCD monitor TV use MST5151A as Scaler engine, which has embedded Analog D-sub, digital DVI(HDMI) decoder, scaling input signal for panel, OSD and advanced 3D de-interlace. The DDR SDRAM is used to accomplish video frame rate conversion and PIP function.

The external CPU is used for back light control, RC receiver, keypad input, I/O switch control , IIC communication and TV tuning control, MSP3450G sound decoder control, SAA7119 video decoder control , Columbus IC (3D –comb filter) control , and Audio AMP TPA3008D2 control.

Video decoder SAA7119 is used for TV video processing and convert it with CCIR 656/8bits digital format and send to Columbus IC for 3D comb filter processing and noise reduction processing , after that then send to Scaler for de-interlace process.

Columbus IC is a combination of Enhanced 2D / 3D Comb filter for both PAL and NTSC , and a Spatial / Temporal noise reduction system for both colour and luminance signals .

One audio decoder MSP3450G is used for TV sound processing, and output to Class D audio amplifier TPA3008D (2 X10W) audio output. This audio decoder is a global sound decoder for Nafta AP, China and European market.

In NAFTA model CC,V-chip data is decoded in SAA5264PS/M3/1437 and the display the CC information via mixed at SAA7119 with the input signal.

The V-Chip is decode by SAA5264PS/M3/1437 and control via the MCU.

In Europe model “Teletext display”. Data decode is done by SAA5264PS/M3/1437, output RGB/FB is to video decoder input for text overlapping.