

## Operational Description of LV520H

### 1. Power

This part, a power supply of regulators, make DC voltages (5V, 3.3V) to operate a main board from input voltage DC12V, and an inverter is operated by input voltage.

- DC 3.3V is supplied into gmZAN1 and LCD Panel.
- DC 5V is supplied into TS80C51RA2(MCU).
- DC 12V is supplied into 4-lamp back light in LCD Panel on an inverter.

### 2. Main Board

#### 1) Video Processing (Image Processor)

The gmZAN1 interfaces computer graphics and video inputs in virtually any format to a fixed frequency flat panel display. Computer images from VGA to XGA resolution input to the chip can be resized to fit on the target display device, which can have any resolution up to XGA.

The gmZAN1 has an on-chip OSD(On Screen Display) processor.

#### 2) Video Processing (Analog to Digital Converting)

This function is integrated into gmZAN1.

#### 3) MCU (Micro Processor Unit)

This Unit controls other ICs and memories.

### 3. Inverter

Each LCD Panel has its own inverter to obtain optimum performance and long lifetime.

The controller board just supplies the power for inverter logic and controls a light On/Off signal and a brightness control signal. So, it is important to use the inverter that has proper driving capacity and control input signal.