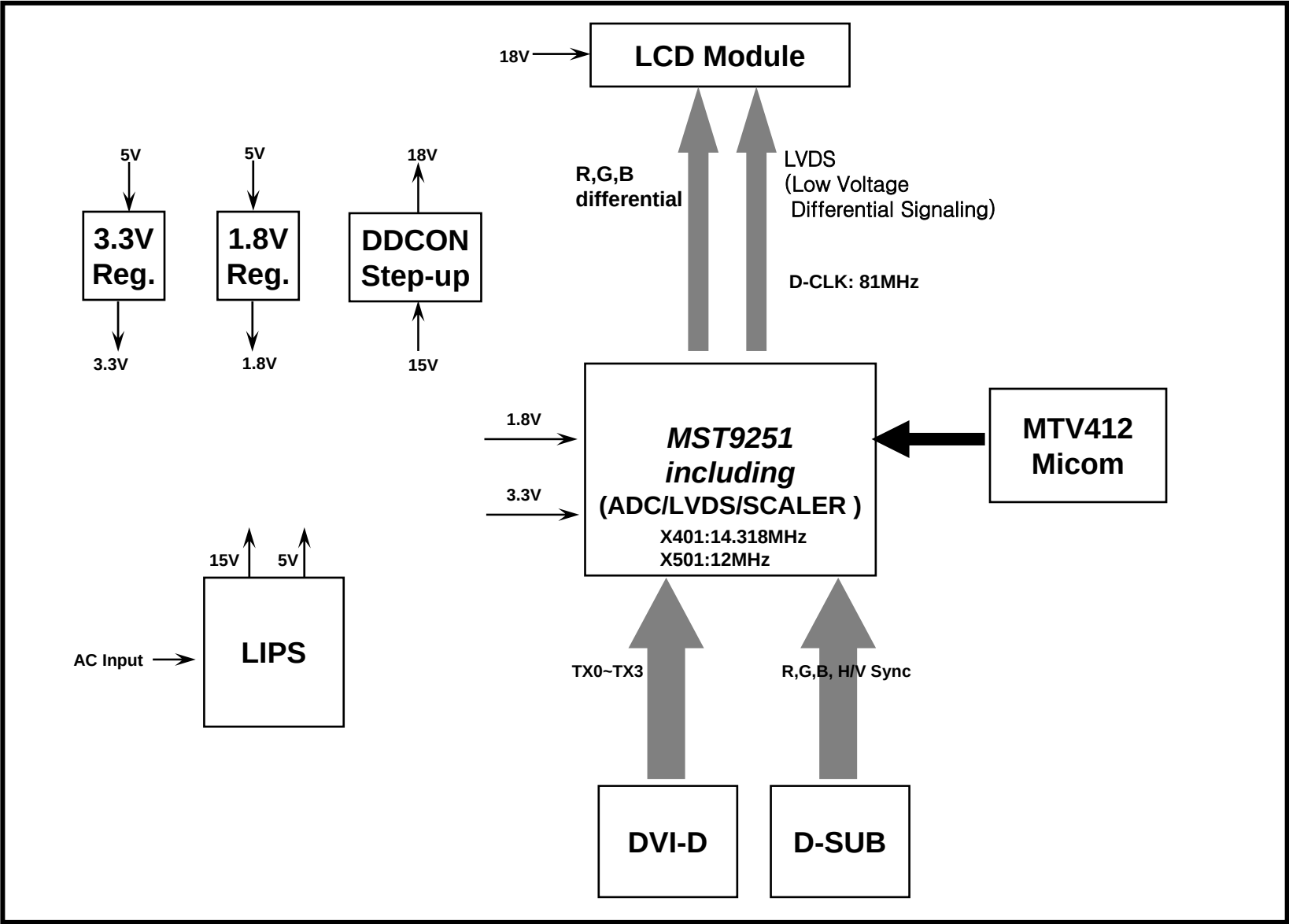


APPENDIX D
: BLOCK DIAGRAM

Main Board Block Diagram



DESCRIPTION OF BLOCK DIAGRAM

1. Video Controller Part & Display Data Transmitter Part.(MST9251)

In case of analog input, this part amplifies the level of video signal for the digital conversion and converts from the analog video signal to the digital video signal using a pixel clock.

In case of digital input, internal TMDS receiver decodes digital signal for scaler operation.

The pixel clock for each mode is generated by the PLL.

The range of the pixel clock is from 25MHz to 162MHz.

This part consists of the All-in-one Scaler with ADC, PLL, TMDS Receiver, Transmitter and scaler.

The scaler interpolates PC input resolution to 1600×1200 resolution signal and outputs 8-bit R, G, B signal to transmitter.

Transmitter codes digital signal from the Scaler and output coded data to receiver of module.

2. Micom Part

This Part consists of EEPROM IC which stores control data, Reset IC and the Micom.

The Micom distinguishes polarity and frequency of the H/V Sync are supplied from signal cable.

The controlled data of each modes is stored in EEPROM.

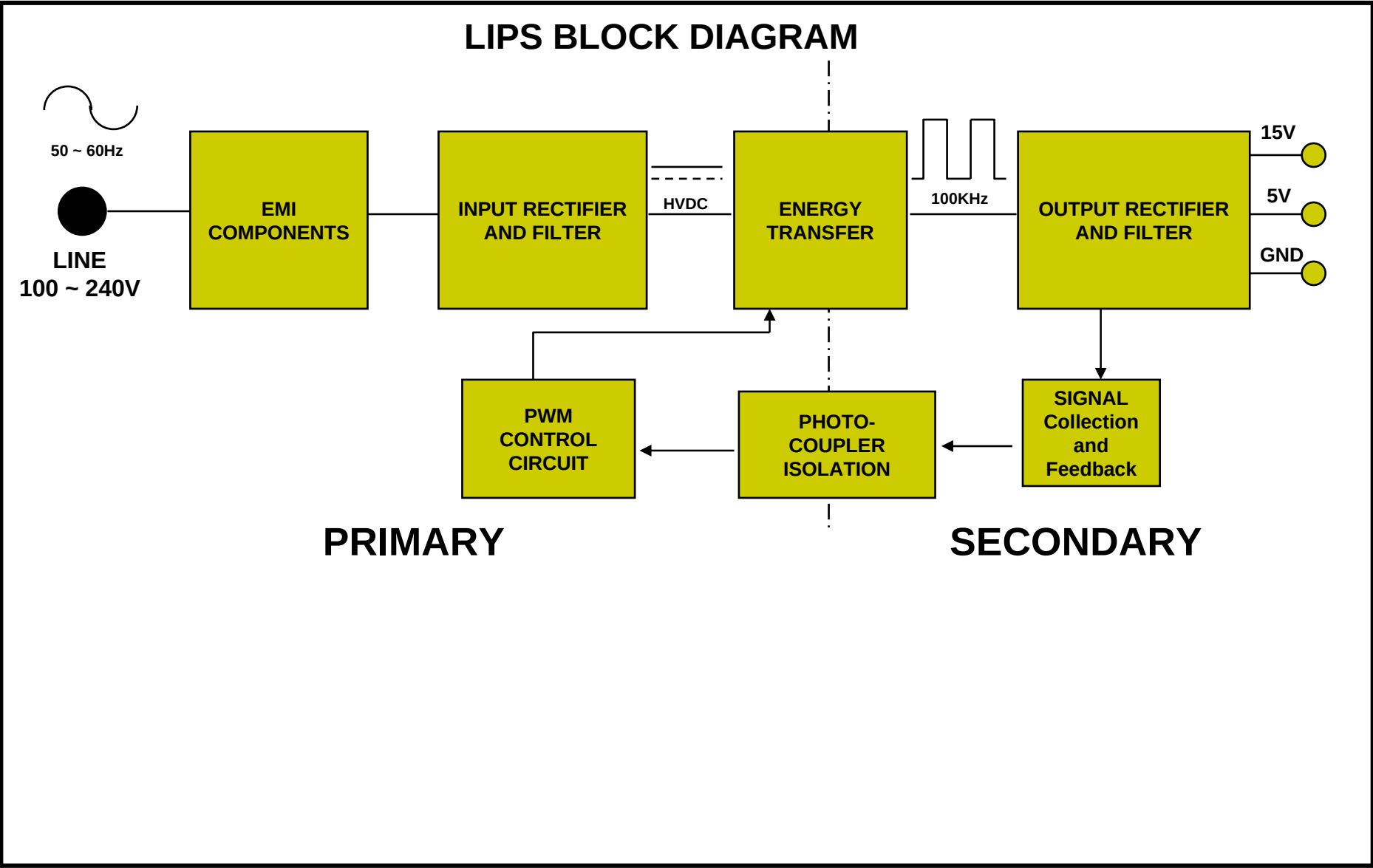
3. Power Part

This part consists of the one 3.3V and one 1.8V regulators to convert power which is provided 5V in LIPS Board.

In addition, step-up DC to DC converter boosts up 15V to 18V for supplying LCD module power.

Also, 5V is converted 3.3V and 1.8V by regulator. Converted power is provided for IC on the main board.

Power Board Block Diagram



OPERATION DESCRIPTION OF POWER

1. EMI components.

This part contains of EMI components to comply with global marketing EMI standards like FCC,VCCI CISPR, the circuit included a line-filter, across line capacitor and of course the primary protection fuse.

2. Input rectifier and filter.

This part function is for transfer the input AC voltage to a DC voltage through a bridge rectifier and a bulk capacitor.

3. Energy Transfer.

This part function is for transfer the primary energy to secondary through a power transformer.

4. Output rectifier and filter.

This part function is to make a pulse width modulation control and to provide the driver signal to power switch,to adjust the duty cycle during different AC input and output loading condition to achieve the dc output stabilized, and also the over power protection is also monitor by this part.

5. Photo-Coupler isolation.

This part function is to feed back the dc output changing status through a photo transistor to primary controller to achieve the stabilized dc output voltage.

6. Signal collection.

This part function is to collect the any change from the dc output and feed back to the primary through photo transistor
