

MBP30 Circuit description

Parent unit:

MBP30 Parent unit consist of 2 DC/DC convertors and 2 LDO. They convert the 5V input from DC adaptor (or 3.6V from battery) to 3.3V, two 2.5V and 1.8V power rail. These different power rails are used to power up different parts of the system.

PB801 is one of the digital processor in the system, which mainly in charge of video signal control. PB801 is powered by 3.3v and 1.8v power rail and is clocked by a 4 MHz crystal. It is connected to a 4Mbit flash SST39VF040 using EMI bus for memory storage. PB801 will control an image processor IC SSD1928 (using 8bit parallel data bus and I2C) which will do video decoding and display image in the 2.4' LCD. PB801 will provide a 4 Mhz clock to SSD1928 using its GPIO pin. The system consist of 6 buttons and are all monitored by an ADC inside the PB801

PB201 is another digital processor in the system, which mainly control RF link and audio processing. PB201 is powered by 3.3v and 1.8v power rail and is clocked by a 18 MHz crystal. It is connected to a 512Kbit SPI serial flash SST25VF512 using SPI for memory storage. PB201 will control a 2.4GHz RF module PM103 for radio frequency transmit and receive. PB201 and PM103 are connected using SPI and PB201 will provide a 18MHz clock to PM103 using GPIO. PB201 will also control an audio codec IC CS42C51, which is used for encode and decode the in/output audio signal.

Both PB201 and PB801 are can be reset by Reset IC ML61C272.