

Circuit Description

The following information describes the Passport STB schematic are used to help to understand the operation of the product.

The motherboard required all power are converted to 12V power adapter. 1.2V is the core voltage for the main IC BCM7208, it convert from regulator MPS1482 of U4. 3.3V goes to the main IC, flash ICs, RF module, audio amplifier, it convert from regulator MPS1482 of U3. 1.5V goes to both the main IC as well as the various DDR RAMs, it convert from regulator LDO of U5. 2.5V goes to the main IC, RJ45 transformer, it convert from regulator LDO of U10. These four voltage driver the main IC.

A 54MHz crystal oscillator provides the clock to the main IC. The main chip provides a 533MHz clock with 2 pieces DDR SDRAM.

12V generate 5V by regulator MPS1482 of U2. 5V supply the USB working power. Another 5v is the MCU power, the MCU is to used for power standby. The MCU power is generated by LDO of U17.

RF module is a low cost, low-power RF transceiver module operating in the 2.4GHz ISM band. The operation voltage is 3.3V. The maximum output power is 1dBm. The maximum support rate is 250 kbps.