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WPS54G Operation Principle

1. CPU, U6, 88W8510 have a 32-bit RISC processor integrated, operation frequency is 160MHz. It needs an external 44MHz crystal for reference frequency; this crystal is also used for RF module. This chip is responsible to control RF-Baseband Transceiver (88W8000G).
2. FLASH, U13, MX29LV800TTC-70, 8Mbits Flash, bottom sector, 70ns. It is used to store the normal and test firmware.
3. Integrated 2.4GHz ISM Band RF-Baseband Transceiver, U9, 88W8000G which is integrated all RF-Baseband receive and Transmit function. It is also integrated programmable frequency synthesizers with integrated VCOs, I/Q generation and CMOS up/down conversion mixers.
4. Power Amplifier (PA), U30, SE2525L, with up to +20 dBm output power at the antenna port.
5. 88W8510 support 802.3 PHY, automatic MDI/MDIX crossover for 100BASE-TX and 10 BASE-T ports.
6. Power part: there are several regulators are used on the board. U17, AZ1084S-3 is used to transfer DC5V to DC3V3; U1, U8 AME8805DEFT are used to transfer DC3V3 to DC2V5; U20, AZ1117-ADJ is used to transfer DC3V3 to DC1V62. The core of CPU is operate at 1.625V.
7. UB2 NEC uPD720101 complies with the universal serial bus specification ver2.0 And open host controller interface specification for full/low speed signaling, the Part is integrated host controller with PCI interface and USB2.0 transceiver into a Single chip.
8. Band-Pass Filters, BP1, BP2, LCB22M2450B1, Freq. Range: 2.4~2.5GHz; IL@BW: 1.7dB
9. GaAs IC SPDT Switch, U7, HWS314, features low insertion loss and positive voltage operation with very low DC power consumption.