
F5D7132 Operation Principle

1. CPU, U6, 88W8515 have a 32-bit RISC processor integrated, operation frequency is 160MHz. It needs an external 40 MHz crystal for reference frequency; this crystal is also used for RF module. This chip is responsible to control RF-Baseband Transceiver (88W8010), Flash IC and LED. This chip also has MII interface integrated to communicate with 10/100 Ethernet Switch.
2. FLASH, U13, S29AL008D70TFI01, 8Mbits Flash, bottom sector, 70ns. It is used to store the normal and test firmware.
3. Integrated 2.4GHz ISM Band RF-Baseband Transceiver, U1, 88W8010 which is integrated all RF-Baseband receive and Transmit function. On-Chip PA with up to +22dBm output power in 802.11b mode and +16dBm output power in 802.11g mode for 2.4GHz ISM transmission. Fully integrated frequency synthesizers with optimized phase noise performance for OFDM applications.

4. Components:

LAN port	1 x 10/100BaseT LAN port
Reset Button	Reboot & reset to factory default
Power port	Connect power adapter.
Antenna	One x 2dbi fixed antennae
Push button (0.25" diameter)	1 x on the back for AutoConfig in universal repeater

5. Power part:

There are several regulators are used on the board. U4, AME8815AEBT330 is used to transfer DC4.5V to DC3.3V; U8 CM2860KIM89 are used to transfer DC3.3V to DC2.5V. U20 CM1117 are used to transfer DC3.3V to DC1.6V

6. LED part:

LED	Color	Description
Power	Green	On - power on Off - no power
(reaching for network)	Red	Off -, means not seaching Blinking - This LED blinks. Means searching
LAN	Green	On – Link Blinking - receiving / transmitting data Off – No link
WLAN	Green	On - Wireless connection available; Wireless Access Point is ready for use. Off - No Wireless connection available. Blinking - Data is transmitted or received via the Wireless access point.

7. Switch button, SW1, it is used to reset the 88W8510.

8. Multilayer Chip Band-Pass Filters, BP1, BF2520-B2R4CACT, 2.4GHz~2.5GHz,

Insertion loss @ 1.5db(max), VSWR @ 2

9. Multilayer Chip Baluns, BA1, BL2012-05B2450T, 50ohm, Insertion loss @ 1.0db(max), VSWR @ 2

10. GaAs IC SPDT Switch, U2, AS179-92, features low insertion loss and positive voltage operation with very low

DC power consumption.