## F5D7132 Operation Principle

1. CPU, U6, 88W8515 have a 32-bit RISC processor integrated, operation frequency is 160 MHz . 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, 88 W 8010 which is integrated all RF-Baseband receive and Transmit function. On-Chip PA with up to +22 dBm output power in 802.11 b mode and +16 dBm output power in 802.11 g mode for 2.4 GHz ISM transmission. Fully integrated frequency synthesizers with optimized phase noise performance for OFDM applications.
4. Components:

| LAN port | $1 \times 10 / 100$ BaseT LAN port |
| :--- | :--- |
| Reset Button | Reboot \& reset to factory default |
| Power port | Connect power adapter. |
| Antenna | One x 2dbi fixed antennae |
| Push button (0.25" dimater) | $1 \times$ on the back for AutoConfig in universal <br> 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 <br> Off - no power |
| (reaching for network) | Red | Off -, means not seaching <br> Blinking - This LED blinks. Means searching |
| LAN | Green | On - Link <br> Blinking - receiving / transmitting data <br> Off - No link |
| WLAN | Green | On - Wireless connection available; Wireless Access Point is ready for <br> use. <br> Off - No Wireless connection available. <br> Blinking - Data is transmitted or received via the Wireless access <br> point. |

7. Switch button, SW1, it is used to reset the 88 W 8510 .
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.Odb(max), VSWR @ 2
10. GaAs sC SPDT Switch, U2, AS179-92, features low insertion loss and positive voltage operation with very low DC power consumption.

