

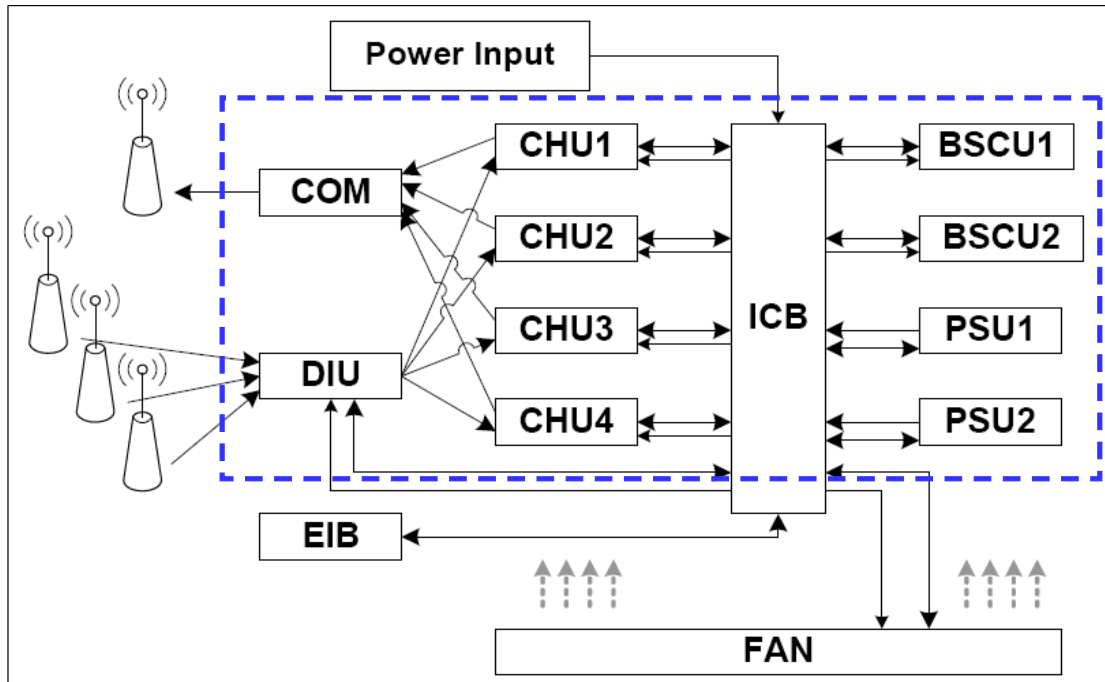
## Tune-up Procedure

### 1、Receive parameters

| Item                | Test Condition   | Test equipment    | Test Part    | Specification/Remark  |
|---------------------|--|-------------------|--------------|---|
| Sensitivity         | input level: -119dBm   | Signal generator  | Receive Port | $P_1 = -119\text{dBm}$ , $\text{BER} \leq 5\%$                                    |
| Spurious Radiations | Spectrum analyzer<br>1. Resolution BW: 100kHz;<br>2. Video BW : 300kHz | Spectrum analyzer | Receive Port | 9 kHz to 1 GHz $\leq -57\text{dBm}$ ;<br>1GHz to 12.75 GHz $\leq -47\text{dBm}$ ; |

### 2、Transmitter parameters

| Item                        | Test Condition   | Test equipment    | Test Part        | Specification/Remark  |
|-----------------------------|--|-------------------|------------------|---|
| Frequency Stability         | Spectrum analyzer<br>1. Resolution BW: 30kHz;<br>2. Video BW : 100kHz  | Spectrum analyzer | Transmitter Port | $\leq \pm 1\text{kHz}$  |
| Emission Mask               | Spectrum analyzer<br>1. Resolution BW: 300Hz;<br>2. Video BW: 1kHz     | Spectrum analyzer | Transmitter Port |   |
| RF Output Power             | Spectrum analyzer<br>1. Resolution BW: 30kHz;<br>2. Video BW : 100kHz  | Spectrum analyzer | Transmitter Port | $43.5\text{dBm} \pm 1.5\text{dB}$   |
| Adjacent channel power      | Spectrum analyzer<br>1. Resolution BW: 30Hz;<br>2. Video BW: 1kHz      | Spectrum analyzer | Transmitter Port | $\leq -60\text{dB}$   |
| Occupied Bandwidth          | Spectrum analyzer<br>1. Resolution BW: 100Hz;<br>2. Video BW: 300Hz    | Spectrum analyzer | Transmitter Port | $\leq 8.5\text{kHz}$  |
| Spectrum emission mask test | Spectrum analyzer<br>1. Resolution BW: 100kHz;<br>2. Video BW : 300kHz | Spectrum analyzer | Transmitter Port | 9 kHz to 1 GHz $\leq -36\text{dBm}$ ;<br>1GHz to 12.75 GHz $\leq -30\text{dBm}$ ; |



After going through the antenna, the service signal reaches DIU and CHU, where the signal will be delivered to baseband after appropriate processing. Then the baseband will send the service signal to BSCU for soft switch. Afterwards, the signal will be sent back via ICB to baseband, which would convert it into HF signal and send it to the transmitter. Finally, the transmitter will deliver the HF service signal to antenna via COM.

- 1、 Open the test tool exe , then input IP address of CHU to the "Listen Remote IP " pane, click the "Open udp" button;
- 2、 then find the Read Frequency pane, input the FPGA & STM32 frequency after this setup click the "Write frequency" button;
- 3、 fixed Read power pane used "Write power" button then open it;
- 4、 Input the RX Frequency to the "Read Frequency" pane, click the "Write frequency" button.