

Circuit Description

1. Power module

An external power supplier provides the board with 48v power via X12, Passing through 5A Fuse, EMI filter, hot swap controller, and then converts to different voltage through DC-DC module and LDO.

2. Clock module

Receives system clock from RMM, such as 16chip, pp2s, 30M.and then delivers the clocks to different modules. Including a PLL that generates a 64chip clock from 16chip clock.

3. CPU module

CPU module is the main control unit in the board, which is responsible for baseband configuration, DDC/DUC configuration, control settings, status query, warning report and communication with RMM via RS485.

4. Baseband interface module

Interface for RMM and DUC/DDC. Also responsible for parity checking , baseband source selection, DAGC adjusting and RSSI power detection.

5. DUC+CFR module

This kernel part converts 4 sectors baseband signals into intermediate frequency digital signals. Also the CFR operation is handled in this module.

6. DPD module

DPD module is responsible for digital predistortion operation, whose input signals are 4 sectors baseband digital signal and feedback digital signal from PRX.

7. DDC module

There are two DDC modules for double reverse signal receive. Kernel part in the board. The DDC module converts the intermediate frequency analog signal from RXRFP into baseband data.

8. RF Link Module

RF Link Module have one Transmit Channel and two Receive Channels. The Transmit Channel converts TX IF signal to RF signal, also responsible for amplifying RF signal .The Receive Channel converts RX RF signal to IF signal and sends to ADC after amplifying the IF signal.

9. PA Module

PA module amplifies the RF signal to rated Power of Antenna.