

Circuit Description

1. Power module

An external power supplier provides the board with 12-13V power, Passing through Fuse, EMI filter, hot swap controller, and then converts to different voltage through DC-DC module and LDO.

2. FE module

There is 2 FE interface, One for ABIS, another for LMT.

3. GPS module

Receives system clock from GPS and then delivers the clocks to different modules.

4. CPU module

CPU module is the main control unit in the board, which is responsible for baseband configuration, configuration, control settings, status query, warning report and communication with BSC.

The CPU offers an excellent combination of protocol and interface support including dual high-performance CPU cores, a large L2 cache, a DDR2/DDR3 memory controller, three enhanced three-speed Ethernet controllers with SGMII support, two Serial RapidIO interfaces with a messaging unit, a secure digital interface, a USB 2.0 interface, and three PCI Express controllers. The device also supports the IEEE 1588™ precision time protocol for network synchronization over Ethernet.

5. Baseband module

The module is responsible for CDMA 1X/EVDO baseband processing. One of CSM chip provides support for the 1x version of CDMA2000. The other one provides an improved level of integration and increased performance and support for enhanced 1xEV-DO release B features.

6. RF module

RF Link Module have one Transmit Channel and one 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.

7. PA Module

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

8. Clock module

This module contains an OCXO, which provides 10MHz clock to the PLL circuit.

Technical specification	
Index	Description
Dimension	260 mm ×180 mm ×58 mm (L×W×H)
Weight	≤2 kg
Environmental temperature	-20 °C to +45 °C.
Environmental humidity	5% ~ 95% RH
Shell protection level	IP30
Power supply	90 V AC to 264 V AC
Band class	869-889MHz
Carrier and bandwidth	3carrier:3*1.25MHz
Power	0.6W(27.8dBm)
Modulation mode	QPSK
Maximal Antenna gain	2.15 dBi
FCC ID	Q78-880280