

# Operation Description

## 1. GSM Transceiver

The AD6548 is an integral component including RF CMOS transceiver IC. AD6548 is highly integrated and fulfill specific functions; functional requirements are partitioned between the ICs to yield complete and optimal multiband, multimode transceiver implementations. Overall transceiver performance depends upon the combined, complementary performance of all the ICs in the chipset. The AD6548 IC supports multiband, multimode phones with five receiver signal paths, four transmitter signal paths, and one dedicated calibration receive path. Receiver paths:

- ☐ GSM 850
- ☐ GSM 900
- ☐ GSM 1800
- ☐ GSM 1900

Transmitter paths:

- ☐ Two low-band Tx paths for:
  - GSM 850
  - GSM 900
- ☐ Two high-band Tx paths for:
  - GSM 1800
  - GSM 1900

The AD6548 zero-IF architecture and highly integrated implementation minimizes handset PCB size and material cost.

## 2. Power Amplifier Module

The GLT2219 is a small, GSM PAM for handset applications. This module has been optimized for excellent amplify efficiency, ACPR and EVM in an open loop polar modulation environment operation while maintaining high GSM/GPRS efficiency. The GLT2219 was optimized for operation with the AD6548 regarding input power range and Rx band performance.

## 3. Antenna Switch and SAW Filter

The antenna switch and Low-loss SAW for mobile telephone system Covering GSM850/GSM900/GSM1800/GSM1900 bands. The TX Signals from the PAM are transmitted to the antenna via the TX path with integrated TX band pass filters, switches and diplexer. The RX Signals from the antenna are balanced output to transceiver through DC blocking capacitors at the antenna

## **4. GSM Baseband Processor**

MT6223D based on a dual-processor architecture, MT6223D integrates both an ARM7EJ-S core and a digital signal processor core. ARM7EJ-S is the main processor responsible for running high-level GSM/GPRS protocol software as well as multi-media applications. The digital signal processor manages the low-level MODEM as well as advanced audio functions. Except for a few mixed-signal circuitries, the other building blocks in MT6223D are connected to either the microcontroller or the digital signal processor.

## **5. GSM Power Management IC**

The MT6223D integrate PMU. It was optimized for operation with the GLT2219 regarding input power range and Rx band performance. Mode Control pins are provided for high efficiency improvement of the low output power range.

Host use condition:

Only use iPod Touch plug into the host-carrier, other device can't be used with the host-carrier. The iPod touch's wifi function will be closed by a software when the Host-carrier detect iPod touch plug into it and using GSM communication. The host-carrier only use GSM function as mobile phone. The host-carrier and host can not transmit simultaneously.