

S5M8627

HEDGE Dual mode RF Transceiver IC

Overview

The S5M8627 is single chip dual mode HSDPA/HSUPA/EDGE Transceiver IC with analog IQ Interface for 3G handsets and other mobile devices. It supports Quad-band GSM/GPRS/EDGE and nine-band UMTS band.

The S5M8627 offers a highly integrated and low cost HEDGE RF solution in 6 mm x 6 mm package. It delivers outstanding RF performance and low power consumption with novel circuit architecture and design. Integration of low noise amplifiers for all bands, synthesizer, loop filters, DCXO, power detector and etc. minimize BOM costs and board area. Especially HSDPA diversity receivers are also integrated in the S5M8627, it needs no additional 3G RF IC to provide diversity function.

Technology

- 0.13 um SAMSUNG RF-CMOS technology
- 121-FBGA Package
 - 6.0 x 6.0 mm
 - Lead (Pb) free Green product

Applications

- Worldwide 3GPP HSDPA / HSUPA / EDGE (HEDGE) mobile handsets and data devices
- Multi-band UMTS / Quad-band EDGE

Features Summary

Supporting Frequency Bands

- Quad-band GSM/GPRS/EDGE
 - GSM850 / EGSM900 / DCS1800/ PCS1900
- Nine-bands WCDMA/HSDPA
 - Band I ~ VI, VIII~X (Except Band VII)

GSM/GPRS/EDGE Transceiver

- Digital low-IF receiver including digital filter for EDGE
- Integrated LNAs for EDGE receiver
- Polar modulator architecture for 8PSK Transmitter.
- Integrated EDGE Ramping generator
- Class 12 compliant for GPRS and EDGE.

WCDMA/HSDPA/HSUPA Transceiver

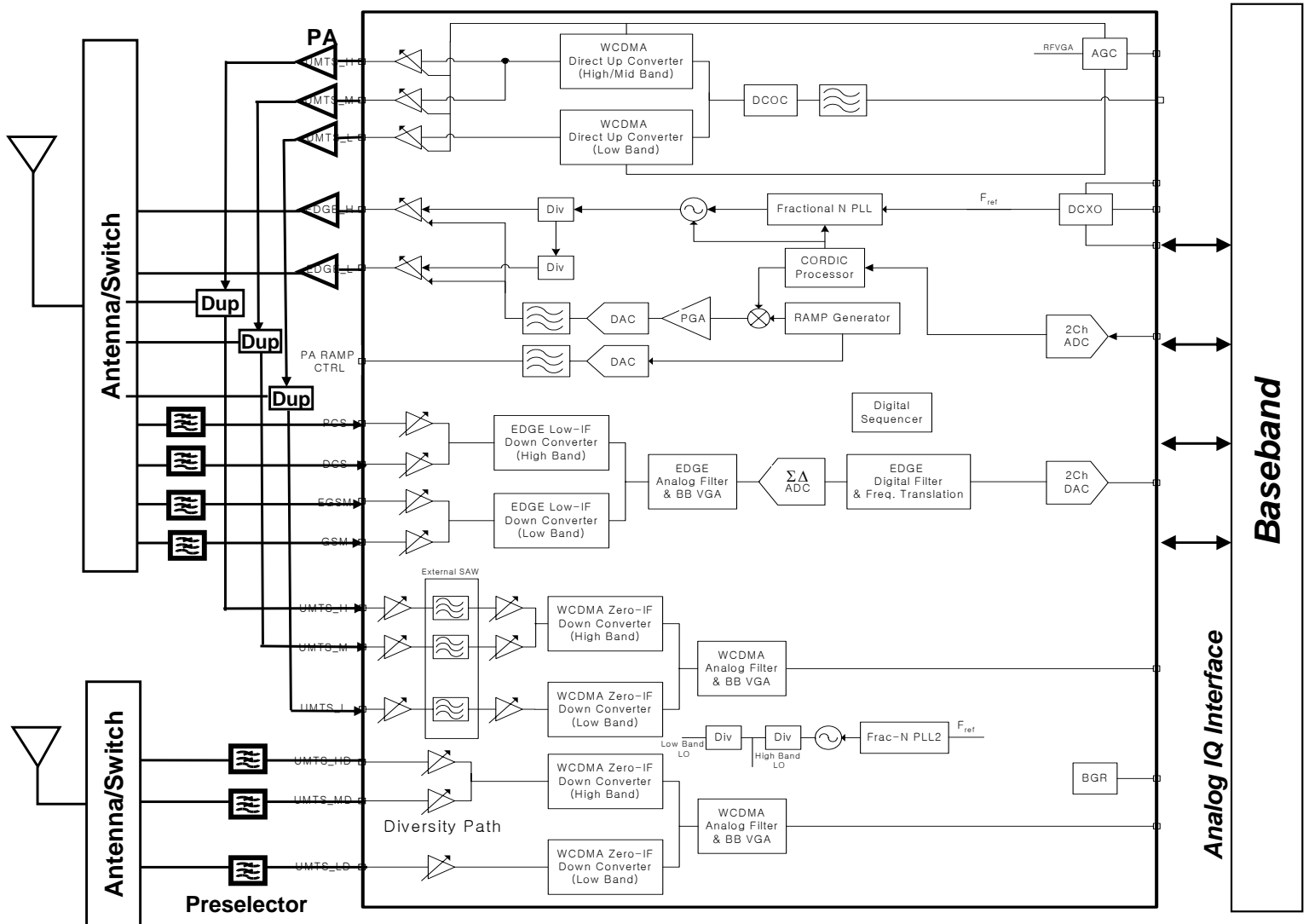
- Zero-IF receiver for WCDMA/HSDPA
- Integrated LNAs for WCDMA/HSDPA receiver
- Integration of Receiver diversity path
- Direct conversion architecture for WCDMA Transmitter

System supports

- 3-wire SPI bus for transceiver control.
- Analog IQ baseband interface
- 26 MHz external reference oscillator can be applied.
- 2.7 to 3.0 V single supply voltage.
- Integrated Fractional-N frequency Synthesizer including VCO and loop filter.
- Integrated digitally controlled crystal oscillator (DCXO) with highly linear tuning characteristic.
- Embedded power detector and thermistor
- Integrated power up down sequencer.

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■ Block Diagram



■ Sampling Schedule

- ES : '08.Q1
- CS : '08.Q4