PRODUCT SUMMARY

CX20536: CDMA and GPS Baseband Analog Processor

Applications

- Dual-band, dual-mode mobile phones (including E911 capabilities)
- GPS receivers

Features

- Single supply voltage 2.7 to 3.3 V
- Operational temperature –30 °C to +85 °C
- Low power consumption in all operating modes including sleep operation
- Single mode for CDMA phones, but also with GPS position location capability
- Receive signal path includes:
  - Separate CDMA, GPS filters, and ADCs
  - DC offset correction
- Receive VHF PLL synthesizer:
  - Programmable charge pump current
  - Lock detector output
  - Operate in conjunction with CDMA/GPS mode receive functions
- System clock generation:
  - 19.2, 19.68, and 19.8 MHz system clock support
  - CHIPx8 accepts external CHIPx8 clock (9.8304 MHz or 8.184 MHz)
- Mode control logic for receive/GPS and sleep modes
- Functionality similar to the CX20489 and CX20529, with GPS processing capability
- RFLGA™ (32-pin, 5 x 5 x 1 mm) package

Description

The CX20536 is a receive-only Code Division Multiple Access (CDMA) and Global Positioning System (GPS) Baseband Analog Processor (BAP) for dual-mode CDMA and GPS-capable portable phones. The device is designed to interface between the receive section and the digital processing circuitry of the telephone.

The CX20536 includes all of the circuitry needed to support receive baseband signal processing and conversions between analog and digital signals for CDMA and GPS operation. For a given operation, the CX20536 accepts analog In-phase (I) and Quadrature (Q) signals, performs channel selection low-pass filtering, and converts the analog baseband signals into digital signals. For clock generation, the CX20536 includes internal digital and Phase Locked Loop (PLL) clock synthesis for 19.2, 19.68, and 19.8 MHz system clocks. It also provides the capability to accept the CHIPx8 clock from the Mobile Station Modem (MSM) or equivalent baseband device. The CX20536 also integrates a VHF PLL synthesizer to synthesize a receive Intermediate Frequency (IF) Local Oscillator (LO).

The CX20536 operates within a power supply voltage range of 2.7 V to 3.3 V. Power control logic maintains a minimum power consumption. Electrical performance parameters are designed to operate over the –30 °C to +85 °C range. The device is available in a 32-pin, 5 x 5 x 1 mm RF Land Grid Array (RFLGA) package. The device package and pinout are shown in Figure 1. A system block diagram of the CX20536 is shown in Figure 2.

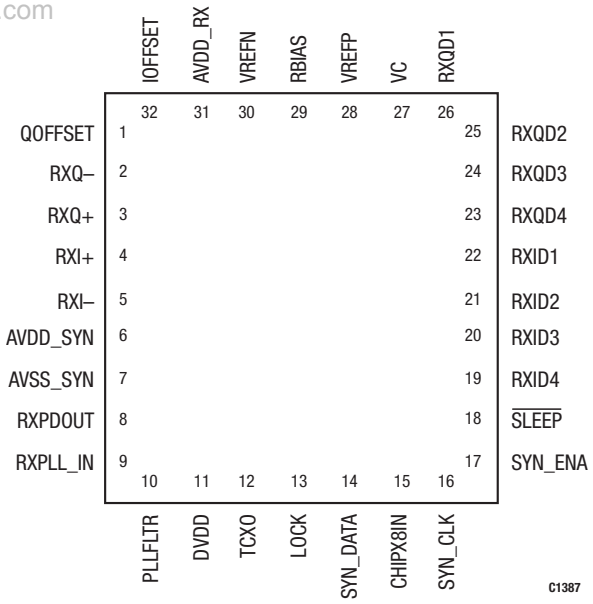

Figure 1. CX20536 Pinout – 32-Pin RFLGA (Top View)

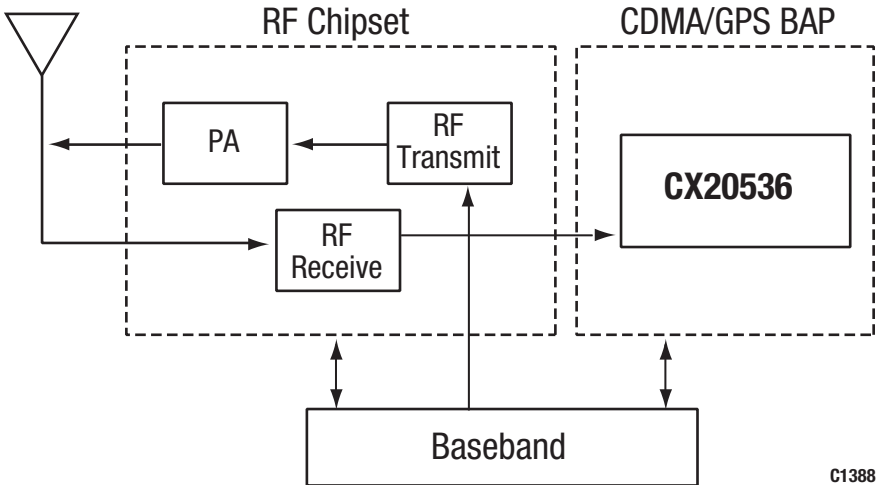

Figure 2. CX20536 System Block Diagram

Ordering Information

Model Name	Manufacturing Part Number	Product Revision
CX20536 CDMA Baseband Analog Processor	CX20536-12	