

PRODUCT SUMMARY

CX20529: CDMA/FM/GPS Baseband Analog Processor

APPLICATIONS

- Tri-band, quad-mode mobile phones (including E911 capabilities)
- GPS receivers

FEATURES

- Single supply voltage 2.7 to 3.3 V
- Operational temperature $-30\text{ }^{\circ}\text{C}$ to $+85\text{ }^{\circ}\text{C}$
- Low power consumption in all operating modes including sleep operation
- Dual mode for CDMA and FM operation with GPS position location capability
- Receive signal path includes:
 - Separate CDMA, FM, GPS filters, and A/Ds
 - DC offset control loop
- Receive VHF PLL synthesizer:
 - Programmable charge pump current
 - Lock detector output
- System clock generation:
 - 19.2, 19.68, and 19.8 MHz system clock support
 - Accepts external CHIPx8 clock (9.8304 MHz or 8.184 MHz) and generates an internal CHIPx8 clock (9.8304 MHz)
 - Adjustable TCXO or TCXO/4 clock output driver levels and power-down capability
 - Provides a TCXO clock through the TCXO/4 output pin
- Mode control logic for Rx, sleep, idle, and GPS modes
- Pin-for-pin and functionality compatible with the CX20489 (but with GPS processing capability added)
- Available in a 40-pin, 6 x 6 mm LGA package

The CX20529 is a receive-only Baseband Analog Processor (BAP) that can be used for Code Division Multiple Access (CDMA), Advanced Mobile Phone System (AMPS) Frequency Modulation (FM), and Global Positioning System (GPS) baseband signals. The device is designed for dual-mode CDMA and AMPS portable phones with GPS capability.

The CX20529 is designed to interface between the Radio Frequency (RF) receive section and the digital processing circuitry of the telephone. The device includes all of the circuitry needed to support the receive baseband signal processing and conversions between analog and digital signals for CDMA, AMPS (FM), and GPS operation. For a given operation, the CX20529 accepts analog baseband In-phase (I) and Quadrature-phase (Q) signals, performs channel selection low-pass filtering, and converts the analog baseband signals into digital signals. For clock generation, the CX20529 includes internal digital and Phase-Locked Loop (PLL) clock synthesis for 19.2, 19.68, and 19.8 MHz system clocks. The device also provides the capability to generate or to accept the CHIPx8 clock to or from the Mobile Station Modem (MSM) or equivalent baseband device. The CX20529 also integrates a VHF PLL synthesizer to synthesize the receive Intermediate Frequency (IF).

The CX20529 is characterized for operation from a power supply voltage range of 2.7 V to 3.4 V, with power control logic maintaining a minimum power consumption. Electrical performance parameters are designed to operate over the $-30\text{ }^{\circ}\text{C}$ to $+85\text{ }^{\circ}\text{C}$ range. The device is available in 40-pin 6 x 6 mm Land Grid Array (LGA) package. A system block diagram of the CX20529 is shown in Figure 1.

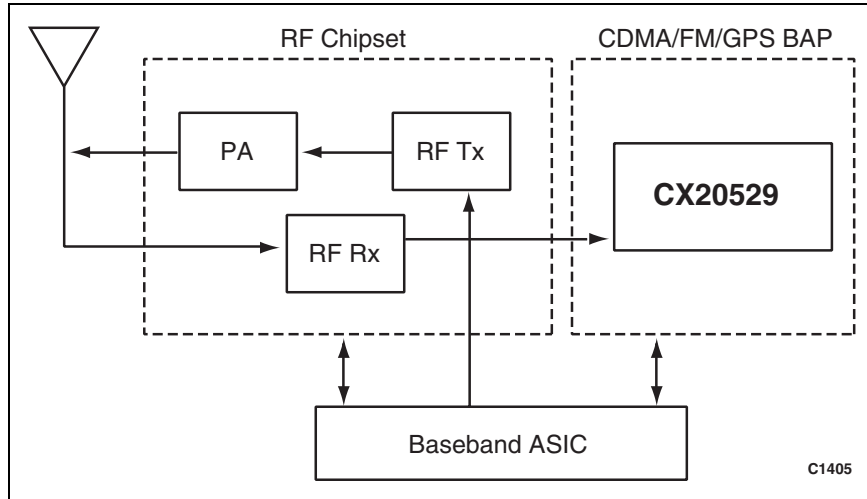


Figure 1. CX20529 System Block Diagram

Ordering Information

Model Name	Manufacturing Part Number	Product Revision
CX20529 Baseband Analog Processor	CX20529-12	

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