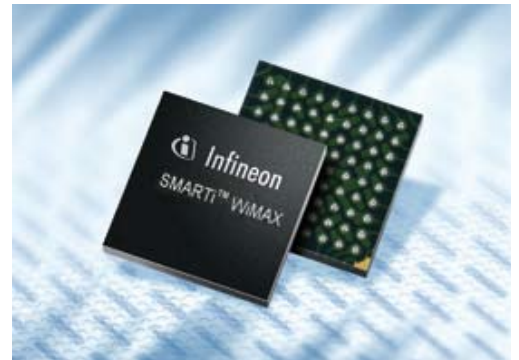


PMB 2008

SMARTi™ WiMAX

Single-chip dual-band WiMAX / WLAN RF
Transceiver IC with standard I&Q interface



SMARTi™ WiMAX (PMB 2008) is the first single-chip dual-band WiMAX and WLAN Transceiver IC with standard I&Q interface for multi-media and feature-rich mobile devices.

It integrates the functionality of a WiMAX and WLAN RF transceiver IC in a single chip CMOS RF transceiver supporting dual band operation (2.5 & 3.5GHz) according to IEEE WiMAX 802.16e and IEEE Wireless LAN standards 802.11b and 802.11g.

SMARTi™ WiMAX features a footprint of only 5x5mm² and provides full support for multiple channel bandwidths, from 3.5MHz to 20MHz, as well a wide range of reference clock frequencies, thus making the SMARTi™ WiMAX a highly flexible solution that can interface with a wide variety of standard WiMAX or WiFi baseband IC's using the chip's standard analog I/Q and serial programming interfaces.

Features

- Fully integrated sigma-delta synthesizer with digital frequency offset compensation
- Support of various external clock frequencies 38.4/26/52/40/44.8MHz
- Configurable channel filters to support all OFDM bandwidths from 3.5 to 20MHz
- Analogue I/Q voltage interface for RX and TX (current mode supported in TX)
- Low EVM: RX < -30dB; TX < -34dB
- Supports 64QAM modulation for up- and downlink
- TX PGA with output power range of 45dB
- Integrated feedback loop to support carrier feedthrough and SSB compensation in TX path
- RX PGC with 101 dB dynamic range
- Various power down modes
- Low current consumption
- Built-in calibration routines to reduce production testing effort & equipment
- Supports coexistence of WiMAX / WLAN with GSM, CDMA, UMTS and BT
- Compatible to a wide variety of Standard WiMAX PA's

Technology

- Based on Infineon's C11 130nm RF-CMOS technology
- PG-WF²SGA-81 package
- 5.0 x 5.0 mm²
- Green product (lead (Pb) and halogen free)

Applications

- IEEE 802.16e WiMAX and IEEE 802.11b/g WLAN mobile phone and modem applications
- PC Cards, PDAs
- Access points

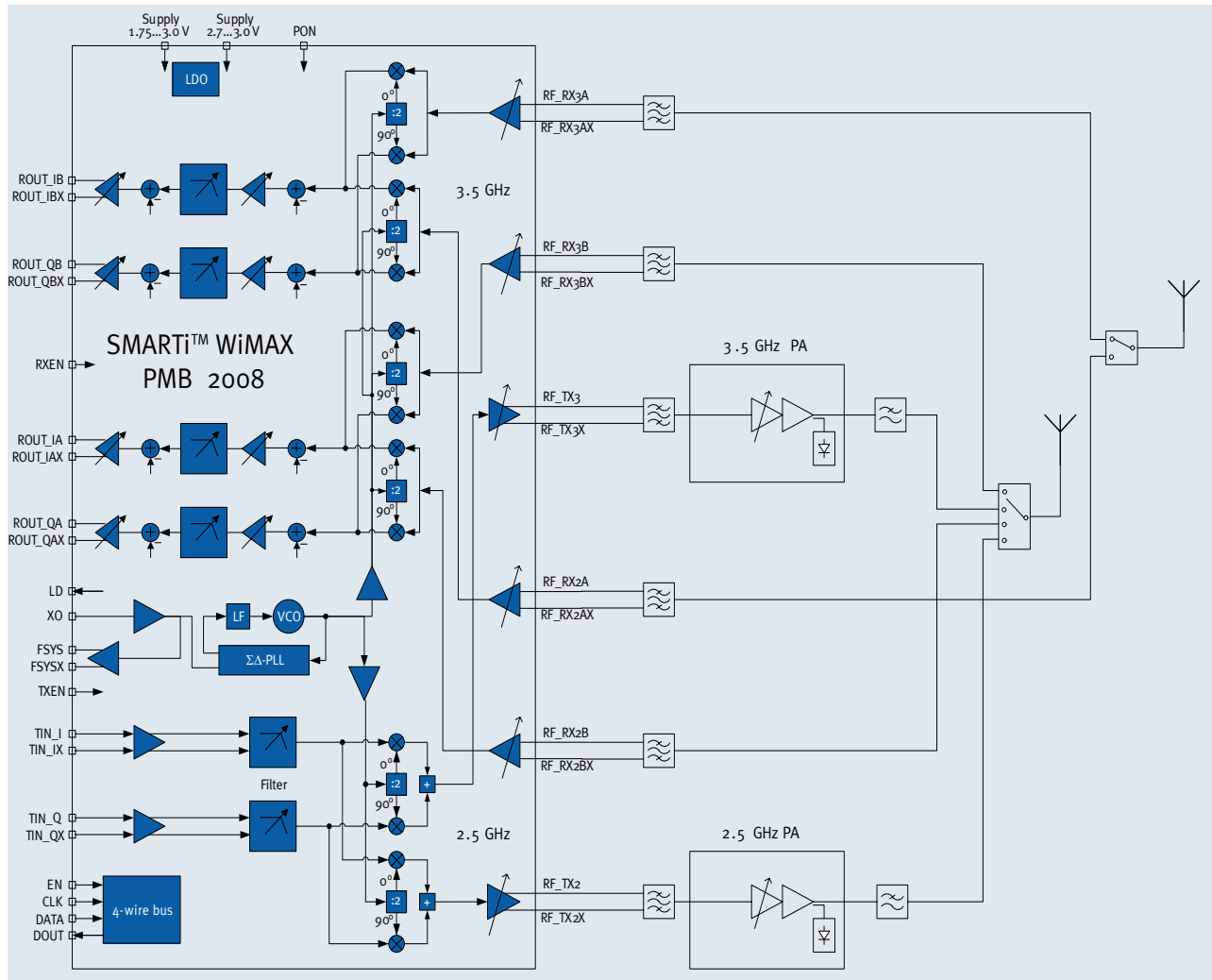
www.infineon.com/RFengine

Communication Solutions



Never stop thinking

Typical Dual Band RF Engine Block Diagram



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<http://www.infineon.com>

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For further information on technology, delivery terms and conditions and prices, please contact the nearest Infineon Technologies Office (www.infineon.com).

Warnings

Due to technical requirements, components may contain dangerous substances. For information on the types in question, please contact the nearest Infineon Technologies Office.

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