

PMB 5701

SMARTi 3G - The First Single-Chip Multi-Band CMOS Radio Frequency (RF) UMTS Transceiver IC



SMARTi 3G IS THE WORLD'S first single-chip multi-band UMTS transceiver IC. It is designed to be used in mobile applications complying with the W-CDMA UTRA FDD system requirements. Supporting all currently used UMTS bands it fully covers the worldwide demand with its different regional frequency requirements in Europe, Asia, North America and Japan.

Applications

- UMTS standard compliant
- Low area, and low power UMTS / W-CDMA solution
- HSDPA/HSUPA data devices

Features

- General
 - Direct conversion receiver
 - Direct modulation transmitter
 - Integrated VCOs
 - Integrated PLL
 - Supporting GSM dual-receive
 - Supporting compressed mode
 - Flexible 3-wire bus configuration
- Tx Section
 - RF VGA's with > 85 dB gain range
 - High-linearity mode for HSDPA
- Rx Section
 - Complete analog baseband path without external components
 - Separate Rx PGC 3-wire bus operation possible
 - HSDPA capability (up to category 8)

Technology

- Based on Infineon's C11 130 nm RF-CMOS technology
- PG-WFSGA-81 leadless package
 - 5.0 x 5.0 mm
 - Green product (lead (Pb) and halogen free)
- Supply voltage range from 2.7 V to 3.0 V

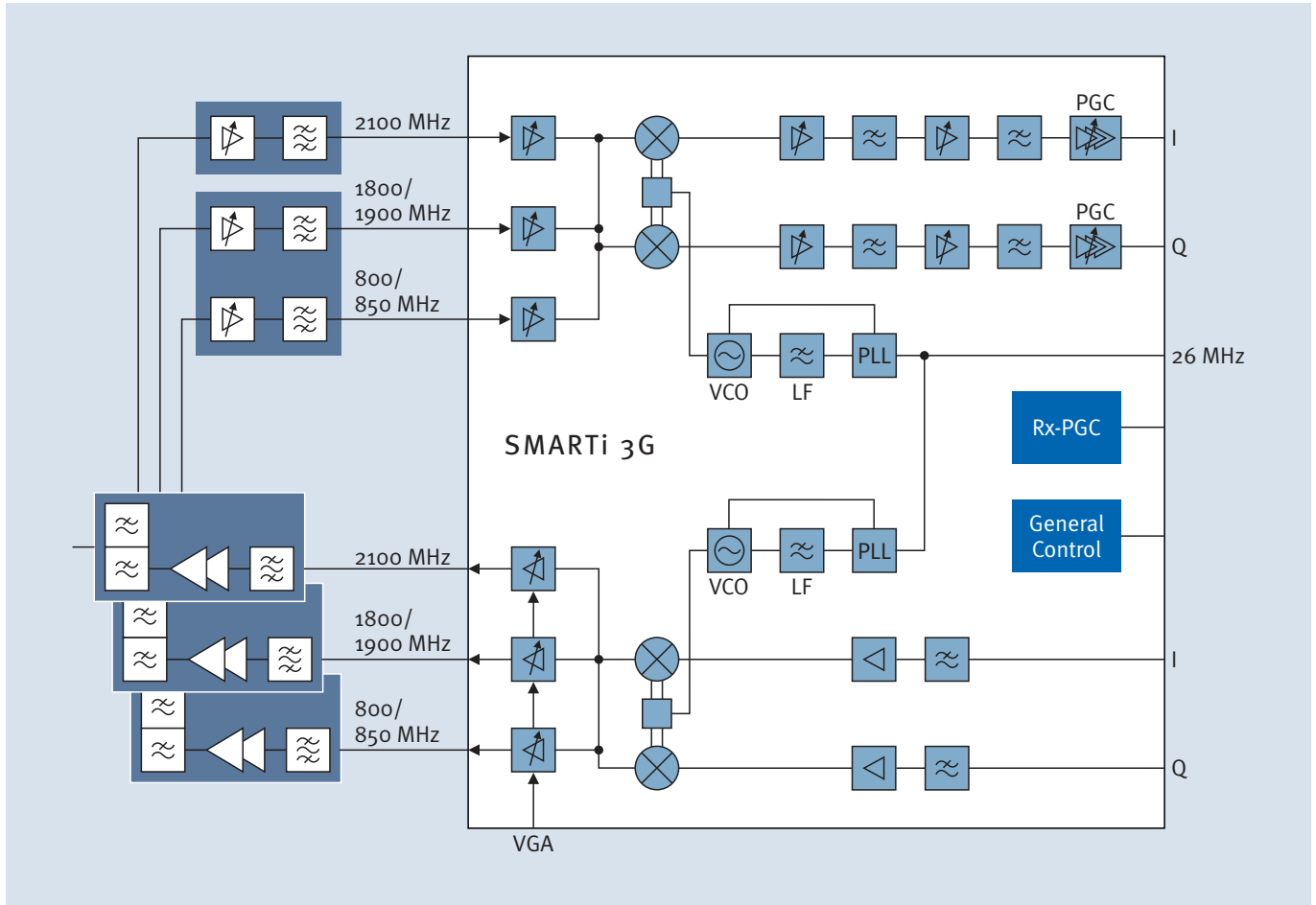
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Communication Solutions



Never stop thinking

SMARTi 3G Triple Band Application Example



Operating Frequency Bands

The transceiver is capable to operate in the following paired frequency bands:

Operating Band	Band Name	Tx Band [MHz]	Rx Band [MHz]
Band I	2100	1920 – 1980	2110 – 2170
Band II	1900	1850 – 1910	1930 – 1990
Band III	1700 or 1800	1710 – 1785	1805 – 1880
Band IV	1.7/2.1	1710 – 1755	2110 – 2155
Band V	850	824 – 849	869 – 894
Band VI	800	830 – 855	875 – 900
Band IX	1700	1750 – 1785	1845 – 1880

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