
# PMB 6952

## SMARTi 3GE - One-Chip Dual Mode W-CDMA/EDGE RF Transceiver

THE PMB 6952 SMARTi 3GE is an industry leading dual mode transceiver based on the SMARTi PM quad-band GSM/EDGE and SMARTi 3G six-band W-CDMA transceiver architecture in a laminate based PG-TFSGA-121 package. SMARTi 3GE offers significant board area reduction for creating the smallest dual-mode mobile solutions. A standard 3-wire bus programming interface, compatible with most basebands, allows easy integration into wireless devices.

### Applications

- W-CDMA: multi-band operation for 3GPP bands I through VI
- Quad-band GSM/EDGE (GSM850/GSM900/GSM1800/GSM1900)
- HSDPA capable (up to category 8)

### Features

- General
  - 0.13 µm RF-CMOS transceiver
  - 3-wire bus for control and programming
  - Power down modes and integrated power up sequencer
  - Supply voltages 1.4 V ... 1.6 V and 2.7 V ... 2.95 V
  - Optional additional supply voltage from 1.71 V ... 3.0 V
  - Operating temperature range -30°C to 85°C
  - 3GPP standard compliance release 5/6 for W-CDMA part, release 4 for GSM part
  - Low external component count
- GSM/EDGE
  - Constant gain quad band direct conversion receiver
  - GPRS/EDGE class 1 to 12/type1
  - Four integrated LNAs
  - Fully integrated channel filter
  - Highly linear RF quadrature demodulator
  - Automatic DC offset compensation
  - Very low power budget
  - Digital Sigma-Delta modulator for GMSK
  - Polar modulator architecture for 8PSK
- W-CDMA
  - Direct conversion receiver, direct modulation transmitter
  - Independent Rx and Tx operation
  - Complete Rx analog baseband path including filtering
  - HSDPA capable
  - RF Tx VGA with >85 dB gain range

### Technology

- C11RF - 130 nm RF CMOS
- PG-TFSGA-121 leadless package
  - 6.0 x 6.0 mm
  - Green product (lead (Pb) and halogen free)

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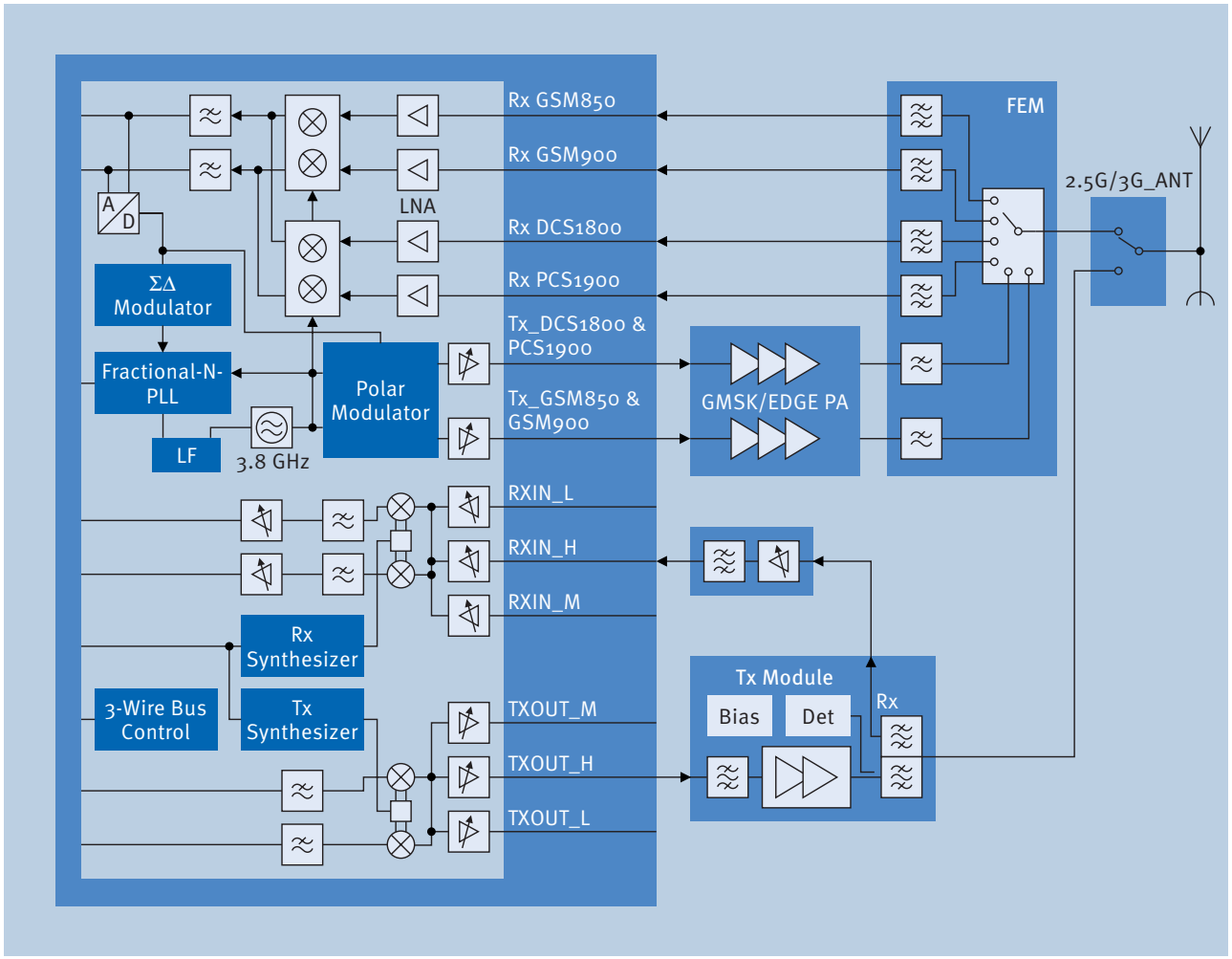
## SMARTi 3GE Application Example

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