

PMB 5699

SMARTi U Single-Chip
W-CDMA/UMTS Transceiver

SMARTi U – First Single-Chip UMTS/W-CDMA RF-Transceiver

Infineon has designed the first single-chip UMTS/ W-CDMA RF-transceiver IC SMARTi U to be used in mobile applications according 3GPP (FDD, 2100 MHz) requirements.

SMARTi U (PMB 5699) offers lowest component count and smallest PCB area at lowest current consumption.

The full homodyne architecture and flexible control concept reduces significantly implementation efforts and time-to-market.

Features

- Integration of receive and transmit path
 - Smallest size
 - Lowest component count
 - Less requirements on PCB layout
- Fully integrated synthesizers
 - No external tank circuit
 - No external frequency adjustment required
- Fully homodyne architecture
 - No IF (intermediate frequency) stage
 - No IF-SAW filter
 - Easiest frequency concept
- Lowest current consumption
 - Highest stand-by and talk time
- Integrated receive channel filter
 - Reduced baseband efforts
- Integrated transmit filter
 - Reduced baseband signal requirements
- Flexible baseband interface
 - Supporting various baseband solutions
 - Various reference frequencies
 - Adjustable I/Q interface
 - Flexible 3-wire-bus concept
 - Supporting multi-mode
- Lowest external component count
 - No external components for DC-offset compensation
 - No external components for channel filtering

General

- Supply voltage: 2.7 - 3.0 V
- 3-Wire bus programmable
- Low external component count
- Temperature range -25 to 85°C
- P-VQFN-40 leadless package
- 6.5 x 5.5 mm, 0.5 mm pitch
- Integrated synthesizers

Rx

- Direct conversion receiver
- Integrated channel filter
- Integrated DC-offset compensation

Tx

- Direct modulation transmitter
- Integrated VGA
- Dynamic range > 85 dB

Applications

- UTRA FDD standard
- Power class 3
- Fixed and variable duplex
- Compressed mode
- Dual-receive
- Cellular phones
- PDAs and handhelds

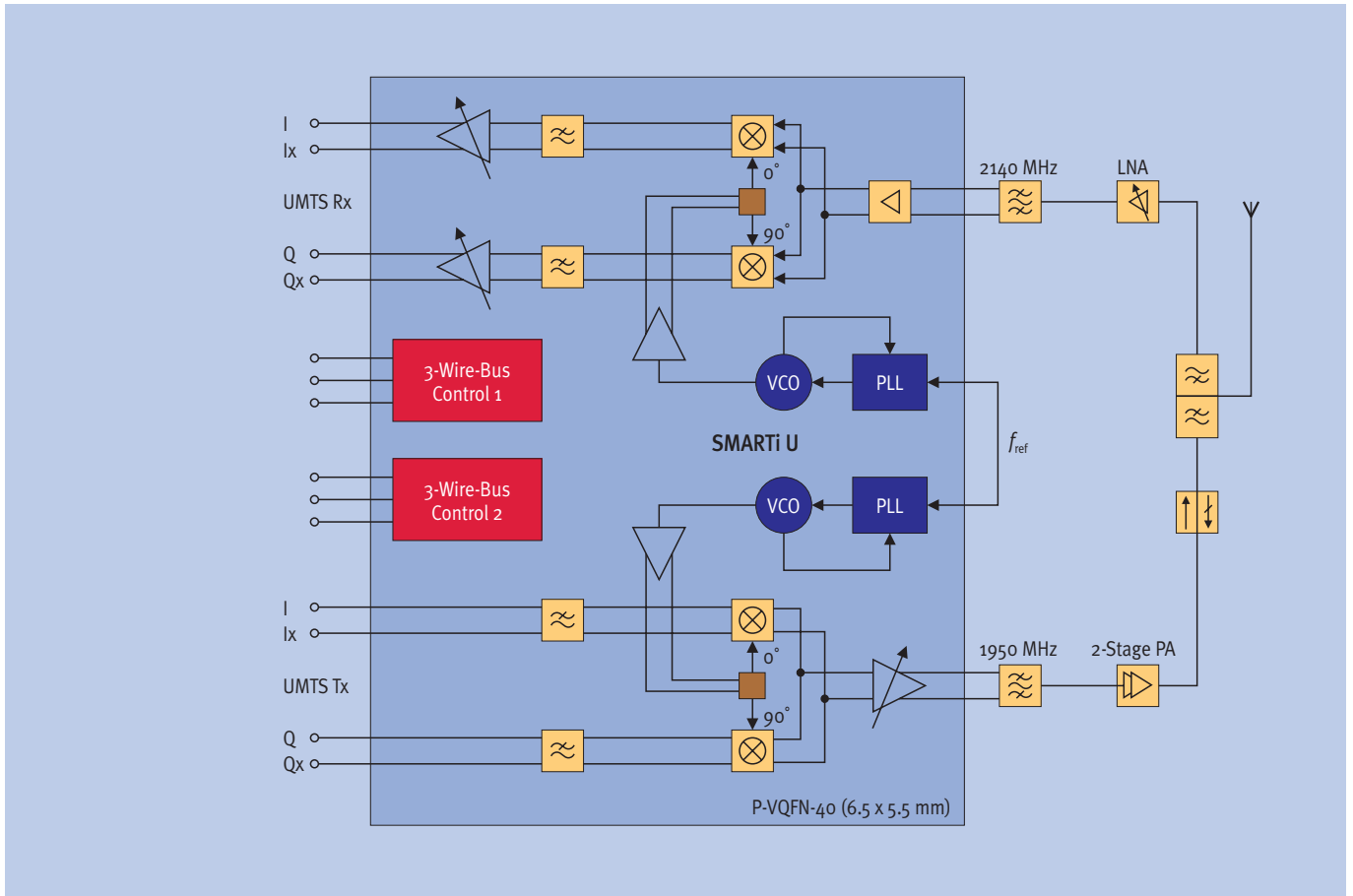
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Never stop thinking.

Block Diagram SMARTi U



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Information

For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office.

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