

## Applications

- GSM/GPRS/WCDMA/LTE Handsets and Modems
- GPRS Class 12 Compatible

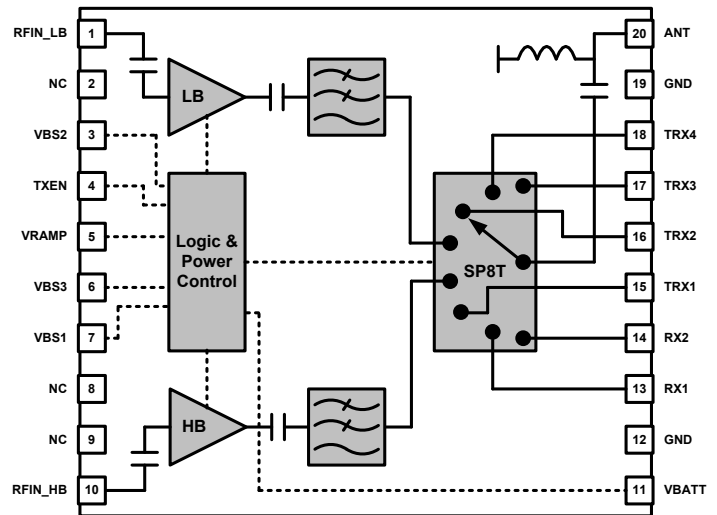
## Product Features

- Ultra Compact Size – 5.0x6.0x1.0mm.
- High System Efficiency –
  - GSM850/900 50% ,
  - DCS/PCS 43%
- Integrated Power and SP8T Control
- Integrated SP8T Switch with four WCDMA/LTE Tx/Rx Ports
- Free choice of Rx ports for band selection
- Integrated Low Pass Tx Harmonics Filter
- Positive Supply Voltage 3.0 to 4.5 V.
- 50 Ω Input and Output Impedances.
- CMOS Compatible Module Control Inputs.
- High-Reliability InGaP HBT Technology
- Ruggedness 20:1
- 260°C RoHS compliant

## General Description

The advanced Quad-Band (Broadband Tx) Transmit Module designed for WCDMA/GSM mobile handset applications provides full RF transmit functionality in a size of only 30 mm<sup>2</sup>. The GSM850/900 and DCS/PCS power amplifier blocks including power control are combined with a low insertion loss switch, Tx harmonics filtering, integrated switch decoder, two Rx ports, four TRx ports, and ESD protection. This architecture eliminates the need for any PA-to-switch design effort for phone designers. Up to four bands of WCDMA or LTE operation is supported by TRx ports and both Tx and TRx ports are frequency independent, allowing flexible routing to the transceiver. The QUANTUM Tx™ module supports GPRS class 12 operation and provides 50 Ohms input and output impedances at all RF input and output ports. The module control inputs are CMOS compatible and have no need for an external reference voltage. With excellent efficiency performance in each band, the power amplifier and switch module contributes to overall talk-time targets in next generation mobile handset designs.

## Functional Block Diagram



## Pin Out & Assignments

Pin#	Pin Name	Function
1	LB_IN	GSM 850/900 RF Input
2	NC	Not Connected
3	V <sub>BS2</sub>	Digital Control Signal
4	TX_EN	Digital Control Signal
5	V <sub>RAMP</sub>	DAC Control Signal
6	V <sub>BS3</sub>	Digital Control Signal
7	V <sub>BS1</sub>	Digital Control Signal
8	NC	Not Connected
9	NC	Not Connected
10	HB_IN	DCS1800/PCS1900 RF Input
11	V <sub>BATT</sub>	Battery Supply Voltage
12	GND	Ground
13	RX1	RX1 Output
14	RX2	RX2 Output
15	TRX1	TRX1 Output
16	TRX2	TRX2 Output
17	TRX3	TRX3 Output
18	TRX4	TRX4 Output
19	GND	Ground
20	ANT	Antenna port
21	GND	Ground