

Features

- 2.4 – 2.5 GHz Frequency Range
- High Efficiency Optimized for Battery Operation
- Highly Integrated PA, LNA, Antenna Switch, Filter Networks, Input/Output Matching Circuitry
- Delivers up to +21dBm Output Power at 3.3V
- 75mA at +20dBm Output Power at 3.3 V
- 2.6dB LNA Noise Figure
- 1.8 – 3.6V Operation
- Single-Ended Transceiver Interface
- -40°C to 125°C Extended Temperature Range
- 3.0 x 3.0 x 0.55 mm 16-Pin QFN Package

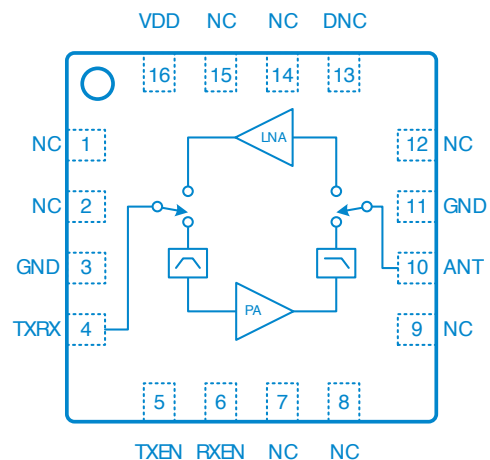
Description

The 8TR8201 is a highly integrated RF Front-End intended for 802.15.4 ZigBee™/ Thread, Bluetooth® Smart, and proprietary ISM protocol wireless systems in the 2.4GHz band. It is optimized for battery-operated applications with enhanced efficiency. The 8TR8201 combines a transmit power amplifier (PA), receive low noise amplifier (LNA), a single pole, double throw (SPDT) transmit / receive (T/R) switch, and an SPDT antenna switch. It also comes integrated with filter networks and input/output matching circuitry in a 3.0 x 3.0 x 0.55mm 16-pin QFN package.

Applications

- IoT (Internet of Things) / M2M Connectivity
- 802.15.4 Zigbee, RF4CE, Proprietary ISM
- Bluetooth® Low Energy (BLE) Mesh Networks
- Smart Home Hubs and Gateways
- Consumer Electronics, Smart Appliances
- Smart Lighting, Smart Metering
- Drone, Toy, Media Remote Controller
- Industrial Wireless Sensor Networks
- Home, Industrial, Factory Automation
- Wireless Sensor Nodes & Networks
- Wireless Audio & Video

Functional Block Diagram



Key Specifications

TX		RX		CHIP	
Parameter	Typical	Parameter	Typical	Parameter	Typical
Large-Signal Gain	24 dB	Gain	11.5 dB	Frequency Range	2.4 - 2.5 GHz
Max Output Power	+21 dBm	Noise Figure	2.6 dB	Supply Voltage	1.8 - 3.6 V
Supply Current At +20dBm	75 mA	Input P1dB / IIP3	-5 / +5 dBm	ESD (HBM)	1000 V
2 nd /3 rd Harmonics at +21dBm	-50 dBm / MHz*	Supply Current	8 mA	Temperature Range	-40 to 125°C

At 3.3V Vdd unless otherwise specified. *With the use of recommended external pi filter.