

NX8151

WEDGE Hepta-Band CMOS
Transceiver RFIC with DigRF3G
Interface and RX Diversity



Features

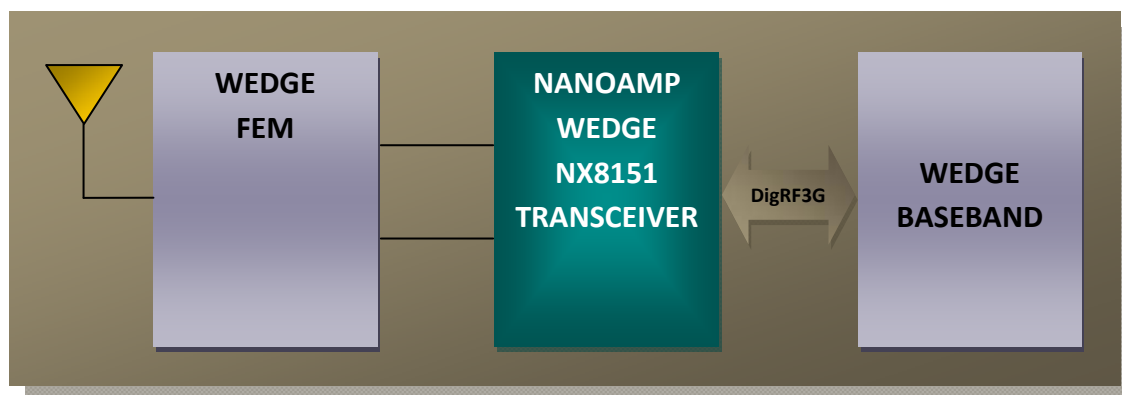
- True Hepta-Band GSM/GPRS/WCDMA Capability
- Ultra Low Power Digital Wireless Processor
- Ultra Low Power Polar Digital Radio Architecture
- Full Support for Multi-Slot GPRS/EDGE Class 33
- Full Support for WCDMA 5.8 Mbps HSUPA
- Full Support for WCDMA 14.4 Mbps HSDPA
- Multi-Band Receive Diversity
- Full DigRF3G Interface Compliance
- Simultaneous 2G/2.5G and 3.5G Call Processing
- Ultra Low Deep-Sleep Mode Current
- 65 nm CMOS Technology
- Integrated Σ - Δ Synthesizer, VCO, and Loop Filter
- Integrated Digitally Controlled Crystal Oscillator
- Single Supply Operation from 2.7 V to 3.7 V
- 6 mm x 6 mm BGA ROHS Compliant Package

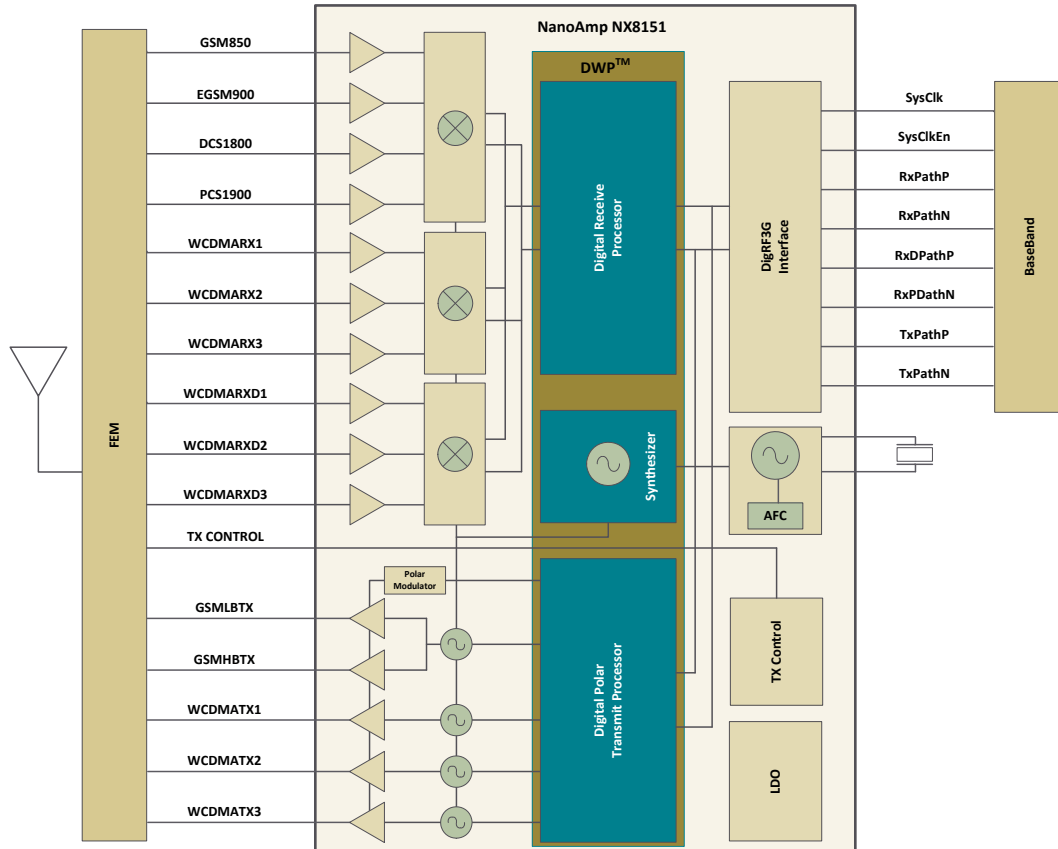
Benefits

- Enables Compact and Slim 3.5G Multimedia & Smartphones with Global Roaming
- Seamless Multi-Standard Global Coverage Spanning Bands I, II, III, IV, V, VI, and VIII
- Ultra-Low Power Consumption Provides Superior 3.5G Mode Battery-Life
- Advanced HSxPA Support for Ultra-Fast Broadband Connectivity
- Compressed Mode for Seamless Hand-Off Between 2G/2.5G and 3.5G Networks
- DigRF3G Baseband Interface Simplifies Design
- Polar TX Architecture Eliminates all TX Filters Reducing eBOM and Board Area

Applications

- WEDGE Hepta-Band Smart Phones
- WEDGE Hepta-Band Multimedia Appliances
- WEDGE Hepta-Band Modems and Terminals





Product Description

The NanoAmp Solutions NX8151 is a Hepta-Band CMOS WEDGE RFIC transceiver solution targeting 850/900/1800/1900 GSM/EDGE and WCDMA Bands I, II, III, IV, V, VI, and VIII voice and data applications. The NX8151 integrates a Class 33 GSM/GPRS/EDGE, Category 6 HSUPA, and Category 10 HSDPA WEDGE transceiver and DigRF3G interface to engender wireless appliances with seamless multi-standard multi-band global connectivity.

Based on the patented NanoAmp Solutions Digital Wireless Processor (DWP™) architecture, the NX8151 delivers superior performance while achieving power requirements far less than similar SiGe or BiCMOS processes, offering superior 3.5G battery-life. Full integration of the transmitter, receiver, and synthesizer eliminates several radio ICs and up to 100 external components, enhancing functionality, maximizing performance, and minimizing board area.

The transmitter is based on a frequency agile polar TX architecture that eliminates the need for complex multi-standard and multiple power amplifiers. The receiver line-up features a full-digital DWP standards-agnostic receiver architecture that provides complete RX functionality in the digital-domain, finally placing radio chip design on the Moore's cost and scaling trajectory. Fully programmable and scalable radio processing enables the DWP to seamlessly process GSM, EDGE, and WCDMA signals with a common digital pipelined architecture with digital baseband interface.

With a fully compatible DigRF3G interface, the NX8151 is the ideal solution to lower BOM costs, reduce board area, and increase battery-life while offering industry-leading seamless global mobility for leading edge wireless solutions.

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