

NX8153

WEDGE Hepta-Band CMOS Transceiver
RFIC with Category 10 HSDPA, RX Diversity,
Japan Band XI, and DigRF3G Interface



Features

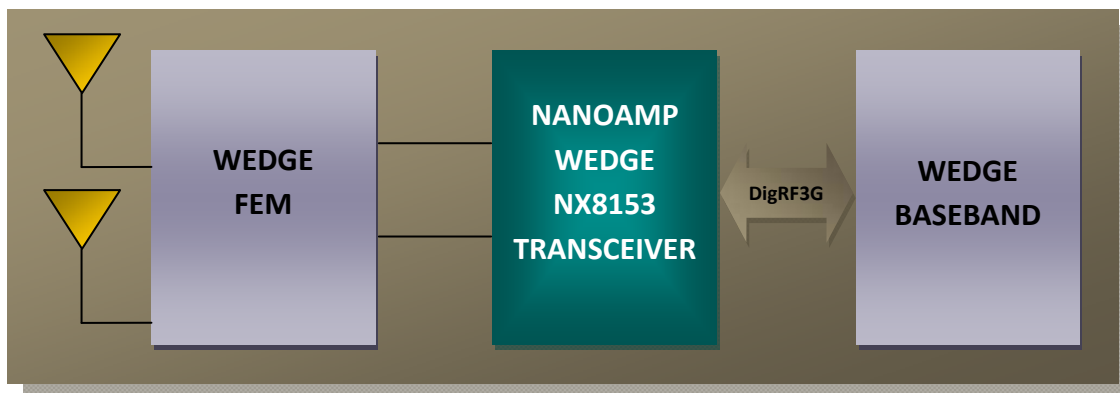
- True Eight-Band GSM/GPRS/WCDMA Capability
- Dedicated Band XI Support for Japan Market
- Category 10 HSUPA 14.4 Mbps Support
- Category 6 HSDPA 5.8 Mbps Support
- Class 33 Multi-Slot GPRS Support
- Fully Compliant DigRF3G Baseband Interface
- Simultaneous 2G/2.5G and 3.5G RX Processing
- Bidirectional 2G/2.5G and 3.5G Handoff Support
- Flexible Linear and Polar Compatible TX
- Ultra Low Deep-Sleep Mode Current
- 65 nm Mixed-Signal CMOS Technology
- Integrated Σ - Δ Synthesizer, VCO, and Loop Filter
- Single Supply Operation from 2.7 V to 3.7 V
- 6 mm x 6 mm BGA ROHS Compliant Package

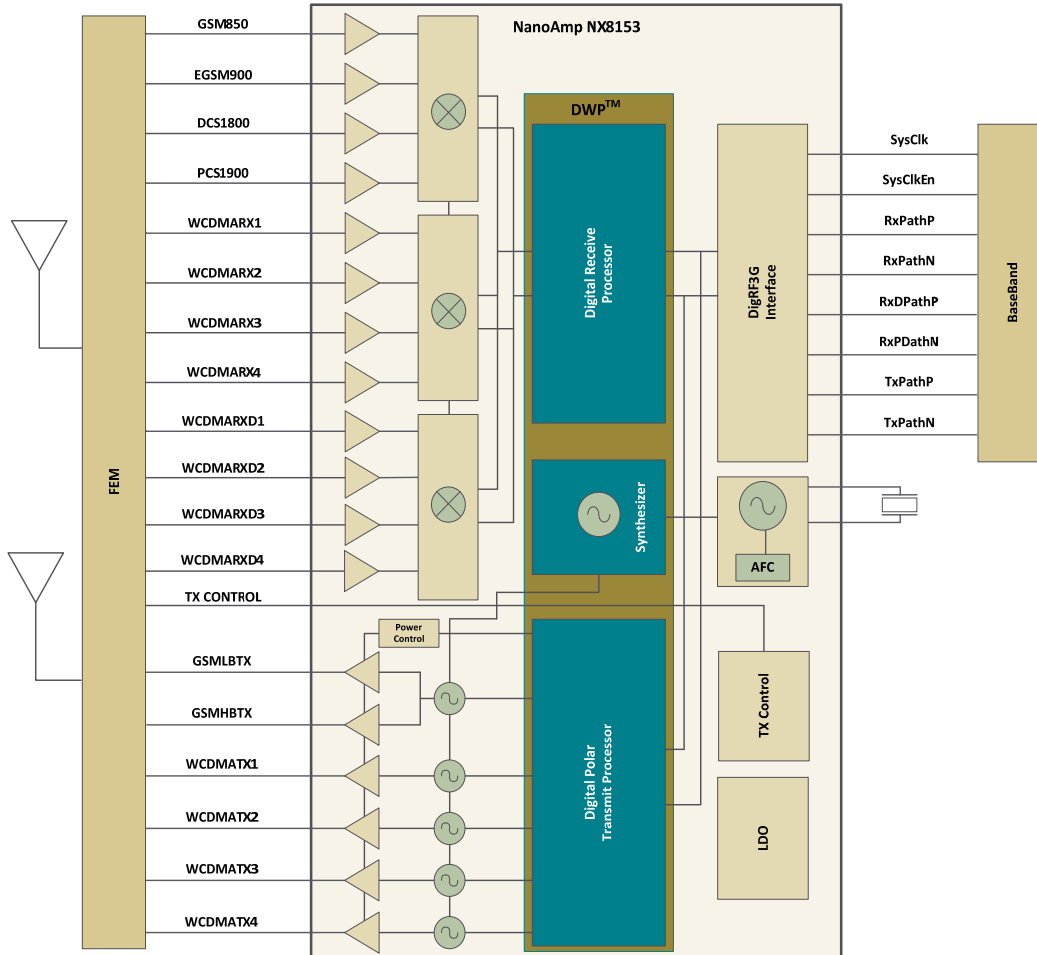
Benefits

- Enables Feature-Packed 3.5G Smart-Phones & Multimedia with Ultra-Broadband Capability
- Seamless Multi-Standard Ultra-Global Coverage Spanning Bands I, II, III, IV, V, VI, VIII, and XI
- Ultra-Low Power Consumption Provides Superior Voice and Streaming Mode Battery-Life
- Scalable 65 nm CMOS Eliminates All But 10 External Chip Components
- On-Chip WCDMA RX Filters Reduce eBOM and PCB Area Needs
- DigRF3G Baseband Interface Simplifies Design
- Future-Proof TX Compatible with Both Linear and Polar Power Amplifiers and FEMs

Applications

- WEDGE Hepta-Band Smart-Phones
- WEDGE Hepta-Band Multimedia Appliances
- WEDGE Hepta-Band USB Dongles and Laptops





Product Description

The NanoAmp Solutions NX8153 is a Hepta-Band CMOS WEDGE RFIC transceiver solution targeting smart-phones, multimedia appliances, and laptops offering ultra-broadband with GSM/EDGE and WCDMA Bands I, II, III, IV, V, VI, and VIII connectivity. The NX8152 integrates a Class 33 GSM/GPRS/EDGE, Category 10 HSDPA, and Category 6 HSUPA WEDGE transceiver and DigRF3G interface providing seamless multi-standard multi-band global connectivity with superior battery-life.

Based on the patent-pending NanoAmp Solutions Digital Wireless Processor (DWP™) architecture, the NX8153 delivers superior performance while achieving power requirements far less than similar SiGe or BiCMOS processes, offering superior battery-life over all use models. Full integration of the transmitter, receiver, and synthesizer eliminates external SAW filters, several radio ICs, and up to 100 external components, lowering eBOM, minimizing board area, enhancing functionality, and maximizing performance.

The transceiver features the all-digital DWP standards-agnostic architecture that provides complete 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 a fully compliant DigRF3G baseband interface.

The NX8153 is the ideal solution to lower eBOM costs, reduce board area, and increase battery-life while offering industry-leading seamless global mobility for feature-packed smart-phones, multimedia appliances, and laptops.

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