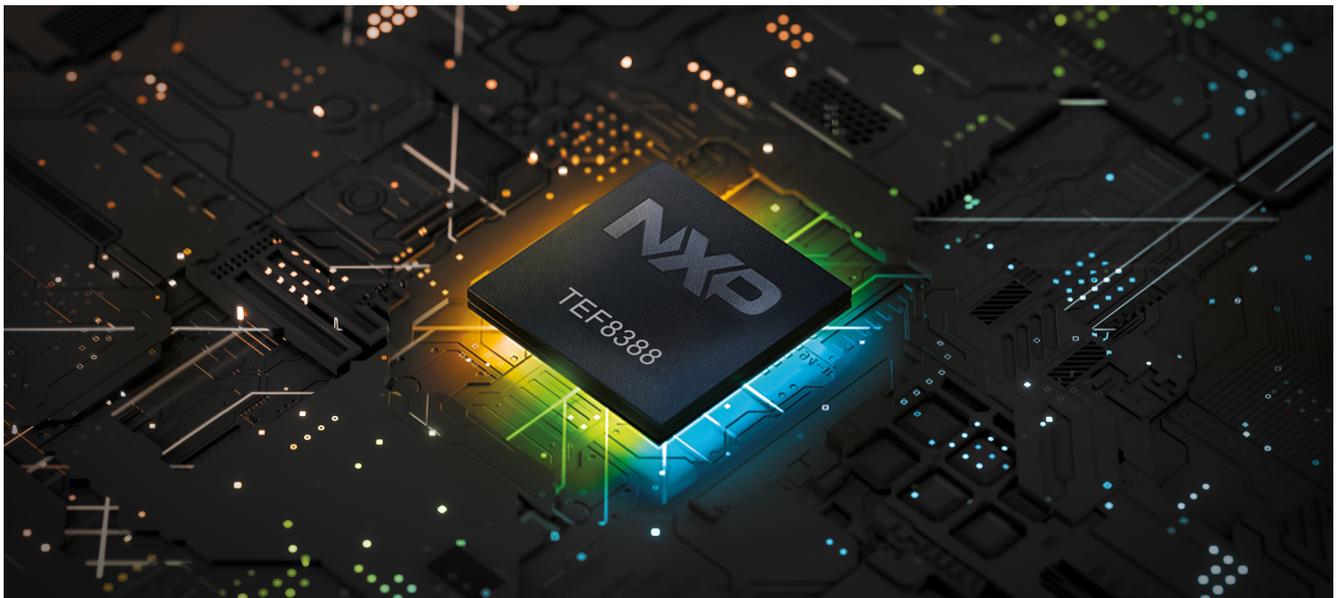


TEF8388 RFCMOS automotive radar transceiver

High-performance automotive radar transceiver enabling scalable imaging radar solutions for autonomous levels L2+, L3 and beyond

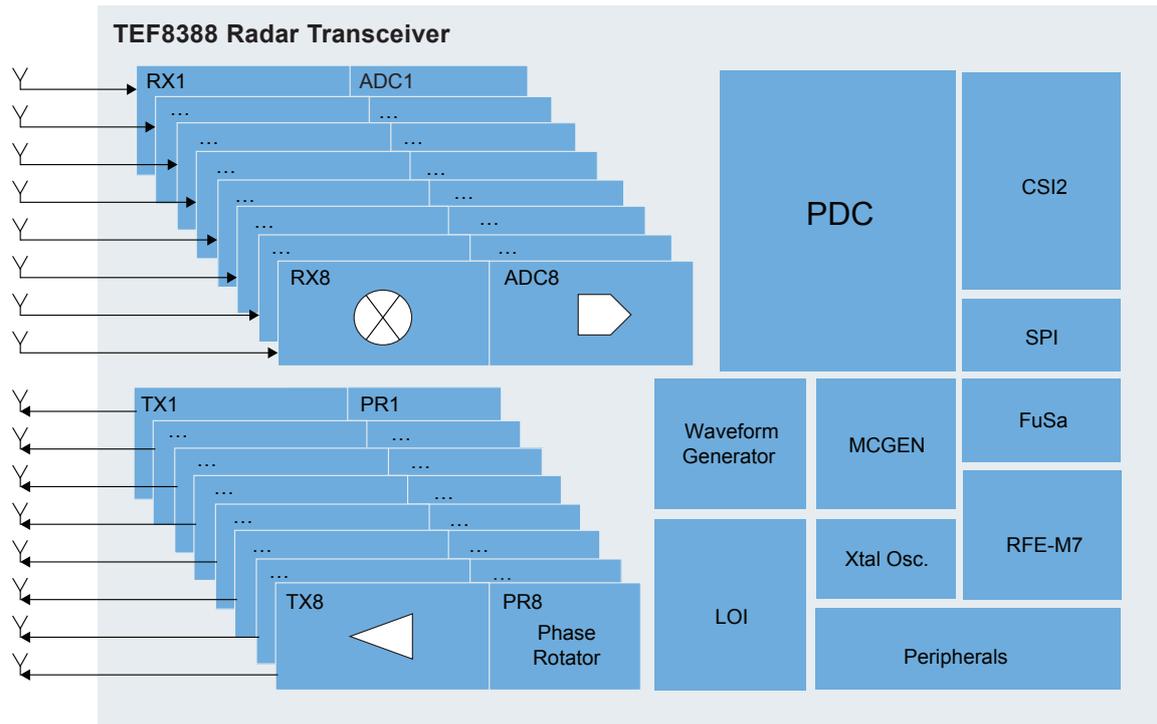


The TEF8388 automotive radar transceiver is a single-chip automotive FMCW radar transceiver enabling imaging radar segments for autonomous levels L2+, L3 and beyond. This device consists of 8 transmitters and 8 receivers with full support of scaling from 8T8R up to 32T32R configurations covering both entry-level and high performance imaging radar applications. It provides state-of-the-art functions with on-chip calibrations and functional safety handling. TEF8388 delivers high power efficiency and significant reduction in system Bill of Material (BOM) within a small form factor.

Key features

- Highly integrated transceiver for 76–81 GHz band
- Eight transmitters and eight receivers to support enhanced resolution
- 7-bit phase rotator with high accuracy
- Very high RF performance: 14dBm Pout and 12dB NF
- Supports cascading up to 4 devices
- Available in Launcher-in-Package (LiP) with compact foot print of 16 x 16 mm
- On-chip M7 core for flexible chirp programming, calibrations and safety handling
- ISO 26262 SEooC ASIL B
- -40°C to 150°C junction temperature
- AEC-Q100 automotive qualified

Block diagram



Target applications

Scalable entry-level to performance imaging radar applications supporting edge processing and streaming architectures.

Benefits

- Flexible chirp programming for adaptable sensing performance
- Integrated calibration and functional-safety support to simplify system design
- High power efficiency for improved thermal performance
- Significant system-level BoM optimization through advanced integration