

NCJ29D6: Ultra-Wideband IC combining ranging and radar



NXP's UWB devices enable secure and precise localization for a variety of applications. Furthermore, this is enhanced with radar capabilities for applications such as in-cabin sensing.

Overview

UWB provides precise, secure, real-time localization capabilities to give spatial awareness to UWB - equipped vehicles, mobiles and other smart devices.

Besides supporting Digital Key functionality for secure truly handsfree car access, the NCJ29D6 enhances this feature with radar capabilities. This enables applications such as Child Presence Detection (CPD) and kick-sensing for easy trunk access. With combined ranging and radar support, the NCJ29D6 reduces system cost and simultaneously maximizes system value.

Product specifications

- IEEE 802.15.4z compatible
- Dual antenna interface for antenna diversity, maximum ratio combining and angle-of-arrival estimation
- Combined ranging and radar support for very low system cost
- Best-in-class full-duplex UWB radar due to NXP Radar Sensitivity Boost technology
- Class-leading interference (i.e., Wi-Fi®) resilience
- Integrated Arm® Cortex® core and CAN FD controller
- CCC and FiRa compliant All-In-One MAC SW available separately

Target applications

- Digital key
- Child Presence Detection (CPD)
- Kick-sensing for easy trunk access
- Intrusion alert