PRODUCT BRIEF

CARKIT 44C0

Infineon's RASIC™ 77 GHz radar module for rapid prototyping of centralized architectures and radar data recording: accelerating radar module development

Infineon's CARKIT 44C0 is a comprehensive 77 GHz radar module designed for centralized radar architecture integrating all essential components for operation – FMCW modulation signal processing, interfacing, and application software – and ready for direct vehicle installation. It facilitates rapid prototyping, software tuning, and a raw radar data connection, significantly speeding up time-to-market.

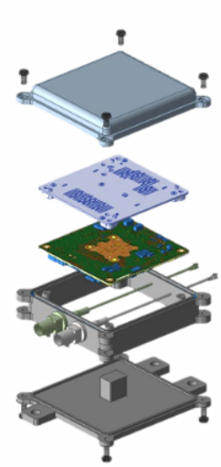
CARKIT 44C0 is designed to detect vehicles and the surrounding environment at distances of up to 200 m, while providing a wide Field of View (FoV) exceeding ±80°. It is optimized for corner and front-end radar applications where a balanced 4-transmit and 4-receive channel configuration is ideal.

It has been designed for central processing architectures, transmitting raw ADC radar data via a 5 Gbps link. Encased in IPX4-protected housing, the radar module includes mounting-ready protrusions for easy integration with vehicles.

Key applications
- Lane-Change Assistant (LCA)
- Front/Rear Cross Traffic Alert (F/RCTA)
- Automatic Emergency Braking (AEB)
- Blind Spot Detection (BSD)
- Parking assist

At its core, the CTRX8144FS MMIC provides 4 transmit and 4 receive channels, part of Infineon's latest generation of radar front ends. It combines excellent RF performance with high Signal-to-Noise Ratio (SNR) and linearity, making it suitable for demanding automotive radar applications. The module employs a waveguide antenna implemented with advanced manufacturing technology to achieve optimal RF transmission characteristics.

For more details, please contact your local Infineon sales representative.





Key features

CARKIT 44C0 enables centralized 4D imaging radar for front and corner applications.
- 4 transmit and 4 receive channels
- Maximum detection range of 200 m and a 160° Field of View (FoV)
- 6° angular resolution based on angle FFT
- 76–81 GHz operating frequency range
- 5 Gbps raw ADC data interface
- Detachable waveguide antenna for design flexibility
- Software framework for configuration and data acquisition
- IPX4 protection
- Compact form factor: 77.4 × 79.8 × 28.8 mm
- Ready for vehicle mounting

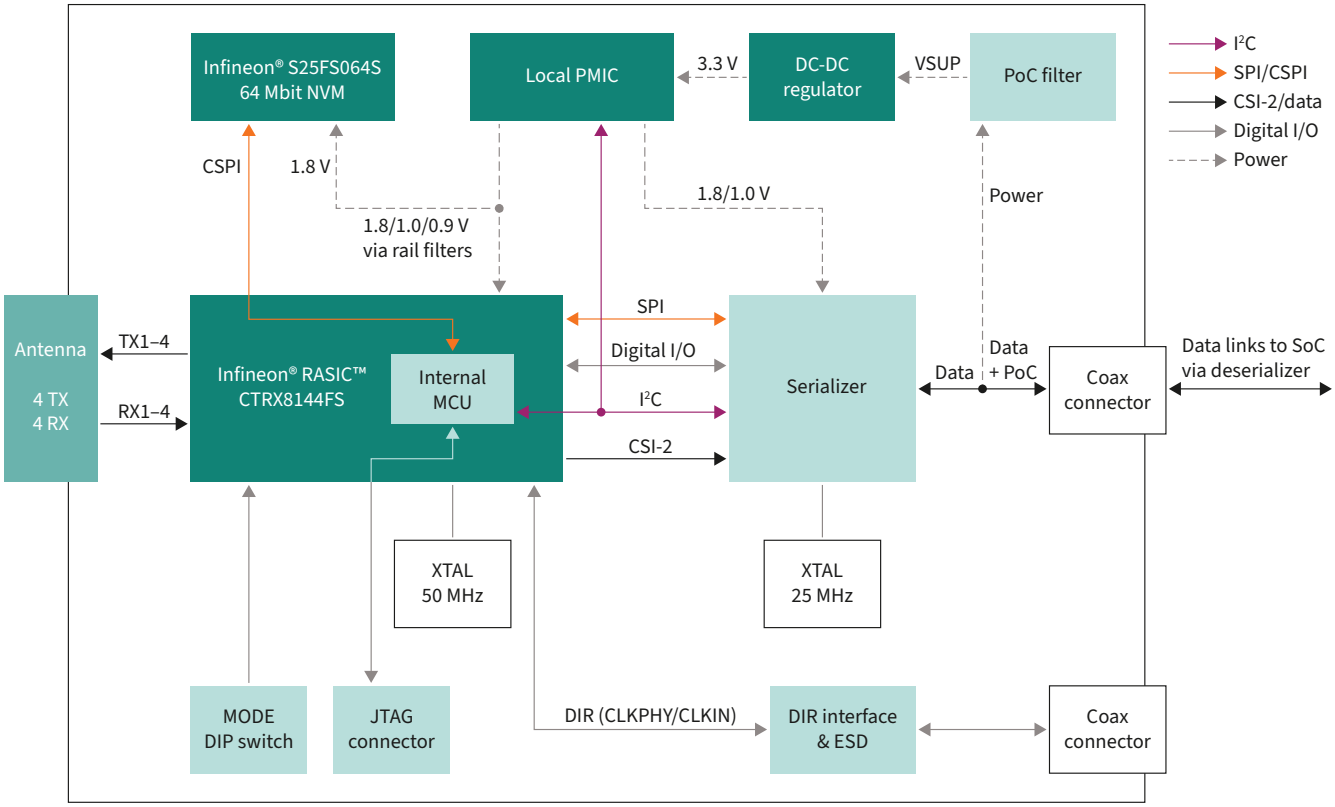
Key benefits

- Easy to use radar module
- Ready for drive tests
- Power over Coax (PoC)
- Enables rapid prototyping and raw radar data connection
- Streamlined path to series production



www.infineon.com/radar-sensors

Block diagram: CARKIT_44C02 / Internal MCU



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