

Pluto Sensor

SAF8544 reference design for mainstream radar applications

The Pluto radar sensor reference design incorporates SAF8544, a 28nm one-chip radar SoC with four transmitters and four receivers which offers high RF performance capabilities combined with the versatility required to build a platform for corner and front radar. This radar SoC incorporates multiple processor cores and hardware accelerators for enhanced radar processing which enables the sensor to output FFT data, point cloud or tracked objects. The Pluto sensor reference design incorporates TJA1120 Gigabit Ethernet PHY to stream high speed data to an external device and PF51 PMIC which is optimized for radar application. This complete reference design is available in a very small form factor of approximately 6 x 6 cm with a patch antenna.

The reference design enables customers to evaluate the features of SAF8544 in an edge or hybrid architecture to accelerate the product development, while shortening time to market.



Key Features

- PCB Size: 50 x 50 mm
- Sensor Size: 60 x 60 x 35 mm
- Complete reference design including PMIC and Ethernet PHY
- 4 transmitter and 4 receiver antenna solution
- Up to 4 x 4 MIMO
- Capable of >200m detection
- Capable of supporting raw data capture

Target applications

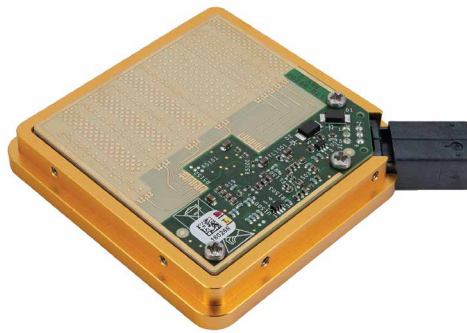
- Automatic cruise control
- Autonomous emergency braking
- Blind spot detection
- Front cross-traffic alert
- Rear cross-traffic alert
- Lane change assist
- Reverse assist
- Parking assist
- Door open warning
- Front collision warning

Software and Tools

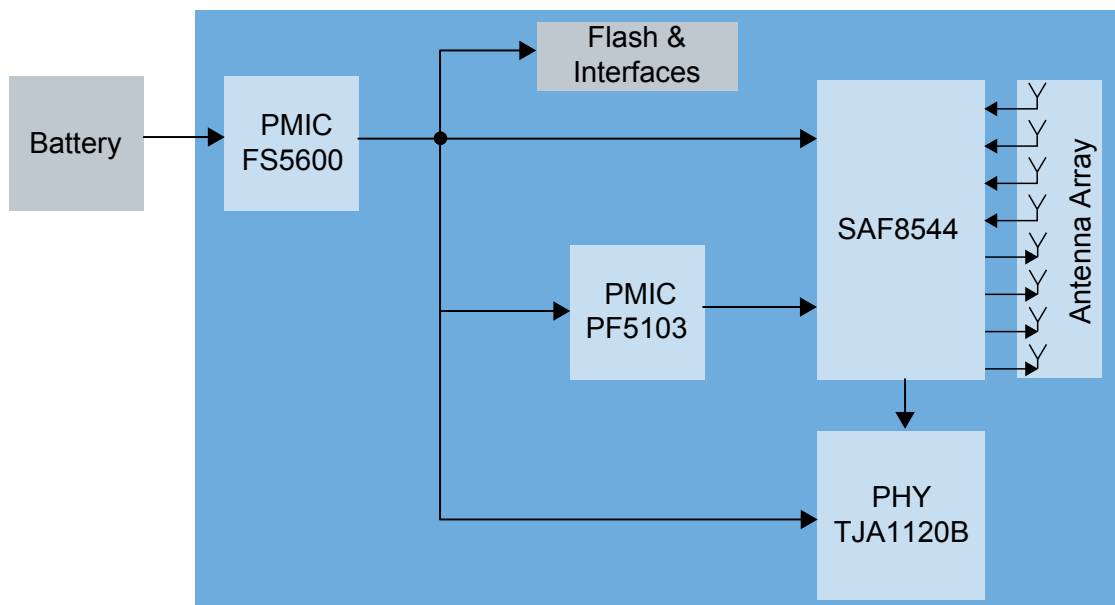
- Radar Xplorer GUI for evaluation
- Schematics and Gerber files

Benefits

- Ready to use reference design
- Shorter time to market by reusing the schematics and HW design
- Radar software development platform



Block diagram



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