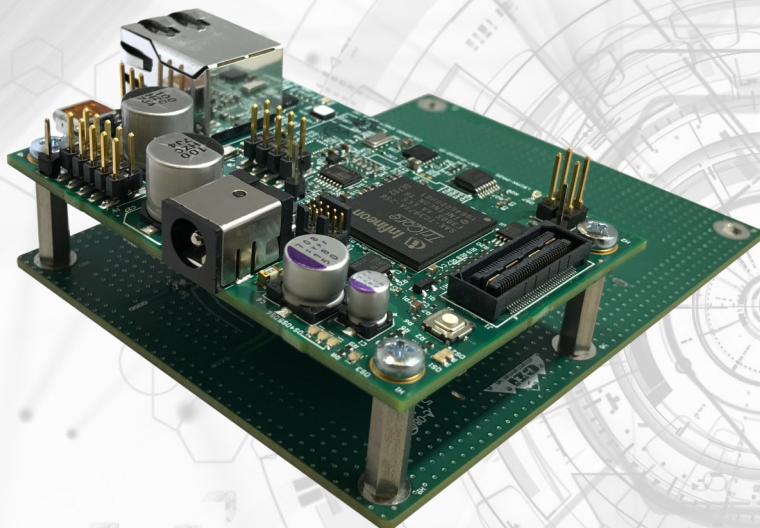


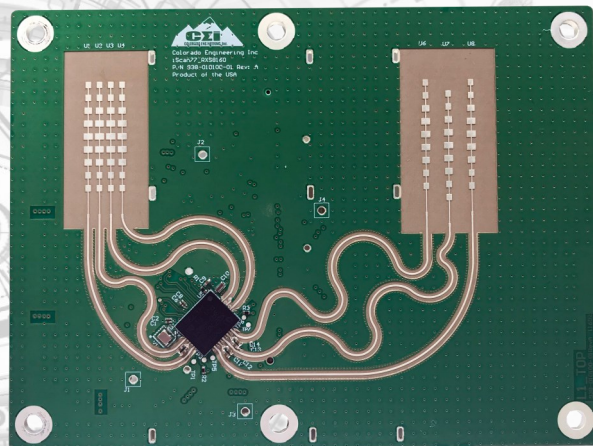
# iScan Phantom

77GHz Automotive Radar Development Kit

Model Number: iScan-K-RXS8160-A2G



**iScan Phantom Development Kit**  
Model Number: iScan-K-RXS8160-A2G



**Antenna Module (Top)**  
Model Number: iScan-A-RXS8160-6610-D

## iScan OVERVIEW

The iScan Radar Series makes rapid prototyping of high performance Radar, quick and easy! Utilizing a modular architecture, CEI's iScan processor, expansion and antenna modules can be mixed and matched to create a customized development platform. iScan provides superior performance for tasks such as range, speed and RCS measurements, target tracking, collision avoidance, occupancy sensing and much more. Additional interchangeable antenna modules are coming soon, making the iScan Radar Series an excellent solution for your next radar application.

## PRODUCT DESCRIPTION

iScan Phantom is a next generation automotive development kit based on Infineon's latest radar MMIC. This development kit contains the radar front-end antenna module and processor back-end module in a stacked configuration. CEI has designed the radar front-end to provide antennas in a MIMO format allowing for digital beamforming and Infineon's processor allows for advanced algorithm development and comes with a software suite for immediate test and deployment. Also, onboard are a variety of environmental sensors to assist with sensing and testing. Choose the iScan Phantom for your next radar application!

## FEATURES

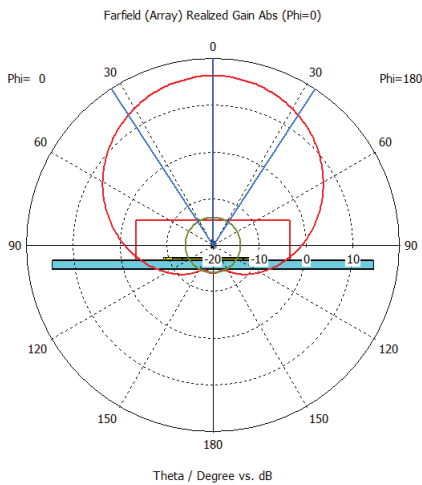
- Infineon 77GHz MMIC RXS8160
- 3x TX, 4x RX
- MMIC Power Output: 12.5 dBm
- Antenna Gain: 16.3 dBi
- Az:  $\pm 33^\circ$ , El:  $\pm 5^\circ$
- Digital Beam Forming
- TC397XA uController with Dedicated Processing
- TLF Power Supply
- Multi-voltage Power Supply

- I/O Headers
- USB to PC Interface
- Gigabit Ethernet
- Modular Design
- Highly Configurable
- Compact, Single chip Solution for RF

## APPLICATIONS

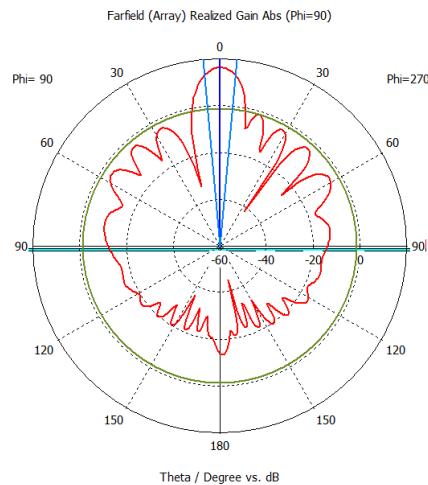
- Collision Avoidance
- Range & Speed
- Moving & Stationary Targets
- Short & Medium Range Radar Application
- Adaptive Cruise Control
- Automatic Emergency Braking

## ANTENNA FIELD OF VIEW (FOV):



**Azimuth:  $\pm 33^\circ$**

— farfield (f=77) [1]  
Frequency = 77 GHz  
Main lobe magnitude = 16.3 dB  
Main lobe direction = 0.0 deg.  
Angular width (3 dB) = 66.3 deg.  
Side lobe level = -30.2 dB



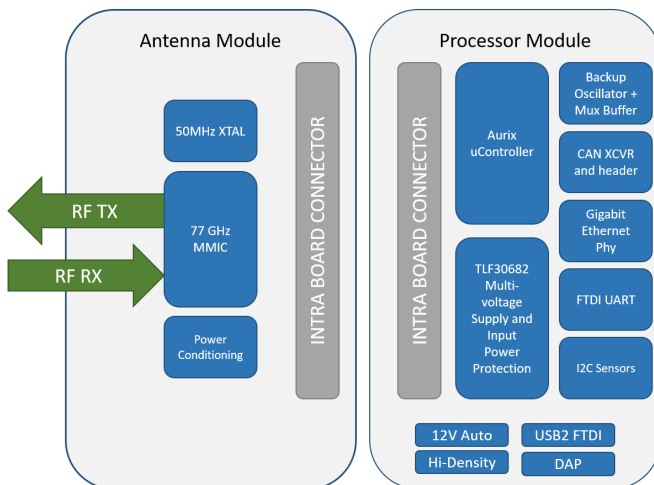
**Elevation:  $\pm 5^\circ$**

— farfield (f=77) [1]  
Frequency = 77 GHz  
Main lobe magnitude = 16.3 dB  
Main lobe direction = 0.0 deg.  
Angular width (3 dB) = 10.3 deg.  
Side lobe level = -17.7 dB

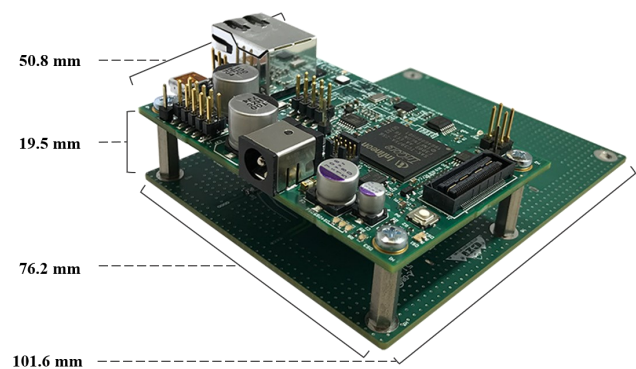
## ARCHITECTURE:

## CONFIGURATION:

**Prizm 1**  
Model Number:  
iScan-A-RXS8160-6610-D



**iScan Phantom Development Kit**  
Model Number: iScan-K-RXS8160-A2G



**COLORADO ENGINEERING, INC. IS PROUD TO BE A DESIGN PARTNER FOR INFINEON**

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