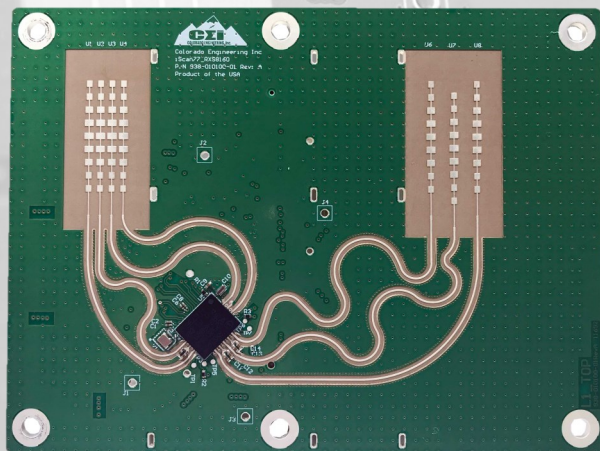


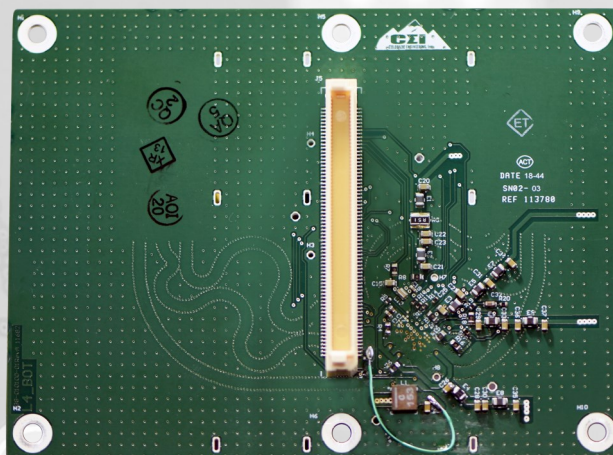
iScan Prizm 1

77 GHz Digital Beam Antenna Module

Model Number: iScan-A-RXS8160-6610-D



Top



Bottom

iScan OVERVIEW

The iScan Radar Series brings high frequency radar technology to small form factor platforms. The iScan Radar Series was designed for land, sea, and air environments where Size, Weight and Power are critical. Equipped with extensive capability, such as steerable beams and digital beam forming, the iScan radar systems can provide superior performance for tasks such as range, speed and RCS measurements, target tracking, collision avoidance, occupancy sensing and much more. With 24, 60 and 77GHz options to choose from, the iScan Radar Series is an excellent option for your next radar application.

iScan Prizm 1 PRODUCT DESCRIPTION

iScan Prizm 1 sport's Infineon's 77 GHz RXS8160 MMIC chip to enable a multitude of radar applications such as, Advanced Driver Assistance System (ADAS) capabilities like emergency braking, adaptive cruise control, and collision avoidance. This module features on-board memory, processing, data recording, Ethernet, 3x TX, 4x RX, and much more. iScan Prizm 1 is compatible with CEI's iScan Edge 1 processor module. When combined, it offers a complete system-level radar solution for ADAS applications. Choose iScan Prizm 1 to integrate into your next modular radar development platform!

FEATURES

- Infineon 77 GHz MMIC RXS8160
- 3x TX, 4x RX
- MMIC Power Output: 12.5 dBm
- Antenna Gain: 16.3 dBi
- Total EIRP: 28.8 dBm
- Az: $\pm 33^\circ$, El: $\pm 5^\circ$
- Digital Beam Forming
- Highly Configurable
- Modular Design
- Compact, Single Chip Solutions for RF

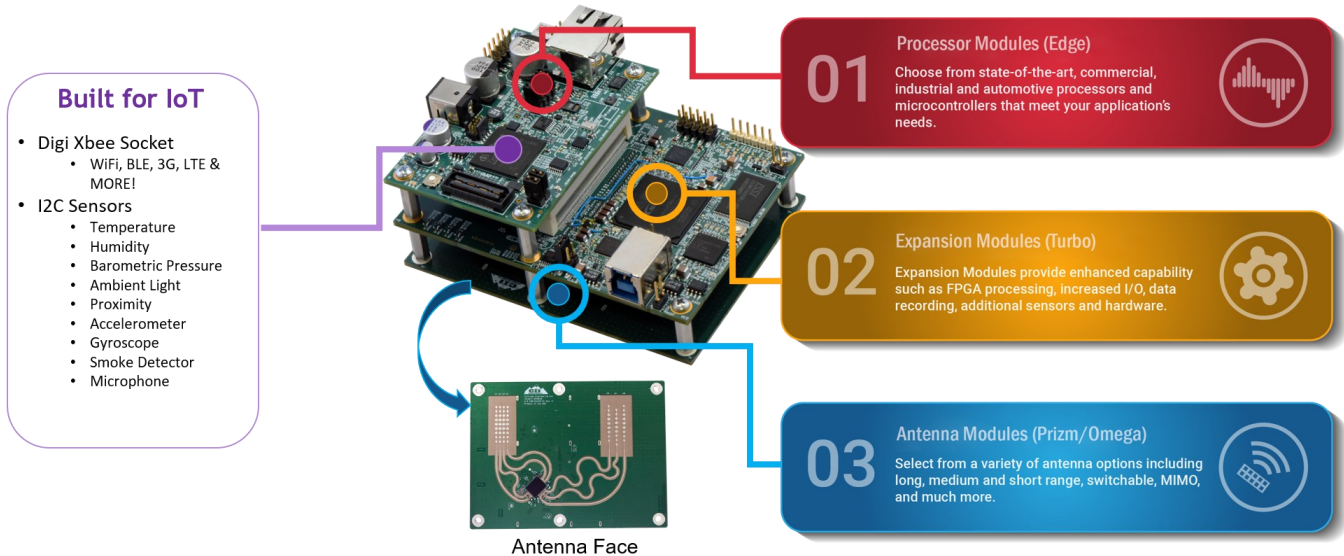
APPLICATIONS

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



iScan MODULAR RADAR ARCHITECTURE

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. Equipped with extensive capability, such as MIMO, steerable beams and digital beam forming, iScan provides superior performance for tasks such as range, speed and RCS measurements, target tracking, collision avoidance, occupancy sensing and much more. iScan Antenna Modules are available in 24, 60 and 77GHz options, making the iScan Radar Series an excellent solution for your next application.



Processor Modules

Name/Model Number	Features
iScan Edge 1 iScan-P-A2G	• Processor: AurixTMTC39xx • On-board Sensors: IMU, Temperature, Humidity, Pressure, Light, Optical, Smoke Detector
iScan Edge 2 iScan-P-4700	• Processor: Infineon XMC4700 • On-board Sensors: Temperature, Humidity, Barometric Pressure, Ambient Light/Proximity, Accelerometer, Gyroscope, Smoke Detection & Microphone • Digi Xbee Socket: WiFi, LTE, Bluetooth
iScan Edge 3 iScan-P-S32R274	• Processor: NXP S32R274 • On-board Sensors: Temperature, IMU, Light/Proximity, Barometer, Humidity, Smoke, Microphone
iScan Edge 4 iScan-P-STM32F4	• Processor: ST Micro STM32F407 • On-board Sensors: Humidity, Barometric Pressure, Accelerometer & Gyroscope, Temperature, Smoke Detector, Ambient/Light Proximity

Expansion Modules

Name/Model Number	Features
iScan Turbo 1 iScan-E-M10	• Processor: Intel Max 10 FPGA • I/O: USB 3.0 Type-A • Other: 4-ch ADC
iScan Turbo 2 iScan-E-TK1 (<i>In Development</i>)	• Processor: NVIDIA Tegra K1 • Features: H.264, HDMI, 1 USB 2.0, USB 3.0, X4 PCIe Gen2, Onboard IMU and much more!

Antenna Modules

Name/Model Number	Features
iScan Prizm 1 iScan-A-RXS8160-6610-D	• Frequency: 77 GHz • XCVR: Infineon 77GHz Chipset • FoV: ±33° AZ, ±5° EL
iScan Prizm 2 iScan-A-TEF8102-24103610-D	• Frequency: 77 GHz • XCVR: NXP TEF 8102 FMCW • FoV: (7x4 Center) ±12° Az, ±5° El (7x3 Outer) ±18° Az, ±5° El
iScan Omega 1 iScan-A-ADF5901-5904-7316-F	• Frequency: 24 GHz • XCVR: ADI 5901TX / 5904RX • FoV: ±36.5° AZ, ±8° EL
iScan Omega 2 iScan-A-ADF5901/04-2526-D	• Frequency: 24 GHz • XCVR: ADI 5901TX / 5904RX • FoV: ±12.6° AZ, ±13° EL

iScan Development Kits

Name/Model Number	Configurations
iScan Phantom iScan-K-RXS8160-A2G	• Processor Module - iScan Edge 1: Infineon AurixTMTC39xx microcontroller • Antenna Module - iScan Prizm 1: Infineon 77 GHz MMIC RXS8160
iScan Phantom with Turbo 1 Expansion Module iScan-K-RXS8160-A2G-M10	• Processor Module - iScan Edge 1: Infineon AurixTMTC39xx microcontroller • Antenna Module - iScan Prizm 1: Infineon 77 GHz MMIC RXS8160 • Expansion Module (optional) - iScan Turbo 1: Intel Max 10 FPGA
iScan Panther with Turbo 1 Expansion Module iScan-K-ADF5901/04-STM32F4-M10	• Processor Module - iScan Edge 4: NXP S32R274 microcontroller • Antenna/XCVR Module - iScan Omega 2: ADI 24 GHz 5901TX / 5904RX • Expansion Module - iScan Turbo 1: Intel Max 10 FPGA