iScan Edge 1

Infineon AURIX™ 2G Processor Module
Model Number: iScan-P-A2G

CEi
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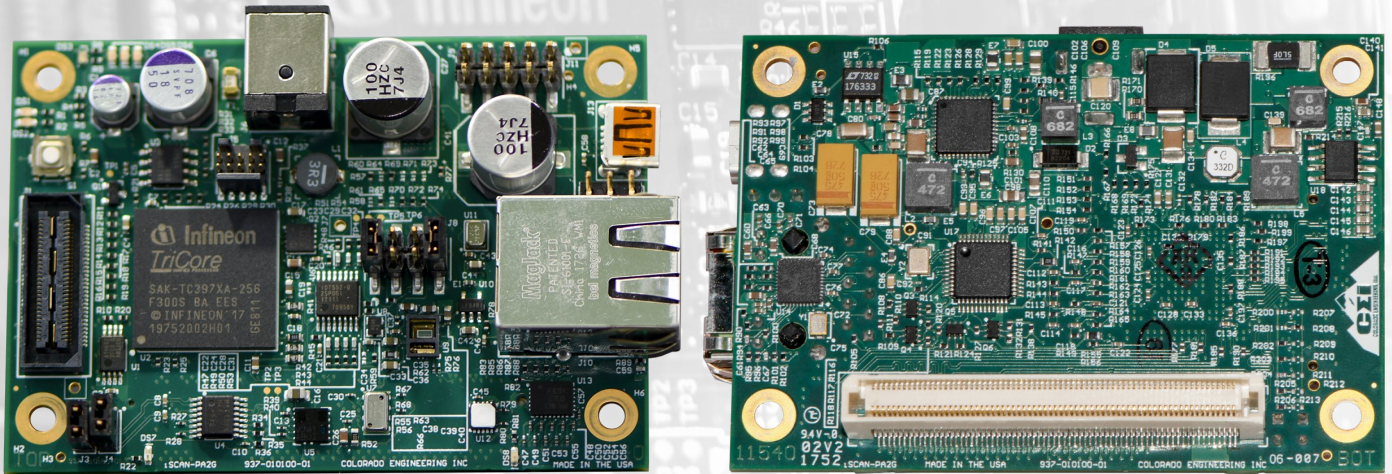
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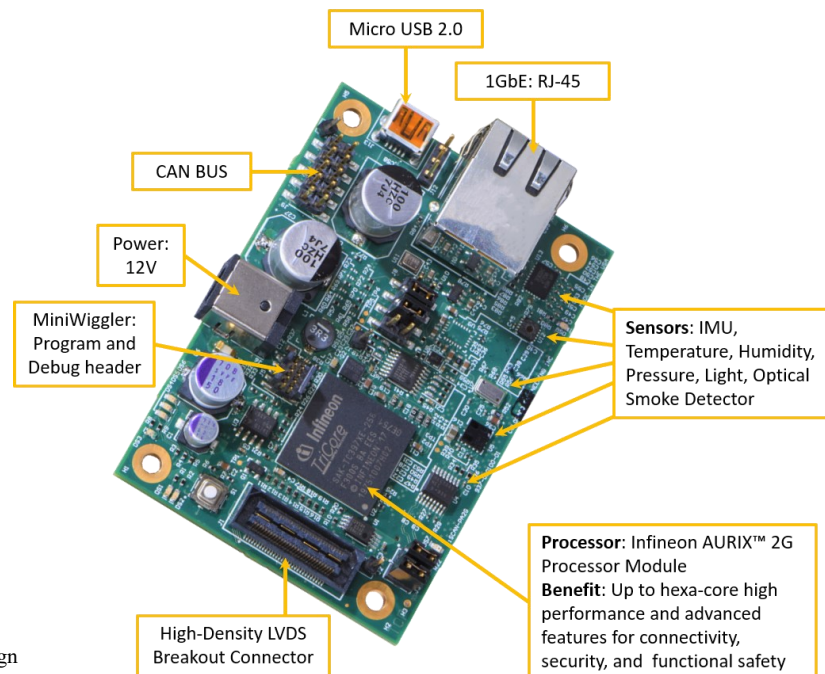## PRODUCT DESCRIPTION   iScan Edge 1

The iScan Edge 1 sports Infineon's second generation AURIX™ microcontroller chipset. Designed with automotive Advanced Driver Assistance Systems in mind, the AURIX™ is a hexacore high performance microcontroller chock full of peripheral interfaces such as QSPI, I2C, CAN, etc. to ensure that it can be integrated with many sensors and systems.

The iScan Edge 1 leverages this new chip in conjunction with other modular board systems to provide not only computing power but also automotive system power through Infineon's automotive multi-voltage system power supply allowing for a variety of voltage rails to power the modular board stack up. The board is also designed with environmental sensors, such as movement, temperature, humidity, and pressure, to provide the user with as much information about the environment they are testing in.
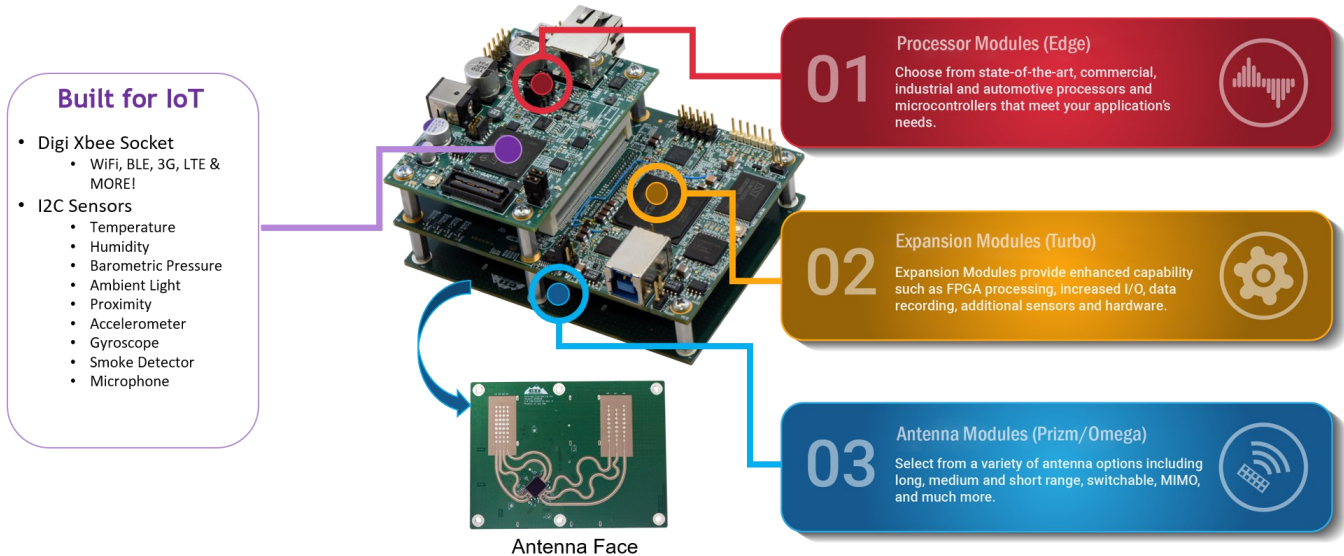
Custom Solutions Available!

Are you looking for custom hardware, software, sensor or mechanical design support? Colorado Engineering Inc. (CEI) has been developing world class technology since 1990. Please contact Sales@ColoradoEngineering.com to find out how we can help you be successful with your next design project!

Micro USB 2.0

1GbE: RJ-45

CAN BUS

Power: 12V

MiniWiggler: Program and Debug header

Sensors: IMU, Temperature, Humidity, Pressure, Light, Optical Smoke Detector

High-Density LVDS Breakout Connector

Processor: Infineon AURIX™ 2G Processor Module
Benefit: Up to hexa-core high performance and advanced features for connectivity, security, and functional safety

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 custom-ized 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.

Built for IoT

- Digi Xbee Socket
  - WiFi, BLE, 3G, LTE & MORE!
- I2C Sensors
  - Temperature
  - Humidity
  - Barometric Pressure
  - Ambient Light
  - Proximity
  - Accelerometer
  - Gyroscope
  - Smoke Detector
  - Microphone

01 Processor Modules (Edge)
Choose from state-of-the-art, commercial, industrial and automotive processors and microcontrollers that meet your application's needs.

02 Expansion Modules (Turbo)
Expansion Modules provide enhanced capability such as FPGA processing, increased I/O, data recording, additional sensors and hardware.

03 Antenna Modules (Prizm/Omega)
Select from a variety of antenna options including long, medium and short range, switchable, MIMO, and much more.

Antenna Face

Processor Modules

Name/Model Number	Features
iScan Edge 1 iScan-P-A2G	• **Processor:** Aurix™TC39xx • **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 (*In Development*)	• **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 Aurix™TC39xx 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 Aurix™TC39xx 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