

Penguin Edge[™] IFC68A1

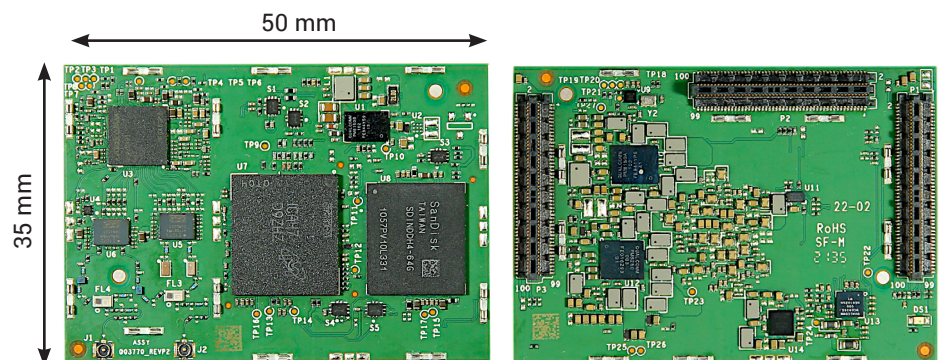
Micro SoM based on the Qualcomm®
QCS8250 Processor

- ▶ Higher performance with Qualcomm Kryo 585 CPU with independent efficiency and power clusters, each designed to optimize for a unique UX
- ▶ Hexagon V66Q DSP and Adreno 650 GPU, to support on-device AI and efficient rendering of advanced 3D graphics
- ▶ Dual 14-bit Spectra 480 ISPs support up to 64MP
- ▶ Qualcomm content protection framework; secure boot; storage and debug security
- ▶ Extended lifecycle; OEM engagement options for build-to-order and custom variants
- ▶ Production-ready with volume-conscious pricing
- ▶ Dedicated technical support from TechWeb

A premium-tier module featuring UHD video collaboration capabilities for enterprise IoT systems

The Penguin Edge[™] IFC68A1 Micro SoM is a small compute module that integrates Qualcomm Kryo 585 CPU, Adreno 650 GPU, Hexagon 690 DSP, Spectra 480 camera ISP and Qualcomm's newest AI-Engine. This enables maximum performance for compute intensive camera and AI applications on the edge for the Internet of Things (IoT).

These components, coupled with 2x2 802.11ax WiFi-6, BT 5.1, full featured USB-C interfaces with UHD display capability and high fidelity audio provide unparalleled video processing capabilities at up to 4K240 decode/4K120 encode to make this product a perfect fit for enterprise and commercial IoT applications such as video collaboration, smart camera, connected healthcare, smart retail and more. Contact Penguin Solutions for SKUs that support an extended operating temperature range.



Embedded AI/ML



Smart Cameras



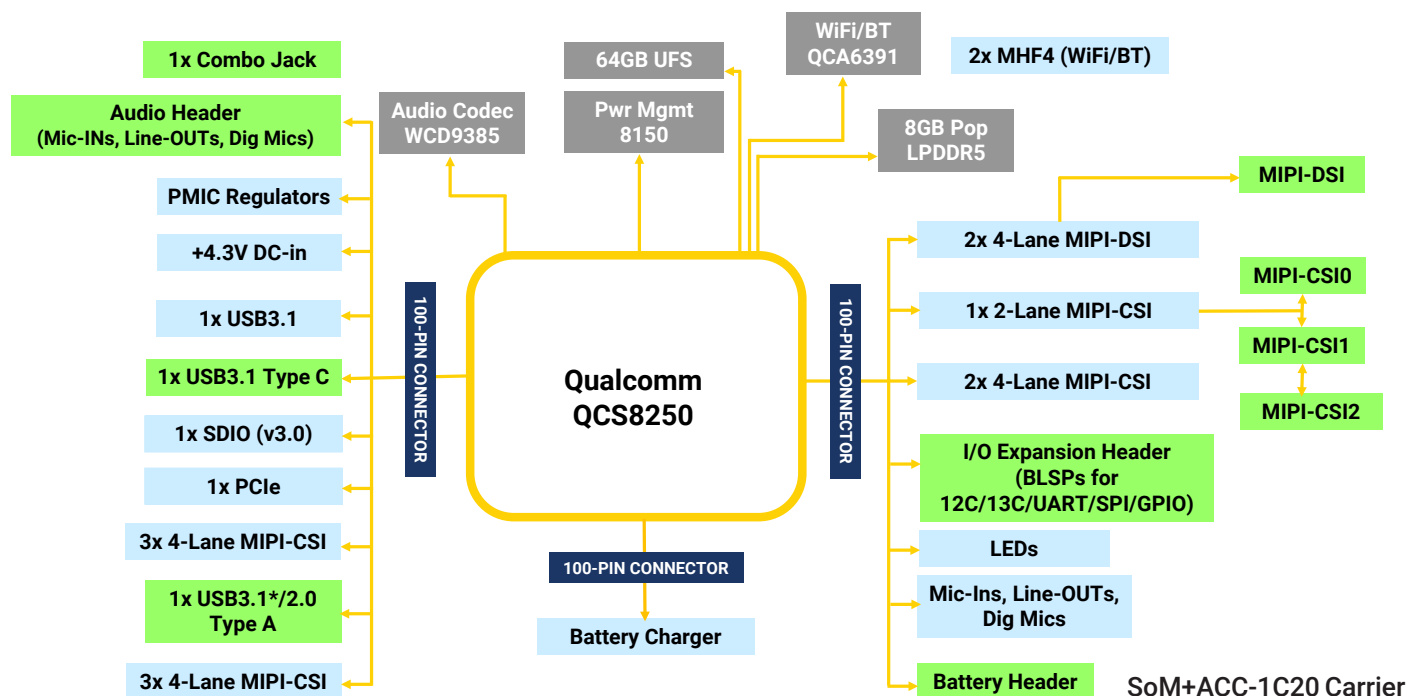
Medical Imaging



Smart Retail



Digital Signage



Processors

- ▶ Custom Kryo 585 Octocore ARM compliant CPU (QCS8250 SoC) @ 2.8/1.8GHz each
- ▶ Qualcomm Adreno 650 GPU with support for OpenGL ES 3.2, Vulkan 1.1 and OpenCL
- ▶ Qualcomm Hexagon V66Q DSP with quad-HVX and
- ▶ Hexagon Coprocessor for ultra low-power audio and sensor processing

Storage, Multimedia, and Connectivity

- ▶ 8GB LPDDR5 RAM/64GB UFS
- ▶ SD V3.0 µSD card interface
- ▶ 2x USB 3.1 interfaces
- ▶ DP Alternate Mode on USB-C for 4K-DCI @ 24fps display
- ▶ Concurrent 4K120 encode + 4K240 decode
- ▶ 5x 4-lane; 1x2-lane MIPI-CSI interfaces for UHD
- ▶ HEVC capture
- ▶ 802.11ax 2x2 MIMO WiFi-6 and BT/LE 5.1 via QCA6391
- ▶ 1x 1-lane PCIe Gen 3

Software

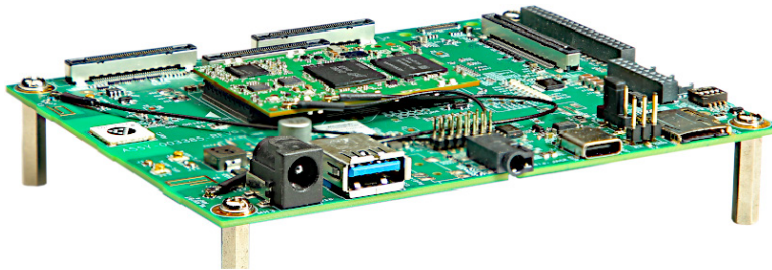
- ▶ Android 10 BSP pre-loaded with Hexagon/SNPE/OpenCV SDKs enabled

Power, Mechanical, and Environmental

- ▶ **Power:** +3.8V/6A Input
- ▶ **Operating Temp:** Commercial grade
- ▶ **Relative Humidity:** 5 to 95% non-condensing
- ▶ **Compliance:** RoHS and WEEE
- ▶ **Certifications:** FCC, CE (in progress)

Carrier Board For Penguin Edge™ IFC68A1 Micro SoM

ACC1C20 - A small but compact carrier that brings out most of QCS8250 SoC's native interfaces to help create, test, prototype and optimize your products with the shortest turnaround time.



Ordering Information

Part Number	Description
IFC68A1-00-P1	Micro SoM (Android 10 OS); 3x B2B conn; Commercial Temp support (0°C to 50°C)
SYS68A1-00-P1	IFC68A1-00-P1 SoM based Reference Design

Contact Us

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About Penguin Solutions

Penguin Solutions accelerates customers' digital transformation with the power of emerging technologies in HPC, AI, and IoT with solutions and services that span the continuum of edge, core, and cloud. The company designs highly advanced infrastructure, machines and networked systems that enable the world's most innovative enterprises and government institutions to build the autonomous future, drive discovery and amplify human potential. The Penguin Edge portfolio covers system on modules, single board computers and application-ready platforms that extend insight, intelligence, and analytical capabilities closer to where the data is generated - optimizing a range of use cases across industries and rugged environments.



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