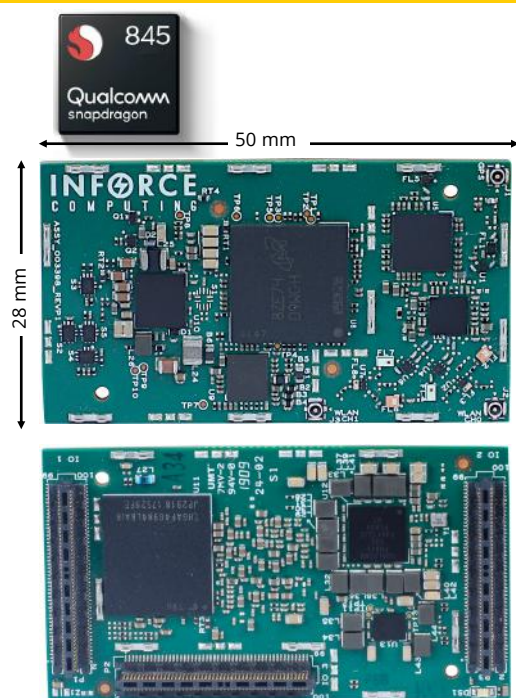# Inforce 67X1™ Micro SoM

Qualcomm® Snapdragon™ 845 Processor based System-on-Module

50 mm

28 mm

A compact compute module featuring on-device AI and Immersion for Embedded Applications

The Inforce 67X1 SoM is a small compute module that integrates Qualcomm®Kryo™ 385 CPU, Adreno™ 630 GPU, Hexagon™ 685 DSP, Spectra™ 280 camera ISP and Qualcomm's 3rd generation AI-Engine. This enables optimized AI performance for a more responsive, power-efficient user-experience and capture of cinema-grade videos in UHD@60fps resolution.

These components, coupled with 2x2 802.11ac Wi-Fi, BT 5.x, a full featured USB-C interface with UHD display capability and high fidelity audio make the Inforce 67X1 SoM a perfect fit for applications that necessitate on-device AI and immersive multimedia experiences. Optional SKUs support extended operating temperature range and EMI shielding for better RF noise protection, while also doubling up as a medium for heat spreading and dissipation to further improve performance.

Connected Cameras
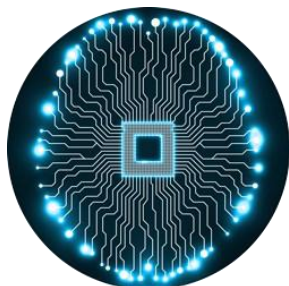
On-device AI

Wearables

Portable Healthcare

- Higher performance with Qualcomm Kryo 385 CPU with independent efficiency and power clusters, each designed to optimize for a unique UX

- Hexagon™ 685 DSP and Adreno™ 630 GPU featuring room-scale 6DoF with SLAM , to support on-device AI and Efficient rendering of advanced 3D graphics

- Dual 14-bit Spectra™ 280 ISPs support up to 16MP for simultaneous concurrent cameras

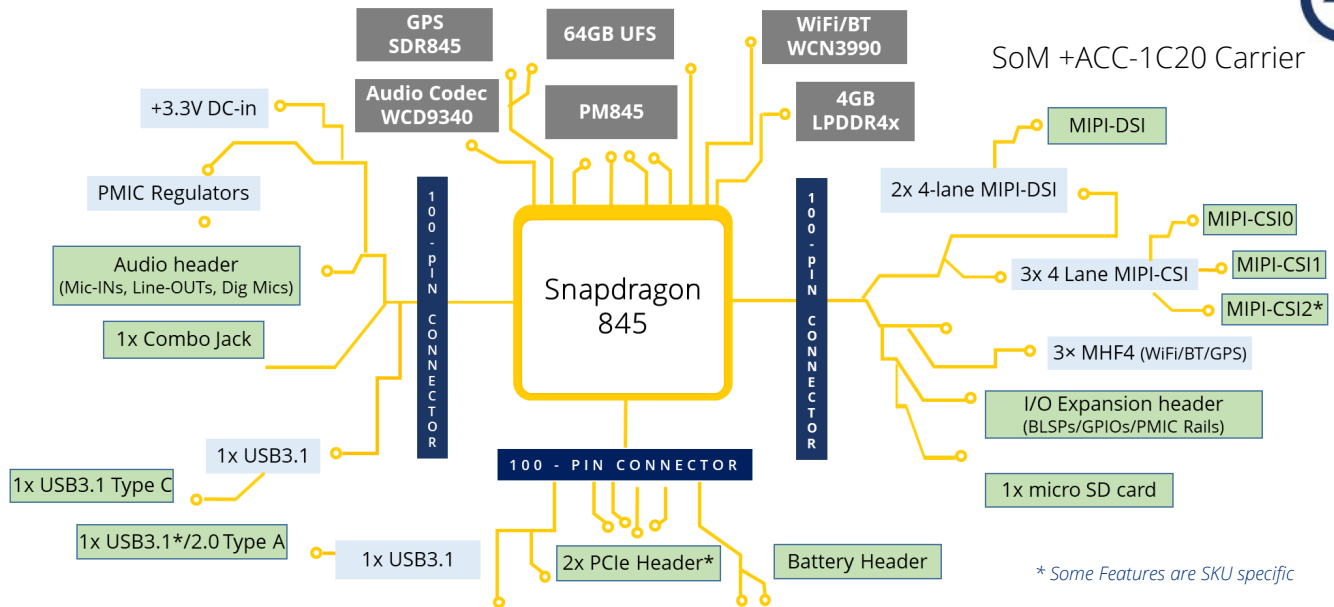- Qualcomm Content Protection Framework; Secure Boot; Storage and Debug security

- Extended lifecycle; OEM engagement options for BTO and custom variants

- Production-ready with volume-conscious pricing

- Dedicated Technical Support from Inforce TechWeb

SoM +ACC-1C20 Carrier

Diagram labels:
- GPS SDR845
- Audio Codec WCD9340
- 64GB UFS
- PM845
- WiFi/BT WCN3990
- 4GB LPDDR4x
- +3.3V DC-in
- PMIC Regulators
- Audio header (Mic-INs, Line-OUTs, Dig Mics)
- 1x Combo Jack
- 100-PIN CONNECTOR
- Snapdragon 845
- 100-PIN CONNECTOR
- MIPI-DSI
- 2x 4-lane MIPI-DSI
- MIPI-CSI0
- 3x 4 Lane MIPI-CSI
- MIPI-CSI1
- MIPI-CSI2*
- 3× MHF4 (WiFi/BT/GPS)
- I/O Expansion header (BLSPs/GPIOs/PMIC Rails)
- 1x micro SD card
- 1x USB3.1
- 1x USB3.1 Type C
- 1x USB3.1*/2.0 Type A
- 1x USB3.1
- 100-PIN CONNECTOR
- 2x PCIe Header*
- Battery Header
- *Some Features are SKU specific*

Technical Specifications

Processors

♦ Custom 64-bit Kryo Octocore ARM® V-8 compliant CPU (SDA845 SoC) @2.8/1.8GHz each

♦ Qualcomm® Adreno™ 630 GPU with support for OpenGL ES 3.2, Vulkan 2 and OpenCL

♦ Qualcomm® Hexagon™ 685 DSP with dual-HVX512 for ultra low-power audio processing

Memory / Storage

♦ 4GB LPDDR4 RAM/64GB UFS

♦ SD V3.0 µSD card interface

♦ 2x USB 3.1 interfaces off which one is USB-C (USB 3.1/Gen1)

Connectivity

♦ 802.11n/ac MU-MIMO WiFi and BT/LE 5.x via WCN3990

♦ GPS/GLONASS via SDR845
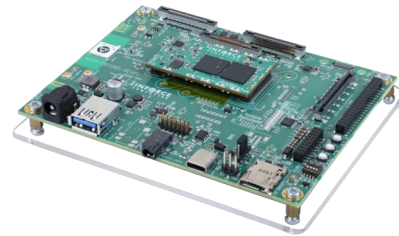
♦ 1x 1-lane PCIe Gen 2 and 1x 1-lane PCIe Gen 3

Multimedia

♦ DP Alternate Mode on USB-C for 4K-DCI@24fps display

♦ Concurrent 4K60 10b encode + 4K60 10b decode

♦ Dual 4-lane MIPI-CSI lines for HEVC capture @4K60

Software

♦ Android 9 BSP pre-loaded wth Hexagon/SNPE/OpenCV SDKs enabled

♦ Debian Linux BSP

Carrier Board For Inforce 67X1 SoM

♦ ACC1C20 - A small but complete carrier that brings out all native interfaces of the SDA845 processor including USB-C to help create and optimize your products with the shortest turnaround time.

Other Specifications

♦ **Power:** +3.8V/6A Input

♦ **Operating Temp:** Commercial grade

♦ **Relative Humidity**: 5 to 95% non-condensing

♦ RoHS and WEE compliant

Ordering Info

Part Number	Description
♦ IFC6701-00-P1	Micro SoM (Android Pie OS); 2x B2B conn; Commercial Temp support (0º - 70ºC)
♦ IFC67A1-00-P1*	Micro SoM (Android Pie OS); 3x B2B conn; Commercial Temp support (0º - 70ºC)
♦ SYS6701-00-P1	IFC6701-00-P1 SoM based Ref Design
♦ SYS67A1-00-P1*	IFC67A1-00-P1 SoM based Ref Design

* - BTO SKU. MOQ of 100

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