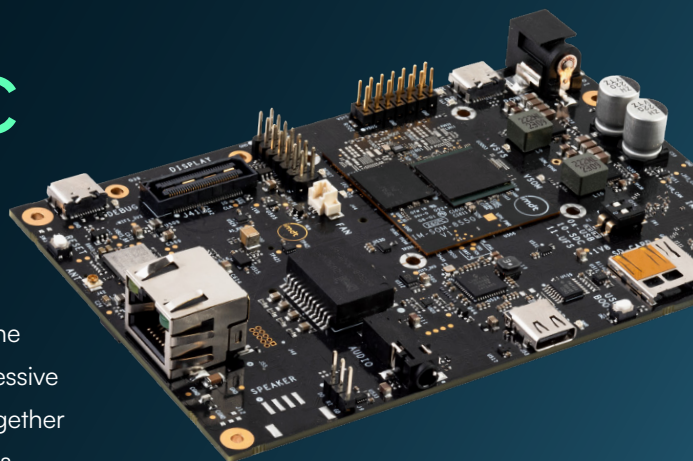




IMDT QCS8550 SBC

The IMDT QCS8550 SBC redefines versatility and performance in compact system design, transforming the IMDT QCS8550 SOM into a fully featured solution tailored for demanding applications like robotics, drones, and smart city deployments. Designed to maximize the potential of the Qualcomm QCS8550 processor, this SBC packs impressive performance with up to 55 TOPs for AI and machine learning tasks together with high-efficiency power management, support for up to 20 cameras, advanced AI and GPU capabilities, and robust connectivity options — all in a small, energy-efficient form factor.



made with
Qualcomm
Technologies

- Based on IMDT QCS8550 SOM
- 8 x 4-lane MIPI CSI interface for cameras
- M.2 NGFF Key-E with PCIe Gen 3 2-Lane & SDIO
- M.2 NGFF Key-B with PCIe Gen 4 2-Lane
- Wi-Fi 802.11a/b/g/n + Bluetooth 5.2 BR/EDR/LE
- Gigabit Ethernet with RJ-45 connector
- 2x 4-lane DSI, with touch I/F
- 6-DOF IMU, 3-Axis magnetometer
- Dimensions: (WxLxH): 125 x 81 x 20 mm



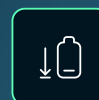
Multi-camera solution



Full connectivity



Small form factor



Low power

Key Features



Qualcomm Kryo central processing unit (CPU), X1.5 compute power



Qualcomm Adreno 740 GPU



Multiple display interface



8th-generation Qualcomm on-device AI Engine, up to 55 TOPs



Qualcomm Spectra 18-bit triple cognitive image signal processor (ISP)



Multiple camera pipelines for high-end imaging



Enterprise-grade security capability - Trust Management Engine and Qualcomm Type-1 Hypervisor

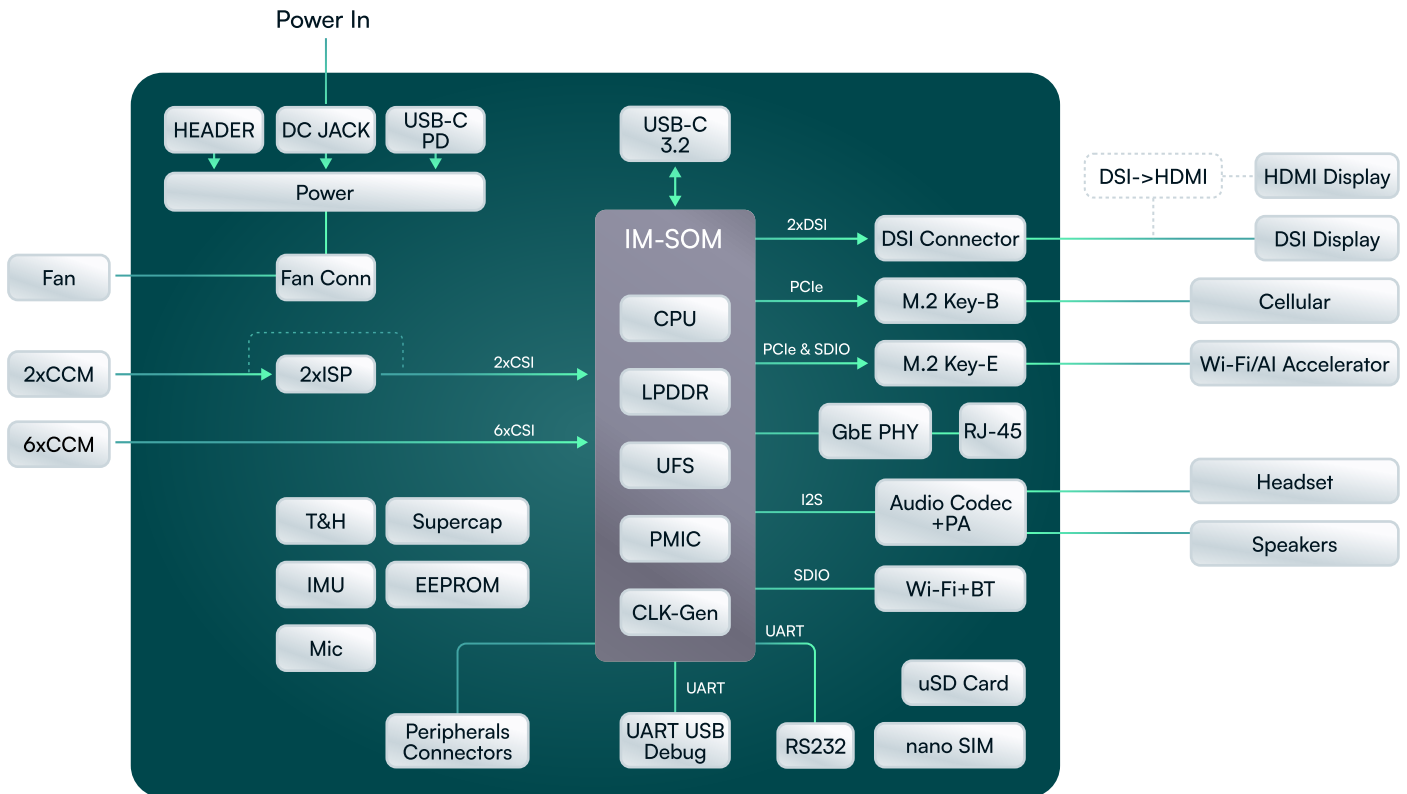


Product Specification

Specification	Description
CPU:	QCS-8550-1-AA, 6 CPU cores, GPU, V73 AI processor
Memories:	3750MHz LPDDR5X, 8GB/12GB UFS 3.1/4.0, 128/256GB SD card slot
Connectivity:	USB3.1 gen2 10Gbps (DP+data), Type-C Wi-Fi - Dual band + Bluetooth 5.2 M.2 NGFF Key-B with PCIe Gen 4 2-Lane M.2 NGFF Key-E with PCIe Gen 3 2-Lane & SDIO Gigabit Ethernet with RJ-45 connector
Camera:	8x 4-lane MIPI CSI interface for cameras ISP — Qualcomm spectra
Display:	2x 4-lane DSI, with touch I/F

Specification	Description
Audio:	Supports headset (including Mic) PDM microphone
Sensors	6-Axis Accelerometer and Gyro 3-Axis Magnetometer Temperature & Humidity sensor
Control I/Fs:	RS-232 SPI I3C GPIOs
Power:	Single power input: USB-C PD / DC-Jack / 2.54mm Header
Debug	On board UART-USB bridge with USB-C connector
Dimensions:	125 x 81 x 20mm

Block diagram



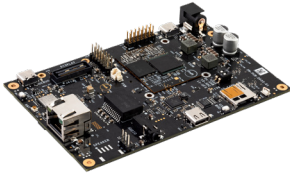
IMDT's QCS8550 Evaluation Kit, based on the IMDT QCS8550 SBC (Single Board Computer), is a high-performance mini-computer designed for a variety of applications in robotics, drones, and smart city projects. The kit offers a user-friendly board with comprehensive onboard connectivity, providing developers with an energy-efficient solution that occupies minimal space.

The QCS8550 EVK can serve as a comprehensive development platform for both evaluation and application development purposes. The kit offers an excellent demonstration of the QCS8550 SOM and SBC connectivity features and performance.



What's in the box

IMDT's QCS8550 SBC



2 x USB cable C - C type
for power supply & Debug



Full HD USB camera



Antenna



USB-C PD 35W Wall Adapter
with foldable US prongs &
replaceable EU and UK plugs



Optional



DSI to HDMI
adapter & HDMI cable

Optional



Up to 5 x AR1335
MIPI cameras

About IMDT

IMDT Technologies, with headquarters in the UK and Israel, specializes in creating advanced vision and AI-powered products and systems. Leveraging extensive engineering experience in real-time applications, including vision and AI on edge hardware and software, IMDT has excelled in design, development, and manufacturing since its inception in 2017. The company globally addresses complex vision and AI challenges, focusing on partnerships with leading chip manufacturers and delivering turnkey projects in medical, robotics, smart cities, smart homes, and industrial IoT.

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