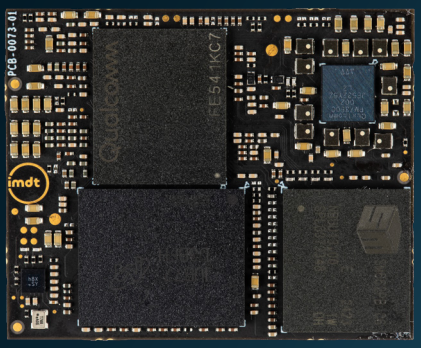
IMDT Q-7790 SOM

The IMDT Q-7790 SOM is a production-ready platform powered by the Qualcomm Dragonwing™ Q-7790. It combines responsive edge AI, rich multimedia, and secure, low-latency operation in a compact 37 x 30 x 2.1mm footprint.

Built for edge AI, computer vision, and advanced embedded products, the Q-7790 SOM is pin-to-pin compatible with Dragonwing QCS5430, Dragonwing QCS6490, and Dragonwing QCS8550 across the IMDT portfolio based on the Dragonwing Q Series Family. Engineering teams can move between performance tiers without redesigning the carrier board. The platform stays. Only the module changes.



* Image for illustration purposes only.

- Based on Qualcomm Q-7790 processor
- 8-core Qualcomm Kryo CPU @ 2.8 GHz
- Qualcomm Adreno 722 GPU
- 24 TOPS NPU for real-time AI inferencing
- Qualcomm Spectra 7-series triple ISP, 48 MP capture
- 4x MIPI CSI cameras
- Dimensions (WxLxH): 37 x 30 x 2.1mm

Powered by Qualcomm Dragonwing

Pin-to-Pin compatible across the Dragonwing Q Series Family

Small form factor

Complete solution including HW&SW

Advanced Security

Key Features

8-core Qualcomm Kryo CPU @ 2.8 GHz

Qualcomm Adreno 722 GPU

24 TOPS NPU for real-time AI inferencing

Qualcomm Spectra 7-series triple ISP, 48 MP capture

4x MIPI CSI cameras

WQHD+ playback at 144 Hz and dual 4K60 display output

Qualcomm TEE, Secure Boot, authenticated OTA updates, and encrypted storage

Customizable Wi-Fi/Bluetooth, memory, storage, and PHY configurations

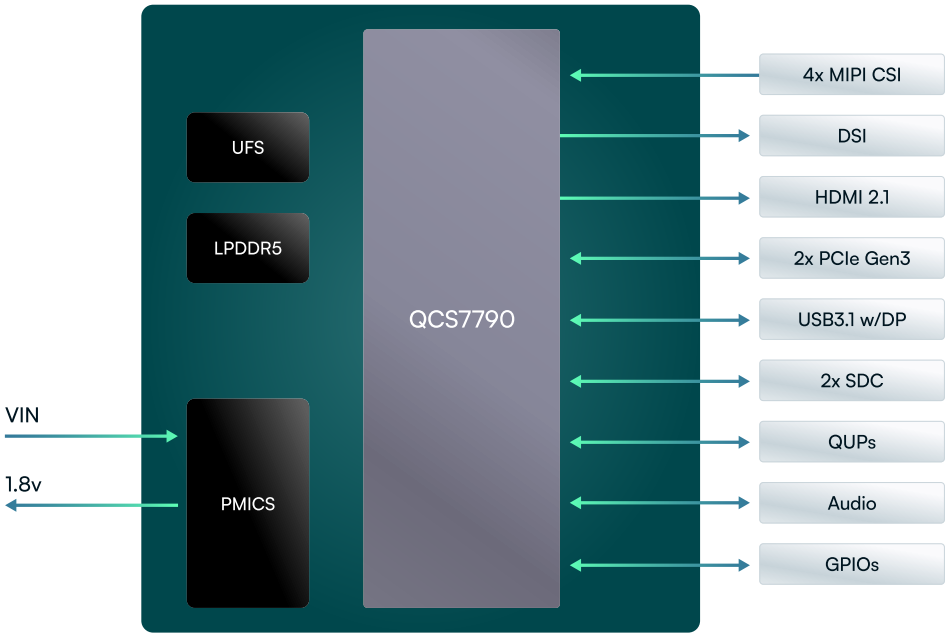
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Product Specification

Specification	Description
CPU:	Qualcomm Dragonwing Q-7790; 8-core Qualcomm Kryo @ 2.8 GHz
	24 TOPS NPU
	Qualcomm Adreno 722 @ up to 1.15 GHz GPU
Memories:	LPDDR5x @ 4200 MHz, 8/16 GB. Storage: UFS 3.1/4.0, 128/256 GB. Memory and storage capacities customizable
Connectivity:	1 x USB 3.1 Gen 2
	PCIe: Gen 3.0 1-Lane & Gen 3.0 2-Lane
	2 x SDC
Camera:	4x MIPI CSI 4-Lanes
	Sensor resolution: 48 MP
	ISP: Qualcomm Spectra 7-series triple
	Video Encode 4K @ 60 fps
	formats: H.264 (AVC), H.265 (HEVC)

Specification	Description
Display:	4K @ 60
	1 x DSI
	1 x HDMI 2.1
	Video playback 4K @ 120 fps
	Formats: H.264 (AVC), H.265 (HEVC), AV1
Audio:	4 x DMIC
	eNPU audio AI accelerator for low power
Low speed I/Fs:	SPI, UART, I2C
Power:	Single rail input / integral PMIC
Mount:	IMDT Q Series - 504-pin BGA, 0.6mm pitch, for SMT assembly
dimensions:	37 x 30 x 2.1mm
OS:	Android, Linux

Block diagram



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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