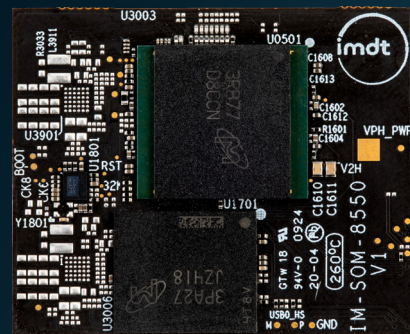


IMDT Q-7790 SOM

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 QCS5430, QCS6490, and QCS8550 across the IMDT Q Series. 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

made with
Qualcomm
Technologies



Pin-to-Pin compatible
across the Q Series



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

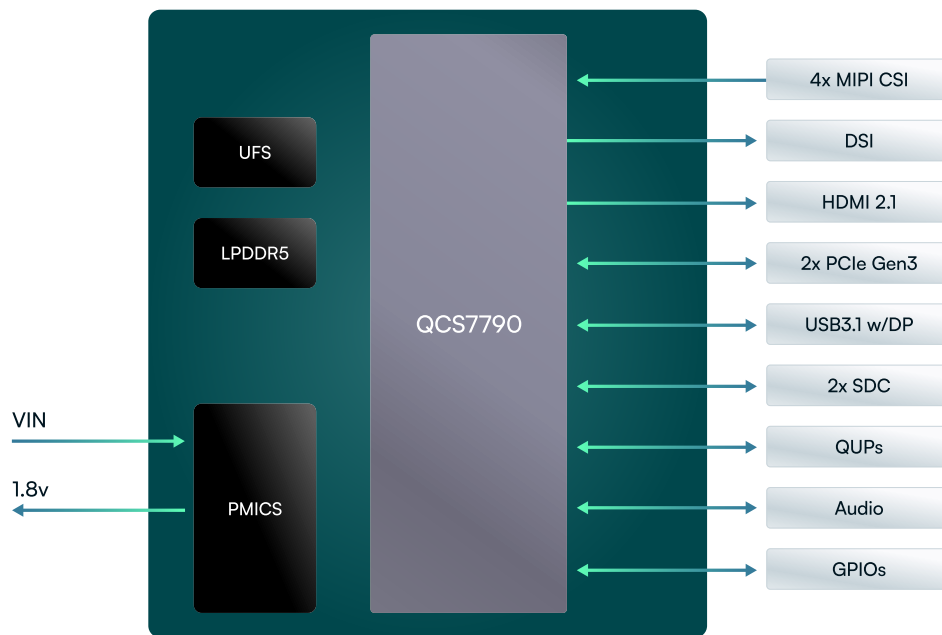


Customizable Wi-Fi/Bluetooth,
memory, storage, and PHY
configurations

Product Specification

Specification	Description	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	Display:	4K @ 60 1 x DSI 1 x HDMI 2.1 Video playback 4K @ 120 fps Formats: H.264 (AVC), H.265 (HEVC), AV1
Memories:	LPDDR5x @ 4200 MHz, 8/16 GB. Storage: UFS 3.1/4.0, 128/256 GB. Memory and storage capacities customizable	Audio:	4 x DMIC eNPU audio AI accelerator for low power
Connectivity:	1 x USB 3.1 Gen 2 PCIe: Gen 3.0 1-Lane & Gen 3.0 2-Lane 2 x SDC	Low speed I/Fs:	SPI, UART, I2C
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)	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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