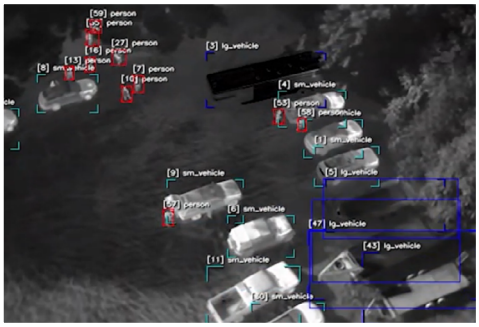
TELEDYNE FLIR AVP

SWaP-Optimized SoM for Prism™

The AVP, a size, weight, and power (SWaP) optimized advanced video processor, provides best-in-class artificial intelligence performance for thermal infrared and visible camera perception systems. It incorporates the latest Qualcomm® QCS8550, the industry's most advanced mobile processor system on chip (SoC) featuring up to 48 TOPS inference compute performance. The QCS8550 is part of Qualcomm's Product Longevity Program, ensuring future-proof product stability.

The AVP is designed to efficiently run Teledyne FLIR Prism AI software providing detection, classification, and target tracking and Prism ISP algorithms including super resolution, image fusion, atmospheric turbulence removal, electronic stabilization, local-contrast enhancement, and noise reduction. Prism software runs efficiently on the AVP leveraging the available system on module (SoM) functions to provide critical edge AI capabilities for automotive, airborne, unmanned, counter-UAS (CUAS), perimeter security, and intelligence, surveillance, and reconnaissance (ISR) applications.



INDUSTRY-LEADING SIZE, WEIGHT, AND POWER (SWaP) CONSUMPTION

Run Prism AI and ISP on the highest-performance QCS8550 SoC in the industry

- Compact 40.27 x 33.41 mm size
- 6 W maximum power consumption
- 5 grams (without shields)

FUTURE PROOF YOUR DESIGN

Flexible hardware is part of the Qualcomm Product Longevity Program

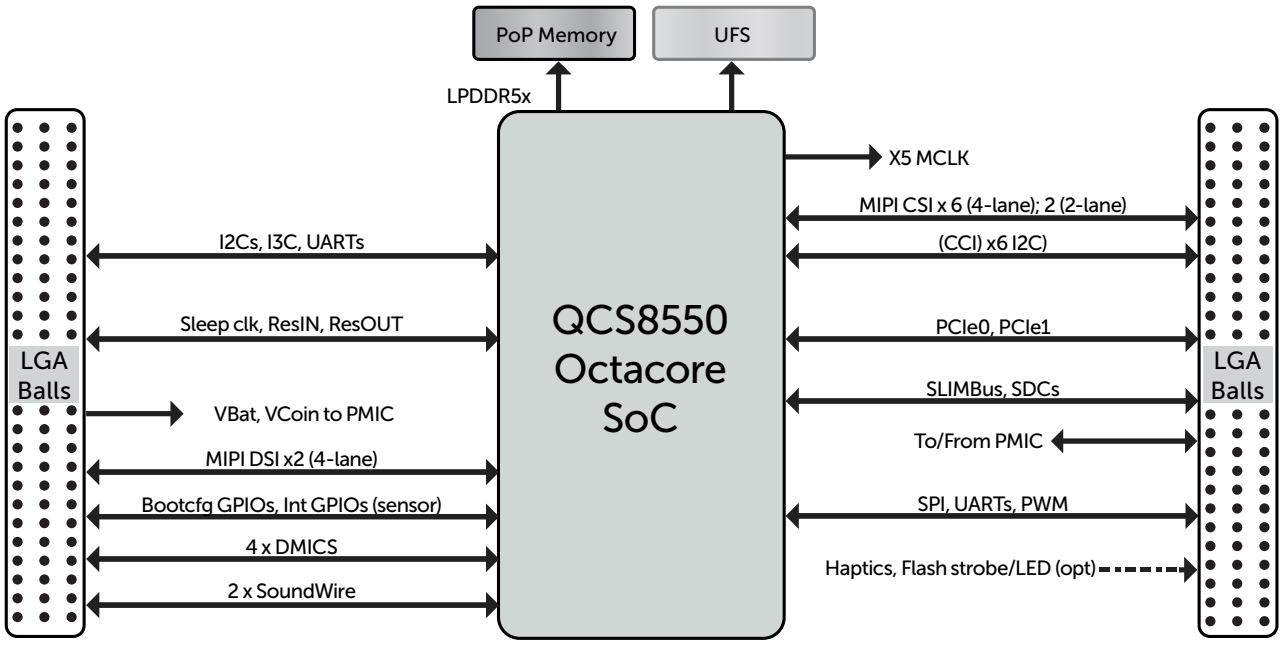
- 48 TOPS INT 8 AI processor
- 3.2 TOPS on GPU (float 32)
- 8 CPU cores
- MIPI and USB camera interfaces

BUILT FOR INTEGRATORS

Simplify development and reduce risk with Prism software and support

- Linux OS
- Development support by qualified engineers
- Sample applications included
- Ongoing AI model development using real-world and proven synthetic data

www.flir.com/prism



HARDWARE FEATURES

Processor

- Qualcomm QCS8550
- 64-bit Octa-Core
- Application processor at 3.2 GHz (Gold+), 2.8GHz (4 x Gold), 2.0GHz (3 x Silver) Qualcomm Kryo CPU
- Qualcomm Adreno GPU 740
- Qualcomm Hexagon Tensor Processor (HTP) with Hexagon Vector eXtensions (HVX) and Hexagon Matrix eXtensions (HMX)
- Qualcomm Secure Processing Unit for advanced secure use cases
- Low Power AI (LPAI) subsystem with dedicated DSP and AI accelerator (eNPU) supporting always-on audio, sensors, contextual data streams, and Always-on camera.

Memory/Storage

- 16GB LPDDR5x
- 256GB UFS 3.1

Audio Interfaces

- 2 x SWR
- 8 x DMIC
- 8 x I2S

Camera Interfaces

- Qualcomm Spectra ISP
- 6x 4-lane CSIs & 2x 2- lane CSIs
- D-PHY v1.2: 2.5 Gbps/lane
- C-PHY v2.0: 13.68 Gbps/trio

Display Interfaces

- 2x 4-Lane DSI
- Supports dual MIPI DSI ports, with support for split-link for fold use case

Video

- UHD video processing unit
- AV1 decode
- Native decode support for H.265 Main 10, H.265 Main, H.264 High, and VP9 profile 2
- Native encode support for H.265 Main 10, H.265 Main, H.264 high formats

Sensor Interfaces

- SPI, I2C, I3C, GPIO connections to sensor core DSP

I/O Interface

- 1 x USB 3.1 Type C
- 1 x MicroSD Card
- 1 x MicroUSB for debug Console
- 2 x PCIe (1x PCIe 2-lane Gen 3, 1x PCIe 2-lane Gen 4)

Operating Environment

- Input Voltage: 3.6V
- Operating Temperature: -20 to +60 °C

Mechanical Specifications

- SOM Board: 40.27 x 33.41 mm LGA form factor
- Weight: 5 grams (without shield)

Operating System

- OS - Linux LE (r76)

Orderable Part

- SOM 4251537
- Devkit Part Number: 421-0100-00

Specifications are subject to change without notice.

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