# Qualcomm® SA8155P Cockpit SOC - Building Blocks

Booth 310

Technology IP Leadership
Leading 7nm FINFET Low power

HW thermal management

High performance, power efficient:
Customized ARMv8 CPUs

NPU: AI/ML compute engine
Neural Network Processing

Heterogenous compute architecture
High-performance DSP
Multi-camera input
Surround-view camera
Object recognition, Image recognition

HW Multi Display Compositor

Optional Modem:
Multi-constellation support

Optional Connectivity:
Wi-Fi + Bluetooth ®
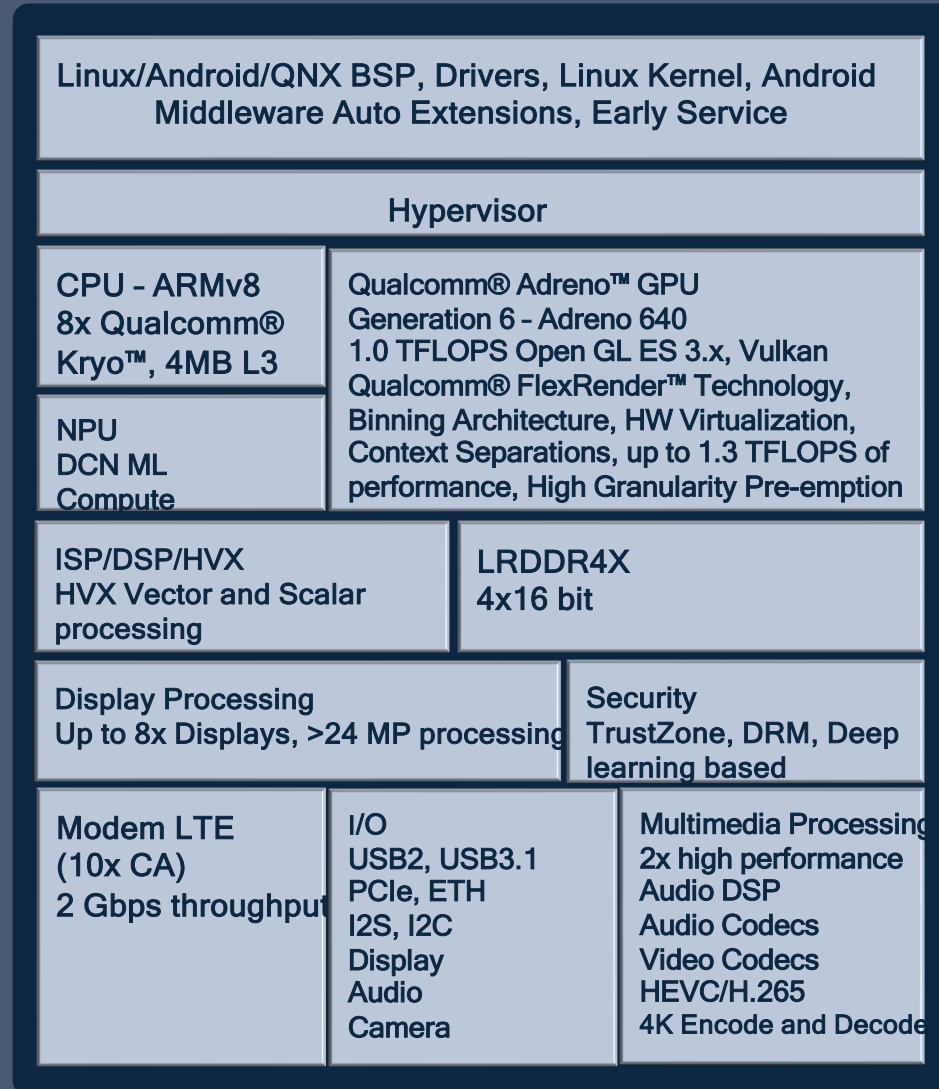
Software Integration
System Level Performance Optimization
Platform integration
Multimedia shared device folder

Highest performance GPU
For infotainment, instrument cluster

Multiple 4K displays, up to
8 simultaneous displays

Latest SCSA security architecture

Next generation audio and video codec
in hardware including HEVC, VP9
DVR capability with H.265 encode

Superior multimedia technologies and features

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**Linux/Android/QNX BSP, Drivers, Linux Kernel, Android Middleware Auto Extensions, Early Service**

**Hypervisor**

**CPU – ARMv8**
8x Qualcomm® Kryo™, 4MB L3

**NPU**
DCN ML Compute

**Qualcomm® Adreno™ GPU**
Generation 6 – Adreno 640
1.0 TFLOPS Open GL ES 3.x, Vulkan
Qualcomm® FlexRender™ Technology,
Binning Architecture, HW Virtualization,
Context Separations, up to 1.3 TFLOPS of
performance, High Granularity Pre-emption

**ISP/DSP/HVX**
HVX Vector and Scalar processing

**LRDDR4X**
4x16 bit

**Display Processing**
Up to 8x Displays, >24 MP processing

**Security**
TrustZone, DRM, Deep learning based

**Modem LTE**
(10x CA)
2 Gbps throughput

**I/O**
USB2, USB3.1
PCIe, ETH
I2S, I2C
Display
Audio
Camera

**Multimedia Processing**
2x high performance
Audio DSP
Audio Codecs
Video Codecs
HEVC/H.265
4K Encode and Decode