VS640 Ultra HD Set-Top Box SoC

PRODUCT BRIEF

The VideoSmart™ VS640 is a high-performance multimedia system on chip (SoC) for a new generation of set-top box (STB) and consumer IoT devices such as far-field voice-enabled smart displays. To enable edge computing AI applications, the SoC integrates a high-performance neural processing unit (NPU) that supports trillions of operations per second. It also includes a quad-core CPU subsystem and the latest-generation GPU. It is supported by the SyNAP™ toolkit, which enables customers to build optimized ML/AI applications for video, vision, and audio AI. Synaptics far-field voice and keyword detection algorithms provide edge-based voice processing.

BENEFITS

- Low system cost
- Secure, best-in-class AI performance
- Low power enabling small form factors
- Support for all major conditional access systems (CASs)

APPLICATIONS

- Smart displays
- OTT and hybrid smart set-top box (STB) platforms
- Streaming dongles

AI ENABLED

LOW SYSTEM COST

SMALL FORM FACTOR

SECURE

FEATURES

- Quad-core Arm® Cortex®-A55 processor with cryptographic extensions
- DRAM controller; eMMC 5.1 controller
- Dedicated hardware for localized neural network (NN)/machine learning applications (up to 1.6+ TOPS)
- Support for TensorFlow® Lite, Android™ NN API, and OpenVX™
- Supports far field voice (FFV) communication processing & keyword detection
- Imagination™ PowerVR™ Series9XE GE9608 GPU
- Video/graphics display pipeline with QDEO®
- Completely firewalled security processor
- MIPI-DSI 1.2

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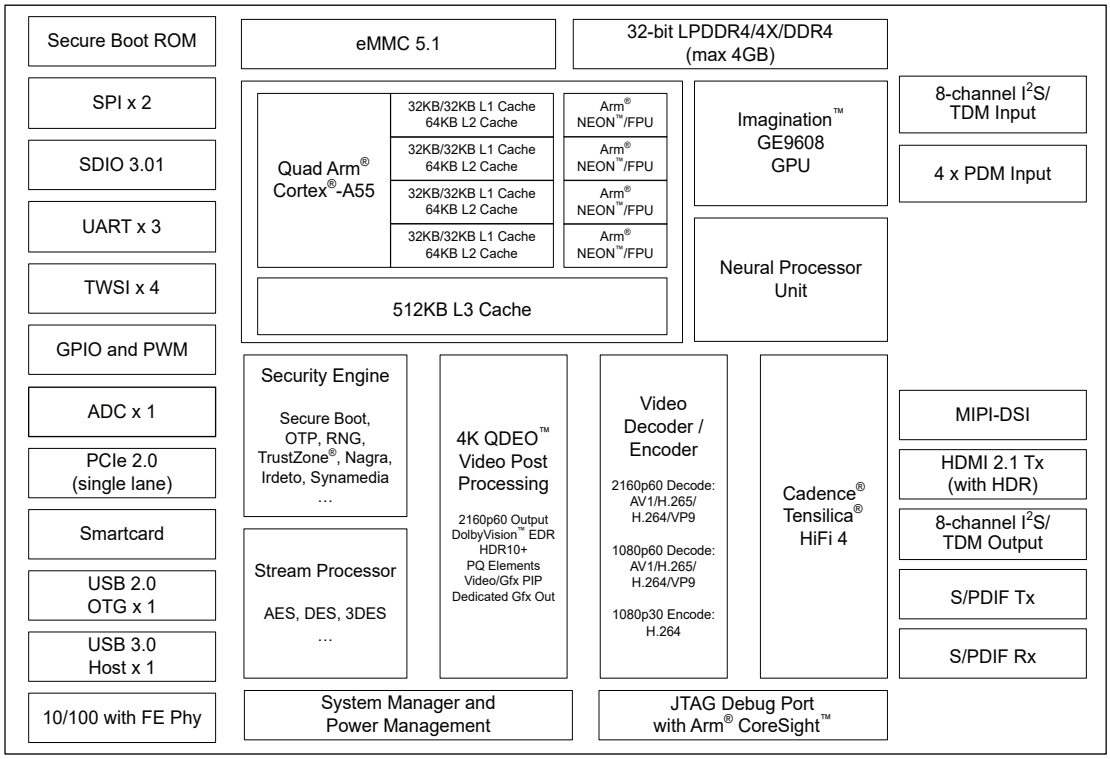
PRODUCT BRIEF

SYSTEM BLOCK DIAGRAM



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