

## Interface Masters

TECHNOLOGIES

Innovative Network Solutions

### OVERVIEW

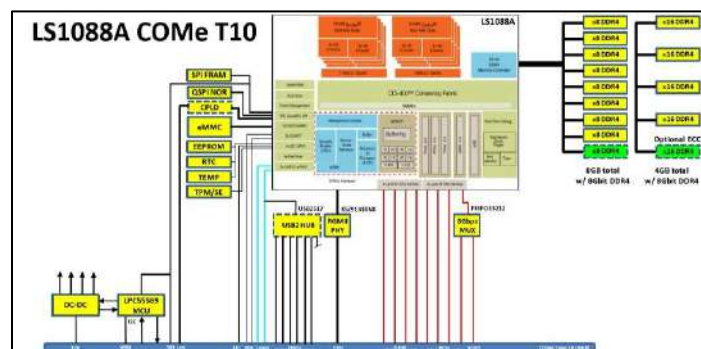
Interface Masters presents Sierra 77431, a System on a Module designed with the NXP quad-core, 64-bit Arm® based LS1088A wAIOP processor, and part of the QorIQ® Layerscape® Processor family of processors. Layerscape is the networking / edge processor of choice for many reasons including scalability (single A53 core to 16x A72 cores) strong Linux ecosystem, and Yocto Distribution for small footprint.

Layerscape processors offer Data Path Acceleration Architecture offloads, lower power, and lower cost. The processors also offer ECC external memory, in addition to ECC Caches (L1, L2, L3). Layerscape offers a minimum 15-year product availability.

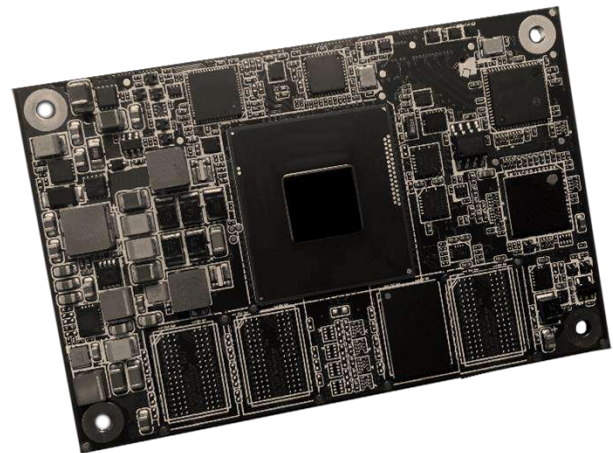
In standard configuration, Sierra 77431 runs on 4-8x A53 cores at 1.6GHz and supports 20Gbps pkt/crypto on AIOP with 2x 10GE + Gen3 PCIe and consumes 6-12W power.

In addition to real-time OpenIL and embedded device ready OpenWRT, the module's Layerscape SDK with Ubuntu Root File System provides flexibility and ease of use. Also included is the Data Plane Development Kit (DPDK).

Interface Masters proudly designs and manufactures all our products in the USA.



Block Diagram showing the COM Express Type 10 with LS1088A



Sierra 77431 SoM (Product in development)

## Product Features

### QorIQ Layerscape COMe

- Single-connector Type 10 COM Express module (4 PCIe lanes, 2 SATA, 2 USB3)
- Sierra 77431 COMe Type 10 access includes: RGMII Gigabit Ethernet, x4 PCIe3\*, 4 ethernet Serdes, TDM, SATA, 2x USB3, SDHC, 2x SER, SPI and I2C. \*PCIe/SATA Serdes

### QorIQ LS1088A Processor

- 4-8x Arm® Cortex® A53 64-bit Cores
- 1.6GHz
- Low power (6-12W)
- 2x 20GE + Gen3 PCIe

### QorIQ Layerscape Differentiators

- Processors have Data Path Acceleration Architecture offloads
- Minimum of 15-year product availability
- Offer ECC external memory, in addition to ECC (L1, L2, L3)

### Software Support

- OpenIL Open-source software for security, true real-time and time-sensitive networking
- Route and control network traffic with Open source OpenWRT
- Layerscape SDK with Data Plane Development Kit (DPDK) provides ease of use and flexibility

ENVIRONMENTAL	
Extended Temperature	0 to 85°C (32°F to 185°F)
Industrial Temperature	-40° to + 85°C (-40°F to 185°F)
Operating Humidity	0 to 95%, non-condensing
Recommended Airflow	100+lf/m

ORDERING INFORMATION	
Part Number	Description
Sierra 77431	Sierra 77431, a System on a Module designed for assisting in control and direct data traffic in industrial networking applications. Designed and built with the NXP quad-core, 64-bit Arm® based LS1088A processor. Compact COMe Type 10 form factor.

COMe Type 10 MODULE DIMENSIONS		
	Inches	Millimeter
Length	3.30 in	84 mm
Height	.59 in	15 mm
Width	2.16 in	55 mm

PRELIMINARY POWER CONSUMPTION	
Typical	Maximum
6-12W	12W

## CUSTOMIZATION SERVICES

Hardware, Firmware, Linux O/S and application code development services available.



## ABOUT INTERFACE MASTERS TECHNOLOGIES, INC.

Interface Masters Technologies is a long term Cavium partner and leading provider of high speed networking solutions focused on Gigabit, 10 Gigabit, 40 Gigabit and 100 Gigabit Ethernet networking solutions. For over 20 years, Interface Masters Technologies has been providing innovative networking solutions with customization services to OEMs, large enterprises and sophisticated end users. Interface Masters Technologies provides Ethernet switches, appliances, server adapter cards with high port density, networking offload and bypass functionality. Company headquarters are located in San Jose, CA with satellite offices in Hong Kong and Europe.

Arm® is a registered trademark of Arm Limited.

NXP®, QorIQ® and Layerscape® are registered trademarks of NXP Semiconductors.