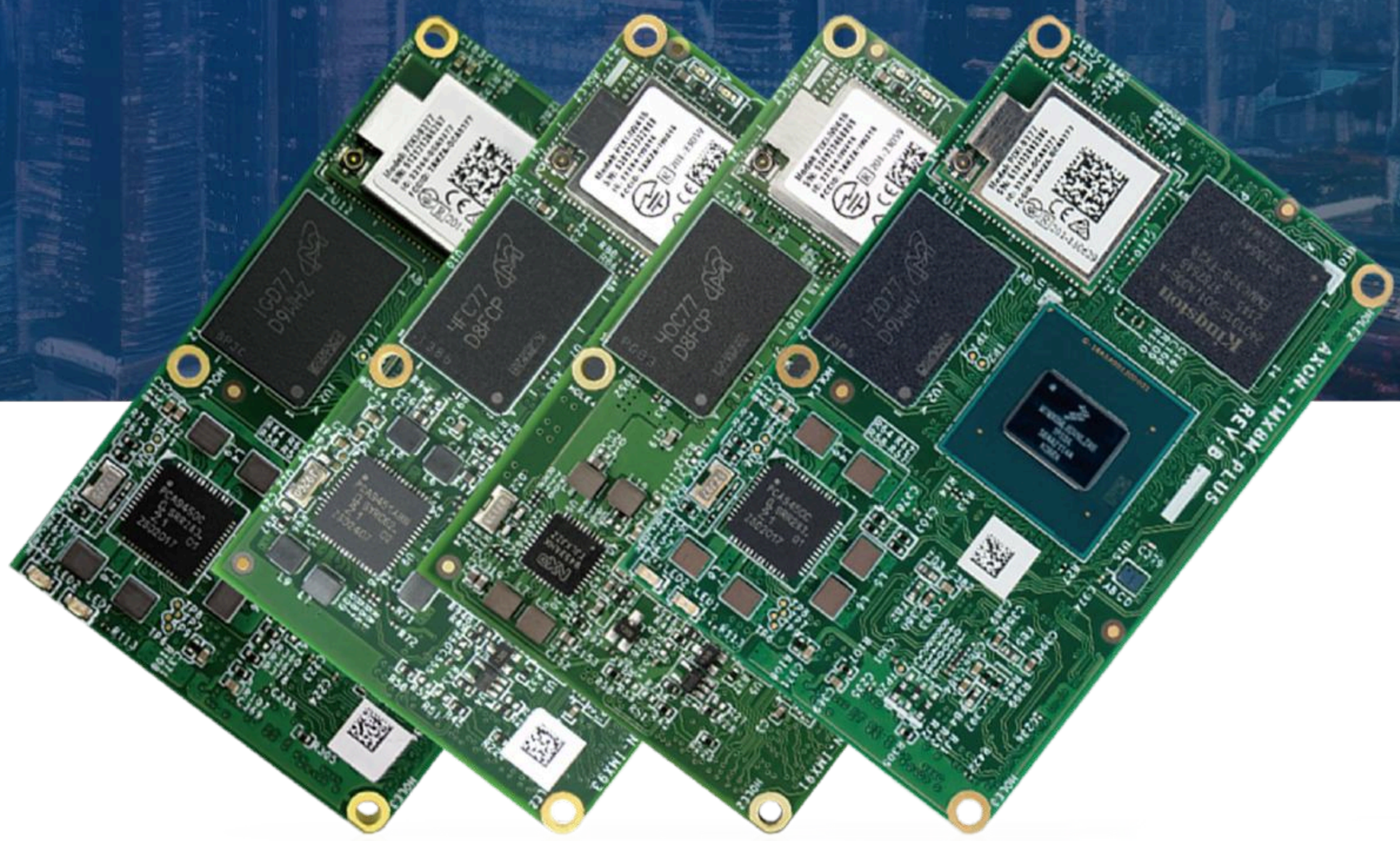
TechNexion

INNOVATORS OF TECHNOLOGY



AXON Series

System on Modules

AXON System on Module Series

The AXON Module Family offers a scalable, compact form-factor System-on-Module using four 80-pin board-to-board Hirose connectors for embedded systems. Designed for vibration-prone environments, AXON modules deliver powerful processing, industrial-grade reliability, and secure mechanical integration — making them ideal for drones, robotics, vehicle vision systems, and edge computing applications.

Key Highlights

Faster Time to Market

A complete design that is ready to deploy assists you to focus on application from day one. Helping you to bring products to your customers much faster.

Longevity

15+ years availability from the start of production ensuring the same product to be available during the lifetime of your embedded project.

Scalable and Pin-Compatible

A complete family stretching multiple generations of SOC technology enabling true scalability and futureproof your design.

Sourcecode Software

Yocto Linux, Debian or Android sourcecode can be easily obtained from our github account for seamless development.

Comprehensive Interface

Packed with versatile interfaces, including serial ports, CAN bus, I2C, SPI, and USB, for diverse connectivity.

Pre-Certified Wi-Fi

Pre-certified wireless options simplify design and reduce costs for end-device certifications.

Camera-Ready

Seamless integration with TechNexion vision modules — built for machine vision, robotics, and edge AI from day one.

Online Technical Help

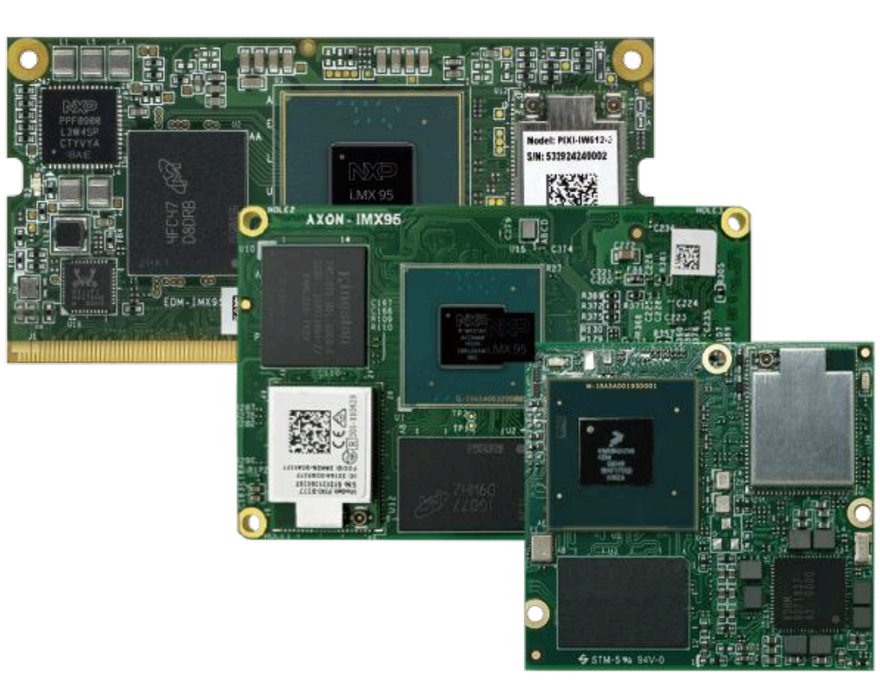
Provides expert resources and guidance to streamlinedevelopment and integration.

Don't see what you are looking for ? Talk to us.

SOM Family Comparison: AXON vs. EDM vs. PICO

Feature	AXON	EDM	PICO
Connector	**4*80-pin Hirose connectors**	260-pin Edge connectors	70-pin Hirose connectors
Size	**58 x 37 mm**	69.6 x 35 mm	37 x 40 mm
Key Advantages	**Interface Superset**	Low-cost single connector	Smallest size
Applications	• **Edge Computing** • **Vehicle vision applications** • **Drone / UAV / Robotics**	• General Embedded • Edge AI / Vision Applications • Smart manufacturing	• Small compact embedded devices • Vibration prone applications • Low-power mobile applications

Deliver your embedded system to market faster because...



- *Readily available evaluation kits*
- *Source code Software*
- *Online Support (resources and manuals)*
- *Schematic and design reviews for Carrier board design*
- *Short lead-time delivery*
- *Pre-certified Wireless / Bluetooth*

Overview

	AXON-IMX8M-PLUS	AXON-IMX91	AXON-IMX93	AXON-IMX95
Core System				
Processor	NXP i.MX8M Plus	NXP i.MX91	NXP i.MX93	NXP i.MX95
Architecture	ARM Cortex-A53 + M7	Arm Cortex-A55	ARM Cortex-A55 + M33	6 x ARM Cortex-A55 + M33 + M7
PMIC	NXP PCA9450	NXP PF9453	NXP PF9451	NXP PPF0900 NXP PPF5302 NXP PPF5301
Memory	Up to 8GB LPDDR4	2GB LPDDR4	Up to 2GB LPDDR4x	Upto 16GB LPDDR5
Storage	32GB eMMC (default)	32GB eMMC (default)	32GB eMMC (default)	32GB eMMC (default)
Debug Interface	JTAG / UART	JTAG / UART	JTAG / UART	JTAG / UART
AI / Vision Capabilities				
AI / ML	NN Accel 2.3 TOPS	NPU Ethos U-65 0.5 TOPS	NPU Ethos U-65 0.5 TOPS	2.0 TOP/s NPU (1GHz)
Camera	2 x ISP up to 12 MP resolution, Dual MIPI CSI-2 (4 lane)	MIPI CSI-2 (2 lanes)	MIPI CSI-2 (2 lanes)	Up to 8 cameras with MIPI virtual channels
Connectivity				
Network LAN	1x Realtek RTL8211	2x Realtek RTL8211	2x Realtek RTL8211	1x Realtek RTL8211
Wi-Fi	Qualcomm Atheros QCA9377 Wi-Fi 5 – 802.11 a/b/g/n/ac (optional)	NXP IW416 Wi-Fi 4 – 802.11 a/b/g/n (optional)	NXP IW416 Wi-Fi 4 – 802.11 a/b/g/n (optional)	NXP IW611 Wi-Fi 6 – 802.11 a/b/g/n/ac/ax (optional)
Bluetooth	Qualcomm Atheros QCA9377 Bluetooth (optional)	NXP IW416 Bluetooth (optional)	NXP IW416 Bluetooth (optional)	NXP IW611 Bluetooth (optional)
Antenna	MHF4 connector (optional)	MHF4 connector (optional)	MHF4 connector (optional)	MHF4 connector (optional)
Signaling				
	HDMI LVDS LAN MIPI CSI MIPI DSI PCIe USB USB OTG I²S	SDIO CAN UART SPI I²C PWM GPIO JTAG	TTL LAN USB 2.0 I²S CAN UART	I²C SDIO GPIO TAMPER ADC	LVDS TTL MIPI DSI MIPI CSI-2 LAN USB 2.0 I²S	CAN UART I²C SDIO PWM GPIO	LVDS MIPI CSI-2/DSI MIPI CSI-2 LAN MDI PCIe (Gen3) USB 3.0 USB 2.0 I²S PDM S/PDIF	CAN UART SPI I²C SDIO PWM GPIO JTAG RGMII USXGMII I³C
Video				
GPU Engine	GC520L (2D) Vivante GC7000UL		PXP - Hardware Compositor	Arm Mali-G310 Graphic Processing Unit 3D GPU supporting 50 GFLOPs FP32 OpenGL® ES 3.2 Vulkan® 1.3, OpenCL 3.0
Video Decode	1080p60 H.265, H.264, VP9, VP8			4Kp30 H.265, H.264
Video Encode	1080p60 H.265, H.264			4Kp30 H.265, H.264
Audio				
Audio Codec	On carrier board	On carrier board	On carrier board	On carrier board
Audio Interface	I²S (2 channel)	I²S	I²S	I²S
Operation Systems				
Standard Support	Linux, Yocto, Android, Ubuntu/Debian	Linux, Yocto	Linux, Yocto, Debian	Linux, Yocto, Debian
Extended Support	Commercial Linux			
Mechanical				
Dimensions	58 (W) x 37 (H) x 5.07 (D)mm	58 (W) x 37 (H) x 5.05 (D)mm	58 (W) x 37 (H) x 5.05 (D) mm	58 (W) x 37 (H) x 5.1 (D) mm

Starter Kits that Deliver

Proof of concept within a day. It’s possible with TechNexion's System on Module Starter kits that bring all bits of hardware to the table. Backed up with demo Yocto Linux and Debian pre-installed on your evaluation kit and take literally a minute to boot after you receive your kit on your doorstep.

Need a touch display or a camera solution, You can easily add these to the kit and software driver is already made available, assisting you quickly with your proof of concept validation steps.

Embedded Vision Made Easy

Integration of Embedded vision camera sensors in your system with TechNexion SOMs is made easy with the TechNexion unified camera driver that comes pre-installed and packaged with your TechNexion System-on-Module.

All TechNexion Embedded Vision products are supported with VizionViewer and VizionSDK, giving your engineering team full control over the camera settings by using C# or Python.

Learn more about TechNexion MIPI CSI-2 Sensors online or ask your Sales Representative for a consultation how we can help you.

< 2 MP	5 MP	8 MP	10 ~ 20 MP
1 MP AR0144 Global Color	5 MP AR0521 Rolling Color	8.3 MP AR0821 Rolling Color	13 MP AR1335 Rolling Color
1 MP AR0145 Global Mono	5 MP AR0522 Rolling Color/Mono	8.3 MP AR0822 Rolling Color/Mono	
2.3 MP AR0234 Global Color		8.3 MP AR0830 Rolling Color/Mono	
2.3 MP AR0235 Global Mono			

SDK

VizionSDK VizionViewer™

TechNexion
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ISO 9001 SGS
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