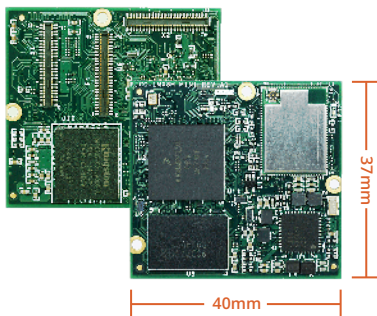




PICO Series System on Modules

PICO System on Module Series

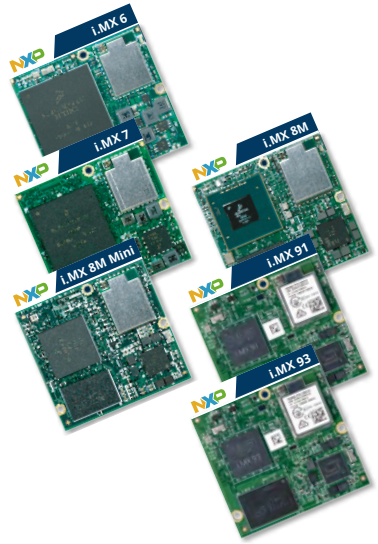
The PICO Module Family offers an ultra-compact, low-power System-on-Module solution measuring just 37 x 40 mm — the smallest form factor in the TechNexion portfolio. Built with three 70-pin board-to-board Hirose connectors, PICO modules are ideal for space-constrained designs that demand reliable performance, pre-certified wireless connectivity, and modular scalability. Perfect for wearables, smart sensors, portable devices, and compact edge AI systems.



yocto
PROJECT



debian



Key Highlights



Ultra-Compact Size

Space-saving 37 x 40 mm form factor, ideal for highly integrated and size-constrained applications such as wearables, sensors, and portable devices.



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 consistent, pin-compatible family spanning multiple generations of SoC technology — making it easy to scale performance and future-proof your product design.



Sourcecode Software

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



Cost-Effective Solutions

Designed with value in mind, delivering reliable performance at a competitive cost without compromising on quality.



Pre-Certified Wi-Fi

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



Power Efficient

Engineered for low power consumption, perfect for battery-operated and energy-sensitive applications where efficiency matters.



Online Technical Help

Provides expert resources and guidance to streamlined development 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 x 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



	PICO-IMX6		PICO-IMX7		PICO-IMX8M		PICO-IMX8M-MINI		PICO-IMX91		PICO-IMX93	
Core System												
Processor	NXP i.MX6 Solo/ DualLite/ Quad		NXP i.MX7 Dual		NXP i.MX8M Quad		NXP i.MX8M Mini		NXP i.MX91		NXP i.MX93	
Architecture	ARM Cortex-A9		ARM Cortex-A7 + M4		ARM Cortex-A53 + M4		ARM Cortex-A53 + M4		Arm Cortex-A55		ARM Cortex-A55 + M33	
PMIC	Discrete Power Solution		NXP PF3000		ROHM BD71837		ROHM BD71847		NXP PF9453		NXP PCA9451	
Memory	Up to 1GB DDR3L		Up to 2GB DDR3L		Up to 8GB LPDDR4		Up to 8GB LPDDR4		2GB LPDDR4 (16bit)		Up to 2GB LPDDR4x (16bit)	
Storage	16GB eMMC (default), MicroSD Cardslot (optional)		16GB eMMC (std), MicroSD Cardslot (optional)		16GB eMMC (default)		16GB eMMC (default)		32GB eMMC (default)		32GB eMMC (default)	
Debug Interface	UART		UART		UART		UART		UART		UART	
AI / Vision Capabilities												
NPU / AI	-		-		OpenCL CPU: 32 GOPS		OpenCL CPU: 32 GOPS		-		NPU Ethos U-65 0.5 TOPS	
Camera	2x MIPI CSI-2 (4 lane)		MIPI CSI-2 (2 lanes)		MIPI CSI (4 lanes)		MIPI CSI (4 lanes)		-		MIPI CSI-2 (2 lanes)	
Connectivity												
Network LAN	RGMII		RGMII		RGMII		RGMII		RGMII		RGMII	
Wi-Fi	Qualcomm Atheros QCA9377 Wi-Fi 5 – 802.11 a/b/g/n/ac (optional)		Qualcomm Atheros QCA9377 Wi-Fi 5 – 802.11 a/b/g/n/ac (optional)		Qualcomm Atheros QCA9377 Wi-Fi 5 – 802.11 a/b/g/n/ac (optional)		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)	
Bluetooth	Qualcomm Atheros QCA9377 Bluetooth (optional)		Qualcomm Atheros QCA9377 Bluetooth (optional)		Qualcomm Atheros QCA9377 Wi-Fi 5 – 802.11 a/b/g/n/ac (optional)		Qualcomm Atheros QCA9377 Bluetooth (optional)		NXP IW416 Bluetooth (optional)		NXP IW416 Bluetooth (optional)	
Antenna	MHF4 connector (optional)		MHF4 connector (optional)		MHF4 connector (optional)		MHF4 connector (optional)		MHF4 connector (optional)		MHF4 connector (optional)	
Signaling												
	RGMII HDMI LVDS TTL RGB MIPI CSI MIPI DSI PCIe SATA USB	USB OTG I²S SDIO CAN UART SPI I²C PWM GPIO	RGMII TTL RGB MIPI CSI MIPI DSI PCIe USB USB OTG	I²S SDIO CAN UART SPI I²C PWM GPIO	RGMII HDMI LAN MIPI CSI MIPI DSI PCIe USB USB OTG	I²S SDIO UART SPI I²C PWM GPIO	RGMII MIPI CSI MIPI DSI PCIe USB USB OTG I²S	SDIO UART SPI I²C PWM GPIO	TTL RGB USB 2.0 I2S UART I2C	SDIO PWM GPIO RGMII	LVDS TTL RGB MIPI DSI MIPI CSI-2 LAN USB 2.0 I2S	CAN UART I2C SDIO PWM GPIO
Video												
GPU Engine	Vivante GC2000 (Quad) Vivante GC320 (2D Composition) Vivante GC355 (Quad) Vivante GC880 (Solo/DualLite)		Image re-sizing / rotation / overlay and CSC Pixel Processing Pipeline		GC7000Lite (4 shaders) Ope nGL® ES 2.0/3.0/3.1, Vulkan®, OpenCL™ 1.2		GC NanoUltra (1 shader) GC520L (2D) OpenGL ES 2.0		-		PXP - Hardware Compositor	
Video Decode	1080p30+D1(Solo/DualLite), 1080p60 H.264 (Quad)		-		4Kp60 HEVC, VP9, 4Kp30 H.264, legacy		1080p60 H.265, H.264, VP9, VP8 1080p60 H.264		-		-	
Video Encode	BP / Dual 720p		-		-		-		-		-	
Audio												
Audio Codec	On carrier board		On carrier board		On carrier board		On carrier board		On carrier board		On carrier board	
Audio Interface	I²S (2 channel)		I²S (2 channel)		I²S (2 channel)		I²S (2 channel)		I²S		I²S	
Operation Systems												
Standard Support	Linux, Yocto, Android, Ubuntu		Linux, Yocto, Android, Ubuntu		Linux, Yocto, Android, Ubuntu/Debian		Linux, Yocto, Android, Ubuntu/Debian		Linux, Yocto		Linux, Yocto, Debian	
Extended Support	Commercial Linux		Commercial Linux Real Time OS (FreeRTOS)		Commercial Linux Real Time OS (FreeRTOS)		Commercial Linux Real Time OS (FreeRTOS)		-		-	
Mechanical												
Dimensions	58 (W) x 37 (H) x 5.07 (D)mm		40 (W) x 37 (H) x 5.15 (D) mm		40 (W) x 37 (H) x 5.15 (D) mm		40 (W) x 37 (H) x 5 (D) mm		40 (W) x 37 (H) x 5 (D) mm		40 (W) x 37 (H) x 5 (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
AR0144 Global Color	AR0521 Rolling Color	AR0821 Rolling Color	AR1335 Rolling Color
AR0145 Global Mono	AR0522 Rolling Color/Mono	AR0822 Rolling Color/Mono	
AR0234 Global Color		AR0830 Rolling Color/Mono	
AR0235 Global Mono			



VizionSDK



VizionViewer™

