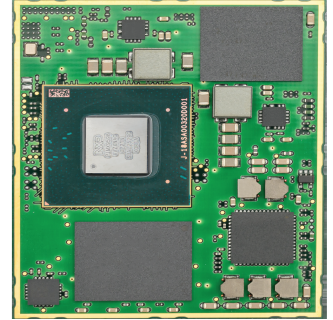


# EP-200N System-on-Module

High-Performance, Always-Connected Edge Computing  
Powered by NXP i.MX95



## OVERVIEW

The EP-200N is a compact, production-ready System-on-Module (SoM) built on NXP's i.MX95 applications processor. Designed for next-generation connected edge devices, it exposes the full connectivity and performance capabilities of the i.MX95 in a compact 40mm x 50mm surface-mount module.

Pre-integrated with Yocto Linux and the Silex SX-SDMAX6E Wi-Fi 6E solution (powered by NXP IW623), the EP-200N delivers robust, industrial-grade wireless connectivity out of the box. With pre-validated SoC and Wi-Fi integration, it significantly reduces development complexity and accelerates time to market.

The EP-200N is engineered for scalable AI, real-time control, and high-performance edge computing in demanding industrial environments.

## KEY FEATURES & BENEFITS

- Production-ready SoM for connected edge (i.MX95)
- Hexa-core Cortex-A55 up to 1.8 GHz + M7/M33
- Integrated GPU, ISP & NPU (PCIe expandable)
- Industrial Wi-Fi 6E (SX-SDMAX6E / IW623, SDIO)
- Yocto Linux with validated drivers
- Up to 8GB LPDDR4, 32GB eMMC
- Highly reliable always-on connectivity
- Long-term lifecycle support
- Pre-validated HW & Linux BSP
- Compact surface-mount form factor

## THE EP-200N ADVANTAGE

### Always-On Connectivity with Wi-Fi Expertise



Industrial Grade Wi-Fi 6E optimized for high reliability and superior power efficiency

### Power-Efficient, Secure AI-Accelerated Edge Processors



Cortex-A55 hexa-core CPU, real-time cores and NPU

### Scalable Edge AI



Integrated NPU with PCIe expansion for advanced AI workloads

### Versatile Interfaces



Reliable, always-on connectivity

# USE CASES

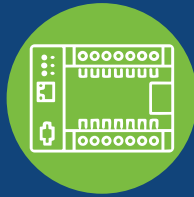
Designed for Healthcare and Industrial Automation.



Smart Hospital Bed



Sensor Hub



PLC



HMI



Connected Edge computer

## Feature List

Model number	EP-200N		
Processors	6 x ARM Cortex-A55 up to 1.8GHz, ARM Cortex-M33, ARM Cortex-M7		
GPU	Arm® Mali™ 3D GPU + 2D GPU • OpenGL ES 3.2, Vulkan 1.2, OpenCL 3.0		
NPU	NXP eIQ® Neutron Neural Processing Unit	2.3 TOPS (8 eTOPS)	
ISP	NXP ISP with RGB-IR support		
DPU	1x 333Mpixel/s MIPI-DSI (4-lane, 2.5 Gbps/lane) supporting 4K30P or 3840x1440P60 Up to 1080p60 LVDS Tx (1x 8-lane) or 2x 1080P30 (2x 4-lane)		
VPU	4K60P H.265/H.264 decode or encode (4K30P H.265/H.264 simultaneous encode & decode)		
Memory/Storage	8GB LPDDR5 32-bit up to 6.4GT/s 32-bit 32GB eMMC Ver 5.1 compliant		
Network Interfaces	1x10GbE + 2x Gb Ethernet w/TSN; AVB and IEEE 1588 for sync; EEE		
Display Interfaces	1x 4-lane MIPI DSI ▪ Exclusive use with one of MIPI CSI 2x LVDS	DSI: Up to 4kp30 or 3840x1440p60 LVDS: Up to 1080p60 LVDS Tx (2x 4-lane or 1x 8-lane) Up to three concurrent display output	
Camera Interfaces	2x 4-lane MIPI CSI ▪ One is exclusive use with MIPI DSI	Up to 1x4Kp60fps, 2x4Kp30, 4x1080p60, or 8x1080p30 cameras with MIPI virtual channels	
PCI Express	2x PCIe Gen 3 (1 lane)		
USB	1x USB 3.0 1x USB 2.0 with PHY		
SDC	3x 4-bit SDIO		
CAN Interface	5x CAN-FD		
Peripheral interfaces	Customizable by BSP		
Power supply	DC 5V±5%		
Power consumption	T.B.D.		
Size	40mm x 50mm x (height T.B.D.)	Form-factor	LGA package
Operating temperature	-40°C - 85°C		
Operating humidity	20% - 90% without condensation		

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