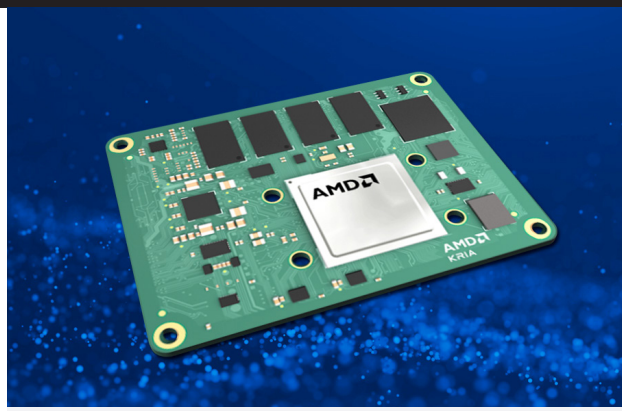
PRODUCT BRIEF

Kria™ K26 System-on-Module



OVERVIEW

The Kria™ K26 SOM is the fastest path to achieving whole application acceleration at the edge. Optimized for Vision AI applications, the K26 SOM combines high AI performance with the adaptability necessary to keep up with evolving algorithms and sensor requirements. With credit-card-sized form factor, and available in production-qualified and certified Commercial and Industrial grades, K26 SOMs are built for volume edge deployment.

Based on the Zynq™ UltraScale+™ MPSoC architecture, the K26 SOM is capable of up to 1.4TOPS AI processing and has an integrated H.264/265 video codec. With 245 I/Os, the K26 SOM can adapt to virtually any requirement – you can connect up to 15 cameras across multiple interfaces, connect to networks at up to 40Gb/s, and have access to a wide range of USB peripherals. The resulting platform is highly scalable, with many possible end applications, and expandable for evolving system requirements.

Developed with software developers in mind, the K26 SOM is out-of-the-box ready and enabled by pre-built accelerated applications for common vision functions. Whatever your FPGA knowledge, Kria SOMs will speed your development and improve time-to-market.

HIGHLIGHTS

Out-of-the-Box Ready for Software Developers

> Begin development on the KV260 Vision AI Starter Kit, complete with carrier card
> Supports Yocto-based PetaLinux and Ubuntu Linux
> App store with pre-built accelerated applications for common vision applications
> Customize your specific design with familiar AMD design tools
> Deploy unique design in volume with the K26 SOM

Performance and Power Advantages versus Competing SOMs

> 3X AI performance versus Nvidia Jetson Nano
> Similar performance at half the power versus Nvidia TX2i
> Superior performance across common AI benchmarks
> Accelerate the whole application from AI to control

Future Proof — Stay Deployed Longer

> Adapt to any sensor, any interface as standards change
> Upgradeable deep learning processing unit (DPU) adapts as AI models evolve
> Ruggedized for long life cycle operation in harsh industrial environments
> Meets best-in-class IEC 62443 standards, adapts to threats across life cycle

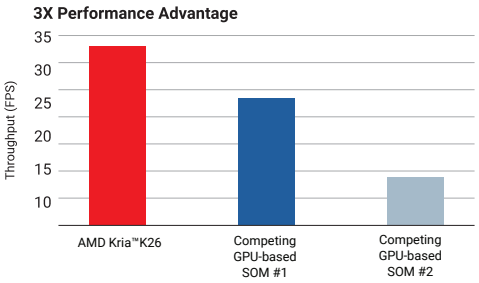
TARGET APPLICATIONS

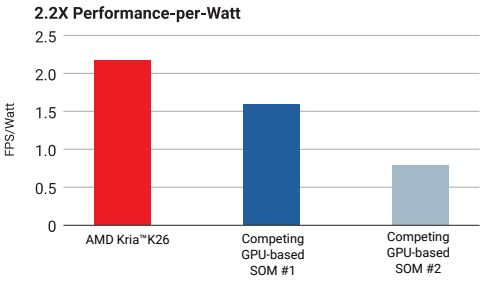
> Security Cameras
> Smart City
> Retail Analytics
> Machine Vision
> Vision-Guided Robotics

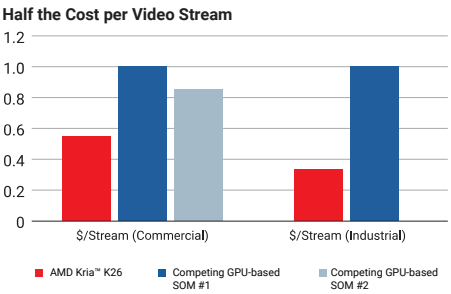
	K26	K26 Industrial SOM
Operating Temp Range	0°C to 85°C	–40°C to 100°C
Warranty	2 years	3 years
Expected Product Lifetime	5 years	10 years
Product Availability	10 years	10 years

BENCHMARKS

Video Pipeline with AI







SPECIFICATIONS

COMPUTE	
Application Processor	64-bit Quad-Core Arm® Cortex®-A53
Real-Time Processor	32-bit Dual-Core Arm Cortex-R5F
Graphics Processor	Arm Mali™-400MP2
Programmable Logic	256K System Logic Cells
Deep Learning Processor	4K INT8 (upgradeable to INT4)
Video Codec (H.264/H.265)	Up to 32 Streams (total resolution ≤ 4Kp60)
Memory	26.6Mb On-Chip SRAM
Security	TPM2.0 supporting IEC62443

INTERFACES	
Camera	11 x4 Full MIPI or sub-LVDS Interfaces 1 x4 SLVS-EC Interfaces
USB	4x USB 2.0 / 3.0
Multi-Media	DisplayPort, HDMI
Network	1Gb up to 40Gb Ethernet (w/GigE Vision)
Memory Interface	4GB 64-bit DDR4
Transceivers	4x 12.5Gb/s, 4x 6Gb/s
Mechanical	77 x 60 x 11mm w/ dual 240-pin connectors

See WP529 for more K26 benchmarking details

K26 SOM pictured with included heat spreader

TAKE THE NEXT STEP

For more information about Kria K26 SOMs, visit https://www.xilinx.com/products/som/kria.html