



KRIA™ SOM PRODUCT SELECTION GUIDE

Kria SOM Products Overview

SOM-based Development Kits

Kria™ KV260
Vision AI Starter Kit



SK-KV260-G

For vision and smart city applications with latest AI models

Kria KR260
Robotics Starter Kit



SK-KR260-G

For industrial systems including ROS2-based robotics applications

Kria KD240
Drives Starter Kit



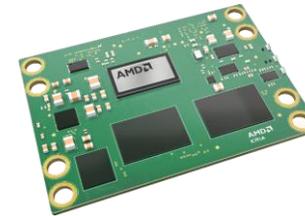
SK-KD240-G

For deterministic motor control and DSP applications

Production Modules

Fully Qualified & Certified

Kria K24 SOM



SM-K24-XCL2GC/I

Cost-optimized SOM for lower power, smaller form-factor & cost sensitive applications

Kria K26 SOM



SM-K26-XCL2GC/I

Mid-range SOM for vision AI and robotics applications requiring higher performance per watt

- Connector compatible between SOMs
- Offered in C-Grade and I-Grade



Kria™ SOM Product Table

Area	Parameter	K24	K26
Silicon Device	Zynq™ UltraScale+™ MPSoC	XCK24 (A530 InFO package, custom and optimized device for motor control and DSP apps)	XCK26 (D784 package, custom and optimized device for vision AI and robotics apps)
SOM to Carrier Connectors	Samtec Connector	1x 240-pin, 1x 40-pin	2x 240-pin
Form Factor	Dimensions (with heat spreader)	60 x 42 x 11 mm	77 x 60 x 11 mm
Processor Unit & Acceleration	Application Processor	Quad-core Arm® Cortex®-A53 MPCore™ at 1.33 GHz	
	Real-Time Processor	Dual-core Arm Cortex-R5F MPCore at 553 MHz	
	Graphics Processing Unit	Mali™-400 MP2 at 600 MHz	
	Deep Learning Processor Unit (DPU)	INT8 (852 GOPs with B2304 DPU)	Up to 1.4 TOPS with B4096 at 300 MHz
	Trusted Platform Module (TPM)	Infineon 2.0	
Memory	On-Chip ⁽¹⁾	9.4 Mb On-Chip SRAM	26.6 Mb On-Chip SRAM
	On-SOM	2 GB 32-bit LPDDR4 @ 1066 Mb/s w/ ECC configuration and 32 GB eMMC	4 GB 64-bit DDR4 (non-ECC) and 16 GB eMMC
Connectivity	High-Speed PS Connectivity (GTR)	PCIe® Gen2 x4, 2x USB3.0, SATA 3.1, DisplayPort, 4x Tri-mode Gigabit Ethernet	
	General PS Connectivity (MIO)	2x USB 2.0, 2x SD/SDIO, 2x UART, 2x CAN 2.0B, 2x I2C, 2x SPI, 4x 32b GPIO	
Transceivers	GTH 12.5 Gb/s Transceivers ⁽⁴⁾	-	4 (PCIe Gen3 x4, SLVS-EC, HDMI 2.0, DisplayPort 1.4) ⁽²⁾
	GTR 6 Gb/s Transceivers	4	4
I/O Count	PS MIO (1.8V)	49	52
	PL High-Density I/O (HDIO) (3.3V)	23	69
	PL High-Performance I/O (HPIO) (1.8V)	56	116
Programmable Logic	System Logic Cells (K)	154	256
	DSP Slices	360	1,248
Integrated IP	Video Codec Unit (VCU) H.265/H.264	-	1x up to 32 streams (total resolution ≤ 4Kp60)
	PCI Express Gen 3x16	-	2x Gen3x8 ⁽⁵⁾
Power & Thermal	Typical Power	2.5W ⁽³⁾	7.5W
	Maximum Power ⁽²⁾	7.5W ⁽³⁾	15W
	Thermal Interface	Passive (Clam shell thermal plates)	Passive (Heat spreader)
Speed and Temperature Grades	Commercial	-2 speed grade, low voltage and 0 to 85°C temperature range	
	Industrial	-2 speed grade, low voltage and -40 to 100°C temperature range	

1. On-Chip Memory (Mb) = Max. Distributed RAM + Total Block RAM + UltraRAM
2. Estimated and subject to change based on actual hardware evaluation

3. Estimated values based on theoretical data
4. For the I-grade SOM, the data rate is 10.3125 Gb/s (only C-grade offers 12.5 Gb/s)

5. PCIe block configuration dependent on available transceivers XMP499 (v1.0)

Kria™ Starter Kit Product Table

Comparison Metric	Feature	KV260 Vision AI Starter Kit	KR260 Robotics Starter Kit	KD240 Drives Starter Kit
SOM used on the Starter Kit	Non-Production SOM ⁽¹⁾	K26 SOM		K24 SOM
SOM to Carrier Connector	Samtec Connector	1x 240-pin	2x 240-pin	1x 240-pin, 1x 40-pin
Networking/Comms	RJ-45	1x	4x (2x Processor Sub-system (PS), 2x Programmable Logic (PL))	3x (1x PS, 2x PL)
	SFP+	-	1x for GigE Vision	-
	RS-485	-	-	1x (PS-based)
	CAN	-	-	1x (PS-based)
Debug & Trace	JTAG PC4 Header (Debug)	Yes		
Security	Zynq™ UltraScale+™ MPSoC hardware root of trust (RoT) in support of secure boot. Infineon TPM2.0 in support of measured boot.			
Expansion Connectors	Pmod (12-pin)	1x	4x	1x (for IMU, supporting interfaces)
	Expansion	-	Raspberry Pi HAT header (26 I/Os)	-
Memory/Boot Options	PS (capacity / width)	4GB (4 x 512Mb x 16 bit) [non-ECC]		2GB LPDDR (2 channel x 256 Mb x 16 bit/channel) [non-ECC]
	QSPI	512 Mb QSPI, Primary Boot Option		
	microSD Card	Yes (up to 64GB), Secondary Boot Option		
Camera	MIPI	2x IAS interface (+AP1302 ISP)	-	-
	SLVS-EC	-	1x (Gen2 x 2 lane)	-
	Raspberry Pi	Yes	-	-
	USB 3.0 / 2.0 Downstream	x4 (Host, can also be used for other peripherals)		2x (Host, can also be used for other peripherals)
Video	HDMI Out	Yes	-	-
	DisplayPort Out	Yes		-
	Video Codec Unit	Yes – 4K60p; H.264/265 Video Codec		-
Motors Control Interfaces and Sensor Peripherals	3-Phase Motor Connector	-		x1
	QEI Connector	-		x1 Single Ended and x1 Differential, (with on board 2-pin header that is used to choose one of them)
	Torque Sensor Connector	-		x1
	Brake Control Connector	-		x1
	DC Link Connector	-		x1
	1-Wire Interface	-		x1
Supported Accessories ⁽²⁾	Accessory packs sold by AMD	Kria™ KV260 Basic Accessory Pack (BACCP) Kria KV260 Power Supply and Adapter	Sony IMX547 Camera Kit (Offered in Color and Monochrome Versions)	Motor Accessory Pack (MACCP)

1. Defeatured version of the production SOM, lacks eMMC boot options and is not fully qualified for reliability in harsh environments

2. Accessories are sold separately

Kria™ SOM Products Ordering Information

Product Type Indicator

SM

Product Type
SM: Production SOM

Product Attributes

K

Product Line
K: Kria

2

Device node
2: MPSoC (16 nm)
3: Versal (7 nm)

6

Device density/capability
0-4: Low-end
4-6: Mid-range
7-9: High-end

Product Definition

XC

Device Grade
XC: Commercial

L

Voltage
L: Low (0.7V)
M: Mid (0.80V)
H: High (0.88V)

2

Speed Grade
-1: Slowest
-2: Mid
-3: Highest

G

RoHS Indicator
G: RoHS Compliant

C

Temp Grade
C: 0 to 85°C⁽¹⁾
I: -40 to 100°C⁽¹⁾

Product Type Indicator

SK

Product Type
SK: Starter Kit

Product Attributes

K

Product Line
K: Kria

V

Starter Kit Target Application Identifier
V: Vision
R: Robotics
D: Drives

2

Device node
2: MPSoC (16nm)
3: Versal (7nm)

6

Device density/capability
0-4: Low-end
4-6: Mid-range
7-9: High-end

0

Reserved Character

Product Definition

G

RoHS Indicator
G: RoHS Compliant

Note:
1. The K26 SOM maximum operating temperature is the temperature below which the product will operate at the specified clock speeds.



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