

Kria™ KR260 Robotics Starter Kit

OVERVIEW

The Kria™ KR260 Robotics Starter Kit is a Kria SOM-based development platform for robotics and factory automation applications. It enables roboticists and industrial developers without FPGA expertise to develop hardware accelerated applications for robotics, machine vision, and industrial communication & control. Developers benefit with greater flexibility from native ROS 2 and Ubuntu support along with increased productivity through the Kria Robotics Stack (KRS).

The pre-built interfaces and accelerated applications make the KR260 an ideal platform to accelerate robotics innovation and take those ideas to volume production deployment with commercial- and industrial-grade Kria K26 SOMs.

HIGHLIGHTS

Instant-On Robotics Platform

- > Enables software-defined, hardware-accelerated applications for robotics
- > Provides deterministic communication across robotics internal network
- > Integrates any sensor (e.g., vision, radar, LiDAR) for perception
- > Leverages Modbus over Pmod for actuation

Time Sensitive Networking

- > Accurate time synchronization over Ethernet (IEEE Std 802.1AS)
- > Two TSN ports with built-in switch eliminates external TSN switch
- > Ethernet with support for converged traffic classes and data types

High-Performance Machine Vision

- > SLVS-EC sensor RX connector for high-performance vision
- > SFP+ cage (10G) for 10GigE Vision
- > Partner IP available for sensor and network connectivity
- > Lightweight ISP optimized for low latency with Vitis™ Vision libraries



TARGET APPLICATIONS

Robotics

- > Collaborative Robots
- > Surgical Robots
- > Autonomous Mobile Robots (AMRs)
- > Automated Guided Vehicles (AGVs)
- > Aerial Robots
- > Delivery Robots
- > Cartesian Robots
- > Hospitality Robots

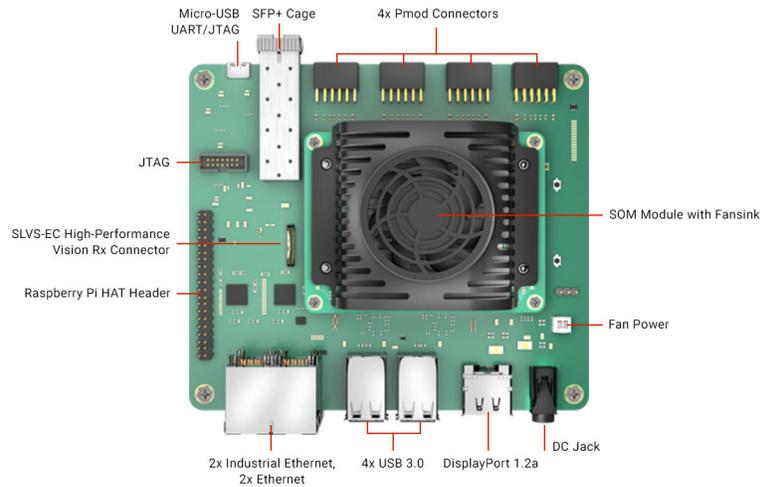
Industrial Communication & Control

- > Programmable Logic Controllers (PLC)
- > Programmable Automation Controllers (PAC)
- > Computer Numerical Control Router (CNC)
- > Wired/Wireless Secure Industrial Gateway

Machine Vision

- > SLVS-EC Sensor-Based Camera
- > USB-Stereo Camera
- > 1/10GigE Vision / CXP over Fiber

WHAT'S INSIDE



PARAMETER	KR260 STARTER KIT
Device	Zynq™ UltraScale+™ MPSoC EV (XCK26)
Form factor	SOM + Carrier Card + Thermal Solution
Starter kit dimensions	119mm x 140mm x 36mm
Thermal cooling solution	Active (Fan + Heatsink)
System logic cells	256K
Block RAM blocks	144
UltraRAM blocks	64
DSP slices	1.2K
Ethernet interfaces	4x 10/100/1000 Mb/s RJ-45s 1x SFP+ Cage
DDR memory	4GB (4 x 512Mb x 16 bit) [non-ECC] DDR4
Primary boot memory	512Mb QSPI
Secondary boot memory	SDHC card
Device security	Zynq UltraScale+ MPSoC hardware root of trust (RoT) in support of secure boot. Infineon TPM 2.0 in support of measured boot.
Video	x1 SLVS-EC Gen2 x2 lane interface DisplayPort 1.2a Output for 1920 x 1080 at 60Hz
I/O expansion	x4 Pmod 12-pin interface x1 Raspberry Pi HAT header with 26 I/Os
USB3.0/2.0 interfaces	x4

TAKE THE NEXT STEP

For more information, documents, and reference designs, or to purchase, visit xilinx.com/kr260

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