PRODUCT BRIEF

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

### Kria KR260 Robotics Starter Kit

![Diagram of Kria KR260 Robotics Starter Kit](image)

### Parameter	| KR260 Starter Kit
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**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 about the Kria KR260 Robotics Starter Kit, visit [www.xilinx.com/kr260](http://www.xilinx.com/kr260)