

KRIA KD240 DRIVES STARTER KIT

Out-of-the-box ready motor control development kit based on the Kria K24 SOM

OVERVIEW

The AMD Kria™ KD240 Drives Starter Kit is a K24 SOM-based development platform that targets motor control and DSP applications. It enables embedded software and control systems developers without FPGA expertise to develop multiple target applications, such as robotics drives/actuators, industrial motors, industrial Ethernet gateways/sensors, EV charging stations, medical equipment, and aerial systems.

The KD240 Starter Kit is focused on ease of use and is supported through a variety of pre-built accelerated applications available from the Kria Apps Store. Developers benefit with greater flexibility from Ubuntu support and PYNQ-based development flows on a competitively priced FPGA-based platform.

The pre-built interfaces and accelerated applications make the KD240 an ideal platform to accelerate DSP innovation primarily in drives and allows developers to take their ideas to volume production deployment with commercial- and industrial-grade Kria K24 SOMs.

HIGHLIGHTS

End-to-End Solution for Embedded Software Developers

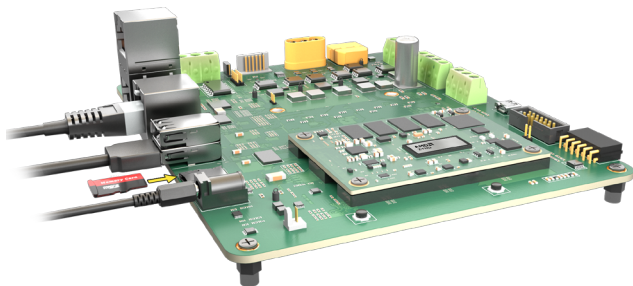
- A variety of motor control interfaces to build target DSP applications
- Implementing customizable designs without access to HW expertise
- Supported by software tool flows and the latest Ubuntu OS

Cost Effective, Faster Time to Deployment

- Affordable motor control solution for small to mid-sized providers
- Easy to use all-in-one platform; no power stage or extension boards needed
- Fast initial hardware bring-up and prototyping using Kria KD240 Motor Accessory Packs

Accessible to Design Communities

- Supported by open standards, app store, and free resources
- Active forum support to get your questions answered by the community



FEATURES

DRIVES APPLICATION READY

- 3-phase Inverter, Quadrature Encoder
- Brake Control, Torque Sensor Interface

NETWORK & GENERAL CONNECTIVITY

- 3x 1 Gb Ethernet (1x PS, 2x TSN-enabled Ethernet)
- CAN, RS-485, USB 3.0/2.0 (2-port Hub)

PMOD EXPANSION

- Extended to a wide range of compatible sensors
- Access to Pmod ecosystem

EASE OF USE & ACCESSIBLE

- Low-cost, FPGA-based motor control kit, enabling design exploration
- Available from AMD and distributors worldwide

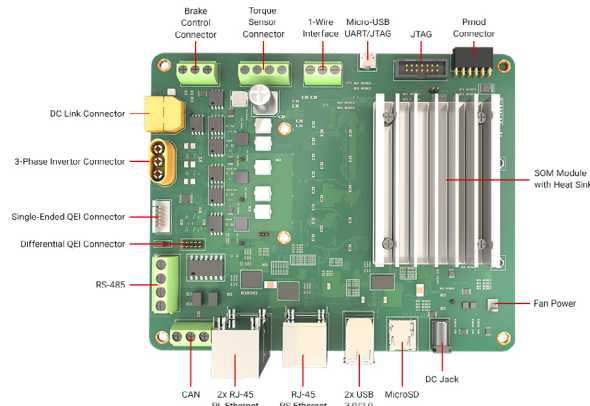
To get started, go to:
www.amd.com/kd240-start



Elevate your KD240 development experience by purchasing the [Kria KD240 Motor Accessory Pack*](#)

*sold separately

SPECIFICATIONS



PARAMETER

Device	Zynq™ UltraScale+™ MPSoC (XCK24)
Form Factor	SOM + carrier card + passive thermal solution
Dimension, Weight	124 mm x 142 mm x 37 mm, 237g
System Logic Cells, DSP Slices	154K, 360
Block RAM, UltraRAM Blocks	216, 0
Ethernet Interfaces	x1 PS (GEM1) Gb RGMII Ethernet x2 PL Gb RGMII Ethernet with time-sensitive networking (TSN), Ethernet for control automation technology (EtherCAT) support
LPDDR4 Memory	2 GB (2 channel x 256 Mb x 16 bit/channel)
Primary Boot Memory, Secondary Boot Memory	512 Mb QSPI, MicroSD card
Device Security Features	Zynq UltraScale+ MPSoC hardware root of trust (RoT) for secure boot; Infineon TPM2.0 for measured boot
USB 3.0 Interface	USB 3.0 downstream (Host) with two user physical ports
PMOD 12-pin Interface	x1, supporting interfaces
CAN Connector, RS-485 Connector	PS-based CAN (1), RS-485 (1)
QEI Connector	x1 single ended and 1x differential with onboard two-pin header for selection
Drives Application-Ready Connectors	Torque Sensor Connector (1), 3-phase Motor Connector (1), Brake Control Connector (1)
DC Link Connector, 1-wire Interface	x1 each

TAKE THE NEXT STEP

- For more information, documents, and reference designs, or to purchase, visit www.amd.com/kd240

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