

# 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

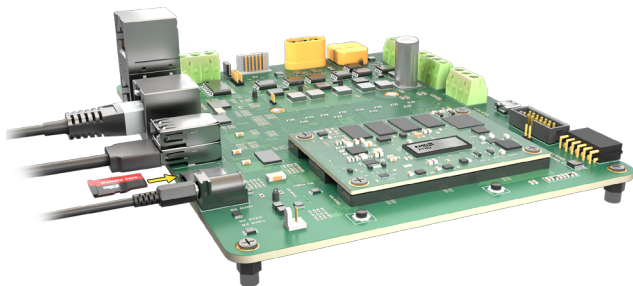
- A variety of motor control interfaces to build target DSP applications
- Implementing customizable designs without access to HW expertise
- Supported by software tool flows and the latest Ubuntu OS

### 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

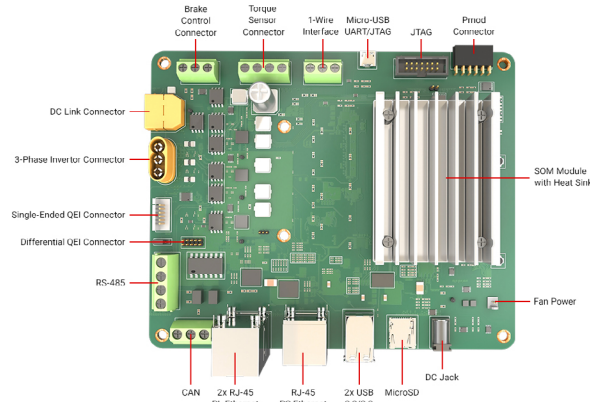
To get started, go to:  
[www.amd.com/kd240-start](http://www.amd.com/kd240-start)



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

\*sold separately

# SPECIFICATIONS



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

## TAKE THE NEXT STEP

- For more information, documents, and reference designs, or to purchase, visit [www.amd.com/kd240](http://www.amd.com/kd240)

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