

# **KPA EtherCAT Master Development Kit**

KPA EtherCAT Master Development Kit (MDK) enables OEMs to integrate KPA EtherCAT Master (Master) functionality. The MDK is available for various platforms and any of the following real-time operating systems (OS): INtime, RTX64, Linux, Xenomai, QNX, VxWorks, FreeRTOS, Windows.

**NOTE** Some OS like Windows XP, CE6/7, OnTime RTOS-32, PikeOS, RTAI are ported, but not actively supported.

## Introduction

The MDK consists out of up to seven parts.

#### Master runtime package (MRT) with licenses

- · Binaries and user manuals (development manuals included in MIP)
- 1x KPA EtherCAT Master Standard License (ETG 1500 "class A" master)
- 1x KPA EtherCAT Master Full (ETG 1500 "class A" including all Features and Extensions)

### Master integration package (MIP)

- Master Core API
- Operation System Abstraction Layer (OSAL) (optionally in source code)
- Remote Procedure Call (RPC) Server (optionally in source code)
- More than 20 samples in source code and documents:
  - Master architecture, white paper
  - MDK manuals, programmers guide
  - API (Application Programming Interface) help

#### **EtherCAT Studio executables**

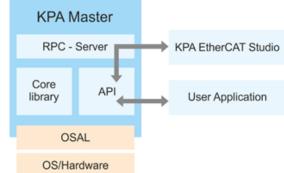
- KPA EtherCAT Studio Premium run-time including all plug-ins and user manuals for configuration and diagnostics of EtherCAT® network
- 1x KPA EtherCAT Studio license

#### Support and maintenance (S&M)

- Technical support and updates of EtherCAT Master/Studio for selected OS with access to Ticket System for one year
- Prolongation on annual base upon request

#### **MDK tutorials**

- How to use KPA EtherCAT Master for selected OS
- How to use KPA EtherCAT Studio with Master for selected OS





• How to configure EtherCAT network, DC, modules and other specifics

### **Optional IP-Cores and drivers (depending on target platform and OS)**

- Encrypted Binaries of IP-Cores
- OS dependent drivers in binary and optionally source code

#### Optional custom build

- custom OSAL implementation (including custom drivers and own OS support)
- custom BSP selection/implementation
- custom toolchain (specific compiler versions)
- target integration

**Optional Products based on MDK** (see separate documents): Master and OSAL in source code, Motion Development Kit.

### **MDK and MDK Trial comparison**

ltem	Criteria	MDK	MDK Trial
	Purpose	Development	Evaluation
1	Master Integration Package (MIP)	Yes	Yes
2	MDK Tutorials	Yes	Yes
3	Licenses for Master Runtime (MRT)	2 <sup>[1]</sup>	Trial <sup>[2]</sup>
4	KPA EtherCAT Studio License	Premium unlimited	Trial <sup>[3]</sup>
5	Support & Maintenance <sup>[4]</sup>	1 year	3 months
6	FPGA IP-Core(s) with drivers	encrypted IPs <sup>[5]</sup>	encrypted IPs <sup>[5]</sup>
7	Optional custom build	Yes	Yes
8	Optional RPC Client package	Yes	Yes
9	Optional Python Interface Library	Yes	Yes

<sup>1</sup>1x Standard license and 1x Full license.

<sup>2</sup>Trial Master uses trial license and works for one hour in Operational.

<sup>3</sup>Trial Studio uses trial License, works only with Trial Master and has limited functionality.

<sup>4</sup>S&M-conditions you find on our customer portal area.

<sup>5</sup>Depending on OS drivers are provided as a static libraries or kernel modules with source code upon request.

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are managed according to our quality management system.

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 $\label{eq:charge} \ensuremath{\mathsf{EtherCAT}}\xspace{\ensuremath{\mathsf{\$}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}\xspace{\ensuremath{\mathsf{s}}}$