



KPA EtherCAT Slave Stack is a software stack designed to run on microcontrollers, CPUs or DSPs with or without any Operating System (OS) and provided as source code or compiled library.

1 General

- Code written in "ANSI C"
- Based on EtherCAT Norm
- Verified with Conformance Test Tool (CTT)
- Small footprint for 8- and 16 Bit- Microcontrollers
 - SAB 80x16x (Infineon)
 - ARM 3..9, ATmega128 (Atmel)
 - ppc 52xx, MPC8536 (Freescale)
 - Microblaze (Xilinx)
 - Sitara AM335x with integrated ESC in PRUs (TI), C2000 (TI)
- RAM size depending on size of Object Dictionary (OD) For static OD \geq **3kB Basic (8kB Standard)**
- ROM (flash) \geq **55kB Basic (64kB Standard)**
- Charts of slave architecture

2 Interfaces

- Compatible with any Beckhoff's EtherCAT Slave Controllers (ESC): ET1x00 and IP-Core
- Supporting ESC integrated in Sitara AM335x (TI)
- IRQ-handling of hardware events
- Polling of Mailbox (Mbx) and Process Image
- Operating System -based or OS-less
- Hardware Abstraction Layer instead of separate "defines"

3 Standard version of Slave Stack

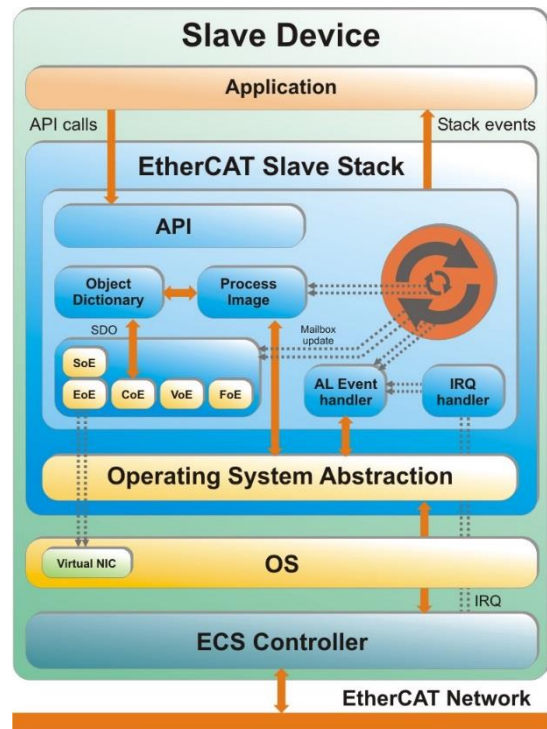
- Mailbox protocols: **CoE, EoE, FoE, SoE VoE**
- Runtime **generation / changing** of Object Dictionary (OD)
 - using standard xml file or
 - customer-specific OD-description data from ROM, flash memory or ECS's EEPROM
- Adapted to operating system by using **Operating System Abstraction Layer (OSAL)**
- **Virtual NIC** support used for EoE (depending on OS)

4 Basic version of Slave Stack

- Mailbox protocol: CoE
- **Static Object Dictionary** with pointer given from application
- With / without Interrupt Service Routines (ISR)

5 Delivery of all source code versions includes

- Source code license after bidirectional contract is signed.
- Manuals, API help and sample applications.
- One year of support and maintenance is included (and can be extended).



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