

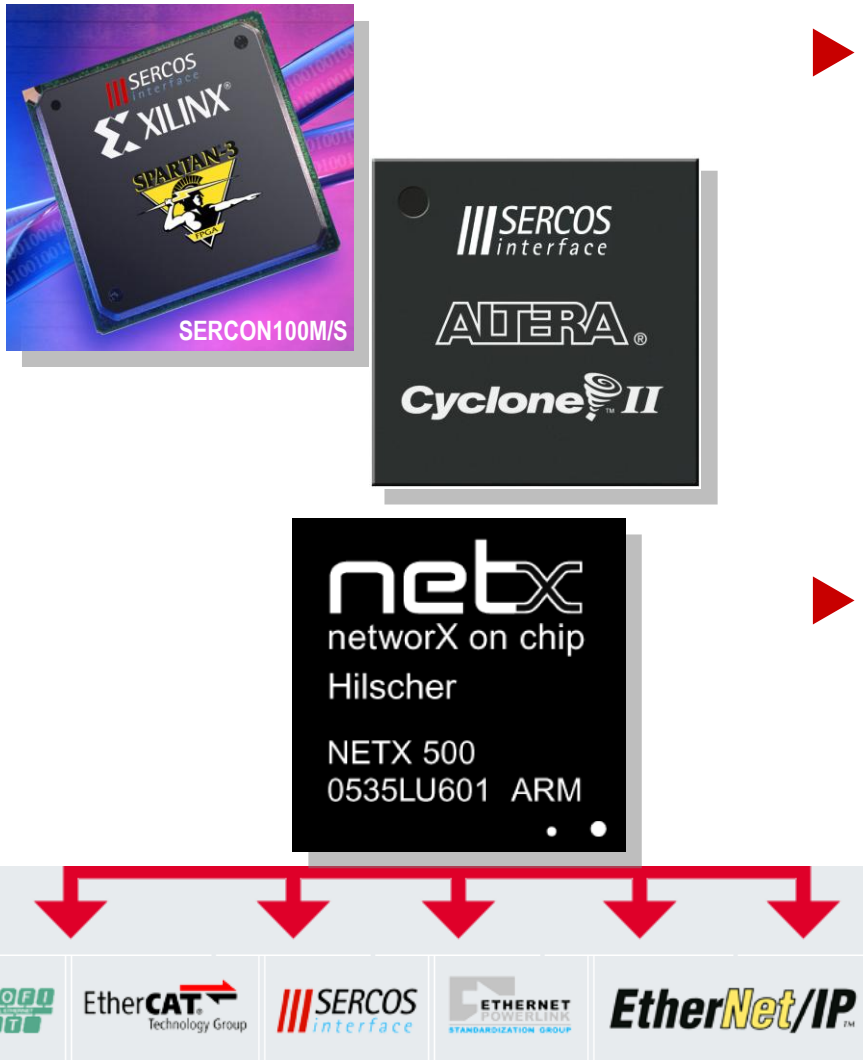


SERCOS III Implementation

SERCOS Seminar Atlanta
September 16, 2009

*Peter Lutz, Managing Director
SERCOS International e.V.*

SERCOS III – Hardware

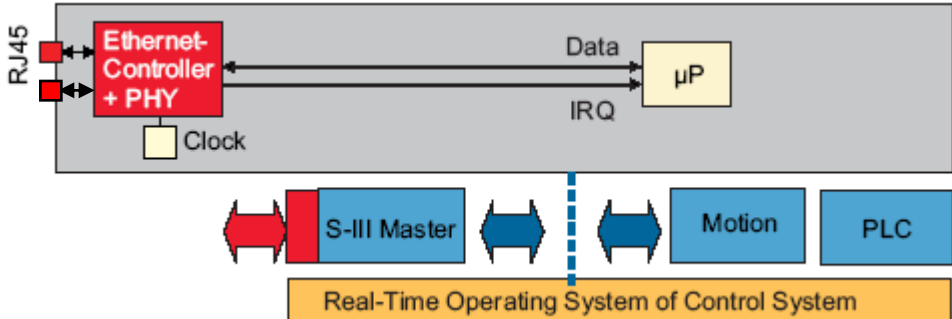


- ▶ FPGA solutions
 - ▶ SERCON100M/S based on Xilinx Spartan-3 and Altera Cyclone II devices
 - ▶ Netlist option for Xilinx Spartan-3/3E and Altera Cyclone II/III devices
- ▶ Integrating SERCOS III into universal communication controllers
 - ▶ Support of multiple Real-Time Ethernet protocols

SERCOS III – Soft-Master (1) Concept

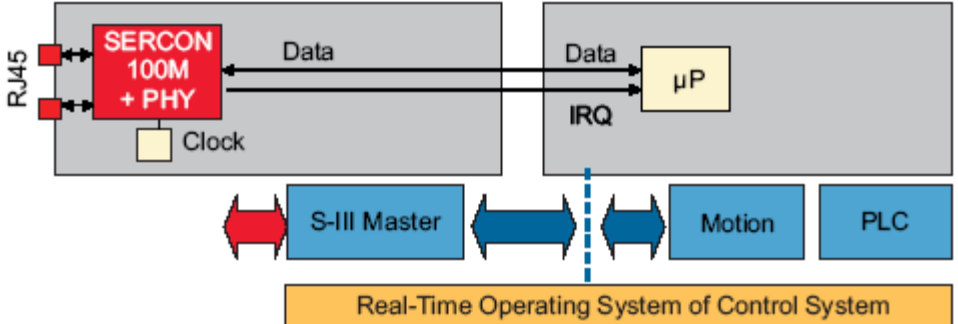
Soft-Master

SERCOS III Master
using Standard Ethernet
Hardware

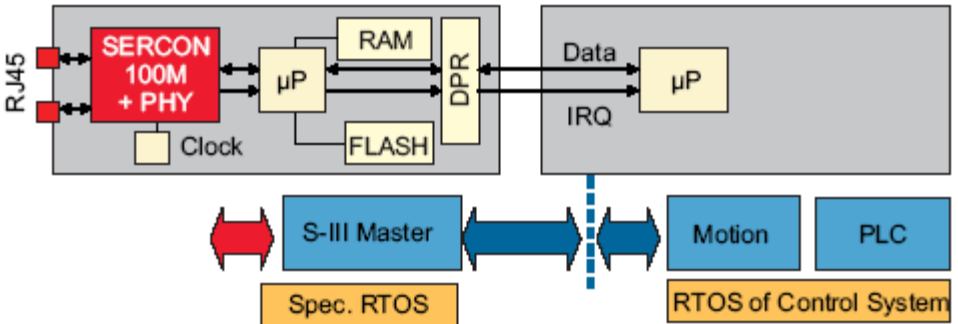


Hard-Master

SERCOS III Master
with passive SERCOS III
interface board



SERCOS III Master
with active SERCOS III
interface board



SERCOS III – Soft-Master (2) Realization of Profimatics

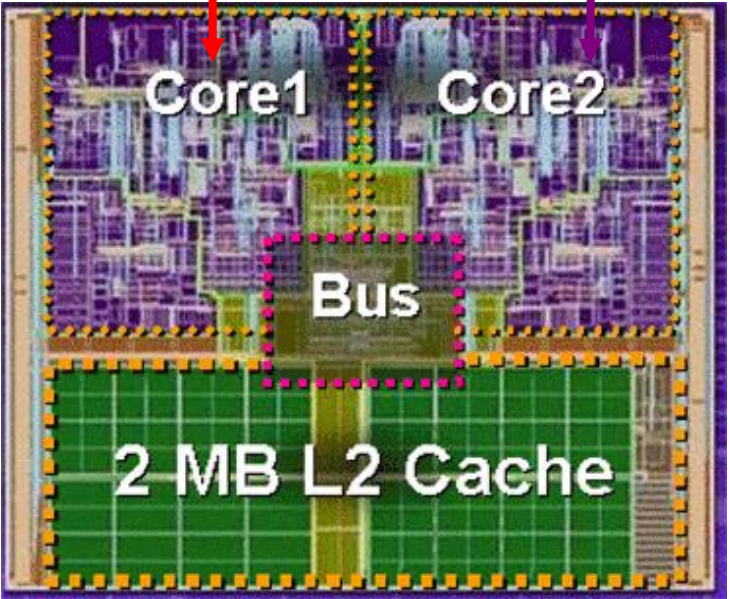
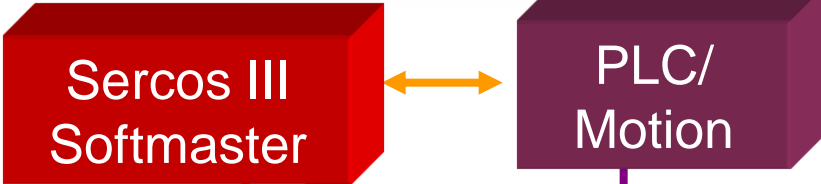
Core1: Sercos III Softmaster
Core2: SPS/Motion/GUI



- Software-based Solution
- Jitter ~1-3µs



PC-based Hardware
with Standard Ethernet
Hardware (onboard)



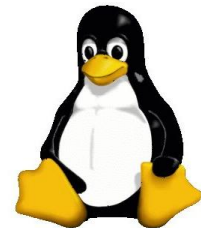
Cooperation with OSADL

- ▶ Cooperation between SERCOS International and OSADL:

Common Aim:

Integration of SERCOS III master driver in mainline Linux

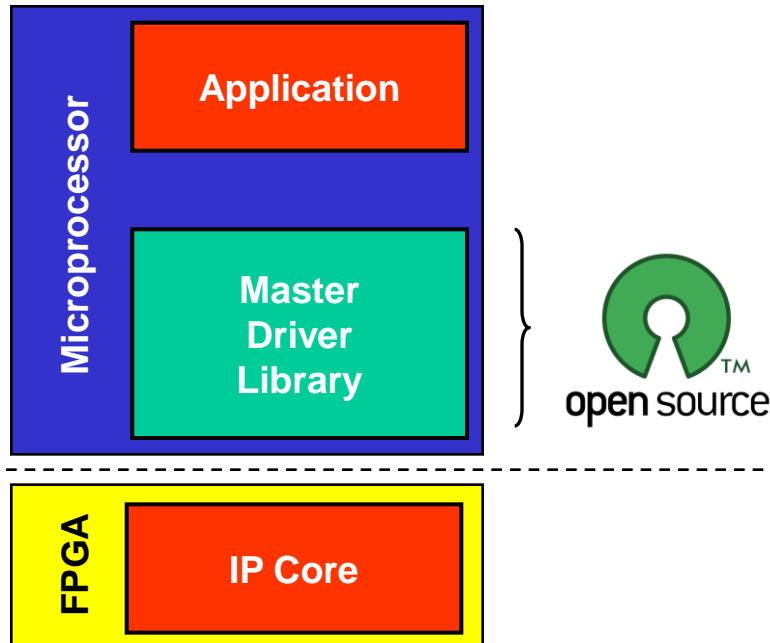
- ▶ Membership of SERCOS International in OSADL
- ▶ Membership of OSADL in SERCOS International



SERCOS Master Library becomes Open Source






SERCOS III Hard-Master



GNU Public License (GPL)

Freedom

- to use the software for any purpose
- to distribute the software
- to analyze and modify the source code
- to distribute the modifications to the software (obligation!)

 ...Hardware  ...Software („closed“)  ...Software („open“)