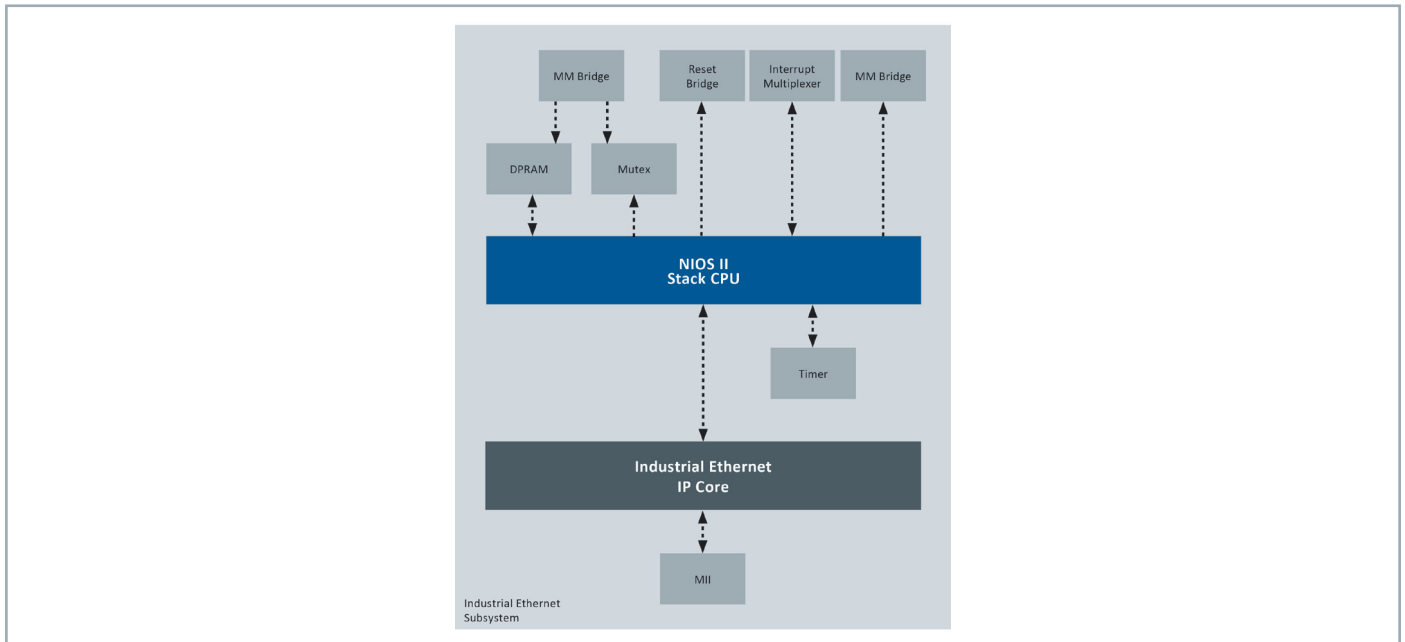


Softing Protocol IP - EtherNet/IP

Simplifying EtherNet/IP Design for Devices Using Altera FPGA

Softing Protocol IP is a combination of IP Cores and protocol software designed to offer all required communication capabilities for an EtherNet/IP implementation based on the Altera FPGA. It provides an identical Programming Interface (API) for integrating various Industrial Ethernet protocols onto one hardware.



Easy and Inexpensive Development of EtherNet/IP Field Devices Using Altera FPGAs

- Ready-to-use EtherNet/IP Qsys system
- Demo application included
- Future versions available for free download
- Transparent IT channel for direct IP access to/from the application

One API For Quick Integration

- Simple Device Application Interface (SDAI) designed as efficient protocol abstraction layer to use different protocols with same application
- PROFINET IRT, EtherCAT, EtherNet/IP, POWERLINK and Modbus TCP using the same API
- Single and dual processor systems supported
- Socket interface for IP communication

Standard IT Support in Parallel with Industrial Ethernet

- Direct forwarding of IP packets to application
- No need to change existing IP structure
- Socket interface for simple integration

Ongoing Enhancements

- Continuous Softing maintenance of Qsys components
- Use in Softing products as well
- Easy update to future versions

Technical Data

Cycle Time	505 Bytes output, 509 Bytes input
I/O Data	10 (default; configurable depending on available socket resources)
Number of IO Connections	10 (default; configurable depending on available socket resources)
Number of Encapsulation Sessions	10 (Voreinstellung; konfigurierbar in Abhängigkeit von vorhandenen Socket-Ressourcen)
Number of Explicit Messaging Connections	2 Explicit Messaging Connections per encapsulation session (20 Explicit Messaging Connections in total, configurable)
Number of User-Specific Objects	Unlimited
Maximum Number of Connections	2 Explicit Messaging Connections x 10 Encapsulation Sessions + 10 I/O Connections (30 connections)
Predefined Standard Objects	<ul style="list-style-type: none">• Identity• Message Router (with Implemented Functionality)• Up to 32 Assemblies• Connection Manager• Device Level Ring• Quality of Service• TCP/IP Interface• Ethernet Link
Functional Scope	<ul style="list-style-type: none">• Adapter• Support of 2 Ethernet Link Objects for implementing line and daisy chain topologies• Device Level Ring (DLR) Protocol (Announce-Based Ring Node)• Quality of Service (QoS)• IPv4 address conflict detection
Application Programming Interface	Simple Device Application Interface (SDAI)
Certificate	Plugfest 2013

Scope of Delivery

Qsys Component	Downloadable from Softing website
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Additional Products and Services

KEL-AB-010001	Altera Cyclone V E FPGA Development Kit and MAX V licensing board
SIA-YY-012501	Integration workshop for implementing field devices based on Altera Cyclone FPGA family
SIA-YY-012503	Integration support provided by e-mail or phone



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