

## Overview

IXXAT is one of the leading suppliers of communication solutions for automation and embedded technology.

IXXAT's success is based on almost two decades of successful project development for customers both at home and abroad. As a pioneer of CAN technology, they have made major contributions to the successful growth of the CAN protocol in a large number of applications and fields, and, have been actively involved in the development of important elements of CAN technology (e.g. the development of the CANopen standard). Today, complete system solutions from IXXAT are used by many companies in a variety of industries around the world.



The primary applications in the field of industrial communication systems involve solutions based on CAN (CANopen, DeviceNet) and Ethernet (ETHERNET Powerlink, EtherNet/IP), as well as TCP/IP with the associated Internet protocols.

Within their core competence - the development of hardware components, software and systems for communication - the range of services includes the development and manufacture of microcontroller-based hardware components as well as the development of real-time and PC-based software (Windows, Linux). On request, IXXAT will also handle long-term maintenance and management of the hardware and software we've developed for customer-specific solutions.

## Product Overview

IXXAT currently supports the following technologies (for additional new developments visit [www.ixxat.com](http://www.ixxat.com)):

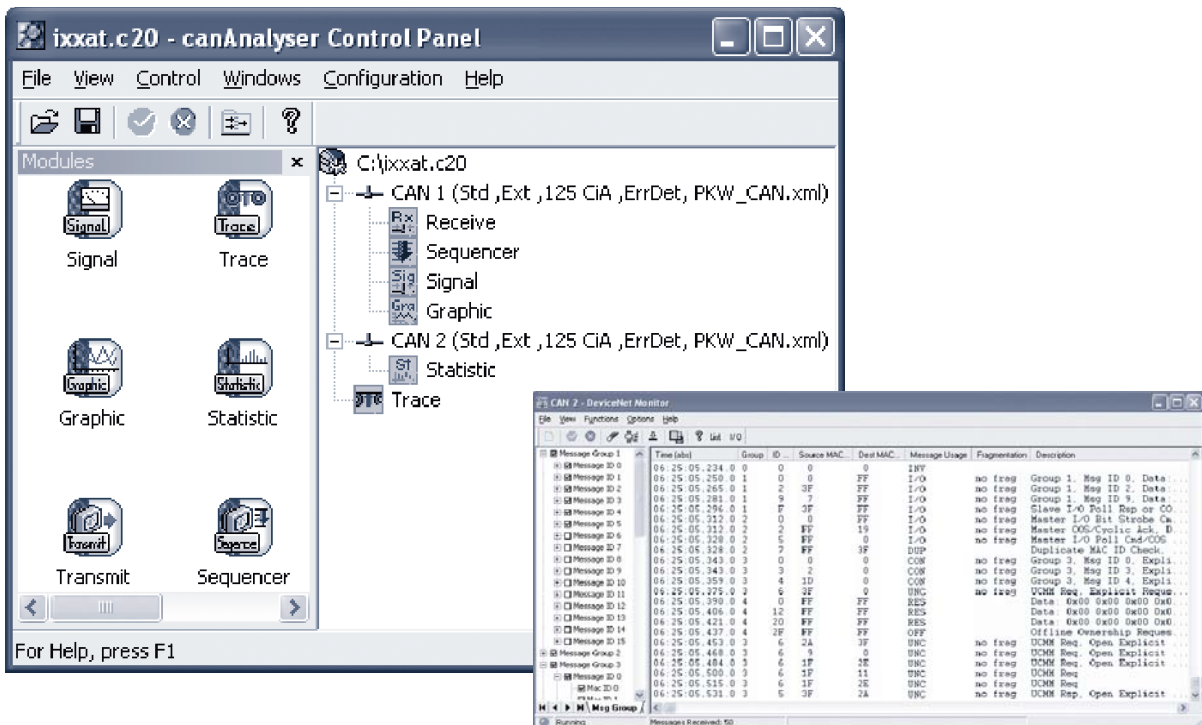


# CAN

CAN is the leading serial bus system for embedded control. More than two billion CAN nodes have been sold since the protocol's development in the early 1980s. CAN is a mainstream network and was internationally standardized (ISO 11898-1) in 1993.

The following CAN products are available:

- PC/CAN interfaces
  - PCI
  - PC/104
  - PCI express
  - PMC
  - ISA
  - Ethernet
  - USB
  - Bluetooth
- Repeater
- Gateways and bridges
- CAN Diagnostic Tools
- canAnalyzer
  - CANopen Module
  - DeviceNet Module
  - J1939 Module

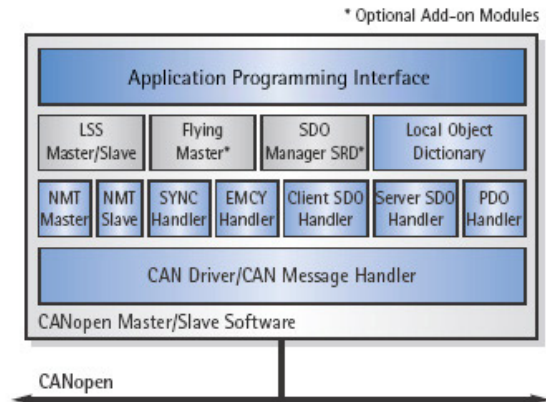


# CANopen

CANopen is the internationally standardized (EN 50325-4) CAN-based higher-layer protocol for embedded control system. The set of CANopen specification comprises the application layer and communication profile as well as application, device, and interface profiles. CANopen provides very flexible configuration capabilities. CANopen networks are used in a very broad range of application fields such as machine control, medical devices, off-road and rail vehicles, maritime electronics, building automation as well as power generation.

The following CANopen products are available:

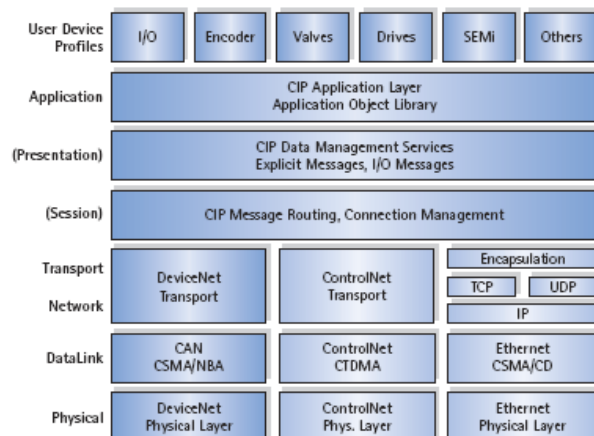
- CANopen Protocol Software
- CANopen Manager Software
- CANopenRT (Real-Time) Software
- CANopen Maritime Software
- CANopen Master API
- CANopen Manager API
- CANopen EDS Editor
- CANopen Device Manager
- CANopen ConfigurationStudio



DeviceNet is a digital, multi-drop network that connects and serves as a communication network between industrial controllers and I/O devices. Each device and/or controller is a node on the network. As a producer-consumer network, DeviceNet supports multiple communication hierarchies and message prioritization. DeviceNet systems can be configured to operate in a master-slave or a distributed control architecture using peer-to-peer communication.

The following DeviceNet products are available:

- DeviceNet Slave Protocol Software
- DeviceNet Client API
- DeviceNet Module
- ODVA DeviceNet Conformance Test Driver



## J1939

SAE's J1939 standards family is the preferred controller area network (CAN) for equipment used in industries ranging from agriculture, construction, and fire/rescue to forestry, materials handling, and on- and off-highway.

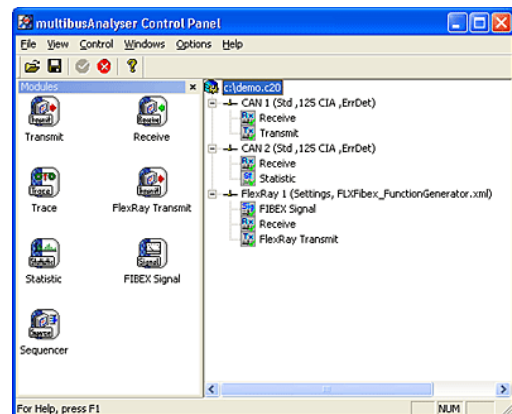
- Software Package for the Development of J1939 Devices



The FlexRay Communications System is designed to provide high-speed deterministic distributed control for advanced automotive applications. Its dual-channel architecture offers system-wide redundancy that meets the reliability requirements of emerging safety systems, such as brake-by-wire. With 10 Mbps throughput per channel, the FlexRay system can also be employed as a vehicle-wide network backbone, working in conjunction with already well-established systems, such as CAN and LIN.

The following FlexRay products are available:

- FlexRay Analyser
- FlexRay CCM
- Residual bus simulation



LIN (Local Interconnect Network) is a low cost serial communication system intended to be used for distributed electronic systems in vehicles, which complements the existing portfolio of automotive multiplex networks.

The following LIN products are available:

- LIN2CAN gateway
- USB-to-CAN/LIN interface

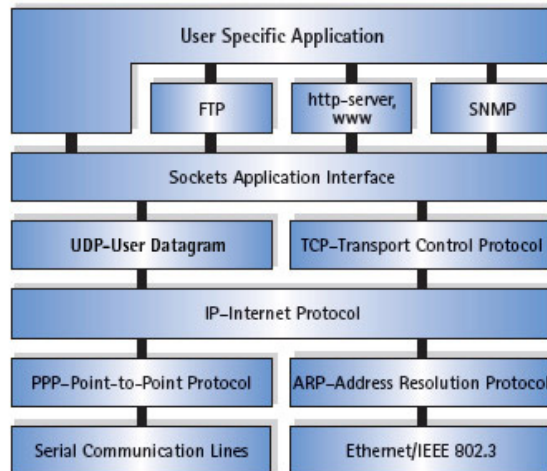


## TCP/IP

The Internet protocol suite (commonly TCP/IP) is the set of communications protocols that implement the protocol stack on which the Internet and most commercial networks run. It is named for two of the most important protocols in it: the Transmission Control Protocol (TCP) and the Internet Protocol (IP), which were also the first two networking protocols defined.

The following TCP/IP products are available:

- NicheStack IPv6
- NicheStack Dual IPv4v6
- Add-ons
  - NicheStack IPsec/IKE
  - NicheStack SSL
  - NicheStack TELNET-Server
  - NicheStack PPP
  - NicheStack FTP
  - NicheStack POP3
  - NicheStack SMTP
  - DHCP-Server
  - NicheStack HTTP-Server
  - SNMP v1, v2c or v3 Agent
  - NicheView

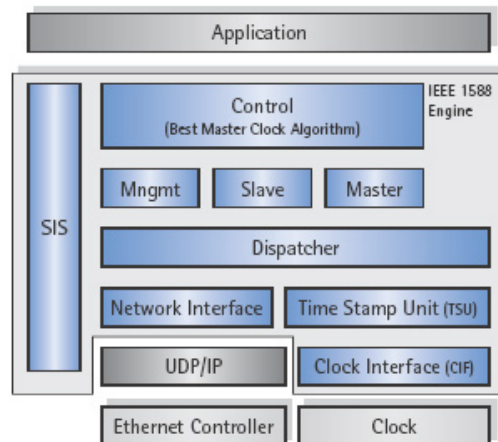


## IEEE 1588

The IEEE 1588 standard is known as "Precision Clock Synchronization Protocol for Networked Measurement and Control Systems" or "PTP" for short. PTP defines a procedure allowing many spatially distributed real-time clocks to be synchronized through a "package-compatible" network (normally Ethernet).

The following IEEE1588 products are available:

- Protocol Stack V1
- Protocol Stack V2
- IP core for FPGAs
- Evaluation kits

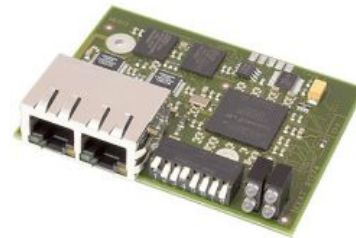
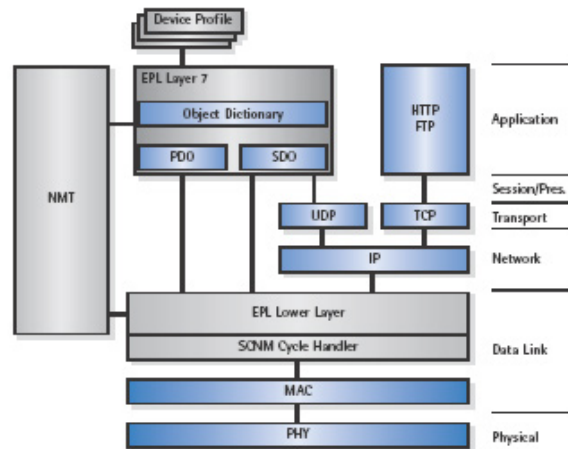


# ETHERNET POWERLINK

Ethernet POWERLINK is a deterministic real-time protocol for standard Ethernet. It is an open protocol managed by the Ethernet POWERLINK Standardization Group (EPSG).

The following POWERLINK products are available:

- ETHERNET Powerlink Protocol Stack
- ETHERNET Powerlink Module
- ETHERNET Powerlink PCI Interface Card
- ETHERNET Powerlink/CANopen Gateway
- ETHERNET Powerlink Configuration Framework
- ETHERNET Powerlink Safety Protocol Stack

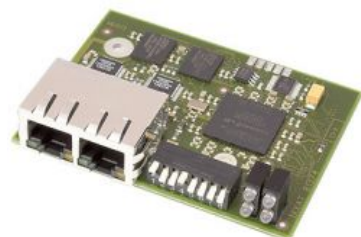
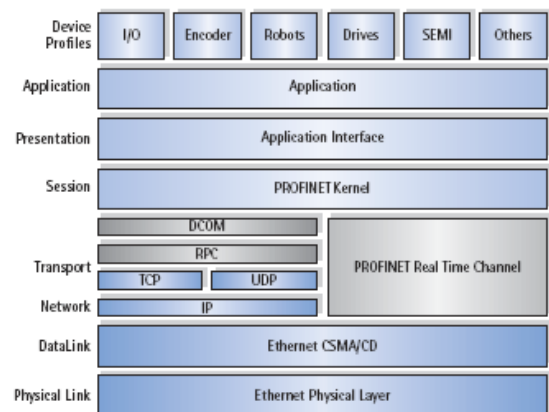


# PROFINET

PROFINET is the innovative, open standard for real-time industrial Ethernet in automation technology. The PROFINET Standard is specified and published by PI (PROFIBUS & PROFINET International – <http://www.profibus.com>).

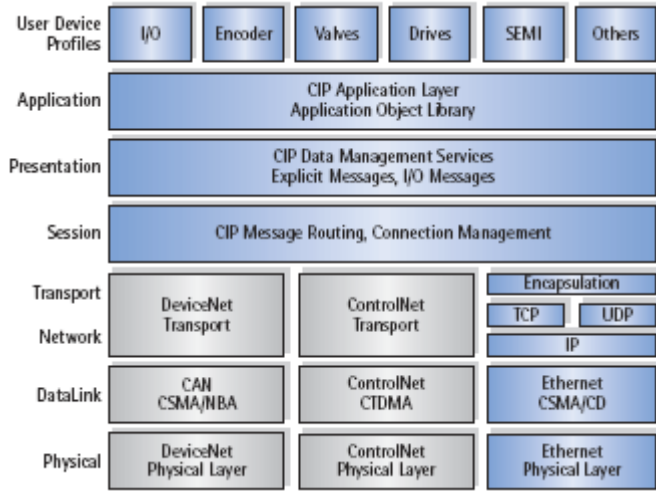
The following PROFINET products are available:

- Protocol software
- PROFINET Module





EtherNet/IP is one of three open network standards (DeviceNet™, ControlNet™ and EtherNet/IP™), which all use a common application layer, the "Common Industrial Protocol" (CIP™). This common application layer and open software and hardware interfaces allow a universal connection of automation components from the fieldbus level over the control level to the enterprise level.



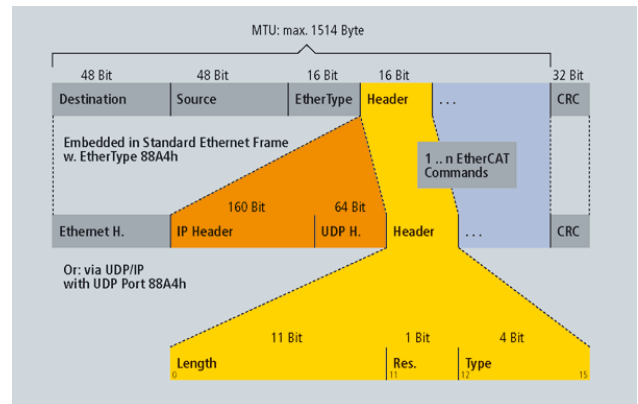
The following EtherNet/IP products are available:

- Scanner Software
- Adapter Software
- EIPScan Test Tool
- EtherNet/IP Module



## EtherCAT

EtherCAT is an open high performance Ethernet-based fieldbus system. The development goal of EtherCAT was to apply Ethernet to automation applications which require short data update times (also called cycle times) with low communication jitter (for synchronization purposes) and low hardware costs.



The following EtherCAT products are available:

- EtherCAT module



For more information about any of the above topics or general questions or comments, please contact us:



Motion Designs is a technical sales and engineering company with extensive machine and motion control experience. We work with some of the best manufacturers in the industry as witnessed by our present line card:

- [www.arcus-technology.com](http://www.arcus-technology.com): Arcus Technology manufactures stepper motor, drive and controller technology, providing USB, Ethernet and Mod-Bus connectivity.
- [www.ctc-control.com](http://www.ctc-control.com): Control Technology is a leader in automation control technology with extensive network connectivity capabilities.
- [www.ixxat.com](http://www.ixxat.com): Ixxat is a leading supplier of products and services for the data communication in industrial and mobile systems.
- [www.magmotor.com](http://www.magmotor.com): MagMotor is a leading servo motor manufacturer.
- [www.technosoftmotion.com](http://www.technosoftmotion.com): TSM is a leading DSP motion control technology company specialized in the development, design and manufacture of digital motor drive products and custom motion systems.

