

zenon Energy Edition

COPA-DATA Know-how:
A variety of drivers

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A basic tool of a control system is communication through drivers and interfaces. Data to be processed must be transferred to the control system reliably. The variety of communication options and how easily or complicated the communication functions are is indicative of the abilities of the control system's manufacturer and determines how efficiently and productively the system can be used.

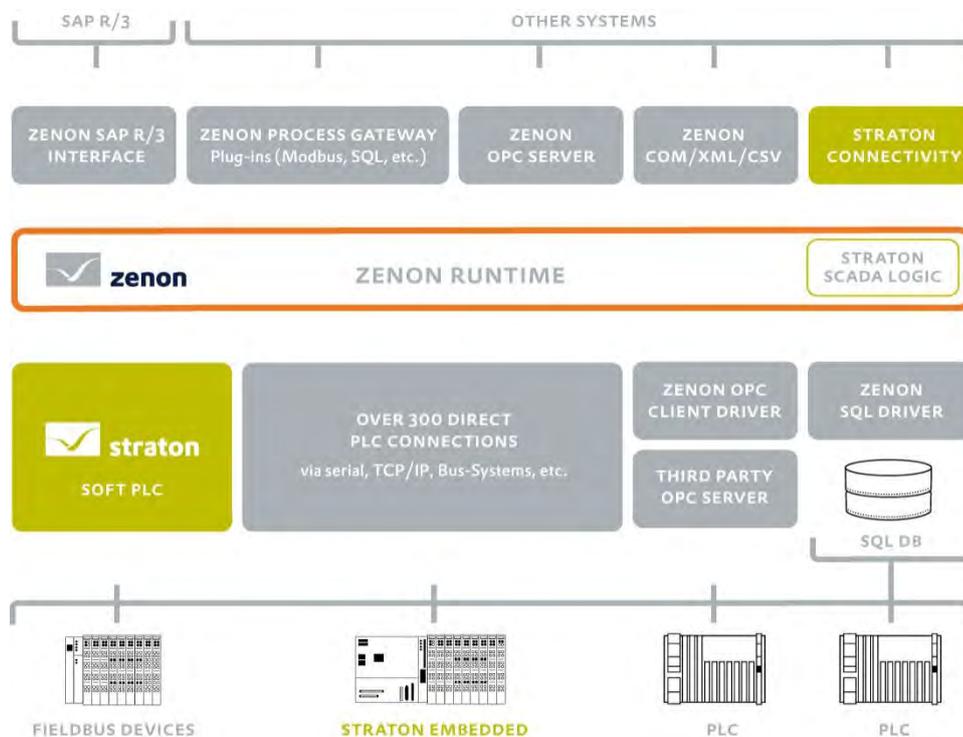


Figure 1: Communication through drivers and interfaces is essential for a control system

COPA-DATA places great value on these basic proficiencies and has equipped its zenon SCADA/HMI system with a variety of high performance communication options since the first version. To achieve this, each connection is manufactured in-house – regardless of whether it is IEC Standard 60870 or 61850, the DNP3 Standard or a very rare driver. Our own driver specialists in the COPA-DATA labs are occupied solely in

developing and maintaining high performance drivers that fully support the relevant standards. This avoids unnecessary deviations of using third-party providers, purchased libraries or superfluous interfaces and thus provides the customer with perfect and efficient communication protocols.

With zenon, users receive drivers developed in-house that conform to standards. With over 300 connection options, virtually all types of hardware can be connected. This expertise guarantees that the product is always up-to-date and enables us to react quickly to new developments. COPA-DATA was the first supplier to provide its customers with a fully developed IEC 61850 driver.

There is a separate zenon version for use in the energy industry, the zenon Energy Edition. Support for safety-related issues such as “Select before Operate” or “File Transfer” ensures that switching is carried out safely and that data cannot be lost.

A single control system for all environments

One advantage of zenon EE (Energy Edition) is that it also uses the drivers from the zenon Standard Edition. That means that all drivers that were primarily developed for industry are also available to the zenon EE. What advantages would this have for your company?

zenon EE is a software solution for a wide range of possible applications. Even devices that only work with an industry protocol and do not work with an energy-specific protocol can be connected without any problem. For example, protective devices that only communicate through Profibus DP can be easily connected to zenon EE. The universal nature of zenon also proves its value with the requirements of low voltage distribution facilities:

Every substation and every power station has low voltage distribution facilities that manage the energy supply for its own requirements. The switch positions are only very rarely provided by means of IEC or DNP protocols. The control system must understand protocols such as Profibus DP or Modbus to do this. Regulators or PLCs for auxiliary equipment use mainly proprietary or industrial interfaces such as Profibus FMS.

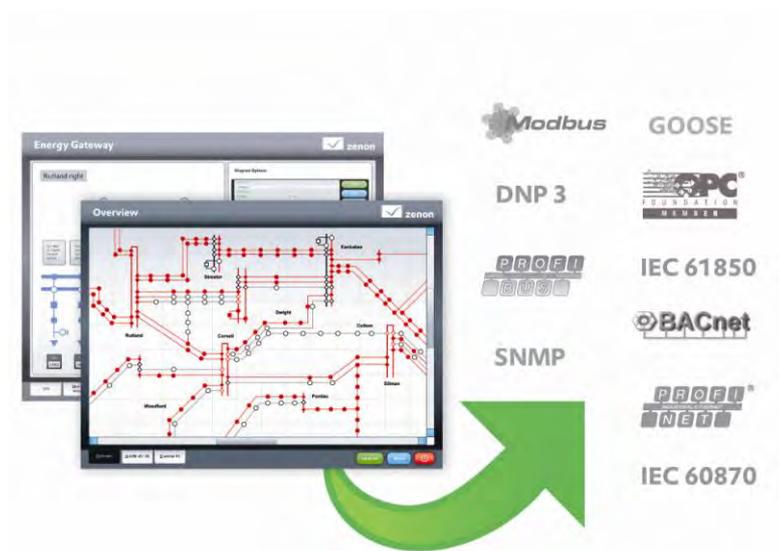


Figure 2: A variety of high performance communication options with zenon

Thanks to its diversity of drivers and wide range of communication possibilities, zenon EE can also be used in a mixed control environment of utility operations as the single control system. Many utility operations or public services control and monitor not only electricity with their control system, but also control and monitor other services such as water, telecommunications, cable TV or traffic. zenon EE can connect to these many different types of devices without any problems.

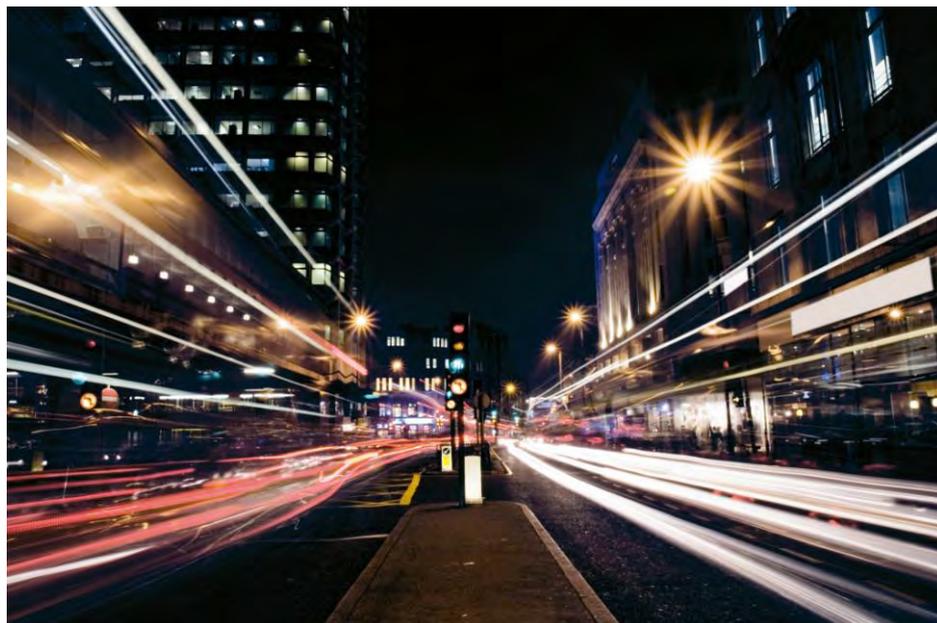


Figure 3: Perfect for utility operations and public services: zenon Energy Edition

For example, by using SNMP (Simple Network Management Protocol), routers and switches in telecommunication networking equipment can be monitored. To control traffic lights, the Brodersen System 2000, for example, is used; whilst different telecommunication protocols are used for monitoring drinking water facilities. Therefore, only one single SCADA/HMI system is necessary with zenon EE, which also provides all necessary protocols – whatever the service.

From standard to individual drivers

Direct drivers offer many advantages; however zenon also supports all current standards, which can be used as the control system communication's „lowest common denominator“. For example virtually every device can be connected with OPC 2.0. With OPC UA Client, the user additionally also has safe communication. zenon EE offers *both* variants.

Communication using Modbus protocol is also very popular and widespread. zenon provides not only the well-known Modbus driver (serial and TCP), but also Modbus Plus and Modbus RTU. As an extra for substation control technology, zenon EE also features a special Modbus Energy driver. This connects to devices (such as those from Areva), which also send a time stamp with the Modbus telegram. The time stamp is adopted in zenon and processed further.

Over 300 communication protocols cover virtually all connection requirements in the industrial and energy field. However, should a driver be missing, this is not a problem for you or the COPA-DATA developers. With their extensive experience in driver development, any desired driver can be quickly developed and integrated into zenon to meet your specific requirements.

For simple driver implementation, COPA-DATA also use straton. The soft PLC integrated in zenon EE makes direct access to serial interfaces or network interfaces possible. Using PLC function modules, simple ASCII protocols or binary protocols can also be implemented as PLC code. Naturally, your own interface application developments can also be developed using VBA or .NET, which then send data direct to zenon Runtime.

With zenon EE, you can connect to the most varied machines and devices simply and directly. Data is transferred reliably and directly into the control system and is available there for further processing, both as online data and as historical data. Open interfaces also allow the development of your own expansions. You can find out more about zenon and COPA-DATA at www.copadata.com or by sending an email to sales@copadata.com.



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