Application Sheet : Water & Wastewater applications

Telemetry – the Next Generation

Operators of water plants have to depend on the safe and reliable functioning of their automated facility, no matter if it is a water treatment plant or a pump station, a sewage treatment plant or a wastewater purification process.

Brodersen's latest telemetry system with its open connectivity, adaptability and multi-media communication options, is a reliable partner in many areas of the water industry.

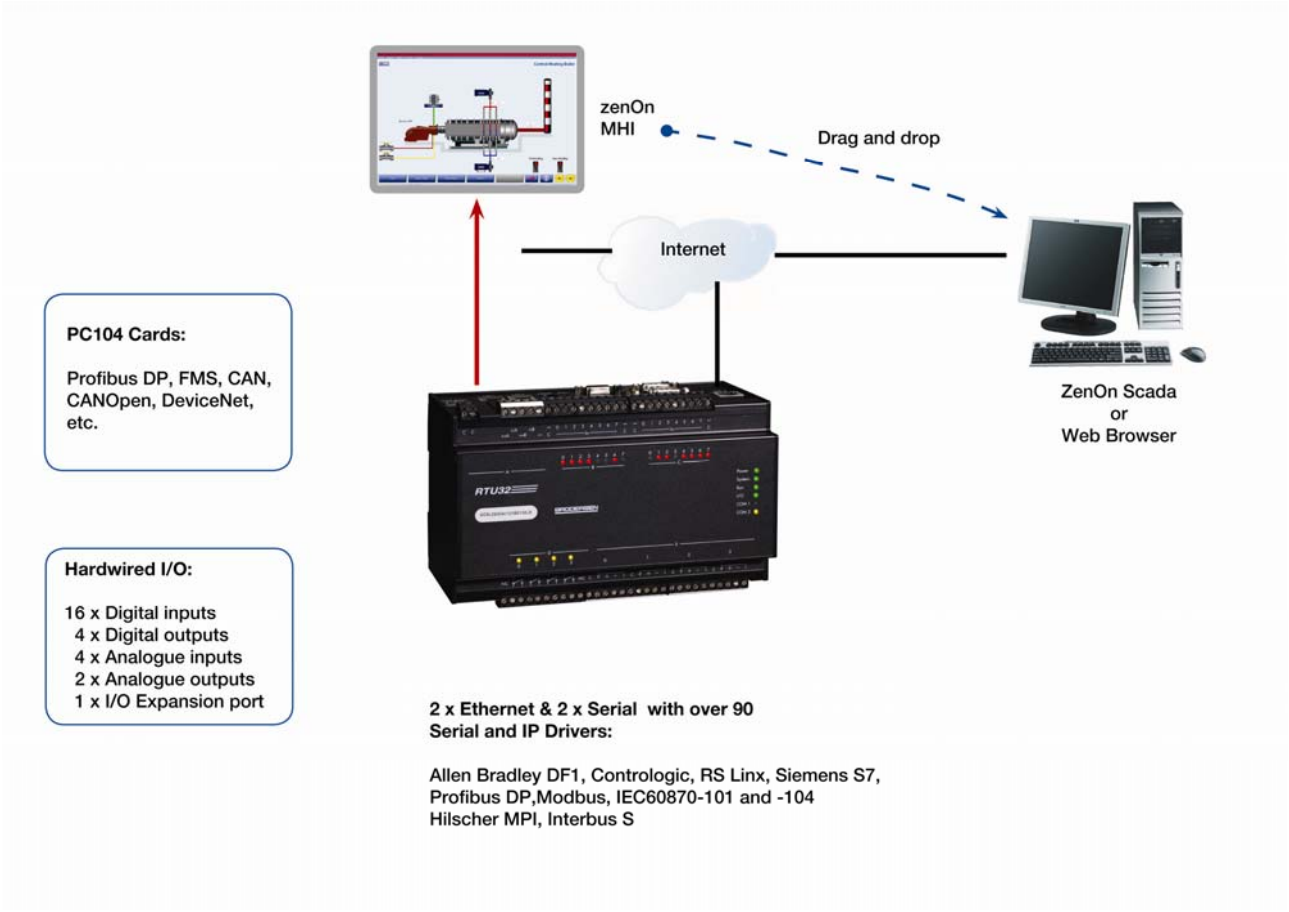
Main Features

At the heart of the Brodersen Telemetry System is the powerful RTU32.

RTU32 A Universal Controller - Bridging the gap between PLC, PC & RTU

- RTU facilities
  - real time clock, ms time-stamping
  - data logging
  - dial-in/dial-out for any serial protocol
- Dual Ethernet and up to 6 COM ports RS232/RS485
- IEC61131-3 Programming with STRATON®
  - supports all 5 languages LD, FB, IL, ST, SFC
- Built-in Web server
  - embedded HMI
  - used for configuration
- EN/IEC60870-5-101/104 Utility Protocol
  - simplified configuration tool
- Redundancy and event driven communication

- Significant savings due to reduced development time using integrated STRATON® & zenOn SCADA
- SNMP protocol
  - integrates IT into factory and process automation
- WinCE open platform
  remote monitoring can be set up with simple drag and drop of the zenOn HMI project as a sub-project into the main zenOn SCADA project. A complete telemetry system can be built up very easily by this method.
- Gateway functions – supports over 90 serial and TCP/IP PLC drivers



The RTU application programs can be developed via the STRATON Workbench. STRATON offers complete SoftPLC functionality and supports features needed in today's industrial environment. STRATON supports:

- all programming languages used for programming SoftPLCs complying with **EN/IEC61131-3,** ie Structured Text, Function Block, Ladder, Instruction List and Sequential Function Chart.

- Simulation of programs and online changes

- Creation of web page, Graphical symbols can be linked to I/Os and then drag and drop into the web page editor to create the web pages.

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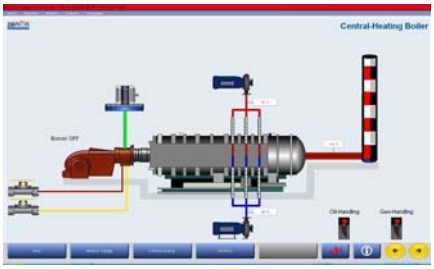
simplifying process

SCADA Features



zenOn is as suitable for use in water treatment plants as it is for use in the water supply field. Whether the need is to manage and monitor many small wells or for a control system for industrial or public wastewater treatment, zenOn can provide the solution.

Modular and Scalable in the Network

Thanks to zenOn's unique network technology, remote control and remote maintenance functions, plants can be controlled independently of geographical location. zenOn offers a wide range of scalable system solutions, starting with stand-alone systems (PC or Windows CE), to client-server, all the way to distributed multi-hierarchic control systems.

With just a few mouse clicks, the zenOn Web-server brings the solution into the Intranet/Internet and, if desired, with exactly the same functionality, the same look and feel, and with all the standard zenOn properties. Properties such as automatic update of web clients, in case of changes in the Runtime server, and full redundancy are included, even in the web.

Data Recording and Analysis

With a fully integrated alarm and event administration, the high-performance zenOn Archive Server, and inter-connection functions, zenOn offers a multitude of intelligent solutions for data recording and analysis.

Data retrieval and archiving, as well as process control and monitoring, are the key function requirements in water and wastewater technology. The Report Generator that is integrated in zenOn also supports standard SQL protocols, which greatly simplifies matters. Spontaneous event processing and data reduction through cascading increases system performance.

Data can easily be integrated into MES and ERP systems such as SAP etc.

Trends and reports can be analyzed in the system and are available at every workplace with zenOn directly supporting standard protocols, as well as regional directives. The package is completed with modules for sending messages, and options for statistical analysis.

Through metering of operating hours and switching cycles, run-times of facilities can be monitored and such information can be forwarded to the Archive, the printer, and to the zenOn Industrial Maintenance Manager, to allow maintenance work to be planned and managed.

Safe & Efficient

Years of experience in the highly sensitive energy sector has proved zenOn software to be extremely fail-safe. The integrated redundancy feature maximizes the safety of operations and data and offers high system availability. zenOn offers more than just hot-standby functionality. With seamless redundancy, zenOn guarantees data consistency and safely avoids any kind of data loss.

The user has the freedom to configure the user administration of zenOn that regulates access authorization and allows the alternative integration of the Windows user administration of the Active Directory. Thanks to the integrated signature option (that even meets the pharmaceutical industry's high standards), no operation is possible without proper authentication.

The fact that each new release of zenOn is always compatible with the last ensures that users have many years of trouble-free operation with new versions of software.

Multifaceted Connection to the Control Level

zenOn is a system that is open to third-party products, with more than 250 different control connections, spontaneous data traffic and exact data recording through real-time stamping. At the same time, zenOn also offers high quality connection through protocols such as DNP3, IEC 61850 and IEC 60870.

Experience

In the UK, Brodersen has several thousand RTUs installed in the North and East of England. We also have a complete telemetry system installed to monitor the waste treatment system in roadside restaurants. In London, our RTUs are used to monitor the amount and size of waste being dumped by the lorries at waste disposal sites. We have completed a turnkey water management project in the eastern part of Sri Lanka for the National Supply and Drainage Board.

In Ireland, we have installed a system in Limerick to monitor reservoir levels, electricity usage, etc. In addition, several hundred of our RTUs are installed in Dublin to monitor pumping stations and other applications.

In Europe, zenOn SCADA has been used extensively in many water and waste treatment projects.

References:

- Logica, UK
- Anglian Water, UK
- Yorkshire Water, UK
- Latakia Water, Syria
- Ministry of Works Bahrain
- National Water Supply and Drainage Board, Sri Lanka

About Brodersen

BRODERSEN supplies industrial process components, including outstations, data loggers, and communication modules for the process and automation industry. Brodersen is an ISO 9001 certified company.

Our Heritage

Founded in 1970 in Denmark, the company has developed into one of Europe's leading designers and manufacturers of Process IT components. With more than 30 years' experience to our credit, we understand the logistics involved in integrating Process IT systems and work hard to offer simplicity in a complex world. We deliver our Scandinavian brand of expertise via our headquarters in Denmark and through our subsidiaries in the UK and Germany. We continue to intensify our presence with partners and agents throughout the world.