Customer Success Story

Gässlösa

Water and waste water treatment facility

westermo

Robust Industrial Data Communications
– Made Easy

Water and waste water monitoring system

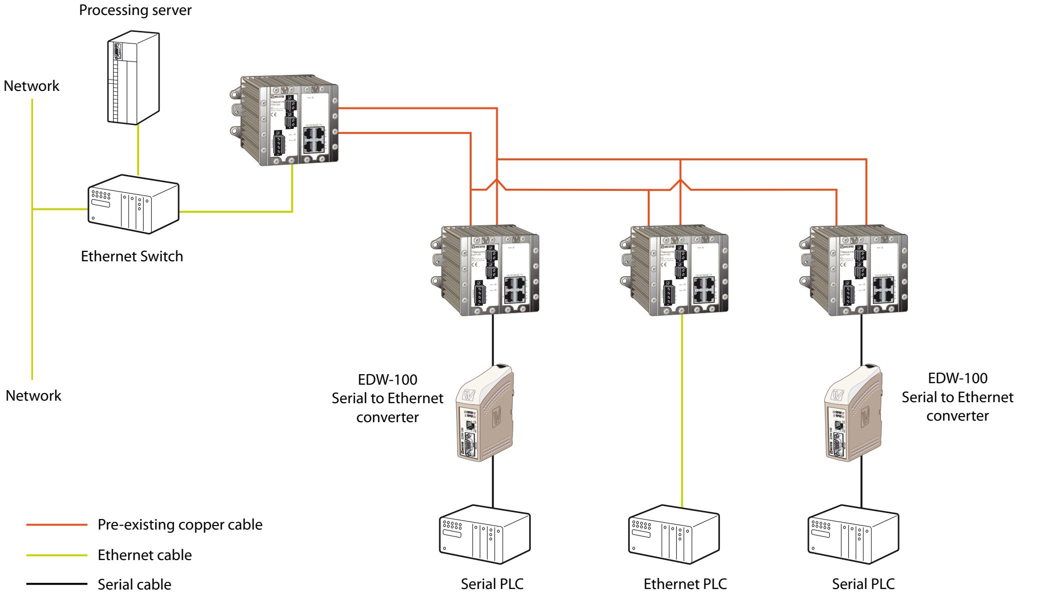
The water and waste water department (VA-verken) in the city of Borås is responsible for more than 200 waste water and drinking water installations, providing water services for the whole city. These installation consist of waste water and water treatment plants, pumping stations and booster stations.

Many of these plants and stations can be remotely monitored and supervised. Telephone modems and short-haul modems has been the technology to provide for the connectivity. In recent years modems have been replaced with a more flexible and reliable solution using the Ethernet Extender DDW-220.

"We have successfully used Westermo products in previous communication solutions with different modems. When we decided to modernise our system we contacted Westermo once again" says Jan Cullberg, computer engineer at VA-verken.

The old system communicated over a legacy city network, and by making use of pre-existing cabling, they have been able to keep the cost down.

If serial data communication is to be replaced by Ethernet one has to put in new cabling, either Cat5 or fibre cable. However, using the Westermo SHDSL concept, the DDW units will convert Ethernet so it can be run on any kind of existing cable. SHDSL (Symmetrical High Bit-rate Digital



Subscriber Loop) is based on the same technique as an ADSL connection to the Internet.

A single, twisted pair can be used on distances up to 14 km between two DDW-100 at a speed of 2.3 Mbit/s. Choosing the DDW-22x series gives 5.7 Mbit/s on a multi-drop setup. The DDW-22x also contains a switch with 4 Ethernet ports making the hook up of several units easy

The new system has resulted in increased availability on many levels and in contrast to previously used devices, the Wolverine series has several advantages. The DDW-220 is not only faster and more reliable, it also makes it possible to remotely configure for example a PCL. Another advantage was the possibility to use legacy equipment together with the DDW-220.

"To obtain a secure and reliable information flow from the different reading instrument in our system, it was an absolute necessity to find a faster communications solution. We are happy how this worked out and there are several other interesting solutions that have been made possible using an Ethernet solution." says Jan Cullberg.

A product range to meet every demand

Westermo provides a full range of data communication solutions for such demanding applications as railways, aeronautics, defence, water treatment, substation automation, roads and tunnels. The staff at Westermo can provide the highest levels of service and technical support to help our customers to choose, configure and install the best solution for each specific application requirement. Our knowledge goes far beyond our own product range; we have a unique competence regarding your environment whether it is on a train, in an aeroplane, on the seabed or in a substation. To ensure a close relationship with the customer, Westermo has a local presence in more than 35 countries. The Westermo product line includes more than one thousand different types and versions of our modems, switches, routers, time servers and converters.

DDW-22x Ethernet Extenders

The DDW-22x is a set of three Ethernet Extenders in the Wolverine series with different function levels. The units utilise SHDSL technology over twisted pair cables to establish a high-speed remote connection between two Ethernet networks. All three unit have a built in four port switch and extended type approvals and depending on which unit you choose there are also features like FRNT/RSTP redundancy protocol, Serial to IP conversion and much more.

- Up to 5.7 Mbit/s data transmission
- Up to 15 km (9.3 mi) on twisted pair
- FRNT/RSTP redundancy protocol
- Extensive line protection
- Wide temperature range (– 40°C to +70°C)
- Galvanic isolation and transient protection

Wolverine

EDW Series – Serial adapter

The EDW-1xx series is a family of serial adapters with differing function levels, or Ethernet Terminal Server, designed for industrial use in harsh environments. The unit use standard TCP/IP protocols together with serial equipment. It allows almost any serial devices to interface through a new or existing Ethernet network. A special adjusted 2 port licence of the virtual COM-software, Serial/IP from Tactical Software, are included with EDW-100 and EDW-120.

- Serial communication, RS-232 or RS-422/485
- Ethernet 10/100 BaseT
- Galvanic isolation and enhanced surge/transient protection on all ports
- Industrial and Railway approval
- Auto MDI/MDI-X
- Redundant power and wide DC input range