

For your automation solutions

Collaborative Automation Partner Program

Industrial IEC 61850 switches for substation
and harsh industrial environments



HIRSCHMANN

A Belden Company

Schneider
Electric

Hirschmann

As a specialist in automation and networking systems, Hirschmann Automation and Control offers a complete, integrated structure for data communication throughout the company. The product range extends from network components for Ethernet, Fast Ethernet and Gigabit Ethernet through fiber interfaces for different field bus systems up to electrical actuator and sensor connectors.

Industrial Ethernet

Industrial ETHERNET offers a wide range of transmission media such as copper, glass fibre or also «wireless»; data transmission rates range from 10 Mbit/s, 100 Mbit/s to 10 Gigabit/s. In this way process and manufacturing data is not just available at the field level, but is seamlessly integrated into higher-level data acquisition systems.

Complete networking solution

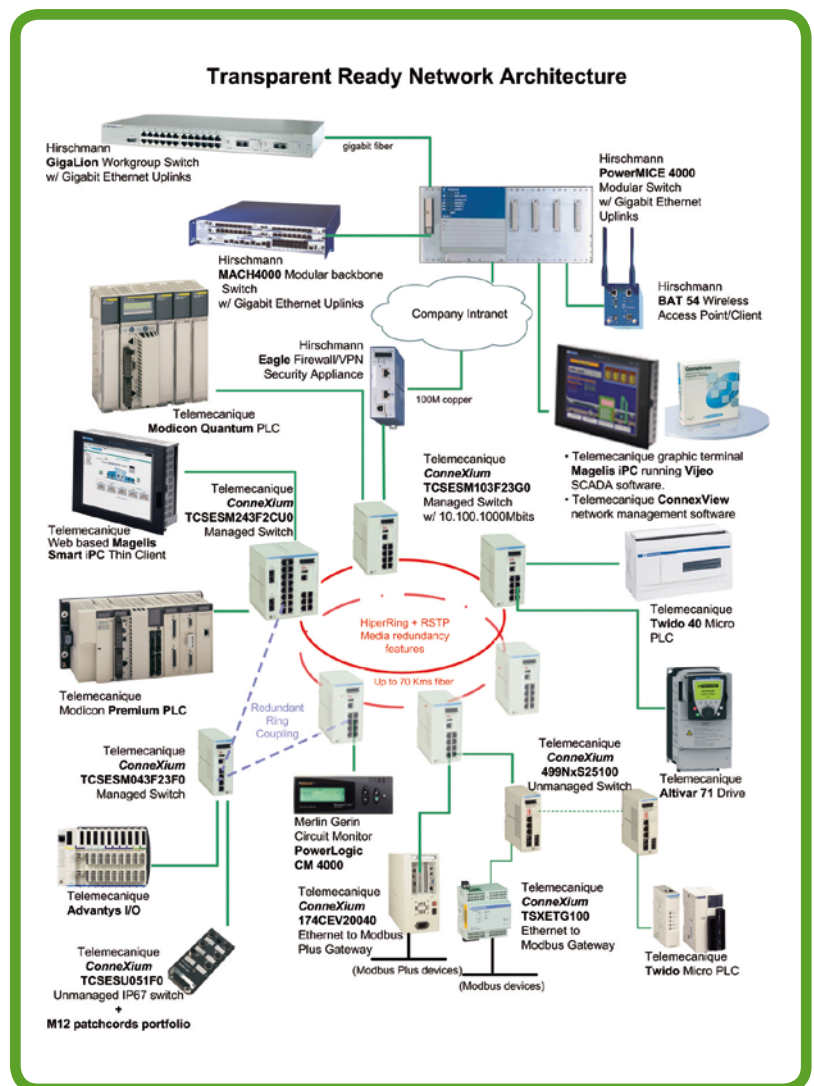
- > From the field level up to the backbone
- > Routers, switches, firewalls, wireless, supervision, audit and trainings.

Reliable solution

- > Ethernet : open standard communication
- > 10 Mbit/s up to 10 Gigabit/s

Industrial and secure solution

- > Independent sub-networks on the same plant
- > Redundancy with : RSTP, Ring coupling, Ring topology (50ms)



MACH1000

Ruggedized Switches

Applications

Power Generation and Distribution of electricity power plants (nuclear, gas, solar, wind...)

- > Transportation
- > Military
- > Industrial Automation

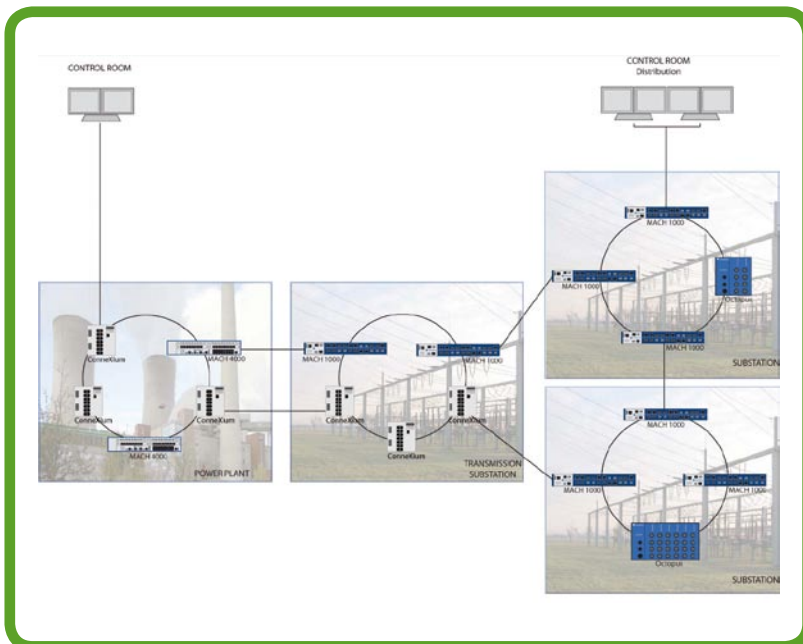
Technical features

- > High port density : 2 up to 26 ports
- > 19" rack
- > Extended temperature range: - 40°C up to + 85°C
- > User-selectable port assignment
- > Extremely high RFI/EMI immunity
- > Integration into redundant HIPER-Ring topology
- > Fast switch-over/resiliency: < 50 ms
- > Modular
- > Fast-/Gigabit-ETHERNET technology
- > Maximum efficiency
- > Redundant Power Supply



Approvals

- > IEC61850-3 and IEEE 1613 conformity
- > IEC 60068-2-x (shock and vibration)
- > EN 61000-4-x (interference immunity)
- > cUL 508
- > Germanischer Lloyd



Wireless – BAT54R and Firewall - EAGLE

Industrial Ethernet solutions

MAR 1000 Family - Substation IEC 61850 switches for harsh environments

- > IEC 61850-3 and IEEE 1613 conformity
- > Ruggedized 19"
- > Up to 24 Fast Ethernet ports, modular with granularity 2 + 2 Gigabit Ethernet Combo ports
- > TP, MM, SM, LH ports up to 120Kms (Gigabit for the backbone) – up to 87Kms (FE)
- > Redundancy : HIPER-ring (ring structure), RSTP 802.1w, redundant network/ring coupling, link aggregation, redundant power supply
- > Management : Serial interface, web-interface, SNMP V1/V2, HiVision file transfer SW HTTP/TFTP
- > Filter : QoS 4 classes, port priority (IEEE 802.1D/p), VLAN (IEEE 802.1Q), multicast (IGMP snooping/querier), unknown multicast detection, broadcast-, unicast-, multicast limiter, fast aging, GMRP IEEE 802.1D
- > Power supply : 24/36/48VDC(9,6-60V), and/or 120/250VDC(77-320V), and/or 110/230VAC(90-265V).



More service with Schneider Electric's worldwide coverage

> Permanent worldwide availability

With over 5000 sales outlets in 130 countries, wherever you are you can be sure of finding a full range of products to meet your needs and fully compliant with the standards in your country.

> Technical support

Wherever you are Schneider Electric provides technical support around the world. What's more, Schneider's experts are at hand to work out a customized solution with you.



HIRSCHMANN

A Belden Company

Our vision

Hirschmann is an international leader in communication and industrial electronics. All our processes are focussed to meet the demands of our customers and the challenges of the future. We invest in the development of innovative, high-quality products and services. With profitable growth we increase the value of the company for our shareholders and employees.

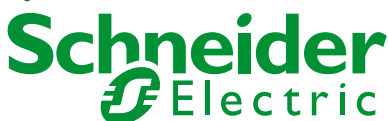
Our values and principles

We have clear and transparent business processes to fulfil our transactions economically, efficiently and with flexibility. We strive for continuous improvement to the benefit of our customers, employees and shareholders. We encourage free-thinking, open leadership and employee empowerment. We are goal oriented and we are dedicated to making our goals a reality. Our co-operation is characterised by mutual appreciation, reliability and active communication. We support, encourage and learn from each other. We are a part of our community and respect our social and ecological obligations.end users.

> www.hirschmann.com

Collaborative Automation

by



Make the most of your energy

Schneider Electric Industries SAS

www.schneider-electric.com

© 2009 Schneider Electric — All rights reserved - Design: pemaco