PLC, SCADA, DCS solution – The differentiating features

We specialize in high performance process control solutions that are based upon truly open standards. Using these micro-PLC modular, scalable controllers and I/O blocks with easy to use configuration tools, gives customers the benefits of a turnkey automation system without the big price tag.

Some of the benefits of Ethernet based micro-PLCs in automation are:

o Scalable Systems that will grow with your requirements (up to 50,000 I/O)

o Truly open standards gives you freedom to choose suppliers and products

o Process Quality I/O - Precision I/O that hot swaps and is isolated for long-term reliability

o Outstanding Environmental Ratings - Operation range of -40 to +75°C, certified for offshore & Zone 2 use

o Reliability Through Redundancy - Redundant processors, networks and I/O channels

o Twenty Year OEM's Product Support Promise - Open systems and planned technology pay off for you in the long run

o Best Value Solutions - Big system performance for the price of just the components

The Architecture

The micro-PLCs, the heart of all Ethernet-based process control or for that matter, any automation solution is the ultimate process controller with the power of open LINUX software. Its powerful communications and advanced programming capabilities make it the perfect solution for your process control, SCADA, or DCS-level application. Though it is built on the open LINUX operating system, no knowledge of LINUX is required in most applications. Get all the benefits of open LINUX with no extra effort. Typical architecture is shown below for reference:
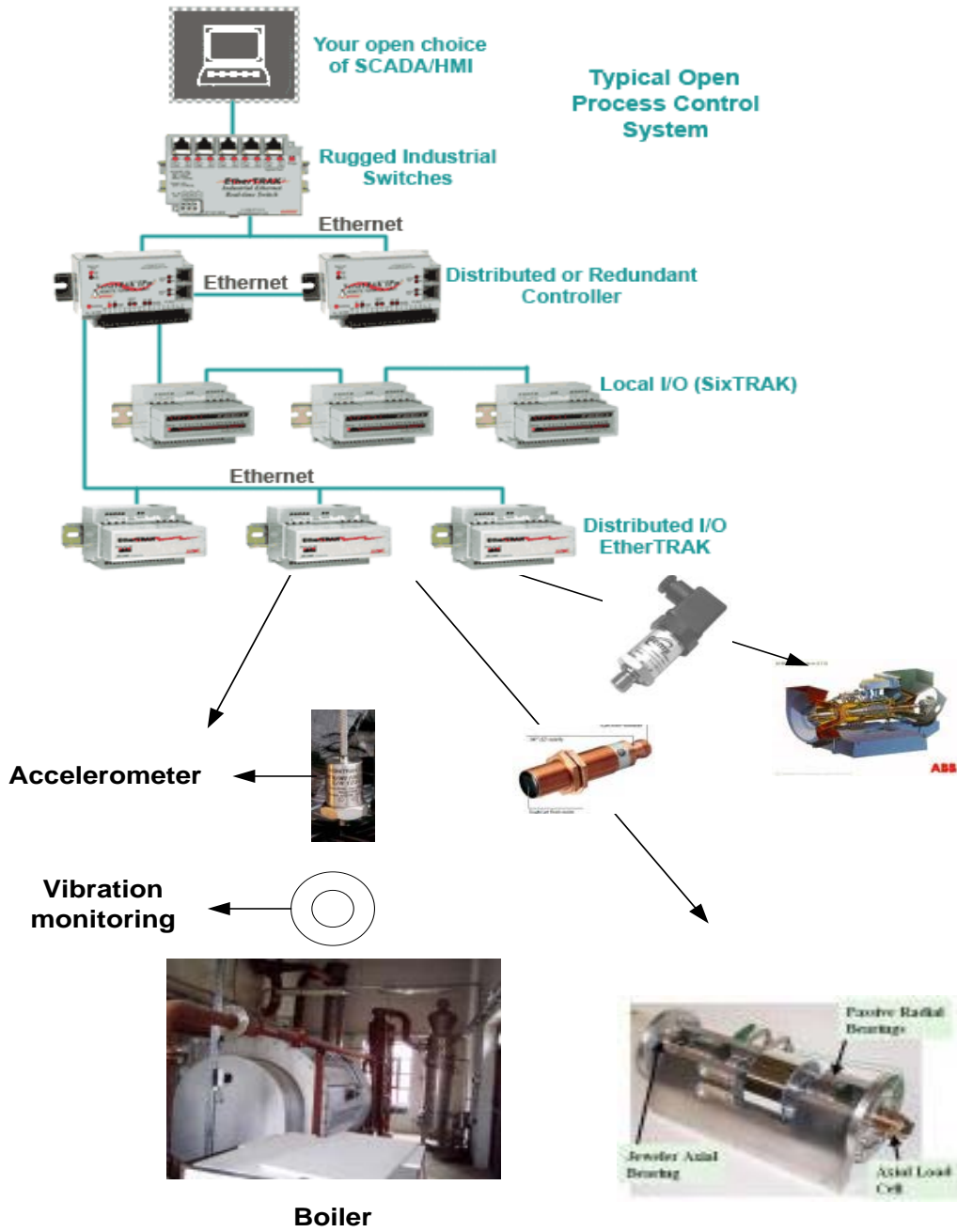
Figure 1 Industrial Ethernet based automation architecture

Machine or Engine Monitoring Automation Features

Accurate, reliable temperature measurements

o The instrumentation modules provide multiple channels of 16 bit, rock solid temperature measurements with electrical isolation and a full range of thermocouple options.

Performance data trending

o Datalogging is a standard feature in process controllers and RTUs. Trend performance data and use it to improve efficiency and avoid problems.

Alarm "cause and result" logging

o An unique feature is data "capture" before and after an alarm. This real advantage distinguishes our systems.

Engine/machine-oriented I/O modules

o The combination I/O module was designed for engine applications with discrete, analog and even high- speed counter channels.

It's compact and cost effective.

Other Automation Applications

Greenhouses

In greenhouses, the logic controller centralises the management of the automatic watering system. The programming options offered, both optimizes the water consumption and provides direct control over opening the solenoid valves under 24 VDC.

Compressor management for cold storage chambers

The larger cold storage chambers are equipped with several compressors. These compressor sets need to be managed on several counts:
Progressive start-up, to prevent drawing too much current.
Using a different compressor each time for start-up to avoid excessive wear on any one.
Controlling the number of compressors in operation at any one time in relation to the demand for cooling.

Managing heating in the home

These controllers are an excellent replacement for other domestic controllers to provide "comfort" temperature when the occupants are

Managing geothermal heating

The principle of geothermal heating consists in collecting the energy contained in the ground (Heat Pump) to use it for heating (floor-heating or radiators) or even for cooling. This method saves 75% in terms of energy in relation to other heating systems, hence the success of the companies specializing in this field. The component elements are similar to those in a refrigerator: a coolant, a pressure reducer, an evaporator, a compressor.

Processing the air in air conditioning

The concept is a cooling tower chilling a water circuit. It is used in air conditioning systems or to cool medium- or large-scale climatic installations in industrial processes, industrial premises and large tertiary activities.

Temperature control in lifts

Relays temperature control relays monitor the ambient temperature of service rooms or lift pulley rooms, to check that it remains within the statutory limits (between 4°C and 40°C) in accordance with standard EN 81.

HVAC

Heating, cooling, air conditioning or extraction. Relay control relays stop the motor to protect the unit in the event of phase, current or supply voltage faults..

Pump and level control

Agricultural applications, watering, irrigation, drying, pressure surge, lift pumps and fire pumps, distribution and treatment of water, etc... Relay control relays are used to manage and protect equipment by current measurement and phase monitoring. These relay control relays can also be used to control emptying and filling levels.

Building Management Systems
Lighting control systems
Air conditioning and heating systems
Lifts, hoists and escalators
Automatic doors and barriers

Commercial Equipment
Automatic washing equipment
Vending machines
Advertising hoardings
Toll barriers