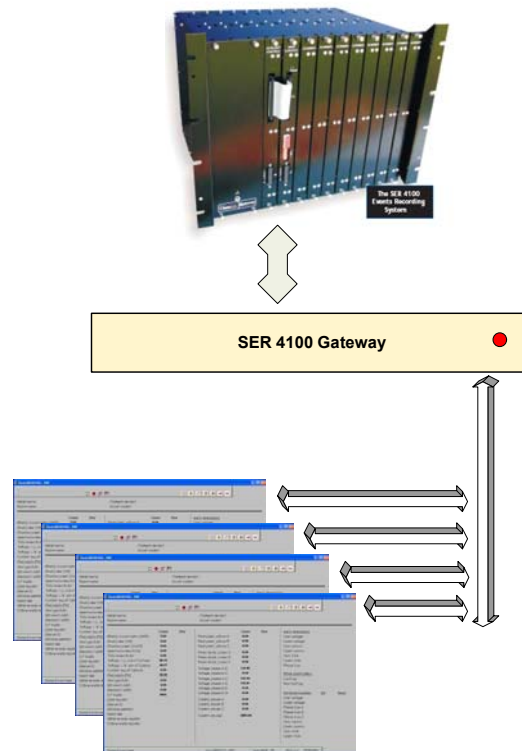




SER4100 Gateway

Connects to industry standard protocols for ease of system integration.

Proven, Reliable and Easy to use



The SER4100 Gateway enables the full functionality of the SER4100 Events Recording System to be integrated into the customer's Master Station Solution.

The SER4100 Gateway extends the building block design and versatility of the SER4100 where a single Gateway can support the full capacity of the SER4100 product.

With flexible configuration the Gateway supports both EIA 323 and TCP/IP ports, plus a number of industry standard protocols (Modbus RTU, DNP V3.0 and IEC 870-5).

Using a command processing methodology the Master Station can actively control the flow of peripheral data.

The SER4100 Gateway deploys the Microsoft ® .Net Compact Framework technology. Therefore supporting concurrent processing of both Master and Slave communications ports.

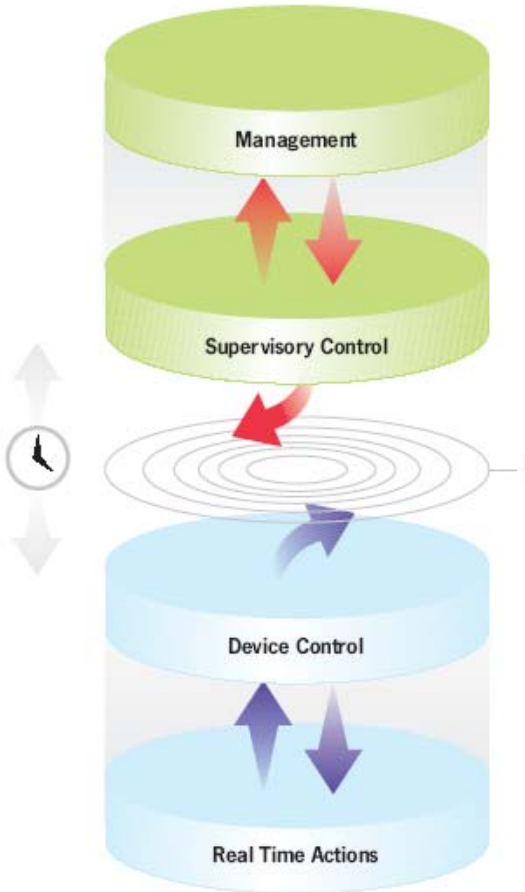
The SER4100 Gateway:

- **Reliable communications interface.**
- **Is easy to program and use.**
- **Command transaction processor.**
- **Maintains system reliability and security.**
- **Multi-protocol support. (Modbus, DNP V 3.0 & IEC 870-5)**
- **EIA 232 and TCP/IP.**

Automation made easy



The Problem



The Current Situation:

Management

Every year organisations spend thousands of dollars establishing, maintaining and monitoring control systems to ensure their services do not falter.

Supervisory Control

These systems are deployed to enable an orderly control of the thousands of pieces of information arriving in close to real time.

Information Disconnect (Protocol Mismatch)

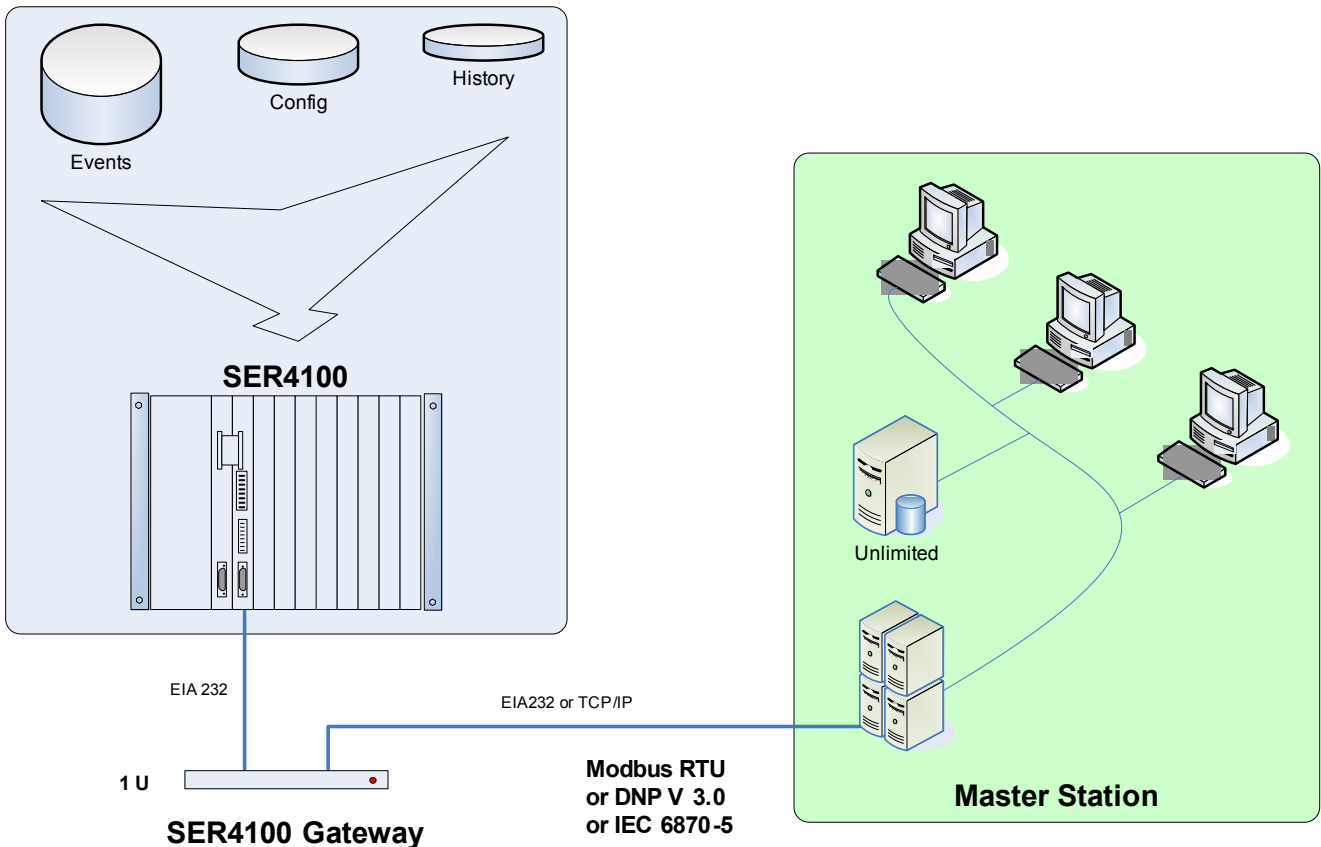
The Problem:

Device Control & Real Time Actions

Operations staff need to get information from the field devices quickly so that system integrity can be monitored and maintained.

The protocol mismatch makes it impossible for the field data to be integrated with the Supervisory Control System and hence the Management of the installation.

The Solution





Reliable Communications Interface.

The communications software is based upon a pre-emptive multi-tasking operating system, configured for multiple automatic retries and error logging. Error logs are maintained of the communications interface to enable trained support engineers to monitor and analyse the inter-communications reliability. Retries, breaks, incomplete packets and byte errors are recorded complete with time and date stamping.

Easy to program and use

The programming of the Gateway is performed by a stand alone PC based Windows 2000/XP application. This GUI based support utility allows the configuration of the communications parameters as well as some of the system functions (Communications Re-tries, Watch Dog Timer, etc). The fields are based upon select and pick drop down selections from the range supported by the SER4100 Gateway.

Command transaction processor

The Master Station has full control over the SER4100 Gateway via a command processor feature. A comprehensive list of commands is available from the Gateway to enable full interrogation of the SER4100 features. For example the Master Station can execute an update History command to obtain current History data sets (from the SER4100 in the back ground) whilst reading the configuration data sets from the SER4100 Gateway in the foreground. In addition existing commands can be cancelled and alternative commands executed based upon current Master Station requirements.

Maintains System Reliability and Security

The SER4100 Gateway has built-in system diagnostics to enable testing of the system hardware. In addition a watchdog reboot facility is built in to ensure maximum on line functionality. An error logging facility records invocations of the re-boot function, plus the re-boot function is exposed to the Master Station for inspection.

Multi-protocol support

The SER4100 Gateway is designed to interface the internal proprietary communications protocol of the SER4100 into industry standard protocols. The following are supported:

Modbus RTU	Released May 2005.
DNP V 3.0	Release to be announced.
IEC 6870-5	Released to be announced.

Others (UCA, etc) considered upon request.

EIA 232 and TCP/IP

The SER4100 Gateway supports either EIA 232 or TCP/IP connection to the Master Station.

Technical Specifications

Power Supply	Input power	<ul style="list-style-type: none"> 12 – 60V DC (supplied via rear panel and polarity protected) Nominal currents 830mA @ 12V, 415mA @ 24V or 210mA @ 48V
	Grounding	<ul style="list-style-type: none"> External contacts for Signal Ground, Chassis, Protection
Performance	Operating system	<ul style="list-style-type: none"> Microsoft ®WinCE
	Watch dog	<ul style="list-style-type: none"> Hardware based watch dog restarts the Gateway if abnormal software execution is detected.
Interfaces	Status Indication	<ul style="list-style-type: none"> Front and Rear Panel mounted Tri-colour LED.
	3 x EIA-232 ports	<ul style="list-style-type: none"> One port fixed for SER 4100 communications (rear panel). One port fixed for Master Station communications (rear panel). One port fixed for configuration (rear panel), including use of onsite configuration workstation software.
	Ethernet port	<ul style="list-style-type: none"> 10/100Base-T Ethernet for Master Station communications (rear panel).
	2 x Status relays	<ul style="list-style-type: none"> One relay providing a health indication of the Gateway. NO/NC field contacts (rear panel). Relay 2 is unused, and is available for use in future development.
	Reset button	<ul style="list-style-type: none"> Momentary action button to perform a hardware restart (rear panel).
	Reset contacts	<ul style="list-style-type: none"> External contacts to perform a hardware restart when shorted (rear panel).
	Configuration	PC Support Tool
System Support	PC Support Tool	<ul style="list-style-type: none"> A standalone PC Support Package enables the Gateway internal performance and error logs to be down loaded and reviewed. These logs can be exported into ASCII Text for emailing as attachments.
Safety	Protection	<ul style="list-style-type: none"> Tested against standard IEC 60950 Information Technology Equipment.
Environmental	Operating temp	<ul style="list-style-type: none"> 0° to 50° C (32° to 122° F).
	Humidity	<ul style="list-style-type: none"> 0 to 95% non-condensing.
	Compatibility	<ul style="list-style-type: none"> Certification to European Union's EMC Directives is pending.
Mechanical	Enclosure	<ul style="list-style-type: none"> 1U, 19" rack mountable chassis.
	Dimensions	<ul style="list-style-type: none"> Width: 482.6 mm (19"), Depth: 405.4 mm (16"), Height: 44.5 mm (1.75")
	Weight	<ul style="list-style-type: none"> Approx. 3.5 kg (7.7 lbs)
	Terminals	<ul style="list-style-type: none"> EIA-232 interfaces via 9 pin D-shell connectors. Ethernet interface via RJ45 connector. Status relay contacts (0.4 A @ 125 VAC/ 2.0A @ 30 VDC) via 3-way terminal connector. External reset contacts (0.4 A @ 125 VAC/ 2.0A @ 30 VDC) via 2-way terminal connector. Power connection via a 2-way terminal connector. Power contacts via a (2.0A Max @ 10 ~ 60 VDC) 3-way terminal connector.