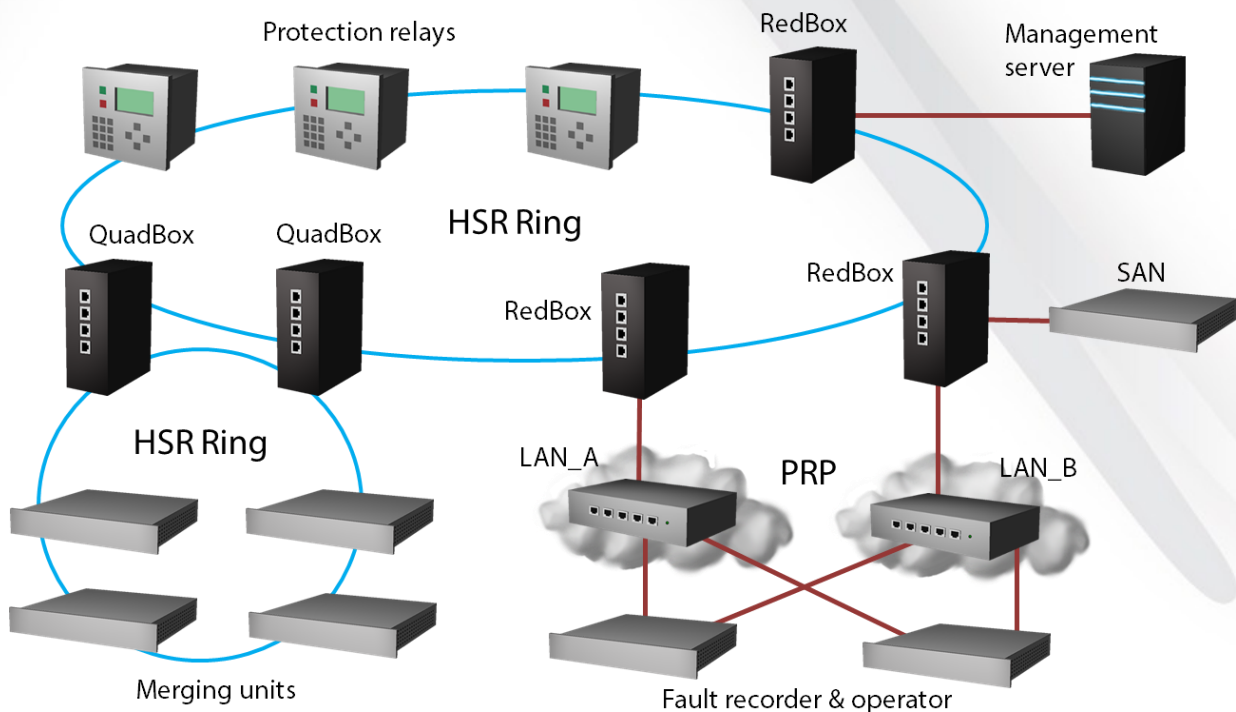


Reliable Ethernet

XR7 Redundancy Supervision

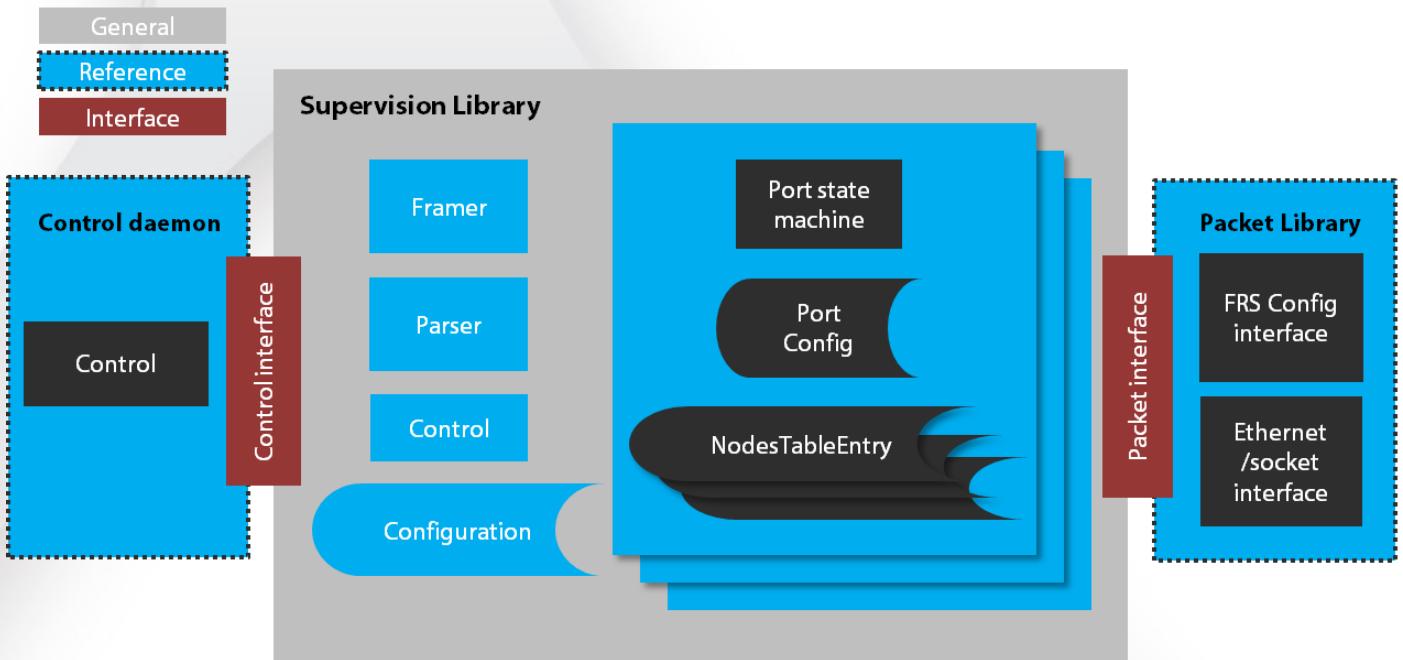
XR7 Redundancy Supervision is IEC 62439-3 compliant implementation of HSR and PRP Supervision Protocol Stacks. XR7 Redundancy Supervision generates, transmits, receives and processes HSR and PRP supervision frames. Based on the information in the supervision frames received, XR7 Redundancy Supervision updates NodesTable that contains information on the other HSR and PRP nodes in the network. This information can be used by other entities including network management and monitoring systems. XR7 Redundancy Supervision itself does not use the information it collects.

The implementation of XR7 Redundancy Supervision is written in pure C language and it is ready to be used in Linux or NIOS/ μ COS-II based systems together with other Flexibilis products, like the Flexibilis Redundant Switch (FRS). Hardware and operating system specific details are hidden behind an abstraction layer so that porting to other operating systems and environments is relatively easy.



The Protocol Stack

XR7 Redundancy Supervision Protocol Stack implementation is divided into a common part and a system specific part. The Common part is the same for all environments and it contains the most of the functionality, including generation of the supervision frames, processing of supervision frames received and maintaining of the NodesTable. The System specific parts provide standard interfaces for the common part, through which it can employ the functionality provided by different kinds of operating systems. Porting Redundancy Supervision to other environments requires making changes to the system specific parts only.



Features

- Sending of HSR Supervision frames
- Sending of PRP Supervision frames
- Receiving and processing of HSR Supervision frames
- Receiving and processing of PRP Supervision frames
- Maintenance of NodesTable
- Interface for reading information in the NodesTable from the host system
- Callback functions for informing about changes in the NodesTable without polling
- Adjustable Supervision frame transmission interval (LifeCheckInterval)
- Adjustable timer intervals (NodeForgetTime, ProxyNodeTableForgetTime, EntryForgetTime, NodeRebootInterval)
- Easily portable to other target systems