RELYUM

HSR PRP
Zero Recovery Time

RELY-SYNC-HSR/PRP-PCIe Time-aware Redbox-DAN PCIe NIC

RELY-SYNC-HSR/PRP-PCIe can be used as a multi-media PCIe Redbox-DAN, operating as an **HSR/PRP node** of a high-availability network and connecting an Ethernet network segment with an HSR/PRP network.

PCI Express (PCIe) is the most extended high-speed serial computer expansion bus. It is the de-facto standard for expansion boards in PC computers and it is gaining acceptance in Industrial PCs and even in SCADA systems.

RELY-SYNC-HSR/PRP-PCIe is a smart pluggable board that comprises in the same device hardware and software resources to implement specialized networking, synchronization and security oriented services.

The device uses dedicated hardware for low latency switching and for implementing high accuracy clock synchronization based on **IEEE 1588** standard.

These key features makes RELY-SYNC-HSR/PRP-PCIe platform the most reliable and multipurpose networking device for critical environments.

Specifications

Communications

- Autonomous management of Supervision Frames and IEEE 1588-2008 PTPv2 support
- Cut-through operation for the HSR ring to minimize the latency in the ring
- Store&forward for PRP and Ethernet operation
- 2x HSR/PRP/Ethernet ports + 1x Ethernet port
- Media options (SFP cages):
  - » 10/100/1000Base-T
  - » 1000Base-X
  - » 100Base-FX
- Zero-Packet-Loss redundancy modes:
  - » IEC 62439-3 v3 Clause 5 "High-availability Seamless Redundancy (HSR)"

    Supported modes: H, N, T, U, HSR-SAN, PRP-HSR, HSR-HSR
  - » IEC 62439-3 v3 Clause 4 "Parallel Redundancy Protocol (PRP)"

    Supported modes: Duplicate discard, duplicate accept, transparent reception, PRP-HSR
- Optional modes:
  - » IEC 62439-2 Clause 5 "Media Redundancy Protocol (MRP)"
  - » "Device Level Ring (DLR)" for Ethernet IP
  - » RSTP IEEE802.1w
- VLAN support
- Ethernet type based or IEEE 802.1P Traffic prioritization
- 1 PPS output
- PCIex1.
- Seamless integration on old Legacy PCI Systems through optional adapter

Software features

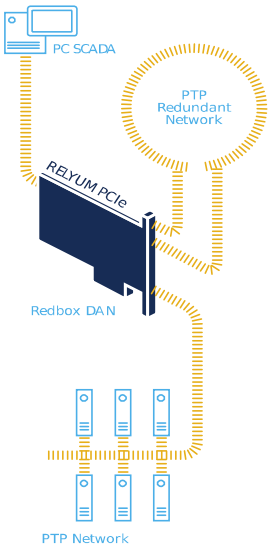
- Ethernet network drivers available for most OS (Linux, Windows, VxWorks, etc.)
- IEEE 1588-2008 PTPv2 Ordinary Clock and Boundary Clock support. Profiles: Default, Power, IEC 61850-9-3, AS

Processing performance

- On-board FPGA for high-speed network switching and PTP timestamping
- Multi-core CPU unit to support autonomous software applications

Configuration and Management

- On-board integrated Web Server to provide HTML5-GUI configuration access:
- Accessible through HTTP(S)
- Configuration profiles and Firmware updates
- Real-time network monitoring



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