



 **IEEE 1588**



## **RELY-SYNC-PCIe Time-aware Switch PCIe NIC**

RELY-SYNC-PCIe can be used as a multi-media **PCIe Switch**, providing 3+1 (PCIe) Gigabit Ethernet ports.

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-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 different standards such as **IEEE 1588** or IRIGb.

These key features makes RELY-SYNC-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
- 3x Ethernet port
- Media options (SFP cages):
  - » 10/100/1000Base-T
  - » 1000Base-X
  - » 100Base-FX
- 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
- PCIe x1.
- Seamless integration on old Legacy PCI Systems through optional adapter

### Synchronization

- IEEE 1588-2008 PTPv2 Ordinary Clock (Master and Slave) and Boundary Clock support
- Profiles: Default, Power, IEC 61850-9-3, AS
- Optional IRIGb Master/Slave bridge

### 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

- Ethernet network drivers available for most OS (Linux, Windows, VxWorks, etc.)
- On-board integrated Web Server to provide HTML5-GUI configuration access:
  - Accessible through HTTP(S)
  - Configuration profiles and Firmware updates
  - Real-time network monitoring

