

# Korusync PTP PCIe Card

## Datasheet

The Korusync PCIe Card is a class leading synchronisation solution for PC's and Servers based on a PCIe card platform and associated software tools.

Highly accurate time is delivered by the Korusync card via network communications utilizing the IEEE 1588-2008 protocol. The card is fully IEEE1588 v2 compliant (Tested to stringent G.8261 Telecom testing standards) and supports the Telecom profile for enhanced performance.

Use of class leading timing recovery algorithms, an oven controlled oscillator and the Korusync timing toolkit software means that the Korusync PTP card can provide time, internally to the Server software applications, to better than 100ns of accuracy.

The Korusys timing toolkit is a suite of applications to accurately deliver time to the attached PC/Servers applications.

The Toolkit allows users to select the set of functions to complement their system requirements and provides a means to replace systems time, provide a lightweight and low latency s/w clock and provide a lightweight system logging function to allow for timing instrumentation of internal s/w components.

**Korusync Daemon (Supplied)**

Accurately disciplines the internal Linux clock based on PTP card time

**ApplicationClock Daemon (Option)**

Provides software applications with extremely low latency access to highly accurate, monotonic, time. Scales across multiple cores.

**ApplicationTrack Daemon (Option)**

Provides for extremely lightweight timestamping and logging of application events.

Please refer to the timing Toolkit software documentation for further details.

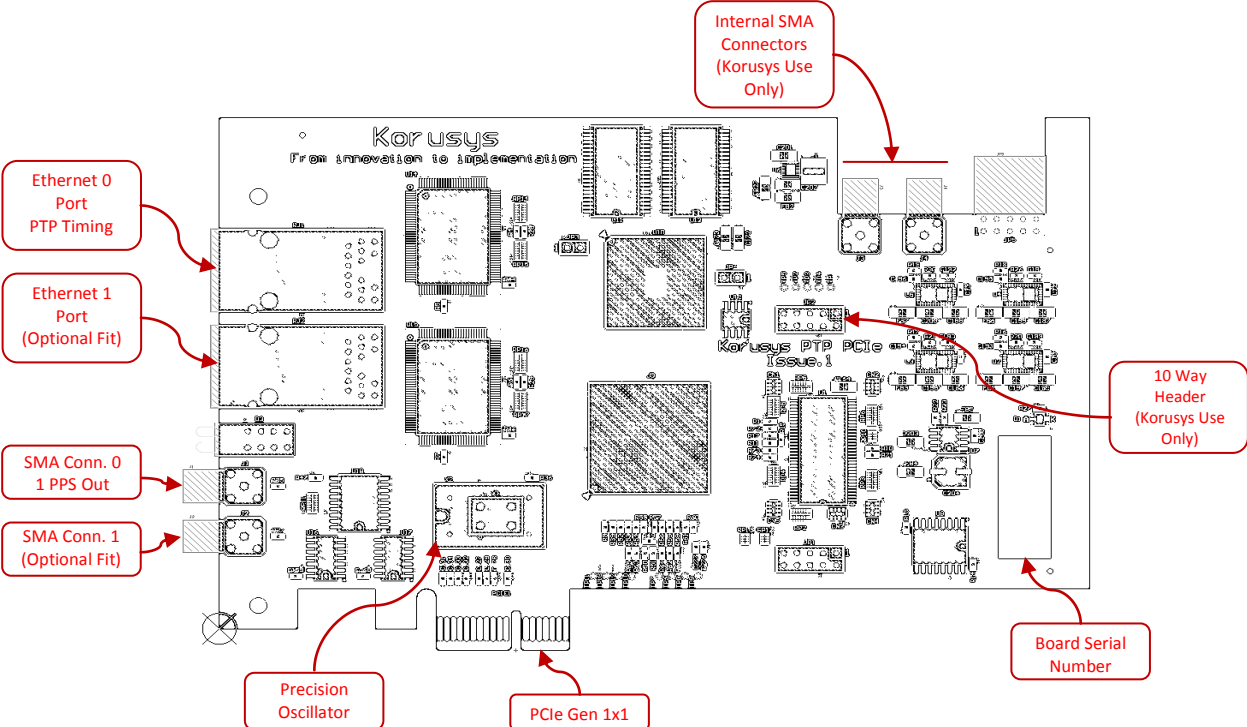


Fig. 1: Korusync PTP Card

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## Technical Data

### Recovered time accuracy

- Better than 100 nS accuracy in unloaded networks.
- Better than 1 uS accuracy in heavily loaded networks.

### PTP Compatibility

- PTPv2 compliant.
- Telecoms profile compliant

### Bus Interface

- PCIe 1.1 x1 Gen1

### Connectors

- Ethernet Port 0 – 10/100/1000 Ethernet PTP network connection
- SMA 0 – One pulse Per second Output. LVTTTL levels, Rising Edge aligned 1uS high period.

### Dimensions

- Single Slot, Full Height, Short Length PCIe Format 172 x 96 mm

### Power Consumption

- < 1 W

### Operating Environment

- Operating temp : 0°C – 70°C
- Storage Temp : -10°C to +85 °C

### Software Support

- Drivers : Linux RedHat 5.5, 6 32 or 64 bits. Other O/S builds available on request.
- API : Linux .so API supplied with card
- Daemons : Korusync server timing daemon supplied with card
- Optional : ApplicationClock daemon, ApplicationTrack daemon

## Ordering Information

Korusync PTP PCIe Card (includes the Korusync Timing daemon)

To order, or for enquiries, please contact us:

Email: [enquiries@korusys.com](mailto:enquiries@korusys.com)

Address: Korusys Ltd  
2 Venture Road  
Chilworth Science Park  
Southampton  
SO16 7NP

Phone: +44 (0)844 5041680

### Additional Ordering Options

ApplicationClock daemon :

Lightweight Software clock allowing for User mode access to highly precise time in the lowest possible latency. Replaces standard Linux time calls which can be expensive and inaccurate.

ApplicationTrack daemon :

Lightweight logging function which allows for instrumentation of critical points within the server software.

## Further Information

Further information is available on request and includes White Papers, Product Briefs, API documentation and User Guides.

## About Korusys

Korusys Ltd are leading experts in packet based synchronisation techniques providing both consultancy services and synchronisation products to various market segments.

Korusys Ltd is also a trusted provider of Electronics Design Services. Focused primarily on FPGA, ASIC, and Embedded Software design and development, Korusys Ltd has earned a reputation for high quality, right first time developments for a wide variety of clients.

Please visit us at <http://www.korusys.com> for contact and product information or visit our reseller partners at <http://www.chronos.com>

## CE Declaration

The Manufacturer, **Korusys Ltd**, of

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Southampton Science Park  
Southampton, UK  
SO15 7NP



(A copy of the technical file for this equipment is available from the above address.)

Declares that the product **PTP-PCIe-1** to which this declaration relates is in conformity with the following standards following the provisions of the directives 2004/108/EC (electromagnetic compatibility),:

To which this declaration relates is in conformity with the following standards:

BS EN55022:2006 + A1:2007 Class A Emissions Standard for Information Technology Equipment  
BS EN55024:1998 + A1:2002 + A2:2003 Immunity Standard for Information Technology Equipment  
BS EN61000-4-2 1995 ESD Requirements  
BS EN61000-4-3 1996 Radiated Susceptibility  
BS EN61000-4-4 1995 Electrical Fast Transient Burst Requirement  
BS EN61000-4-5 1995 Surges Requirements  
BS EN61000-4-6 1996 Conducted Susceptibility  
BS EN61000-4-11 1994 Voltage Dips and Interruptions

**Authorised Signatory :**

**Paul Rushton (Director) on 12/7/2011 at Korusys Ltd, 2 Venture Rd, Southampton, UK**

## FCC Declaration

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

