

PTP in real-time: Your network in complete unison

The PTP stack by Kithara achieves something that Ethernet on its own is not able to—synchronize multiple network participants within a distributed system in real-time. The real-time capabilities of the Kithara Ethernet driver provides precise time stamps with deviations in the sub-microsecond range in order to accurately match the internal clocks of all participants.

In practice, PTP can be implemented for applications such as accurate synchronization of image data from multi-camera systems, acquisition of exact measurement data with high resolutions or execution of parallel robotics tasks. Furthermore, with connection to GPS, otherwise separate computer networks can be synchronized even globally, without requiring a direct physical link.

Besides manually determining the master and slave functionality, PTP can also apply the so-called best master clock algorithm (BMCA) for synchronization. The algorithm will identify the participant with the most accurate system clock and use it as reference for all other participants.

With the PTP stack by Kithara, raw Ethernet as well as IP/UDP can be used as transport layer. For high-precision hardware time-stamping, selected PTP-compatible network controllers are supported.

Take a peak behind the scenes and learn more about what happened to one of our programmers during the development of the PTP stack:
> kithara.com/en/blog/time-travel.

For an up-to-date overview of Kithara products and a variety of test versions visit our website at
> www.kithara.com.

