Product Focus

PTP in Real Time: 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 provide precise time stamps with deviations in the sub-microsecond range in order to accurately match the internal clocks of all participants.

In practice, the Precision Time Protocol (IEEE 1588) can be implemented in 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 function by Kithara, raw Ethernet as well as IP/UPD can be used as transport layer. For high-precision hardware time-stamping, selected PTP-compatible network controllers are supported.

The latest information about Kithara products as well as a free 90-day trial version can be found ›**on our website**.