



syn1588<sup>®</sup>

syn1588<sup>®</sup> Software Suite

# Release Overview

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## 2020 v1.12

### Overview

This release focuses on redundant PTP clock synchronization and introduces the redSync utility for this mode. In addition, a new Linux driver for the syn1588® PCIe NIC is introduced which is compatible with the current syn1588® PCIe NICs as well as the brand new syn1588® Dual NIC.

### redSync utility

This new utility allows the user to run two syn1588® PTP stack instances in parallel. Each synchronizing with a different PTP Master over a common syn1588® PCIe NIC interface. This utility can be configured to use the first syn1588® PTP stack that is in-sync with its PTP Master or to compare both syn1588® PTP Stacks (and their Masters) via the PTP BMCA and select the better PTP Master. The utility will monitor both syn1588® PTP stacks during operation. It will seamlessly switch to the backup syn1588® PTP Stack when the primary syn1588® PTP Stack connection or the quality of its PTP Master degrades.

Take a look at the syn1588® User Guide for a detailed overview of the redSync utility and its recommended application or contact Oregano Systems ([contact@oregano.at](mailto:contact@oregano.at) or [sales@oregano.at](mailto:sales@oregano.at)) for more details.

### syn1588 PCIe NIC driver for Linux

We introduce the new syn1588® PCIe NIC driver for Linux which provides the usual support for the syn1588® PCIe NIC. In addition, this driver supports the brand new syn1588® Dual NIC, i.e., one will be able to use both ports of the syn1588® Dual NIC like the well-known syn1588® PCIe NIC. This will allow you a seamless integration of the syn1588® Dual NIC in your current applications. Upcoming releases will incrementally introduce advanced features of the syn1588® Dual NIC. This driver directly replaces the current syn1588® PCIe NIC driver.

## 2019 v1.11

### Overview

This release focuses on documentation of the user APIs. In addition, preparations for redundant clock synchronization have been added to the software suite. This involves

- access to a second timestamping unit on the same interface of a syn1588® PCIe NIC device
- enabling/disabling control of the clock for a PTP Stack

## 2019 v1.10

### Overview

This release focuses on 32-Bit and 64-Bit system compatibility. It further includes improvements to the PTP Security implementation and various bugfixes and smaller improvements.

## 2019 v1.9

### Overview

The 2019 v1.9 Release of the syn1588® software suite is mostly concerned with increasing the performance and the improvement of our documentation. The new feature introduced with this release is an implementation of the PTP v2.1 Security protocol, which is described below.

### PTPv2.1 Security

The first feature from the upcoming PTP Version 2.1 implements the PTP Security protocol as specified in IEEE1588-2018. The PTP Security protocol provides an effective way to secure PTP traffic from Man-In-The-Middle attacks, Replay attacks as well as malicious Master spoofing. See the Application Note *an\_security.pdf* for further details.

## 2019 v1.8

### Overview

The most interesting improvement introduced with the Q1-2019 release of the syn1588® Live System is the new feature Dynamic Port Re-configuration, which will be described below. Apart from that, the current release features a couple of minor bugfixes relating to different parts of the syn1588® software, such as the parser, offset compensation, and improvements in the handling of Layer2 mode.

### Dynamic Port Re-configuration

The Precision Time Protocol has introduced the concept of PTP ports. During start-up of the syn1588® PTP Stack a physical port is linked to a PTP port. In previous versions of the syn1588® PTP Stack this was done statically. Any changes in the physical port required to stop the syn1588® PTP stack and re-invoke it after making the changes for the Ethernet port

Dynamic Port Re-configuration allows to user to modify the Ethernet port (i.e. change the IP Address) or link a different Ethernet port to a specific PTP port) during runtime of the syn1588® PTP Stack. The reconfiguration is done via the Shared Memory API.

For further information on how to use the Dynamic Port Re-configuration feature, please take a look at the example program in the Shared Memory API export.

## Further Information

You are looking for further information about our syn1588® product line-up? Please contact Oregano Systems support! We will be pleased to provide you all the required information.



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