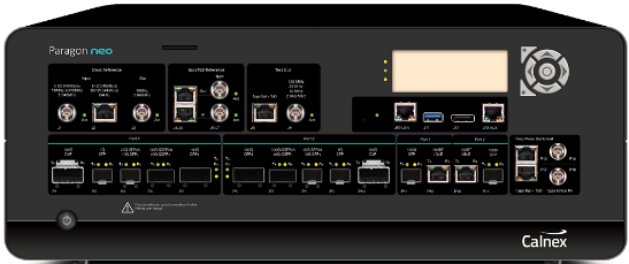


Paragon-**neo** Drop 1.1

NEW FUNCTIONALITY AND ENHANCEMENTS

(Release 01.01.XX)




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1 Software Release Overview

Drop 1.1 (01.01.XX) adds the following features to Paragon-neo and CAT¹:

Software Update with valid CSS
(Customer Support Service) contract



New Options	Enhancements to existing Options	Base product enhancements
Option 100M		Defect Fixes

 To check the current software version installed, select **Help > About** on the Paragon-neo GUI.

¹ This release includes enhancements to the CAT. The CAT accompanies Paragon-neo and is used to display/present graphical results such as Wander and Time Error and to calculate metrics such as MTIE/TDEV for further analysis.

2 Features and Benefits

Paragon-neo	Benefit
100M Optical Interfaces (Optional)	For devices with 100M Optical interfaces, commonly as a tributary output for connection to external equipment (with standard accuracy requirements, rather than enhanced accuracy) relevant PTP and SyncE performance testing is enabled – potentially combined with higher rate input interfaces for e.g. Boundary Clock test scenarios

3 New Options

3.1 100M Optical Interface support

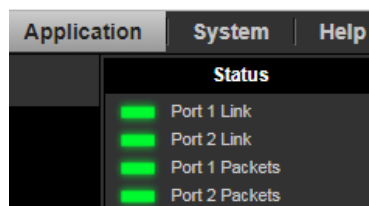
To allow ITU-T standards-based synchronization testing of SyncE Wander and PTP performance (enabled with the relevant Paragon-neo options) test cases can now be run on 100M optical interfaces.

Please note that the target application for these interfaces is standard accuracy, rather than enhanced accuracy for applications such as 5G, therefore the 100M Optical interface has an independent measurement specification compared to other optical interfaces on Paragon-neo.

Implementation note:

100M PHYs shift their receive clock on first receipt of packets. For SyncE systems, this implementation results in phase jumps of potentially tens of ns.

Therefore, for consistent SyncE wander test results at this rate, packet receipt should be confirmed BEFORE starting measurements, for example by checking the appropriate port packets indicator is green:



If this procedure is not followed, the measured results can still be truncated post-capture to use the unaffected measurement data only. This can be done by adjusting the analysis period in CAT using the drag feature.

With 100M SFP Optics inserted, the required ports can be selected in the **Select Interfaces** page from the Paragon-neo GUI.

Ports can be decoupled to allow e.g. higher rate PTP input to a system-under-test, with measurement of Time Error on the 100M Optical output from the system.

Features such as the G.8273.2 Boundary and Slave Clock Conformance Test App, or PFV packet capture and analysis can then be run in the same manner as for other available interfaces and rates.



Presets Save/Recall Settings

Test: Noise Generation (Clause 7.1)
Noise Generation (Clause 7.1)
Noise Tolerance (Clause 7.2)
PTP to PTP Noise Transfer (Clause 7.3.1)
PTP to 1pps Noise Transfer (Clause 7.3.1)
SyncE to PTP Noise Transfer (Clause 7.3.2)
SyncE to 1pps Noise Transfer (Clause 7.3.2)
SyncE to PTP Transient Response (Clause 7.4.1.2)
SyncE to 1pps Transient Response (Clause 7.4.1.2)
T-BC Holdover Performance (Clause 7.4.2.2)
T-TSC Holdover Performance (Clause C.2.4.2.2)

Estimated Time Remaining: N/A

Elapsed Time: 00d 00h 00m 00s Elapsed Time: 00d 00h 00m 00s

Master/Slave Emulation

START
PTP
CAT

4 Appendix A: Software Advisory Notes

- There is a **fix in this release** for a detected issue running long term measurements with Calnex Analysis Tool (CAT). As of this release, there is no limit on the duration of measurements.
- There is a known issue in this release, affecting Transparent Clock Mode T4 measurements when transmitting at relatively high packet rates. It is recommended to use the ITU-T G.8275.1 specified packet rate of 16pkt/s.
- When using automation, it is recommended to have live captures stopped before trying to access/read data via script, as there can be intermittent errors.

To Install:

Paragon-neo SW is delivered as an ISO (disk image). To upgrade the instrument, this ISO file must be written to a USB stick as an image. To do this, you will need to install an application capable of writing ISO images to USB. One such application is Win32DiskImager. This can be downloaded from <http://sourceforge.net/projects/win32diskimager/>

Once you have your application installed, run it. You should then load the Neo ISO. Using Win32DiskImager:

- Select the folder icon next to the “Image File” field
- In the “Select a disk image” dialog, select the *.* file filter
- Locate and open the Neo SW package installer ISO

The ISO should then be written to your USB stick:

- Select “Write”

Once written to USB, you are ready to load on to the Paragon-neo unit.

The instrument should be powered on BEFORE you insert the USB stick. In addition, it is not possible to upgrade unless the box is idle - make sure to stop all generation and capture.

Click **System** in the menu selection on the top right of the UI

- Click **Setup** in the left hand menu bar
- Insert the USB stick
- Click **Update**

The instrument will now begin the upgrade process. Note that updating the Paragon-neo can take up to 30 minutes. **Please do not power off while the upgrade is in process.**

You can now connect and the new software is ready to use.

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