

5.9. gPTP Time Synchronization

This device supports Generalized Precision Time Protocol as defined in IEEE 802.1AS. It can be configured to use the Standard profile or the Automotive profile as defined by the Avnu Alliance.

Note

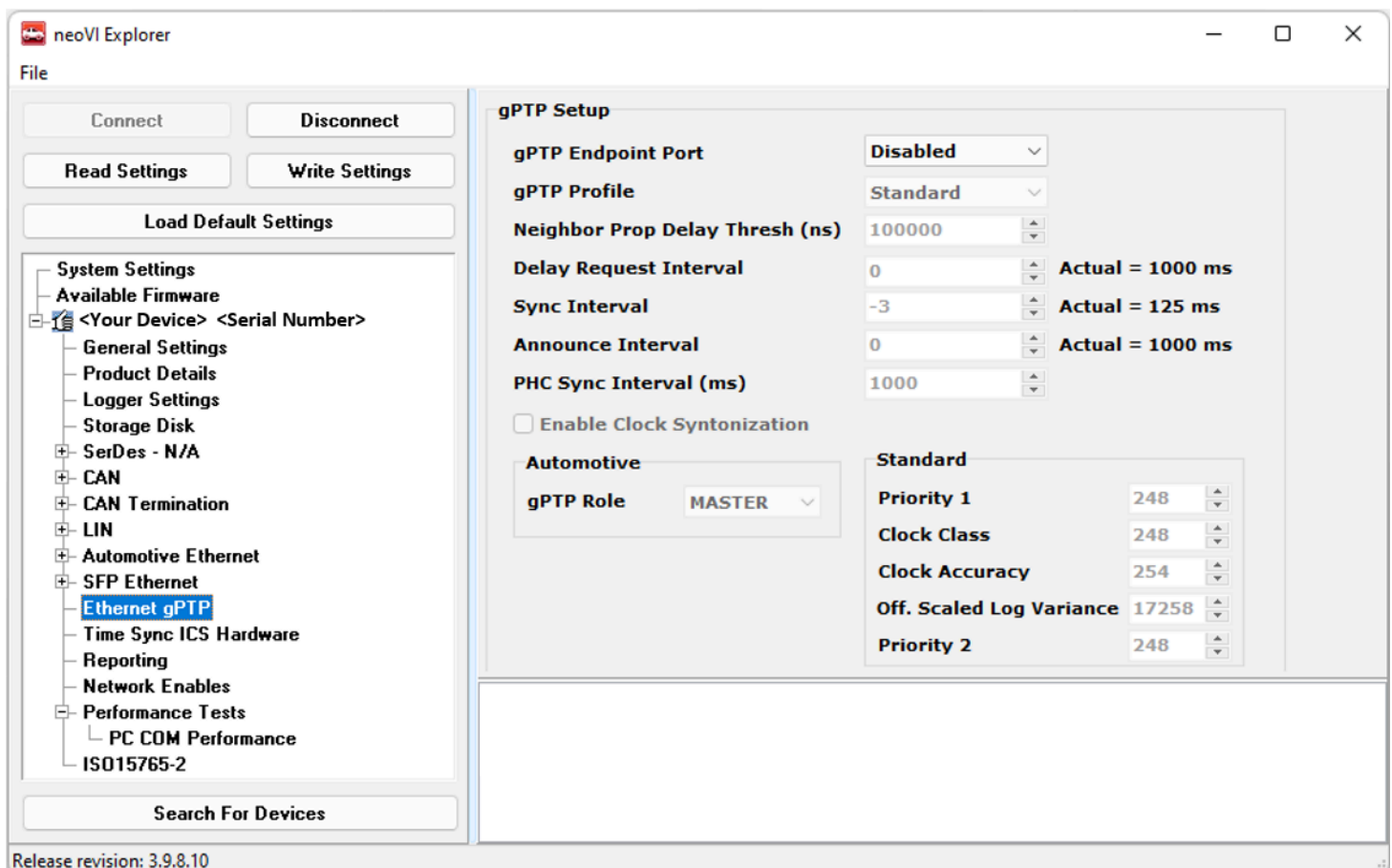
Since this device is not a switch, only a single port may be enabled to support gPTP. This port may serve as a Grandmaster or as a clock slave to sync the device clock to a Grandmaster.

Typically the timestamp Physical Hardware Clock (PHC) of your device is synchronized with a host computer when connected. In cases where it is desirable for this clock to be synchronized with another clock source, gPTP can be enabled. The clock is automatically synchronized to Epoch Time when enabled and it is connected to a gPTP grandmaster.

Note

Erratic behavior may be observed if the Epoch Time of logged messages is prior to 1/1/2007.

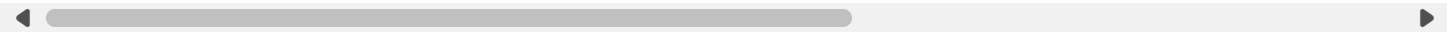
gPTP is configured in the following interface.



Note that this screen varies in content between Intrepid devices.

5.9.1. gPTP Settings

gPTP Endpoint Port	Select the Ethernet port of the device connected to a gPTP domain
gPTP Profile	Automotive: AVNU defined profile
	Standard
Neighbor Prop Delay Threshold (Standard Profile Only)	Device will be identified as non-AS Capable if pDelay exceeds this value Default 800, but increased to 100000 to insure latency of active tap does Can be set as high as 10000000 for the purposes of certain AVNU testin
Delay Request Interval	Period of Pdelay_Request
Sync Interval	Period of Sync/Followup messages
Announce Interval	Period of BCMA Announce message (Standard profile only)
PHC Sync Interval	Period the PHC (Physical Hardware Clock) is synchronized with the gPT
Enable Clock Syntonization	Slave clock will use rateratio to compensate for frequency offsets between



Note

The interval of Delay Request Interval, Sync Interval, and Announce Interval are calculated using the value entered as follows:

- Value = log2(Interval in Seconds)
- Min =-5 / Max =22

5.9.2. Automotive Profile Settings (Avnu)

gPTP Role	Master
	Slave

5.9.3. Standard Profile Settings

Grandmaster Credentials (Reference IEEE-1588-2008 for attribute details)	Priority 1: 0-255, lower value = higher priority
	Clock Class: Attribute defining a clock's TAI traceability
	Clock Accuracy
	Offset Scaled Log Variance: Attribute defining the stability
	Priority 2: 0-255, lower value = higher priority