

NTS100 Firmware Release Notes

VERSION 3.21r2 (October 2017)

- **Improvement:** Added support for new GNSS receiver hardware. NTS100 units from serial number 181000 onwards contain the updated GNSS receiver hardware, which will allow for the possibility of adding support for additional satellite constellations in future firmware revisions.
- **Feature:**
Added an advanced configuration option to use local time instead of UTC time for NTP timestamps. This is non-standard, but may be required in certain applications. This option applies to both server and client operation, and is set independently on each port. Tekron Configuration Tool 4.2.1.10 or later is required to enable this option.
- **Feature:**
Added an option to allow the unit to be reset to factory defaults in the event of a forgotten administrator password. Physical access to the unit is required to perform the reset procedure. Please refer to the Tekron website for the reset procedure. This option is disabled by default. Tekron Configuration Tool 4.2.1.0 or later is required to enable this option.

When this option is disabled, the unit must be returned to Tekron for reprogramming in the event of a forgotten administrator password.

- **Improvement:**
The failure to obtain an IPv4 address via DHCP will result in the clock adopting an ARP tested Link-Local address (169.254.xxx.xxx). An IPv4 address fail alarm will now be displayed in the Configuration Tool. When this alarm occurs, the user may need to update their network adaptor settings to a Link-Local address to gain access to the clock. The alarm will persist until the IPv4 address settings are changed or the clock is connected to a DHCP enabled network.

The alarm appears in the Configuration Tool as “**ipv4 address**”. **This alarm does not open the alarm relay, and does not send an SNMP notification.** This alarm can be viewed in the Configuration Tool by connecting to the NTS100 via the USB port.

- **New feature:**
Added support for ITU-T G.8275.1 PTP Telecom Profile. Both Telecom Grandmaster and Slave operation is supported. Tekron Configuration Tool 4.1.1.0 or later is required to configure PTP in this profile.
- **Improvement:**
PTP slave algorithm has been improved to be more resistant to noise and transients in the PTP time source, which could be caused by heavy or varying network traffic, or by network reconfiguration.
- **Improvement:**
Additional checks are now performed on incoming PTP messages when operating as a PTP slave, in order to improve resistance against possible PTP spoofing attempts.

VERSION 3.16r7 (October 2016)

- **Bug Fix:** The NTP time stamp consists of two fields, a 32 bit field for the number of seconds since 1 January 1900 and a 32 bit field for the sub-second fraction. From 23:00:00 UTC on December 31st 2016 (one hour before the leap second is applied) the sub-second fraction will be frozen at its maximum value (binary all 1's). However, the number of seconds field will continue to update and maintain correct time. This has the effect of decreasing the time stamp resolution from 16ns to 1s and means that the date and time will remain accurate down to 1 second accuracy only. At 23:59:00 UTC the sub-second fraction will return to normal operation and the leap second will be applied correctly.

VERSION 3.16r6 (March 2016)

- **Bug Fix:** When the GNSS satellite constellation is restricted to GLONASS only, and the unit has not been previously synchronised to GPS, the UTC time may be offset by the current leap second difference between GPS and UTC time. This fix detects and corrects the offset.

VERSION 3.16r5 (Not Released)

VERSION 3.16r4 (Initial Release)