



# FIELD SERVICE BULLETIN

FSB# 160218

February 18, 2016

Revised February 28, 2016

**Affected Products:** Tempus LX, Unison, Meridian, Tycho, RTM3204, Praecis Gntp, Tempus Gntp (all GPS-Synchronized)

<b>Part Number:</b>	<b>Description:</b>
3015-xxxx-xxx	Tempus LX GPS Network Time Server
3017-xxxx-xxx	Unison GPS Network Time Server
3019-xxxx-xxx	Meridian Precision GPS TimeBase
3021-xxxx-xxx	Tycho GPS Frequency Reference
3204-xxxx-xxx	RTM3204 GPS Timing Module
3009-xxxx-xxx	Praecis Gntp Network Time Server
3012-xxxx-xxx	Tempus Gntp Network Time Server

Note: "x" is variable.

## **Problem:**

A time fault alarm occurred in the above products at 00:00:00 UTC on February 14<sup>th</sup>, 2016. The persistent time fault was caused by the internal GPS receiver not reporting the correct, extended GPS week number of 1884 that pertains to February 14-20, 2016. The GPS week count within the GPS receiver "rolled over" to week number 860 that pertains to June 30 – July 6, 1996. A firmware update is necessary to ignore the



## Required Action:

The GPS Subsystem firmware must be upgraded on all affected products.

Apart from the error extending the GPS week count, the GPS receiver operated normally, tracked and locked to the satellite signals. The time fault was raised when the integrity checks on the time data from the GPS receiver recognized the rollover and rejected it. The GPS disciplined oscillator routines continued operating but the frequency accuracy and stability were degraded briefly each day when new UTC parameters were received from the receiver with the incorrect week number, causing an erroneous GPS-UTC correction to be applied. Interestingly, this behavior was similar to the effect caused by the GPS control segment transmitting incorrect UTC parameters on Jan 25, 2016.

The following section describes details regarding the software update:

### Tempus LX, Unison, Meridian, Tycho, RTM3204

These products are comprised of two subsystems:

#### Linux/NTP Subsystem

- Current version is 6010-0044-000 v5.7 or 6010-0042-000 v5.7
- If your system does not have v5.0 or later, you must upgrade. Please review the version history.

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**Contact Information:**

Feel free to contact us if you have any questions or need help:

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