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Customer Assistance Center: 1-408-428-7907

FIELD SERVICE BULLETIN

FSB #: 098-50620-037**DATE: April 12, 2012****Title: SS-S100 GPS Model, April Time Jump****System: SS-S100 GPS****Product Identity: SS-S100 GPS Network Time Server***Note:* The **SS-S100** GPS was discontinued in 2005.**Product Code:** N/A**Description:** N/A**CLEI Code:** N/A**Technical Support:** Worldwide 1-408-428-7907 (1) (2) or USA toll free 1-888-367-7966 (1) (2)**Customer Relations:** Worldwide 1-408-428-7907 (2) (2) or USA toll free 1-888-367-7966 (2) (2)

NOTE: Find a copy of this FSB in the Support section on the Symmetricom website:

<http://www.symmetricom.com/support/online-support/ttm-product-support/field-service-bulletins/>

General Behavior:

1. SS-S100 GPS used a standard base software that utilized leap seconds to identify the GPS week rollover epoch:

Epoch 0: Jan 6, 1980 – Aug 22, 1999

Epoch 1: Aug 23, 1999 – Apr 6, 2019

Epoch 2: Apr 7, 2019 – Nov 20, 2038

This was a standard practice at the time the product was developed, since GPS does not provide year information. The algorithm identifies the GPS week rollover epoch based on a predicted number of leap seconds. This algorithm used leap seconds at the start of GPS week to properly compute year, month and day for the remaining weeks in the current rollover epoch (Aug 23, 1999 – Apr 6, 2019).

April 8th, 2012 at 23:59:45 UTC marked the beginning of the current GPS week. Since the current GPS leap second count is 15, the clock jumped back to the previous epoch 0 and the year 1992.

Although other product functions, not related to year and day of year, have continued to operate normally (i.e., hour, minute, second, 1 PPS, frequency), future performance cannot be predicted.

Recommended Actions:

Immediate workaround solution for all affected customers

Symmetricom maintains three Public NTP Servers for use by our customers as Reference Sources via the World Wide Web.

IP Addresses:

69.25.96.11	(DNS: ntp1.symmetricom.com)
69.25.96.12	(DNS: ntp2.symmetricom.com)
69.25.96.14	(DNS: time.symmetricom.com)

Recommend reconfiguration of units to use these servers as their units Stratum 1 Reference source.
Recommend to use all three addresses as three reference sources are considered best practice.

Need to open Port 123 in their Firewall to allow connectivity with our servers via the World Wide Web.

Using the SS100's GUI's NTP Association page, configure the above addresses as references.

Recommend configuration as "Servers"

Using the available drop down menus on the SS-S100's GUI's NTP Association page select the following configurations:

Minimum and Maximum Poll Intervals of 16 Seconds (This will allow the most accurate timing).
Configuration to use iBurst Mode (This will allow multiple attempts per poll interval).
Configuration of "Default" value for NTP version information (Our Servers will respond to every received request).

Restart the NTP Daemon on the customers SS-S100 (SyncServer S100).

Monitor the SS-S100 GUI's NTP Association page "Reach" report.

An indication between 1 and 377 indicates successful connectivity with our Symmetricom NTP Servers at the referenced addresses.

A zero ("0") reach indicates that there may be a connectivity issue (Most likely related to the Firewall forwarding of Port 123, The NTP Protocol Port).

When completed the unit should be operating as a Stratum Level 2 NTP Server using Symmetricom's Public NTP Servers as its reference sources.

Long Term Solution: Replace the SS-S100 GPS

Several SyncServer models are available; visit www.symmetricom.com to find the best replacement server for your needs.

Contact Information:

Symmetricom, Inc.
3750 Westwind Blvd.
Santa Rosa, CA 95403

E-mail: support@symmetricom.com
Toll Free Calls: 888.367.7966 option 1, then option 2

Toll Calls: 408.428.7907 option 1, then option 2
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