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FIELD SERVICE BULLETIN

FSB #: 098-50620-052 **DATE: December 2, 2011**

System: SyncServer S3xx Series Network Time Servers

Product Identity: NTP Servers

Product Code: Description:

1520R-S300 RoHS	SyncServer S300
1520R-S300-RB RoHS	SyncServer S300 with Rubidium Oscillator
1520R-S300-DC RoHS	SyncServer S300 & 40-60 Vdc Power Supply
1520R-S300-RB-DC RoHS	SyncServer S300 & RB Oscillator & 40-60 Vdc Power Supply
1520R-S350 RoHS	SyncServer S350
1520R-S350-RB RoHS	SyncServer S350 with Rubidium Oscillator
1520R-S350-DC RoHS	SyncServer S350 & 40-60 Vdc Power Supply
1520R-S350-RB-DC RoHS	SyncServer S350 & RB Oscillator & 40-60 Vdc Power Supply

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NOTE: Find a copy of this FSB in Support section of our website at http://www.symmetricom.com.

Summary

Symmetricom SyncServer S300/S350 Software Update v2.65

Version 2.65 of the S300/S350 SyncServer software is an important patch release for SyncServers loaded with v2.62 software. SyncServers loaded with version v2.03 software are **not** encouraged to update unless one of the specific issues listed below is a concern. Symmetricom recommends that all S300/S350 SyncServers running v2.62 be upgraded to v2.65.

Recommended Actions:

Background: Version 2.62 was released for the S300/S350 SyncServers to support the IEEE 1588/PTP Option on LAN2. No other major changes were implemented in v2.62. For users not interested in purchasing the PTP option there is no need to upgrade from version v2.03 to v2.65.

Version 2.65 implements a specific repair to a defect in v2.62 as well as a few minor repairs found in v2.03. If your SyncServer S300/S350 is running v2.03 we recommend that you **not** upgrade unless one of the specific issues listed below is a concern. Be advised that if you upgrade to v2.65 from v2.03 there is no going back to v2.03.

Version 2.65 was released to address a very specific issue regarding item 1 below. Also listed are the other items corrected in the v2.65 release.

1. Repaired a rare condition where the time server may not lock properly to GPS and may not have the correct time. Depending on how the server is configured it is possible this incorrect time may be served to NTP clients. (See **Comments** below on how to configure any NTP server to guard against serving the incorrect time).
2. Updated the time zone list
3. Time zone offset now correctly reflected on all web pages
4. PTP network operations will not start until the server locks to GPS, NTP, IRIG or is placed Free Run mode
5. Minor security issues resolved regarding postgres account password
6. Repaired IPv6 port bonding

7. Restored NTP Minimum Poll Intervals
8. IPv6 global address now persists across system reboot
9. PTP Option installed in the field now persists after reset to factory default
10. Corrected a GPS Receiver Down error if in Position Hold mode

Version 2.65 Download

For those customers who desire the v2.65 update, the software is available online at http://www.symmetricom.com/support/online-support/ if you log in and follow the links to software downloads. Note that many customers are running v2.03 in their S300/S350 SyncServers and we encourage those users to stay at v2.03. There are very few changes in v2.65 that are compelling enough to encourage the update from v2.03 to v2.65. The 2.65 software is only required if an S300/S350 SyncServer in the field is to be upgraded to PTP.

Comments:

The NTP daemon has safeguards against synchronizing to an incorrect time source by peering to other network time servers to "crosscheck" the time. By default the SyncServers ship with two other peers configured. The GPS clock in the SyncServer is considered to be a peer as well. The NTP daemon will check the time on all peers and through the use of a clustering and selection algorithm will choose the best peer as its source of time.

In normal circumstances the Stratum 0 GPS time source located inside the SyncServer is always preferred over any other Stratum source available over the network. However, if the time of the Stratum 0 source differs from the other peers by more than 128 milliseconds, and two or more other peers are in relatively close agreement, a few milliseconds for example, the Stratum 0 source will not be used. If there are one or less peers available to the NTP daemon inside the SyncServer it will choose the GPS reference source if there is a time difference with the other peer.

The best practice here when deploying any NTP server is to always have at least 2 other NTP peers configured. Having 3 or 4 would be ideal.

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