System Release Notice
SyncServer® S600/S650
Release 2.1

Introduction
This document provides information about SyncServer S600/S650 release 2.1.8. The latest information regarding features, improvements, and known issues are described in this document.

Summary of Features

New General Features Added
- Security vulnerabilities (CVEs) mitigated
- GPS Dynamic Modes (Automotive, Seaborne, Airborne)
- Reference input priority selection (GNSS, IRIG, PTP Input, etc.)
- NTPq Support
- Improved email support- sender, hostname, time stamps
- Ping FQDN (Fully Qualified Domain Name)
- S650: Output time offset adjustments: +/- 500,000,000 ns in 10 ns steps
- S650: Output squelch control: Rules based, 6 rules to choose from

New Features to Existing S600/S650 Software Licenses
- PTP Output:
  - Simultaneous PTP output on multiple ports with different profiles/port allowable
  - Telecom Profile-2008 support added
  - 800 unicast slaves at 128PPS
  - Default PTP profile added
  - Enterprise profile now handles multicast and unicast automatically (No special configuration to one or the other)
- Security Protocol License
  - Simultaneous NTP Reflector on multiple ports
– Improved LDAP filters

- FlexPort Timing Option
  – Selectable impedance on J1 IRIG input - 50 Ohm or High

**New Features to S650 FlexPort Software License**
- Output time offset adjustments: +/- 500,000,000 ns in 10 ns steps
- Output squelch control: Rules based, multiple rules to choose from

**New Software Licenses**
- PTP Input License (Telecom Profile 2008)
- 1PPS Time Interval Measurement License (S650 Timing I/O module required)

**New Hardware Based Options**
- Dual Port 10GbE Interface (S600/S650)
- Dual DC Power Supply (S600/S650)
- Low Phase Module (S650)
- Ultra Low Phase Noise Module (S650)

**Resolved Issues**
- KXX-885: DSCP shifted 2 bits in the IP header
- KXX-881: IP gateway is now displayed properly when Static IPv4 is configured on ports 2-4 while link is down
- KXX-880: Corrected issue where unchecking autoconfig with static IPv6 did not remove the autoconfig addresses.
- KXX-878: Corrected issue where manual UTC offset from TAI could not be set if NTP is qualified on June 30 and Dec 31
- KXX-876: Resolved a condition where if NTP is the only time reference for PTP Grandmaster operations, the SyncServer S600/S650 would set the PTP frequency traceable bit while locked to NTP, although unit only phase locks and does not frequency lock to NTP.
- KXX-875: Corrected the SNMP trap configuration where coldstart traps/informs will no longer be sent using the previously configured community or SNMPv3 trap credentials.
- KXX-746: Corrected issue so that when starting from Time of Day status = Freerun, if "Forced Manual Time Entry" is selected (on Timing > Input Control form) or time is set from front-panel, upon return to “External Time Sources” (on Timing > Input Control form) the system can lock to GNSS.

- KXX-744: Corrected issue that when an NTP association was configured to use a specific Ethernet port which was down, then LAN1 would be used incorrectly.

- KXX-591: After changing an input cable delay configuration setting, the change may take some time to be fully incorporated. This delay value is used in the clock control filter. The settling time will depend on the type of oscillator in the unit (Rubidium takes longer than OCXO which takes longer than the standard oscillator), the amount of time locked to the reference, and the delta change in the delay setting. If the cable delay is set after the system has locked to GPS or IRIG, it may take many hours before the full cable delay is fully integrated into the output.

- KXX-435: GNSS-related alarms are no longer generated if the GNSS reference is disabled.

**Common Vulnerabilities and Exposures (CVE) Mitigated**


**Known Issues**

- KXX-603: If DHCP has been used to obtain an IP address for a LAN port, the SyncServer S6x0 will not attempt to obtain a new address from a new DHCP server until the DHCP lease expires, even if the old DHCP server is no longer reachable.

- KXX-844: IPv6 interfaces only allow configuration of the prefix value to 64 in DHCP mode.
  
  **Workaround**: None

- KXX-976: Event "First time normal-track since power up" is being created early at fast-track clock state instead of normal-track clock state. This is just an issue with when the event is generated and does not affect performance of the SyncServer.

  **Workaround**: Event "Enter/exit Time/Frequency Normal" could be monitored for the actual time of entering normal clock state.

- KXX-1105: Time error alarms ("timing quality > xxx" and "holdover time error threshold exceeded" may be cleared on entry to holdover recovery, but system output may still exceed the threshold.
**Workaround:** timing threshold should be met when unit transitions to normal-lock state

- **KXX-1106:** Squelch feature may not work correctly if feature configured to squelch when unit is already in the configured condition. For example, if configuring to "squelch if not locked" when unit is in holdover (not locked), then squelch feature may incorrectly un-squelch when the unit is in holdover recovery.

  **Workaround:** Configure squelch feature while the system is in normal-lock state.

- **KXX-1129:** System user interface will be slow when the unit is heavily loaded.

  **Workaround:** Be patient or reduce load. Priority is given to servicing time requests.

- **KXX-1134:** Output from CLI help command incorrectly displays "gnss - show GNSS configuration" when it should display "gnss - show GNSS status".

  **Workaround:** None, "show gnss status" works correctly

- **KXX-1138:** When performing upgrades and downgrades of the software while the unit is under heavy load, there have been rare conditions where the unit hung.

  **Workaround:** Perform upgrades or downgrades under light traffic (or no traffic). If not possible, a reboot of the system may be required.

- **KXX-1142:** The pull-downs for the announce, sync, and delay rates on the PTP configuration pages do not contain the correct log numbers for positive values. The actual rates in parentheses are correct. For example, "16 (1 pkt/16sec)" should be "4 (1 pkt/16sec)"

  **Workaround:** Look at the rates and ignore the log values.

- **KXX-1143:** The RADIUS port setting is not saved to flash memory or to the exported configuration file. Therefore, the port will always revert to 1812 after a reboot.

  **Workaround:** If port needs to be 1645, set the value after every reboot.

- **KXX-1144:** The phase offset value for PTP client will accept a larger integer than is supported.

  **Workaround:** Only enter values from -500000000 ns to 500000000 ns.

- **KXX-1145:** The GNSS time qualified event is not using the correct event ID. The event will be logged with event 22, but this event can't be configured from the web interface to change the priority, enable SNMP traps, or enable email.

  **Workaround:** Event is visible in the log with event ID 22, and could also be seen via a remote syslog server if the syslog server is configured.
Notes

- The LAN1 interface should not be configured with the same address as one of the other Ethernet ports. If this is done, then network access could be lost to the LAN1 management interface. Each port should be configured on a separate subnet.

- Serial port settings on the DB9 interface are 115,200 baud, 8N1, Flow Control–None.

- If using a gateway, then all IP interfaces should be configured with the proper gateway IP address and subnet mask. If a gateway address is programmed on LAN1, then the gateway/router must be present and reachable for the port to operate normally.

- For SNMPv3 traps, both a user and a trapuser need to be configured identically, depending on the SNMP trap manager. In addition, the SNMP manager should use the specified user/trapuser to connect to the SyncServer S6x0. This will ensure that a SNMPv3 trap will be successfully received by the manager using the corresponding trapuser username.

- If the browser is displaying a busy indicator, then please wait until the previous action is complete before starting another action. Depending on the browser used, the web page responsiveness will vary due to the use of the encryption cipher suite used in the S600/S650. Microsemi recommends using the Google Chrome browser.

Available Documentation for Setup and Configuration

- System Release Notice (this document, 098-00721-000)
- SyncServer S600/S650 Quick Start Guide (098-00719-000 Rev. A)
- SNMP MIBs

This System Release Notice and the User’s Guide is provided in PDF format. The SNMP MIB is provided as an ASCII text file. You will need the version of Adobe Acrobat Reader that is appropriate for your Operating System to view and print these documents. If you don’t have Acrobat Reader already installed on your system, you can download it from Adobe’s Web site (http://www.adobe.com).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLI Administrator</td>
<td>User Name: admin, Password: Microsemi</td>
</tr>
<tr>
<td>LAN1 IP Address</td>
<td>192.168.1.100</td>
</tr>
</tbody>
</table>
SYSTEM RELEASE NOTICE

Where to Find Installation Procedures

Please refer to the SyncServer S600/S650 User’s Guide for instructions for installing and updating the software.

Contacting Technical Support

If you encounter any difficulty installing the update or operating the product, contact Microsemi Frequency and Time Division (FTD) Services and Support at:

**U.S.A. Call Center:**
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