



Software Release Notice

TimeProvider 1000 and 1100 Release 3.3

Introduction

Thank you for choosing Symmetricom as your solution provider for telecommunications timing and synchronization solutions.

This Software Release Notice (SRN) describes the latest release of TimeProvider IMC firmware (release 1.05.04) and TimeProvider IOC firmware (release 1.05.00), which adds native Simple Network Management Protocol (SNMP), and Telcordia GR-833 TL1 command-line interface support to the TimeProvider product line.

What's New In This Release

SNMP Support

This release adds support for Simple Network Management Protocol (SNMP) version 1, 2, and 3 to the TimeProvider. Using SNMP, the TimeProvider can be directly configured, managed, and controlled by any SNMP-based network management system such as Hewlett-Packard Open View. All standard SNMP functions, including Traps, Notifications, and Informs are fully implemented.

A Management Information Base (MIB) browser or the SNMP Manager is used to access, retrieve, and query information defined by the MIB. All reports, queries, autonomous messages, control, provisioning, and administration (except for communication port parameters, Set User ID/Password, Set IP assignments, Reset connection, and SNMP community settings) are available through SNMP.

The following TL1 commands are modified to reflect the addition of SNMP support:

- ACT-FEATURE
- GEN-EVT
- ED-USER-SECU
- ED-EQPT
- ENT-USER-SECU
- RTRV-COND
- RTRV-CRAFT
- RTRV-USER-SECU

GR-833 Support

Prior releases of TimeProvider firmware only supported the legacy TL1 command format. This release adds support for the Telcordia GR-833 command format to the TimeProvider 1000 and TimeProvider 1100 platforms. This release also supports the PLNA error code associated with the GR-833 TL1 command format.

All TimeProvider units are now preconfigured at the factory to support *either* the legacy TL1 format *or* the GR-833 command format. Users may opt to change the command format using the ED-EQPT command, as described in the section “Setting the Response Format” in the *TimeProvider User’s Guide*. (097-58001-02, Rev F.01) which accompanies this release.

The following GR-833 TL1 messages are added to this release:

- REPT-ALM (second modifier). An “Invalid Format. Syntax does not match GR-833 CORE”
Correction: message no longer appears.
- REPT-ALM (aidtype). An “Invalid Format. Syntax does not match GR-833 CORE”
Correction: message no longer appears.
- REPT-EVT (second modifier). An “Invalid Format. Syntax does not match GR-833 CORE”
Correction: message no longer appears.
- REPT-EVT (aidtype). An “Invalid Format. Syntax does not match GR-833 CORE”
Correction: message no longer appears.
- RTRV-ALM (second modifier) An “Invalid Format. Syntax does not match GR-833 CORE”
Correction: message no longer appears.
- RTRV-COND (second modifier) An “Invalid Format. Syntax does not match GR-833 CORE”
Correction: message no longer appears.
- RTRV-HDR (compld) The command syntax now complies with SR-1665
Correction: the network element no longer responds with COMPLD when the NMA is not logged in.

Resolved Issues

- 20615: Downloads to the IMC using serial baud rates of 38400 and/or 57600 no longer fail.
- 20766: During firmware downloads, TimeCraft now properly indicates when the command is complete.
- 21600: The default value for INACTTIME is now 1800 s.
- 21605: The GPSPOS default alarm level is now Minor (MN).
- 22050, 22051, and 22084: TimePictra now reports correctly after a firmware download.
- 22281, 21604, and 21809: The RMV-EQPT command responses are clarified.
- 22307: The RTRV-CRAFT command includes the status of SmartClock.
- 22419: An EXDSC alarm is issued when 3 signal faults (OOF, BPV, CRC, or AIS) occur within a 5-minute period.
- 22784: The document is updated to reflect the appropriate revisions.

- 22912: Improved the communication between the GPS antenna and the IMC during lightning storms
- 22963: The document is updated to reflect the appropriate revisions.
- 23260: NTP license could not be duplicated by customer (internal)
- 23314: The IMC now properly resets power to the GPS antenna after an outage.
- 23373: The RTRV-INV command no longer creates a memory leak.

Known Issues

- 12598: When downloading small files to the IMC and IOC, the action will show that the downloading is successful.
Work Around: Only download approved IMC and IOC firmware. Do not attempt to download other unknown file types.
- 20563: Output Group D in isolated pulse mode can yield some pulse distortion.
Work Around: When using the isolated pulse mode for measuring output waveforms, use Output Groups A, B, and C only.
Note: This does not affect outputs in non-isolated pulse mode.
- 20661: The response format is incorrect for the `rtrv-sync::aid::fltdelay;` and `rtrv-sync::aid::clrdelay;` commands.
- 20722: The `tidquiet` command does not work on a Local port.
- 20767: On a system with one IOC, when replacing that IOC there is a possibility that the IOC may show an alarm that the IMC does not see. This only happens on a system with no Expansion Panel.
Work Around: Reboot the IMC using the `init-sys` command.
- 20843: On a 1.544 and 6.312 MHz input signal into the INP1 port, the IOC cards may alarm at inputs higher than the stated -16 dBm level, with declarations of frequency or phase alarms.
- 21191: When inserting Circuit IDs, the following characters are restricted and should not be used: the comma (,) the semicolon (;) and embedded quotation marks (“) within the quoted text string.
- 21470: The `aomerge` command to provision the ethernet port (COMI) does not work when connected to the Local port (COML).
Work Around: To provision the ethernet port `aomerge` command, execute the TL1 command from the ethernet port (COMI).
- 21471: The `aomerge` command does not provide an autonomous message event when the `aomerge` command has been enabled for the COMI, COML or COMR ports.
- 21492: NTP Version 3 is supported with the exception of Broadcast mode.
- 21493: When provisioning NTP Server commands by TL1, all parameters must be entered for the command to work properly. All parameters should be filled in; no parameters can be left empty with a comma separator.
- 21499: When provisioning NTP Server commands by TL1, all parameters must be entered for the command to work properly. All parameters should be filled in; no parameters can be left empty with a comma separator. If user does not provide parameters, the `minpoll` and `maxpoll` values will default to 1024 seconds.

- 23962: IOC card reports electronic inventory as 090-58021-31 or 090-58022-31 instead of 094-58021-13 or 094-58022-31.
- 21515: GPS leap second events will have correct time-alignment within 30 seconds after the leap second occurs.
- 21523: During NTP client operation with a peer, leap second events will have correct time-alignment within 15 minutes after the leap second occurs.
- 21789: In the event of an IOC power failure which results in a switchover to the redundant clock, the maximum phase fault may exceed specifications.
- 21841: When the TimeProvider is in PRR mode, GPS is the only valid reference input. If the user attempts to force switch the reference input, the TimeProvider returns the “COMPLD” response. The response should be “DENY” with a reason code of “IPNV” (parameter not valid).
- 22240: When SSM is enabled for an E1 signal, the CRC function is not automatically enabled per the specifications.
Workaround: You must manually enable the CRC function in order to enable SSM operation.
- 22355: The TimeProvider does not responds to requests from the NTPQ application.
Workaround:
- 22382: The TimeProvider does not attempt to load the correct time on startup from NTP peers.
Workaround:
- 23427: User logging off the TimeProvider also logs off all other users logged in using the same name.
Workaround: Log in to the TimeProvider using a unique username and password.
- 23632: Adding or deleting a large number of user names in rapid succession may cause the IMC to reboot.
Workarounds: Use TimeCraft to manage TimeProvider 3.3.
Restrict SNMP user management changes to a single parameter change every 5 seconds.
- 23639: Editing multiple SNMP user access privileges in rapid succession may cause an IMC-to-IOC communication failure and loss of GPS, performance monitoring, and NTP service
- Restrict SNMP user management changes to a single parameter change every 5 seconds.

Download Files Procedure

For the 3.3 release, there is an additional download file for the IMC boot code. The purpose of the new boot code is to turn on the hardware watchdog function in the processor. To download the files properly, follow these steps:

1. Load the latest IMC main code (1.05.04 or higher) and wait for IMC reboot. The file to download for the 1.05. 04 version is **IMC_1_05_04.srec**.

For more information, please refer to the TL1 `ACT-SWDL` command description in *Chapter 2* of the *TL1 TimeProvider 1000 and 1100 Edge Clock TL1 Reference Guide (097-58001-01)*.

2. Load the latest IMC boot code (1.05.02 or higher) and wait for IMC reboot. The file to download is **IMCBOOT_1_05_02.srec**.

The download procedure is the same as downloading the IMC main code except that you pick a different file in the Y modem utility.



Caution: DO NOT power off the system or pull out the IMC. If anything unusual occurs, please call Symmetricom support.

3. Verify that TL1 works by first logging on to TL1 and then issuing the following command to IMC:

```
rtrv-cond::imc:ctag;
```

The response you see will look like:

```
TIMEPROVIDER 08-03-18 12:17:39
M CTAG COMPLD
  "IMC:IOC1COMM-OK,IOC2COMM-OK"
  "RUNTIME:BOOTVER=1.05.02,WATCHDOG=OFF,BOOTCNT=132,UPTIME=0 00:14:07"
;
```

BOOTVER— is the boot code version

WATCHDOG=ON— means the watchdog is turned on

WATCHDOG=OFF— means the watchdog is turned off

BOOTCNT— is the boot counts

UPTIME— is system-up time since the last reboot. The UPTIME format is: <days>
<hours>:<minutes>:<seconds>

4. Reseat the IMC by pulling out the IMC and then pushing the IMC back in.
5. Log on to TL1 and verify that the watchdog function is on by using the `rtrv-cond::imc:ctag;` command used in Step 3.

You should see a "WATCHDOG=ON" response to let you know that the watchdog function is enabled.



Caution: Symmetricom recommends that you **do not** revert back to firmware older than 1.05.xx. Older versions of firmware do not support the watchdog function. If you revert back to an older firmware version, you will disable the watchdog function. You will need to follow the procedures in this section to enable the watchdog function again.

Ordering Information

To order TimeProvider modules (IOC or IMC) with GR-833 firmware pre-configured as the factory default, contact your Symmetricom sales representative. Note that these are available with a custom part number only.

- 094-58031-31: GR-833 compliant firmware for TimeProvider IMC (required for AT&T only)
- 094-58041-31: GR-833 compliant firmware for TimeProvider IMC with integral GPS (TPIU) (required for AT&T only)
- 094-58021-31: Customer-specific Quartz IOC firmware (required for AT&T only)
- 094-58022-31: Customer-specific Rubidium IOC firmware (required for AT&T only)
- 920-58000-01: SNMP software option

The following modules ship with legacy TL1 pre-configured as the factory default:

- 090-58031-01: IMC
- 090-58041-01: IMC with integral GPS (TPIU)
- 090-58021-01: Quartz IOC
- 090-58022-01: Rubidium IOC

Using the Release CD

To launch the CD for Windows 95/98/Me/NT 4.0/2000/XP/Vista, insert the CD into your computer's CD-ROM drive, then do the following:

- In Windows Explorer, double-click on the PDF documentation file for your product.

Available Documentation

The following documents are provided to help you set up and configure your product:

- Software Release Notice (this document)
- *TimeProvider User's Guide* (located on the accompanying CD)
- *TimeProvider TL1 Reference Guide* (located on the accompanying CD)

This Software Release Notice and the User's Guide are included in PDF format on the CD. Use Adobe Acrobat Reader to open the appropriate file on the CD.

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 install it from the CD or download it from Adobe's Web site (<http://www.adobe.com>).

Where to Find Installation Procedures

Please refer to the *TimeProvider User's Guide* for instructions for installing and updating the software.

Compatibility

When you use redundant IOC cards, Symmetricom recommends that you use the same revision of firmware on each IOC for proper operation. The following tables illustrate the compatibility between hardware and firmware revisions, including the IMC card. Revisions indicate the top assembly marking on units, not the version indicated in unit memory.

Y = Compatible; N = Not compatible

Table 1-1. IMC Hardware/Firmware Compatibility

| IMC 09X-58031-XX | All IMC Firmware Versions |
|---------------------|---------------------------|
| | 1.0x.xx |
| All Revisions | Y |

Table 1-2. IMC/TPIU Hardware/Firmware Compatibility

| IMC/TPIU 09X-58041-XX | IMC Firmware Version | | | | |
|--------------------------|----------------------|---------|---------|---------|---------|
| | 1.01.xx | 1.02.xx | 1.03.xx | 1.04.xx | 1.05.xx |
| All Revisions | N | N | N | Y | Y |

Table 1-3. IOC Hardware/Firmware Compatibility

| IOC Assembly Revision | | IOC Firmware Version | | | | |
|--------------------------|------------------------|----------------------|---------|---------|---------|---------|
| Rubidium 09X-58022-XX | Quartz 09X-58021-XX | 1.01.xx | 1.02.xx | 1.03.xx | 1.04.xx | 1.05.xx |
| N/A | 1 | Y | Y | Y | Y | Y |
| N/A | A-B | Y | Y | Y | Y | Y |
| A-L | C-N | N | Y | Y | Y | Y |

Table 1-4. Hardware Compatibility Between IOC and IMC Versions

| IOC Assembly Revision | | IMC Hardware Version 09X-58031-XX | | IMC/TPIU H/W Version 09X-58041-XX ¹ |
|--------------------------|------------------------|--------------------------------------|-----|--|
| Rubidium 09X-58022-XX | Quartz 09X-58021-XX | 1 | A-R | A-F |
| N/A | 1 | Y | Y | Y |
| N/A | A-B | Y | Y | Y |
| A-M | C-P | Y | Y | Y |

Note:¹Different interconnect cables are required for GPS*Table 1-5. IMC/IOC Firmware Compatibility*

| IMC Firmware Version | IOC Firmware Version | | | | |
|----------------------|----------------------|----------------|---------|---------|---------|
| | 1.01.xx | 1.02.xx | 1.03.xx | 1.04.xx | 1.05.xx |
| 1.01.xx | Y | N ¹ | N | N | N |
| 1.02.xx | N | Y | N | N | N |
| 1.03.xx | N | N | Y | N | N |
| 1.04.xx | N | N | N | Y | N |
| 1.05.xx | N | N | N | N | Y |

Note:¹No alarm is generated*Table 1-6. IOC Firmware Compatibility*

| IOC1 Firmware Version | IOC2 Firmware Version | | | | | | |
|-----------------------|-----------------------|---------|---------|---------|---------|---------|---------|
| | 1.01.xx | 1.02.12 | 1.03.xx | 1.04.02 | 1.04.06 | 1.04.07 | 1.05.xx |
| 1.01.xx | Y | N | N | N | N | N | N |
| 1.02.12 | N | Y | N | N | N | N | N |
| 1.03.xx | N | N | Y | N | N | N | N |
| 1.04.02 | N | N | N | Y | N | N | N |
| 1.04.06 | N | N | N | N | Y | Y | N |
| 1.04.07 | N | N | N | N | Y | Y | N |
| 1.05.xx | N | N | N | N | N | N | Y |

Table 1-7. Hardware Compatibility Between Quartz IOCs

| Quartz IOC1 Assembly Revision 09X-58021-XX | Quartz IOC2 Assembly Revision | |
|---|-------------------------------|-----|
| | 1 | A-P |
| 1 | Y | Y |
| A-P | Y | Y |

Table 1-8. Hardware Compatibility Between Mixed IOCs

| Rubidium IOC1 Assembly Revision 09X-58022-XX | Quartz IOC2 Assembly Revision | |
|--|----------------------------------|-----|
| | 1 | A-P |
| A-M | Y | Y |

Contacting Technical Support

If you encounter any difficulty installing the update or operating the product, contact Symmetricom Global Services at:

U.S.A. Call Center

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San Jose, CA 95131-1017

Internet: www.symmetricom.com

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