TNS541
Seamless TS Monitoring Switch
Release Notes

Revision: 2.4.0 (5089)

2016-08-26

1 Overview

This document contains the SW revision history for TNS541. The release note is cumulative, each chapter describing changes since the previous released version.

2 Upgrade instructions

- Software upgrade of the device should – if possible – be done at a time when the device is not in use for critical signal transmission.
- Always take a backup of the device's current configuration before doing the upgrade (use Device Info > Save/load Configs > Save Configuration in the device's GUI).
- Have a copy of the original software file currently in use at hand, in case of a need for reverting to the last operational state.

2.1 How to upgrade

- Log into the unit as admin using any web browser. Navigate to Device Info > Maintenance > Software Upgrade and click on Browse. Then upload the software image (*.out) from your file system.
- After the software is loaded the unit will reboot and load the new software image. Loading the new software image takes the same amount of time as a normal reboot, which may take from 45-90 seconds.
- It is possible to upload the software to the unit, and postpone the reboot operation. The old software will be used until the next reboot. This is done by disabling the Reboot on success option on the Software Upgrade page.
- If you have T-VIPS Connect, refer to the T-VIPS Connect User's Manual on how to upgrade several units.

Note: During re-boot, passive relays will wire the secure output to the selected input. If the switch is in Passive mode, there will be no service interrupt during the software upgrade. If the switch is in Active mode there will be a short service interrupt when re-booting, and a short service interrupt when the switch again enters Active mode.

3 Release 2.4.0 Lafayette

3.1 Release date 2016-08-26

3.2 Hardware

- 3.6.38 and on supports a new NAND flash variant that is not backwards compatible with older SW versions. Added a check in the SW loader to ensure software compatibility with running HW.

4 Release 2.2.2 Waldenburg

4.1 Release Data 2015-02-06

This is a maintenance release with some bugfixes.

4.2 Bugfixes

- Fixed an issue with not having an output signal when using Spread mode and low bitrates (< 10 Mbit/s) and the port-mapped outputs.
- Fixed performance issue introduced in 2.0.2.
- Several other minor fixes and improvements.

4.3 Feature

- Added option to set minimum delay through unit. If you have low rate spread stream, configure this value to a sufficiently large value (10 ms or less).

5 Release 2.0.2 Kaufbeuren

5.1 Release Date 2013-09-30

This is a maintenance release with several new features and minor bugfixes. This release also bring the new Nevion look and feel.

Warning: TNS541 2.0.2 is not fully compatible with T-VIPS/Nevion Connect3 3.16.32 or older. Upgrading of TNS541 should be postponed until a newer version of Connect3 is released.

5.2 Bugfixes

5.3 DHCP/DNS

Added support for automatic IP address assignment by DHCP client. Registration of user supplied host name at DNS server via the DHCP server for identification of the host by name on the network.

5.4 Mobile GUI

Added simple version of GUI for mobile browser. Found by contacting `http://<ip>/m/index.html`.

5.5 DVB-T SFN network delay measurement

- The unit can now track the SFN network delay, with detailed statistics. Requires use of external GPS locked 1PPS.
- User configureable minimum and maximum delay values for alarm generation.
- May be used to detect drift in SFN adapter.

5.6 Miscellaneous improvements and bug fixes

- New Nevion look and feel in the graphical interface.
- Added option to Load Configuration from other devices using HTTP. Located under Device Info -> Save/Load Config.
- Added alarms for PIDs scrambled/not scrambled.
- Improved PCR analysis by calculating PCR stamp difference (Transmit Interval).

6 Release 1.12.78 Unterensingen

6.1 Release Date 2013-05-13

Maintenance release with a few bugfixes.

6.2 Bugfixes

- Fixed an issue where buffers could be adjusted when Matching Mode was set to Disabled.
- Fixed a rare case where the unit could reboot due to abnormal TCP traffic.

7 Release 1.12.74 Kingsland

7.1 Release Date 2013-02-25

This release rebrands the TNS541 from T-VIPS to Nevion and includes a few bugfixes.

7.2 Bugfixes

- Fixed an issue where the DVB-T MIP Analyzer could trigger a false alarm.
- Fixed an issue where Generate System Report would not work if password had been changed.

8 Release 1.12.72 Markesan

8.1 Release Date 2012-12-19

This release is a maintenance release for the TNS541, including bug fixes and enhancements.

8.2 Switch

- Added option to disable internal matching logic. Useful for non-identical streams to avoid Seamless switching alarms.
- Buffers may now be configured up to 10 seconds on each input. For delays up to 1.2 seconds the unit is able to handle 213 Mbit/s on each input buffer. For delays above 1.2 seconds the user must make sure that the input rate is limited. If not an alarm will be raised.
- Added Switch prefix to alarm details for the Switch Done alarm.
- Added alarm log entry when performing a Reset Delays operation.
- Added yellow change indicator on switch alarm config.
- Changed switch drawing ASI input labels to include user label.
- Increased robustness for signal with large packet jitter.

8.3 Miscellaneous improvements and bug fixes

- Added Generate System Report button under Device Info -> Maintenance. For Support purposes.
- Added Configuration ID field under Device Info -> Product Info. This field changes on configuration load and will be displayed in the status header. Makes it easy to see which configuration is loaded.
- Reduced SNTP polling intervals. Avoids SNTP alarms when SNTP server refuses too rapid polling.

9 Release 1.12.60 (2012-05-14)

- Fixed some SNMP parameters for controlling the switches
- Fixed potential switch issue in T2-MI matching mode
- Fixed error in PCR alarm triggering

10 Release 1.12.54 (2012-02-29)

- Added option for setting Individual Initial Buffering. If the delay between the streams is known this is the preferred way of configuring the initial buffering.
- Added configurable maximum delay through the unit. If either buffer try to increase their delay above the configured Max Delay value, it will be truncated to the configured Max Delay.
- Added option for automatic resetting of delays (Auto Reset). If enabled, the delays will be readjusted (same as pressing Reset Delays) if either buffer try to increase above the Max Delay value.
- Increased tolerance for jittering signals.
- Fixed an issue where going from Active to Passive mode on Switch 1 could affect the output of Switch 2.
- Improved alarm details for seamless switch alarms
- Added SNMP support for switch parameters. Contact T-VIPS for new MIB files.
- Fixed SNMP source text for alarms.

11 Release 1.12.20 (2011-11-21)

- Passive mode has now a constant delay between active and passive output ports, approximately 1 ms.
- Reduced time spent to detect identical streams.
- Fixed an issue when entering passive mode after sync loss on both inputs.
- Fixed an issue with delay on Alternate Output port.
- Fixed an issue where the PID rate too low alarm would trigger incorrectly.

12 Release 1.12.8 (2011-10-04)

- Improved matching logic.
- Readded Clock Regulator page.
- Added 5 second off hysteresis to Input Stream Not Equal alarm.

13 Release 1.12.2 (2011-05-03)

- Moved CP541 to new product family T-VIPS nSure and renaming it to TNS541.
- Added option for Gang Switch functionality.
- Added alarms for max/min TS rate per input.
- Removed Clock Regulator page.
- Fixed a rare issue when performing a manual switch in T2MI mode causing the switch to fallback immediately.

14 Release 1.10.8 (2011-03-14)

- Added seamless SFN for DVB-T and DVB-T2. Selectable in switch config (Matching mode) if Seamless SFN feature is enabled.
- Added manual setting of output format (TS packet length and Burst/Spread mode).
- Added alarm and load bar for Input load.
- Added MIP bindings for TS input.
- Added STT as possible Time Source in ATSC mode.
- GUI: Some restructurings to switch config.
- GUI: Lots of minor improvements.
- Removed service streaming due to CPU load.
- Fixed TDT/TOT as Time Source for switch 2 inputs.
- Fixed an issue with idenitcal streams not being aligned.
- Fixed issue with CP541 saying “No seamless” if input and output formats don’t match.
- Fixed issue with reswitch wait time being used for Manual switch mode.
- Fixed padding from 188 to 204 bytes to use 0xFF instead of 0x00
- Fixed fan speed for 3010 alarm relay board.
- Fixed dual power alarm when only one PSU active on boot for 3010 alarm relay board.
- Fixed an issue with port mapping not being set correctly for some configurations on boot.

15 Release 1.8.2 (2010-12-20)

- Added Service Streaming
- Added new MIP packet decoding
- Many minor refinements and improvements to the GUI.
- Fixed an issue with boot and pressing Reset seamless not behaving equally.
- Fixed an issue with alarm 'Input stream not equal' even though stream actually were identical.
- GUI: Added Seamless/No seamless status for manual switch mode.

16 Release 1.6.12 (2010-09-20)

- Fixed bug on SLA for Switcher 2
- Fixed bug with reset statistics from the GUI

17 Release 1.6.10 (2010-06-21)

- Fixed bug where high input load could prevent unit from starting up correctly.

18 Release 1.6.8 (2010-06-15)

- Software updated with latest library improvements
- Fixed bug with Reset to factory defaults.

18.1 User Interface

- Status “switch mode” fixed.
- Minor cosmetic changes.
- Enable Switch parameter moved to Device Info :: Maintenance.

18.2 SNMP Control

- New OID “nextavailabletableindex” in the MIB-file added. This OID indicates the next available table index for the destination hosts list.

19 Release 1.0.22 (2010-04-13)

- Fixed issue with switch status in the GUI. Alarms were still triggered even if the switch was disabled.
- Add OID “nextavailabletableindex”in the MIB-file. This OID indicates the next available table index for the destination hosts list.
- Minor cosmetic changes in the user interface

20 Release 1.0.18 (2010-02-03)

20.1 SNMP Control

- Enhanced monitoring capabilities as well as control of more switch parameters through SNMP.

20.2 Fallback to preferred input

- Automatic switching with fallback to a configurable preferred input port in now supported. For example, after an initial failover switch from the main port to the spare port, the CP541 can now be configured to automatically return to the main port if this comes back up.

20.3 User Interface

- Revised layout of switch configuration parameters.

21 Release 1.0.10 (2009-11-13)

This release includes a few bug fixes and improvements to CP541.

21.1 Switch Controller

- Fixed problem with switcher when fast switching was disabled.
- Fixed problem when returning to passive loop trough, when no input signals were present.
- Added additional alarm details.
- Changed behaviour. Now the output format (Burst / Spread) and output packet length (188 / 204) will follow the inputs if both inputs change to a new format / packet length.
- Added protection when input source is switched to an input with packet length of 188 and a bitrate exceeding the maximum 204 bitrate. The output is then switched from 204 to 188 if applicable.

21.2 GUI changes.

- Added descriptive text to Main and Alternate output ports in status summary
- Fix to prevent “green flashing” when loading GUI.
- Fix for the status counters on the SLA page.
- Fixed problem where TPS TS priority on the MIP analysis tab did not update correctly.

21.3 General

- Improved system time accuracy.
- Improved startup sequence.
- Update of SI table decoding.

21.4 Known issues

- The unit has limited support for analysis of ATSC tables.
- When the TS packets in the input signal is bursted in chunks, the fast switching part of the seamless switch thinks that there is a sync loss and switches to the other input. The symptoms for this is that the switcher changes rapidly between the two inputs, or it is always switched away from the input with the described signal.

22 Release 1.0.6 (2009-09-15)

This release has a few improvements to the CP541.

22.1 PortMap

- It is now possible to select the 'alternate' port in the PortMap. The BNC set to 'alternate' will always have the opposite to the main output selected. The 'alternate' output will have a sync loss on every performed switch.

22.2 Known issues

- The unit has limited support for analyses of ATSC tables.
- When the TS packets in the input signal is bursted in chunks, the fast switching part of the seamless switch thinks that there is a sync loss and switches to the other input. The symptoms for this is that the switcher changes rapidly between the two inputs, or it is always switched away from the input with the described signal.

23 Release 1.0.4 (2009-08-11)

This release has a few improvements to the CP541.

23.1 Alarms

- Updated alarm 702 “The input streams are not equal”. The alarm is now shown when there is only small changes between the input streams.

23.2 GUI changes.

- Fixed wrap-around bug under Packet Dump.

23.3 Switch Controller

- Stability fix.

23.4 Known issues

- The unit has limited support for analyses of ATSC tables.
- When the TS packets in the input signal is bursted in chunks, the fast switching part of the seamless switch thinks that there is a sync loss and switches to the other input. The symptoms for this is that the switcher changes rapidly between the two inputs, or it is always switched away from the input with the described signal.

24 Release 1.0.2 (2009-07-02)

This release is the first official release for CP541.

24.1 Features

- Seamless switching of two identical input signals.
- Seamless alarm level switching based on analysis of input signals.
- Support for One or two switch controllers.

24.2 Known issues

- The unit has limited support for analyses of ATSC tables.
- When performing packet dump. The packet timestamps wrap around 4000 seconds which may give odd timestamp values in the GUI.
- When the TS packets in the input signal is bursted in chunks, the fast switching part of the seamless switch thinks that there is a sync loss and switches to the other input. The symptoms for this is that the switcher changes rapidly between the two inputs, or it is always switched away from the input with the described signal.