

TNS544 TSoIP Switch Release Notes

Revision: 2.8.0 (5201)

2017-05-16

1 Overview

This document contains the SW revision history for TNS544 TSoIP Switch. The release note is cumulative, each chapter is 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: If the unit is equipped with ASI connectors, relays will connect the outputs to the inputs while the unit is re-booting, thus reducing the service out-age time to a minimum.

3 Release 2.8.0 Jasper

3.1 Release Date 2016-08-10

- Added new field sent in every trap to identify the unit. This field has the default value TNS544, but may be changed to any value.
- T2-MI mode: Fixed an issue where a TEI bit on the input could be propagated to the output.
- Diversity mode: Improved on case with rapid errors on inputs.

3.2 Hardware



Note: SW version 2.8.0 and onwards 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 2.6.20 Erdweg

4.1 Release Date 2016-03-20

- Removed limitation on output ports having to be on the same switch as the corresponding input port.
- Fixed an issue in TS diversity mode where a null packet could be preferred over a data packet when having continuous errors.
- Removed empty service and component descriptor lists which are not supported on this product.

5 Release 2.6.14 Bauru

5.1 Release Date 2015-05-20

5.2 New features

This release adds support for the RIPv2 redundancy protocol. RIPv2 is configured per IP destination.

5.3 Bugfixes

Fixes an issue where a RTP error might yield CC error on the output in TS diversity mode.

6 Release 2.6.4 Poppenroth

6.1 Release Date 2014-11-13

This release adds several new features to the TNS544 TSoIP Switch, and also rebrands the unit from T-VIPS to Nevion.

6.2 New features

6.2.1 New match modes

- Added new match modes per switch. Selectable in Match mode drop-down box.
 - Disabled: No automatic alignment.
 - Single PID: Protect single PID from CC errors when switching.
 - Diversity: Intelligent switching which switches automatically on basic streams errors. Alarm switching ignored.

6.2.2 SFN Seamless

- Adds support for Seamless SFN switching functionality for DVB-T and DVB-T2 SFN Networks. Selectable in Match mode drop-down box on each switch if licence key /SSFN present.

6.2.3 Input Copies

- Added Input Copies. May create up to 8 copies, where each copy may select from any ASI or IP source.
- An Input Copy is treated as a separate source by the unit. Useful when using one input as the source for more than one switch.
- Not a licenced feature, but each input copy counts on the /TSIX licence.
- Located under Inputs -> Inputs Overview -> Input Copies

6.2.4 FEC

Increased maximum allowed dimensions of FEC matrixes.



Note: Using larger FEC matrixes means increased need for buffering on the receiver.

Table 6.1 New and old FEC matrix limits

Parameter	New limit	Previous Limit
D (Depth)	32	32
L (Length)	250	32
L + D	254	32
L * D	1024	256

6.2.5 DHCP/DNS

Unit now supports automatic IP address assignment by DHCP on the Ethernet interfaces. When using this function a hostname can be registered for the unit on the DNS server by the DHCP server. This makes it possible to access the units on the network by name instead of IP address. When configuring a uni-cast destination for transmitted IP streams, it is now possible to specify the destination by hostname instead of IP address.

6.3 Bug fixes and improvements

- Added option to set Max Delay. Delays will be truncated to Max Delay to have control on delay through unit.
- Added support for 204 bytes TS packets over IP.
- Fixed an issue where alignment of streams for FAST COARSE mode could take several minutes.
- A few other minor bugfixes.

6.4 Licensing

The following table lists the available SW options in this SW version.

Table 6.2 The list of licensed features in this version

Key	Function
SFP	SFP slot support.
SFPC	Enable config of some telco variants of SFPs.
SFNR	SFN rate lock.
SSFN	Seamless SFN.
SSWX	Number of seamless switches.
FEC	Enables Forward error correction on IP input and outputs.
TCON	Enables control management via T-VIPS Connect.

7 Release 1.4.22 Manhuacu

7.1 Release Date 2013-04-02

7.2 Bug fixes and improvements

- Fixed an issue where the FEC engine would introduce errors for very specific FEC and Data receive patterns. The issue appeared if **both** FEC Row and FEC Column was received before a row of Data. This could happen with network equipment using different QoS settings on FEC and Data, and sometimes delaying the Data frames relative to the FEC frames by some milliseconds. This issue would typically also only be seen for FEC matrixes with a small FEC Row length.

8 Release 1.4.20 Moca

8.1 Release Date 2012-12-19

This is a bugfix release for the TNS544 TSoIP Switch.

8.2 Bug fixes and improvements

- Fixed an issue where a specific sequence of input sync loss and sync return could leave the output of a switch muted.
- Fixed an issue where enabling of a switch could affect the other switches on the unit.
- Improved on IP-RX lock time for FAST COARSE regulator mode.
- Added display of delay on each buffer.

8.3 Known issues

- When using FAST COARSE mode, the matching process will sometimes use several minutes to find match between the streams. This will result in a non-seamless switch, if a switch is performed within this period.

9 Release 1.4.16 Bielawa

9.1 Release Date 2012-10-30

This release is a maintenance release for the TNS544 TSoIP Switch, including bug fixes and enhancements.

9.2 Miscellaneous improvements and bug fixes

- Improvements to large buffer scenarios.
- Improved boot-up sequence by waiting some seconds before activating ASI relays to minimize service outage during reboot.
- Improved seamless switching behavior when using small buffers.
- Fixed an issue where the output could have CC errors if the Ethernet Management cable was disconnected.
- Added SNMP control of ASI relays.
- Added more SNMP control and status for the switches.
- Added Reset Delays option when right clicking on switch.
- 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.

10 Release 1.4.4 Surat Thani

10.1 Release Date 2012-09-18

This release adds several new features to the TNS544 TSoIP Switch, including ASI Switch Relay card (2070), fast coarse mode IP regulation and a new stream matching mode that makes it possible to ignore null packets in the input streams.

10.2 New features

10.2.1 ASI Switch Relay Card (2070)

- Enables support for ASI inputs.
- Switch card features passive relays, which will operate in full passthrough without power.
- Possible to operate in both active and passive mode, even with power.
- Possible to route one switch to several ASI outputs.

10.2.2 Fast Coarse mode IP regulation

- Very fast bit rate regulation on IP inputs.
- Useful for IP streams without PCR data.

10.2.3 Ignore null packets

- Ignore null packets and PCR stamps during the matching process.
- Enables seamless switching from sources that performs unequal null packet stuffing and PCR insertion into the streams.

10.3 Miscellaneous improvements and bug fixes

- No longer needed to re-enable the IP output channel when changing the number of TS pkts per frame with FEC enabled.
- Improved IP input synchronization time when using PCR to regulate.
- Fixed an issue where garbage data could be played out from the unit on unstable input signals.
- tsAlarmStatusTable SNMP table should now be properly updated with correct input ports.

10.4 Known issues

- Missing MIBs for some of the switch parameters.

10.5 Licensing

The following table lists the available SW options in this SW version.

Table 10.1 The list of licensed features in this version

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SFNR	SFN rate lock.
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FEC	Enables Forward error correction on IP input and outputs.
TCON	Enables control management via T-VIPS Connect.

11 Release 1.2.12 Beerse

11.1 Release Date 2012-05-07

This release is the first official release for the TNS544 TSoIP Switch.

The release features TS IP inputs and outputs, with emphasis on TS monitoring and TS seamless switching. Up to four switches can be used in this product.

11.2 Features

- Up to 4 seamless switches with 2 to 4 inputs each. Alarm based switching, with option for fallback switch to preferred input.
- Transport Stream monitoring and error detection
 - Error detection according to ETSI TR 101 290 Priority 1 specification
 - Bitrate alarms
- Analysis
 - TS, Service and PID analysis
- Simultaneous, real-time monitoring of up to 16 MPEG2 TS streams on 2 Ethernet data interfaces, given that the total bitrate of the input data is within the processing limit of the device.
- WEB/XML based remote control
- Persistent internal alarm logs.
- Synchronize real time clock to prioritized list of SNTP servers and/or TDT/TOT/STT on an input port.
- SNMP agent for easy integration with NMS systems