THOMSON

Thomson Gateway

Residential and Business DSL Gateways

Customer Release Note

Main Track Slotted Release R8.2.6

Thomson Gateway

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Main Track Slotted Release R8.2.6

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About this Customer Release Note

Applicability

This Customer Release Note provides an overview of the Main Track Slotted Release R8.2.6 for the supported Thomson Gateway products.

Typographical Conventions

Following typographical convention is used throughout this manual:

- Sample text indicates a hyperlink to a Web site.

  Example: For more information, visit us at www.thomson.net.
- Sample text indicates an internal cross-reference.

  Example: If you want to know more about guide, see "1 Introduction" on page 7.
- ***Sample text*** indicates an important content-related word.

  Example: To enter the network, you ***must*** authenticate yourself.
- **Sample text** indicates a GUI element (commands on menus and buttons, dialog box elements, file names, paths and folders).

  Example: On the **File** menu, click **Open** to open a file.

Used Symbols

A ***note*** provides additional information about a topic.

A ***caution*** warns you about potential problems or specific precautions that need to be taken.

Documentation and software updates

THOMSON continuously develops new solutions, but is also committed to improving its existing products.

For more information on THOMSON's latest technological innovations, documents and software releases, visit us at www.technicolor.com.

About this Customer Release Note

1 Main Track Slotted Release Overview

Introduction

The Main Track Slotted Release R8.2.6 is the latest software release made available for the following Thomson Gateway products:

- Thomson ST products:
  - ***Thomson ST585(i) v6*** Wireless Multi-User ADSL2+ Gateway
  - ***Thomson ST608(i/m) WL*** Wireless Business ADSL2+ Gateway
  - ***Thomson ST620(i/m)*** Wireless Business ADSL2+ Router
  - ***Thomson ST620s*** Wireless Business SHDSL.bis Router
- THOMSON TG products:
  - ***THOMSON TG546f*** Residential Multi-User Fiber Gateway
  - ***THOMSON TG585(i) v7*** Wireless Multi-User ADSL2+ Gateway
  - ***THOMSON TG585(i)n*** Wireless-n Multi-User ADSL2+ Gateway
  - ***THOMSON TG587(i)n*** Wireless-n Multi-Service ADSL2+ Gateway
  - ***THOMSON TG605s*** Business SHDSL.bis Gateway
  - ***THOMSON TG628s*** Operator-Managed 8-Wire SHDSL.bis Business Router
  - ***THOMSON TG712(i)*** Wireless VoIP Multi-User ADSL2+ Gateway
  - ***THOMSON TG782(i)*** Wireless VoIP Multi-User ADSL2+ Gateway
  - ***THOMSON TG782T*** customer-specific Wireless VoIP Multi-User ADSL2+ Gateway
  - ***THOMSON TG784*** Wireless VoIP Multi-User Ethernet WAN & ADSL2+ Gateway
  - ***THOMSON TG787(i)*** Wireless VoIP Multi-Service ADSL2+ Gateway
  - ***THOMSON TG787(i)v*** Wireless VoIP Multi-Service VDSL2 Gateway
  - ***THOMSON TG787(i)v Business*** Wireless VoIP Business Multi-Service VDSL2 Gateway
- Customer Acceptance Release products:
  - None.

In this chapter

This section covers the following topics:

1.1 Product Release Portfolio Overview

Introduction

This section summarizes the overall Thomson Gateway DSL Gateways and Routers product portfolio and its evolution during subsequent releases.

For each Thomson Gateway product,

- the initial release (if covered) is indicated with ★,
- an applicable release is indicated with ✓,
- a non-applicable release is not marked,
- a last supported release (up till the current release) is indicated with ♦.
- a customer acceptance release is marked CAR

Residential Multi-User VDSL2 Gateways

DSL product (board mnemonic)	R7.4.4	R8.2.1	R8.2.2	R8.2.3	R8.2.4	R8.2.5	R8.2.6
THOMSON TG546(i)v v7 (VDNT-C)	✓	✓					

Residential Multi-User Fiber Gateways

DSL product (board mnemonic)	R7.4.4	R8.2.1	R8.2.2	R8.2.3	R8.2.4	R8.2.5	R8.2.6
THOMSON TG546f (CANT-E)				★	✓	✓	✓

Wireless Residential Multi-User/Multi-Service ADSL2+ Gateways

DSL product (board mnemonic)	R7.4.4	R8.2.1	R8.2.2	R8.2.3	R8.2.4	R8.2.5	R8.2.6
Thomson ST585(i) v6 (BANT-W)	✓	✓	✓	✓	✓	✓	✓
THOMSON TG576(i) v7 (CANT-P)	✓	✓					
THOMSON TG585(i) v7 (CANT-P)	✓	✓	✓	✓	✓	✓	✓
THOMSON TG585(i)n (CANT-J)	✓	✓	✓	✓	✓	✓	✓
THOMSON TG587(i)n (CANT-O)	✓	✓	✓	✓	✓	✓	✓

VoIP-enabled Residential ADSL2+ Gateways

DSL product (board mnemonic)	R7.4.4	R8.2.1	R8.2.2	R8.2.3	R8.2.4	R8.2.5	R8.2.6
THOMSON TG712(i) (CANT-5)			★	✓	✓	✓	✓
THOMSON TG782(i) (CANT-W)		★	✓	✓	✓	✓	✓
THOMSON TG782T (DANT-D)				★	✓	✓	✓
THOMSON TG784 (CANT-Y)		★	✓	✓	✓	✓	✓
THOMSON TG787(i) (CANT-G)	✓	✓	✓	✓	✓	✓	✓
THOMSON TG870 (CANT-3)		CAR	✓	✓			

VoIP-enabled Residential VDSL2 Gateways

DSL product (board mnemonic)	R7.4.4	R8.2.1	R8.2.2	R8.2.3	R8.2.4	R8.2.5	R8.2.6
THOMSON TG787(i)v (VDNT-D), ID=0)	✓	✓	✓	✓	✓	✓	✓

Business ADSL2+ Routers

DSL product (board mnemonic)	R7.4.4	R8.2.1	R8.2.2	R8.2.3	R8.2.4	R8.2.5	R8.2.6
Thomson ST608 WL (BANT-G, ID=0)		✓				✓	✓
Thomson ST608i WL (BANT-G, ID=0)		✓				✓	✓
Thomson ST608m WL (BANT-G, ID=0)		✓				✓	✓
Thomson ST620 (BANT-G, ID=1)		✓		✓	✓	✓	✓
Thomson ST620i (BANT-G, ID=1)		✓		✓	✓	✓	✓
Thomson ST620m (BANT-G, ID=1)		✓		✓	✓	✓	✓
THOMSON TG605 (CANT-R, ID=0)	✓	✓		✓			
THOMSON TG605i (CANT-R, ID=0)	✓	✓		✓			
THOMSON TG605m (CANT-R, ID=0)	✓	✓		✓			
THOMSON TG608 (CANT-R, ID=1)	✓	✓		✓			
THOMSON TG608i (CANT-R, ID=1)	✓	✓		✓			
THOMSON TG608m (CANT-R, ID=1)	✓	✓		✓			

Business SHDSL Routers

DSL product (board mnemonic)	R7.4.4	R8.2.1	R8.2.2	R8.2.3	R8.2.4	R8.2.5	R8.2.6
Thomson ST620s (SHNT-D)	✓	✓		✓	✓	✓	✓
THOMSON TG605s 2-wire (SHNT-G, ID=1)	★	✓	CAR	✓	✓	✓	✓
THOMSON TG605s 4-wire (SHNT-G, ID=0)	★	✓	CAR	✓	✓	✓	✓
THOMSON TG628s (SHNT-F)		★	CAR	✓	✓	✓	✓

VoIP-enabled Business VDSL2 Routers

DSL product (board mnemonic)	R7.4.4	R8.2.1	R8.2.2	R8.2.3	R8.2.4	R8.2.5	R8.2.6
THOMSON TG787(i)v Business (VDNT-D, ID=1)		★	✓	✓	✓	✓	✓

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1.2 Major Features, Modifications and Fixes

Introduction

This section provides an overview of the Main Track Slotted Release R8.2.6 features.

1.2.1 Product Evolution

End-of-Life products

Following products are in general not supported anymore in the Main Track Slotted Release:

- None.

New product introduction

This release introduces following new products:

- None.

Customer acceptance program

For certain products, a customer acceptance release, based on this R8.2.6 release may exist. Contact your THOMSON sales representative for more information.

Following products are released as Customer Acceptance Release product:

- None.

1.2.2 General new features

New features overview

Echo Cancellation timing (ECAN) has been changed from 48ms to 64ms for G.168 compliancy

To solve comfortable noise issues seen and to comply with G.168 (for the benefit of inferior phone equipment that produce an echo of up to 64ms, echo cancellation has been changed from the 48ms industry-standard to 64ms.

Changed default Connection Admission Control (CAC) value to allow a maximum of two simultaneous external calls from the Thomson Gateway

The default value for the CAC feature has been changed to 2 to allow a maximum of two external (incoming/outgoing) calls per Thomson Gateway. In this behaviour, a third caller (incoming/outgoing) will receive busy tone (486 BUSY message) instead of a temporarily unavailable tone (480 TEMPORARILY UNAVAILABLE message).

SIP Server extensions for advanced Connection Admission Control (CAC) configuration

The SIP server configuration has been extended to allow the configuration of the maximum number of external session configuration, and configuration of response codes with customized values.

This allows to - for example - support only maximum two external calls and a customized code in the response in case more call sessions are requested.

TFTP client-based platform software upgrade mechanism

For customers that do not deploy a CWMP/TR-069 remote device management environment, a TFTP client in running software has been implemented, supporting TFTP-DHCP mode and TFTP-PPP mode.

The already featured TFTP-Manual for dual-bank Business Thomson Gateway products is not impacted.

Separated authentication trigger point in AAA framework

The issue where local telnet and serial access to the Thomson Gateway is impossible in case AAA is enabled while the remote server does not support authentication for telnet and serial access, has been solved by descoping the telnet and serial trigger points authentication from the AAA module.

Support for device-specific SSID through new environment variable

A new device -specific environment variable **_SSID_WL_ACCCODE_POSTFIX** has been added (equalling the last six characters of the Thomson Gateway modem access code) to allow to customize the wireless network name (SSID) to a device-specific value based on this access code.

SIP Server GUI page improvements

The SIP Server GUI page has been restructured for improving the user-experience:

- On the **SIP Server > Configure** GUI page the individual configuration for each UA has been moved to a dedicated configuration page (via an **Edit** link).

Thomson ST620s default MAX_OVIDS value increased from four to eight

The Thomson Gateway platform software has been prepared to allow the definition of maximum eight “extratagging” entries instead of the default four.

New Firmware Embedded Help integrated

From this Main Track Slotted Release onwards an improved Firmware Embedded Help (FEH) is included in the Thomson Gateway platform software.

This FEH:

- Introduces single-sourced, conditionalized XML sources for FEH content, facilitating customization and localization.
- Fixes various issues found in earlier versions (such as missing coverage for example).

New language pack iterations are made available that include a localized version of this improved FEH. However existing language packs can still be re-used and do not conflict with the new FEH framework.

Improved GUI interoperability with Internet Explorer 8 and Google Chrome

Several interoperability issues of the Thomson Gateway GUI when browsing the GUI pages with Internet Explorer 8 or with Google Chrome have been solved.

GUI text improvements

The GUI tasks to setup the Thomson Gateway (previously “Set Up”), to restart the Thomson Gateway (previously “Restart”) and to reset the Thomson Gateway (previously “Return to Factory Default Settings”), have been renamed to better reflect their actual behaviour. They have been respectively renamed to:

- Setup my Thomson Gateway
- Restart my Thomson Gateway
- Reset my Thomson Gateway

1.2.3 Implemented Customer Key Technical Issues

KTI implementation overview

Following Key technical Issues that have been reported by dedicated customers have been implemented:

Voice parameter lengths compliancy to TR-104

The maximum supported lengths of the user name, password, proxy addresses, user agent domain, registrar address,... for a SIP UA configuration in the Thomson Gateway are compliant to TR-104.

Extension for SIP response code 3xx

The issue where the Thomson Gateway, upon receiving a SIP message 301 Moved Permanent, always resends the REGISTER message to the same, original address, instead of sending a REGISTER request to the new server address (as identified by the maddr address field in the received 301 message, has been solved.

Customizable call waiting tone support

The issue where the Thomson Gateway SIP UA did not support to play a specific customized call waiting tone (as received in a SIP INFO message sent by the remote SIP gateway), has been solved.

Voice LED behaviour extensions to take SIP account status into account

In case independent profiles are created for individual Thomson Gateway VoIP connections, the Voice LEDs for the particular VoIP connection takes the individual status of the profile into account instead only basing the LED status on the COMMON profile.

Resume of call on hold fails

The issue where when an active call is resumed from being put On Hold caused the call to be dropped by the Thomson Gateway due to the Thomson Gateway not increasing the localSDP version when rehandling the re-invite success, has been solved.

Fixed SIP Server problem where outgoing calls with authentication are not possible anymore after some time

The issue where after a single night of endurance, outgoing calls are not possible anymore (i.e. the re-invite message with proxy-authorization can not be sent by the B2BUA) while incoming calls are still OK, has been solved.

Solved Thomson Gateway GUI HTTP(S) server security vulnerability

A potential vulnerability issue where Thomson Gateway GUI HTTP(S) server replies contain device information, i.e. “SpeedTouch WebServer 1.0” in the Server field, has been solved. The Server field in replies now contains an empty string.

Improved GUI page loading

The issue where loading the GUI home page of the Thomson Gateway was slowed down due to extensive and redundant Device Discovery actions, has been solved.

IGMP proxy’s membership database gets corrupted with multiple Set-Top Boxes

The issue where the Thomson Gateway IGMP proxy’s membership database (the group list that keeps track of what Set Top Box (STB) clients are using what stream) may become corrupted after some time in case multiple STB clients are connected, has been solved.

IPoE WAN connections are not shown on the Thomson Gateway Broadband Connections GUI page

The issue where IP over Ethernet (IPoE) WAN connections were not shown on the Thomson Gateway BroadBand Connections GUI page, has been solved.

Two simultaneous incoming calls not handled correctly by the Thomson Gateway

The issue where during an incoming call that is not answered yet (phone is ringing), a second incoming call to this phone is received, will not result in busy signal to the calling party and will ultimately fail due to no phone alerting, has been solved.

It is not possible to reset VoIP profiles via the TR-104 IGD management

The issue where triggering "InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Reset" to reset a VoIP profile does not work, has been solved.

Adding a second SIP account via TR-069 causes the Thomson Gateway to restart

The issue where adding a second SIP account via TR-069 caused the Thomson Gateway to restart, has been solved.

Solved interoperability issues with Huawei SIP Server

The issue where the Thomson Gateway may restart due to following VoIP call actions against a Huawei SIP Server:

- Picking up the phone a second time after an unsuccessful outgoing call to an unknown phone number,
- Calling a busy phone number,
- Waiting until ringing time-out during outgoing call that is not answered,

have been solved.

Solved internal SIP Server registration failure

The issue where it has been observed that after some time the internal SIP Server registration of the voice profile list is not registered anymore, has been solved.

Corrected Broadband LED behaviour on THOMSON TG782

The issue where in case the THOMSON TG782 is used in an Ethernet WAN scenario (i.e. one of its Ethernet ports is assigned WAN port), LED behaviour is not correctly representing the operational Internet state, has been solved.

Legacy front-panel button functionality is unable to disable the wireless interface after restarting the Thomson Gateway

The issue where once the legacy front-panel button functionality is enabled, the button cannot be used for disabling the integrated wireless interface after a restart of the Thomson Gateway, has been solved.

The SIP ALG does not add the NAT-ted port to the contact header in case the received contact header didn't contain a port number

The issue where the Thomson Gateway SIP ALG does not add the translated proxy port in the contact header of SIP messages in case the proxy port was not present in the original contact header of the SIP message, has been solved.

1.2.4 General Fixes and Improvements

Introduction

This section provides an non-exhaustive overview of fixes and improvements. For the reader's convenience, the issues are grouped by functionality.

Overview

CWMP / Datamodel

- The issue where the extensions to the IGD datamodel done do not fully support to add new IP Set-Top Boxes (STBs) (using DHCP vendor class, or possibly MAC address) to the flexiport functionality of the Thomson Gateway, has been solved.
- The issue where configuring IGD voice line object parameters fail if PhyReferenceList isn't set as the first parameter, has been solved.

GUI / Firmware Embedded Help / Embedded Easy Setup / Lua

- The issue where the GUI framework of the Thomson Gateway does not support auto-adjustment of column widths according to screen-resolution, web browser application, has been solved.

NAT ALG

- The issue where the Thomson Gateway SIP ALG can not setup an RTP port map (i.e. doesn't create the child connection) in case PRACK is used by an ATA client connected to the Thomson Gateway network, has been solved.

Physical Layer - ADSL/ADSL2+

- A new Broadcom-specific Physical Layer Retransmission modem label that can be used in a customized THOMSON TG787 platform software, is available solving crashes observed in case a DSL resynchronization is forced while traffic is flowing (e.g. video stream).

Physical Layer - SHDSL

- The issue where 64&128&1518 bytes' throughput on EFM are obviously changed between 8247 and 8234, has been solved by removing redundant debug information.
- The issue where 64 & 128 bytes' throughput on EFM are obviously changed between 8247 and 8236, has been solved by removing redundant debug information.
- The issue where 128 bytes' throughput on ATM are obviously changed between 8247 and 8236, has been solved by removing redundant debug information.

Services - UPnP AV / Content Sharing

- The issue where in case the Content Sharing FTP Server service is enabled to allow FTP connections from the WAN to the shared media, authentication of initiated FTP sessions from the LAN will fail, has not been observed anymore.

SNTP - Real Time Clock

- The issue where the daylight saving configuration could only be set once the Thomson Gateway SNTP was synchronized at least one time with the Internet SNTP server, has been solved.

VoIP - General / DECT / SIP

- The issue where the Thomson Gateway restarts when configuring a VoIP profile with long VoIP user names and/or long SIP URIs (IMPI-compliant) via the GUI, has been solved.
- The issue where even in case a VoIP profile is disabled and unregistered, (Visual) Message Waiting Indication ((V)MWI) may still be active, causing the VoIP profile to try to subscribe, has been solved.
- The issue where, if call waiting service is enabled, when during an incoming call a second incoming call is received and the first call is put on hold to answer the second call, after terminating this second call, the phone is alerted for the fist call on hold, but with the CLIP number of the second call instead of the one of the call on hold, has been solved.

- The issue where DTMF/RFC2833 packets are only sent to the first party that joined a 3-way conference call, and not to the third party of the call, has been solved.

VoIP - SIP Server

- The issue where deleting an Internal UA via the GUI, causes all mappings between any intUA to any extUA to be deleted instead of only the mappings for the deleted intUA, has been solved.
- The issue where the SIP Reregistration mechanism has not been corrected to avoid an immediate and incorrect SIP reregistration attempt after receiving error messages from the external SIP server (for example due to invalid IP credentials in the SIP registration message), has been solved.
- The issue where when deleting and then adding an another extUA via the GUI, or when changing the extUA interface, the Thomson Gateway SIP Server cannot trigger the registration of any extUA longer, has been solved.
- The issue where when deleting all intUAs and extUAs via the GUI, the mappings between intUAs and extUAs actually are still present in the Thomson Gateway configuration, has been solved.
- The issue where in certain call transfer scenarios, the REFER message may not properly be translated by the Thomson Gateway SIP Server, has been solved.

1.2.5 Modified Features and Optimization

Modified features and optimization overview

Following existing features have been modified:

Reduced feature set on Thomson ST585 v6 and THOMSON TG585 v7

Upon applicability following standard features are either removed, reduced or changed to optimize memory occupation:

- The tracelevel has been reduced to one.
- The Routing Information Protocol (RIP) is not supported.
- USB master and slave port functionality has been removed.
- SNMP and ILMI is not supported.
- Trace and debug commands for the Thomson Gateway Ethernet driver have been removed.
- KPML has been removed.
- Call logging is not supported.
- The Phone book GUI page has been removed.
- Accelerated IP is not supported.
- ScheduleInform RPC is not supported.
- Reduced Differentiated Service Delivery (DSD) functionality.

Following Thomson Gateway products feature this reduced feature set:

- Thomson ST585 v6
- THOMSON TG585 v7

TFTP client and download daemon removed from Thomson ST585 v6

Following features are not supported from this Main Track Slotted Release R8.2.6 onwards to optimize memory occupation:

- The newly introduced TFTP client in running platform software.

This has no impact on the TFTP function embedded in the product's bootloader.

- The DOWNLOAD daemon for platform software upgrades in non-CWMP/TR-069 upgrade scenarios.

Re-introduction of the PPTP functionality on THOMSON TG585 v7

The PPP-to-PPTP Relaying Internet Service and PPTP ALG that were previously removed from the THOMSON TG585 v7 have been re-introduced.

802.1X suppliant removed from THOMSON TG585 v7

The THOMSON TG585 v7 does not support the 802.1X suppliant feature anymore from this Main Track Slotted Release R8.2.6 onwards to optimize memory occupation.

1.3 Open Issues

Introduction

This section provides an overview of issues that have been detected in this Main Track Slotted Release R8.2.6. For the reader's convenience, the issues are grouped by functionality.

Overview

Bridge / VLAN / Bridge Filter / Ethernet

- PAUSE frames are not sent or forwarded by the THOMSON TG787v and THOMSON TG787v Business Ethernet switch (or software bridge), impacting Ethernet QoS functioning.
- VLANs are not properly configured on an Ethernet port that has been configured as non-bridge Ethernet WAN interface. This causes tagged packets to be dropped by the Thomson Gateway Ethernet switch. As a workaround, enable unknownVLAN on the other (LAN-assigned) Ethernet ports of the switch so that the Ethernet switch is forced to flood the packets received on the WAN Ethernet port.
- When sending a unicast packet from an unknownVlan LAN port, the learned MAC address is lost on the unknownVlan WAN port.

CWMP / Datamodel

- CWMP packets may not be forwarded according to QoS label rules.
- Changing NAPT port mappings via the IGD data model is not possible, it is only possible to set the port mapping via TR-069 using the same internal and external port on the first attempt.
- Some datamodel parameters of type 'boolean', 'int' and 'unsignedint' are empty in the IGD datamodel, which is not in line with TR-098 specification. This may cause problems with ACS test scenarios.
- In case the ACS server's DNS name is resolved by the Thomson Gateway DNS server to multiple IP addresses, the Thomson Gateway will only use the first resolved IP address to connect to the ACS. As a consequence, CWMP actions may fail.

DHCP / IPCP

- The Thomson Gateway crashes in case the assigned IP address of the PPP interface is part of the DHCP server's DHCP pool range.
- The Thomson Gateway has been observed to crash in case - with Device Discovery enabled (default setting) - the DHCP leases are flushed while a high number of DHCP hosts are connected to the Thomson Gateway.

GUI / Firmware Embedded Help / Embedded Easy Setup / Lua

- It is not possible to switch to another user directly via clicking the user name on the Thomson Gateway GUI when using Internet Explorer 8. As a workaround, switch to another user via the User Management page (**Toolbox > User Management**).
- On the WAN statistics GUI page (**Expert > Thomson Gateway > Diagnostics > WAN > Statistics**) of the THOMSON TG628s wrong CRC values are shown.
- On the **Web Cameras** GUI page (if supported and enabled) the MAC address is displayed and used instead of the camera's IP address. As a consequence the web camera cannot be controlled via the Thomson Gateway GUI.
- On the IPSec VPN GUI page of the THOMSON TG787v Business a **Use Certificate Authentication** button is present while certificate authentication is not supported.

Housing / LEDs

- Due to the WAN auto-sensing feature added to the THOMSON TG784, after upgrading from R8.2.2 to this release, LED behaviour may be incorrect in case of Ethernet WAN scenarios.

IP Acceleration / IP Forwarding / IP Routing

- TCP traffic from a THOMSON TG784 configured in IPoA Routed mode, without NAT and IP Acceleration enabled is dropped on Alcatel-Lucent DSLAMs (with ISAM version 3.6.02 or higher) because data packet length=0 so is considered as bogus packets. As a workaround, disabling IP acceleration solves the issue.

IPSec / VPN

- The Thomson Gateway cannot relay IPSec packets when the IKE and ESP connections are bound to a specific port in the Thomson Gateway connection bind list. As a workaround unbind IKE and ESP via the CLI.
- The IPSec VPN client cannot be configured via the Thomson Gateway product's CLI, while it can be configured correctly via its GUI pages.
- On the GUI, in case multiple IPSec tunnels are configured, only one tunnel can be displayed as "running", though more may be actually started.
- In IPSec scenarios with NAT-T the Business Thomson Gateway products have a segmentation problem, i.e. in case firewall UDP checks are enabled (default setting), the second segment is always dropped. As a workaround, disable UDP checks in the Thomson Gateway firewall.

NAT ALG

- The Thomson Gateway product's SIP ALG does not correctly handle the address translation of call forward RTP coming from a local SIP PBX on the local network.
- The Thomson Gateway PPTP ALG erroneously deletes the NAT mapping after time-out expiry and no traffic, though the PPTP control connection exists. As a consequence, GRE data traffic from WAN cannot pass and the local PPTP client can not communicate with the WAN.
- In PPP-subnet-passthrough scenarios, no transparent NAT map is added for the public DHCP subnet. As a consequence address translation is applied on the public subnet lease addresses of local hosts instead of being transparently passed through the Thomson Gateway.

Physical Layer - ADSL/ADSL2+

- High frame loss rate (high Bit Error Ratio (BER)) in the downstream direction and many Code Violation (CV) packets have been observed if the Thomson Gateway operates in ADSL1 annex B fast mode against an Alcatel-Lucent NALT-D line card. This problem does not appear if interleave mode is used.
- A large value of data rate spread that can exceed 5Mbps has been observed if the Thomson Gateway operates in ADSL2+ Interleave mode against an Alcatel-Lucent NVLT-C line card.
- DSL synchronisation losses have been observed if a THOMSON TG782i operates in ADSL2 or ADSL2+ in Interleave 16/2 mode against a Huawei 5100 DSLAM.
- It is not possible to enable or disable Dying Gasp on Thomson Gateway products running a GoLinux-based platform software.

Physical Layer - VDSL2

- Invalid DSL statistics are shown and CPE remote inventory and noise margin values are not shown at all on the GUI or CLI due to the fact that the OHM module is disabled.
- ADSL2+ downstream synchronization rates of the THOMSON TG787v and THOMSON TG787v Business against IKANOS-based Central Office DSLAMs using Fast Leave is lower than expected (max. 19Mbps).

Physical Layer - SHDSL

- On Thomson Gateway SHDSL products it is not possible to use Game & Application Sharing as the proper NAT mappings are not added during configuration and the firewall is not configured properly to allow the sharing service.
- The THOMSON TG628s Tip/Ring Reversal does not follow ISAM5 link configuration.
- Throughput performance is negatively influenced by enabled UPnP and host manager functionality. Therefore, UPnP and host manager functionality have been disabled on Thomson Gateway SHDSL products.
- While EFM 4-pair performance is good on the THOMSON TG628s, ATM 4-pair performance for small frames is lower than expected.
- Link1 and Link2 signal-to-pin assignments have been inverted on DSL connector DSL1 compared to the assignment on DSL connector DSL0.
  Currently the following connector pinning is applied:

- Link0: DSL-0 3&4 (inner pair)
- Link3: DSL-0 2&5 (outer pair)
- Link1: DSL-1 2&5 (outer pair)
- Link2: DSL-1 3&4 (inner pair)

i.e. Link1 and Link2 are inverted, as for these the connector pinning should be as follows:

- ***Link1: DSL-1 3&4 (inner pair)***
- ***Link2: DSL-1 2&5 (outer pair)***

The signal-to-pin assignment is fully described in the SHDSL configuration Guide and TG628s user documentation.

The possible consequence is outlined below:

1. When using ATM mode, if Auto-Master is enabled, the sequence of the links will be automatically arranged, so inverted is issue won't affect us.
2. When using EFM mode, the sequence of the links doesn't matter at all.
3. When using ATM mode, and the Auto-Master was disabled, there might be two scenarios:
   - When the CO side is also using Infineon's chips, based on Infineon's internal mechanism, the sequence of the links won't affect us.
   - When the CO side is using Conexant chips (or other chip vendor except Infineon), we might get problem. Solutions will be: Enable the Auto-master, or cross connect the cables of link1 and link2 on DSLAM side.

Quality of Service

- PPPoE Active Discovery (PAD) messages (PADI, PADO, PADR) do not respect the internal class setting assigned by PPP; as a consequence the derived P-bits are wrong.
- On a THOMSON TG605s, when using QoS labels to rewrite the tos/dscp/precedence fields, the corresponding field is set to 0x00 instead of the configured value in case the incoming packet has already tos/dscp/precedence values equal to the value to be set. In all other cases the value is rewritten with the configured value.
- Queue-based rate limiting has no impact.

SNMP

- ifInOctets and ifOutOctets values of some interfaces (such as eth0, ethport2, ethport3, ethport4) will reset to 0 (zero) if they effective number exceeds 65535.
- The THOMSON TG628s reports wrong or incomplete SHDSL MIB SNMP info.

UPnP / TR-064

- The Internet connection state of Thomson Gateway VDSL products configured with IPoE, is unreliable and cannot be controlled via MS Windows' Network Connection page.
- It is not possible to browse the Thomson Gateway UPnP AV Server.

VoIP - General / DECT / SIP

- When forcedFXO is provisioned, no corresponding dial plan entry added for forcedFXO calls. As a consequence a forcedFXO call may be done over VoIP.
- When a a terminated active call exists on FXS1 and a second external party calls FXS1, this external party gets the busy tone. When now the existing active call is disconnected from the originating side, the FXS1 port should normally is supplied with release tone accompanied by polarity reversal back to "I" state. however instead no tone is produced at all.

- In case all phones (FXS phones and DECT handsets) are common and call waiting service is disabled, if a DECT handset is in a call when another incoming call is received, only the FXS phone(s) will start ringing (normal behaviour). If the DECT handset now terminates its call, it will start ringing as well for the remaining incoming call (if still not picked up). However, when answering this call with the DECT handset, only the dial tone is heard and the FXS phone(s) will continue to ring, i.e. the call is actually not picked up at all.
- Call logs on the voice page of the Thomson Gateway GUI may not register calls correctly in case an interrupted intended call (phone is picked up, no number is dialled and the phone is hung up again) from an FXS phone has been made.
- An Air-upgrade of a DECT handset is not possible in case IPQoS is enabled on the Thomson Gateway.
- The voice of the ongoing call is interrupted (and not restored) on a phone (DECT or FXS) after a first voice Call Waiting tone alert is received on this phone.
- When the proxy port and/or the registration port of a voice profile are changed, after reconfiguration, RTP streams are dropped by the Thomson Gateway.
- If during a 3-party call HF+0 is pressed, the 3-party call is terminated.
- When during a phone call a second call attempt is done to the phone, generating the call waiting tone, after subsequently both the waiting call and the active calls are terminated, no release tone is generated by the Thomson Gateway.
- During a 3-Party call, if two of the three callers go on hook, the remaining caller does not hear a release tone (no remaining call) as expected.
- A phone call over the regular phone line via an FXO port (Reduced FXO call), set up while the Thomson Gateway is turned of (for example due to power failure), is broken of by the Thomson Gateway when registering its VoIP service after restarting (i.e. in the example when power is restored).
- Caller Identification (CLIP) on receiving VoIP calls may not work after reducedFXO calls.
- When the Thomson Gateway restarts during reducedFXO calls, the reregistration of VoIP after restart cancels the ongoing calls.
- It has been observed that after some time, depending on the reregistration period (typically 15 to 20 days with default reregistration timer), SIP reregistration fails, hence no VoIP connection exists anymore, though the SIP account may still appear as being registered if checked via CLI and/or GUI.

VoIP - SIP Server

- A SIP Server transfer operation fails if an authentication invite is needed as the RE-INVITE does not contain the Referred-By and Replaces fields anymore.
- After adding or deleting an External UA, the Thomson Gateway must be restarted before the external UA is able to send its Register message.
- In some cases address translation is wrongly applied causing SIP packets to be dropped.

Wireless

- Packet loss in wireless traffic from LAN through a THOMSON TG784 to the WAN may cause the Thomson Gatewayto restart.
- If the Thomson Gateway is configured with multiple SSID and the virtual access point is assigned to a VLAN with separate DHCP pools, wireless clients can only associate on the virtual access points without encryption; i.e. WEP, nor WPA(2) is supported in this case.
- In case the wireless hardware button is used for legacy MAC address based registration, if during the registration phase the wireless interface is disabled (e.g. via CLI), the button LED is not turning off.
- When the wireless network name (SSID) contains one or more spaces, after a restart the SSID returns to its factory default value.
- When using WEP encryption or WPA-TKIP wireless security the throughput performance of the 802.11n wireless interface is lower than when using no wireless security or WPA2.

Miscellaneous

- In normal operating conditions (i.e. in cases where the Thomson Gateway is not overloaded with Ethernet WAN traffic processing), VoIP, Video, TR-069 gets prioritized over normal traffic.
- The Thomson ST620s has been observed to occasionally restart when using the ISDN fall-back WAN connection intensively for extended periods of time.

- Subsequently attaching and detaching WAN interfaces on a THOMSON TG784 used in Ethernet WAN scenario, may cause the Thomson Gateway to stop responding on any management channel (telnet, FTP, GUI, UPnP).
- Resetting the THOMSON TG787v and THOMSON TG787v Business to factory defaults with a THOMSON DECT USB Adapter connected, crashes the device.
- Physical layer version information cannot be read from the archive of some Thomson Gateway products.

2 Product Deliverables

Introduction

The release R8.2.6 has been made available for following Thomson Gateway DSL products:

- Thomson ST products:
  - Thomson ST585(i) v6
  - Thomson ST608(i/m) WL
  - Thomson ST620(i/m)
  - Thomson ST620s
- THOMSON TG products:
  - THOMSON TG546f
  - THOMSON TG585(i) v7
  - THOMSON TG585(i)n
  - THOMSON TG587(i)n
  - THOMSON TG605s
  - THOMSON TG628s
  - THOMSON TG712(i)
  - THOMSON TG782(i)
  - THOMSON TG782T
  - THOMSON TG784
  - THOMSON TG787(i)
  - THOMSON TG787(i)v
  - THOMSON TG787(i)v Business

Deliverables overview

2.1 Detailed Platform Software Information

2.1.1 Thomson ST products

Thomson ST585(i) v6

BANT-W Software Components			
Component		**Identification**	**Remarks**
Firmware	bootloader image	ZZQIAA8.265.bli	RTEMS
	operational firmware	ZZQGAA8.265	RTEMS
ADSL/POTS modem label	bcm96348_V1.0.188_ADSL_PHY_A2pBT010o.d20h		
ADSL/ISDN modem label	bcm96348_V1.0.188_ADSL_PHY_B2pBT010g.d20h		
Translation project		ZYRHAA8.265.tgz	TRM/TRP-file
Tag Parser version		v2.0.0	-
Boot Loader version		v1.0.8	-

Thomson ST608(i/m) WL

BANT-G(0) Software Components			
Component		**Identification**	**Remarks**
Firmware	bootloader image	ZZRZAA8.265.bli	RTEMS
	operational firmware	ZZRZAA8.265	RTEMS
ADSL/POTS modem label	bcm96348_V1.0.188_ADSL_PHY_A2pBT010o.d20h		
ADSL/ISDN modem label	bcm96348_V1.0.188_ADSL_PHY_B2pBT010g.d20h		
Translation project		ZYRUAA8.265.tgz	TRM/TRP-file
Tag Parser version		v2.0.0	-
Boot Loader version		v1.0.20	-

Thomson ST620(i/m)

BANT-G(1) Software Components			
Component		**Identification**	**Remarks**
Firmware	bootloader image	ZZUKAA8.265.bli	RTEMS
	operational firmware	ZZUIAA8.265	RTEMS
ADSL/POTS modem label	bcm96348_V1.0.188_ADSL_PHY_A2pBT010o.d20h		
ADSL/ISDN modem label	bcm96348_V1.0.188_ADSL_PHY_B2pBT010g.d20h		
Translation project		ZYRTAA8.265.tgz	TRM/TRP-file
Tag Parser version		v2.0.0	-
Boot Loader version		v1.0.20	-

Thomson ST620s

SHNT-D Software Components			
Component		**Identification**	**Remarks**
Firmware	bootloader image	ZZMKAA8.265.bli	RTEMS
	operational firmware	ZZMIAA8.265	RTEMS
SHDSL modem label	bcm96348_V1.0.188		
Infineon firmware version		v1.6.1	Infineon Socrates
Translation project		ZYQ3AA8.265.tgz	TRM/TRP-file
Tag Parser version		v2.0.0	-
Boot Loader version		v1.0.0	existing products
		v2.0.1	new products

2.1.2 THOMSON TG Products

THOMSON TG546f

CANT-E Software Components			
Component		**Identification**	**Remarks**
Firmware	bootloader image	ZZDVAA8.265.bli	RTEMS
	operational firmware	ZZDUAA8.265	RTEMS
Translation project		ZYR4AA8.265.tgz	TRM/TRP-file
Tag Parser version		v2.0.0	-
Boot Loader version		v1.0.2	

THOMSON TG585(i) v7

CANT-P Software Components			
Component		**Identification**	**Remarks**
Firmware	bootloader image	ZZ5YAA8.265.bli	RTEMS
	operational firmware	ZZ5XAA8.265	RTEMS
ADSL/POTS modem label	bcm96338_V1.0.188_ADSL_PHY_A2pBT010o.d20h		
ADSL/ISDN modem label	bcm96338_V1.0.188_ADSL_PHY_B2pBT010g.d20h		
Translation project		ZYQJAA8.265.tgz	TRM/TRP-file
Tag Parser version		v2.0.0	-
Boot Loader version		v1.0.1	-

THOMSON TG585(i)n

CANT-J Software Components			
Component		**Identification**	**Remarks**
Firmware	bootloader image	ZZBTAA8.265.bli	GoLinux BLI-Image
	bootloader image	ZZBSAA8.265.rbi	GoLinux RBI-Image
ADSL/POTS modem label	bcm96358_V1.0.188_ADSL_PHY_A2pBT010o.d20h		
ADSL/ISDN modem label	bcm96358_V1.0.188_ADSL_PHY_B2pBT010g.d20h		
Translation project		ZYQQAA8.265.tgz	TRM/TRP-file
Tag Parser version		v2.0.0	-
Boot Loader version		v1.0.3	-

THOMSON TG587(i)n

CANT-O Software Components			
Component		**Identification**	**Remarks**
Firmware	bootloader image	ZZ1NAA8.265.bli	Golinux BLI-Image
	bootloader image	ZZ1MAA8.265.rbi	Golinux RBI-Image
ADSL/POTS modem label	bcm96358_V1.0.188_ADSL_PHY_A2pBT010o.d20h		
ADSL/ISDN modem label	bcm96358_V1.0.188_ADSL_PHY_B2pBT010g.d20h		
Translation project		ZYQLAA8.265.tgz	TRM/TRP-file
Tag Parser version		v2.0.0	-
Boot Loader version		v1.0.1 v1.0.2	-

THOMSON TG605s

4-wire SHDSL

SHNT-G(0) Software Components			
Component		**Identification**	**Remarks**
Firmware	bootloader image	ZZ2WAA8.265.bli	RTEMS
	operational firmware	ZZ2VAA8.265	RTEMS
SHDSL modem label	bcm96348_V1.0.188		
Infineon firmware version		v1.6.1	Infineon Socrates
Translation project		ZYPYAA8.265.tgz	TRM/TRP-file
Tag Parser version		v2.0.0	-
Boot Loader version		v1.0.2	-

2-wire SHDSL

SHNT-G(1) Software Components			
Component		**Identification**	**Remarks**
Firmware	bootloader image	ZZ2RAA8.265.bli	RTEMS
	operational firmware	ZZ2QAA8.265	RTEMS
SHDSL modem label	bcm96348_V1.0.188		
Infineon firmware version		v1.6.1	Infineon Socrates
Translation project		ZYPZAA8.265.tgz	TRM/TRP-file
Tag Parser version		v2.0.0	-
Boot Loader version		v1.0.2	-

THOMSON TG628s

SHNT-F Software Components			
Component		**Identification**	**Remarks**
Firmware	bootloader image	ZZ5AAA8.265.bli	RTEMS
	operational firmware	ZZ59AA8.265	RTEMS
SHDSL modem label	bcm96348_V1.0.188		
Infineon firmware version		v1.6.1	Infineon Socrates
Translation project		ZYQ0AA8.265.tgz	TRM/TRP-file
Tag Parser version		v2.0.0	-
Boot Loader version		v1.0.2	-

THOMSON TG712(i)

VoIP - SIP

CANT-5 SIP Software Components			
Component		**Identification**	**Remarks**
Firmware	bootloader image	ZYMHAA8.265.bli	GoLinux BLI-image
	bootloader image	ZYMGAA8.265.rbi	GoLinux RBI-image
ADSL/POTS modem label	bcm96358_V1.0.188_ADSL_PHY_A2pBT010o.d20h		
ADSL/ISDN modem label	bcm96358_V1.0.188_ADSL_PHY_B2pBT010g.d20h		
Translation project		ZYMAAA8.265.tgz	TRM/TRP-file
Tag Parser version		v2.0.0	-
Boot Loader version		v1.0.0	-

THOMSON TG782(i)

VoIP - SIP

CANT-W SIP Software Components			
Component		**Identification**	**Remarks**
Firmware	bootloader image	ZYUOAA8.265.bli	GoLinux BLI-image
	bootloader image	ZYUNAA8.265.rbi	GoLinux RBI-image
ADSL/POTS modem label	bcm96358_V1.0.188_ADSL_PHY_A2pBT010o.d20h		
ADSL/ISDN modem label	bcm96358_V1.0.188_ADSL_PHY_B2pBT010g.d20h		
Translation project		ZYODAA8.265.tgz	TRM/TRP-file
Tag Parser version		v2.0.0	-
Boot Loader version		v1.0.1	-

VoIP - MGCP

CANT-W MGCP Software Components			
Component		**Identification**	**Remarks**
Firmware	bootloader image	ZYUHAA88.265.bli	GoLinux BLI-image
	bootloader image	ZYUGAA8.265.rbi	GoLinux RBI-image
ADSL/POTS modem label	bcm96358_V1.0.188_ADSL_PHY_A2pBT010o.d20h		
ADSL/ISDN modem label	bcm96358_V1.0.188_ADSL_PHY_B2pBT010g.d20h		

CANT-W MGCP Software Components		
Component	**Identification**	**Remarks**
Translation project	ZYOCAA8.265.tgz	TRM/TRP-file
Tag Parser version	v2.0.0	-
Boot Loader version	v1.0.1	-

THOMSON TG782T

VoIP - SIP

DANT-D SIP Software Components			
Component		**Identification**	**Remarks**
Firmware	bootloader image	ZY6XAA8.265.bli	GoLinux BLI-image
	bootloader image	ZY6WAA8.265.rbi	GoLinux RBI-image
ADSL/POTS modem label	bcm96358_V1.0.188_ADSL_PHY_A2pBT010o.d20h		
Translation project		ZY6QAA8.265.tgz	TRM/TRP-file
Tag Parser version		v2.0.0	-
Boot Loader version		v1.0.2	

THOMSON TG784

VoIP - SIP

CANT-Y SIP Software Components			
Component		**Identification**	**Remarks**
Firmware	bootloader image	ZYU4AA8.265.bli	GoLinux BLI-image
	bootloader image	ZYU3AA8.265.rbi	GoLinux RBI-image
ADSL/POTS modem label	bcm96358_V1.0.188_ADSL_PHY_A2pBT010o.d20h		
Translation project		ZYOAAA8.265.tgz	TRM/TRP-file
Tag Parser version		v2.0.0	-
Boot Loader version		v1.0.1 v1.0.2	-

THOMSON TG787(i)

VoIP - SIP

CANT-G SIP Software Components			
Component		**Identification**	**Remarks**
Firmware	bootloader image	ZZ73AA8.265.bli	GoLinux BLI-image
	bootloader image	ZZ72AA8.265.rbi	GoLinux RBI-image
ADSL/POTS modem label	bcm96358_V1.0.188_ADSL_PHY_A2pBT010o.d20h		
ADSL/ISDN modem label	bcm96358_V1.0.188_ADSL_PHY_B2pBT010g.d20h		
Translation project		ZYR0AA8.265.tgz	TRM/TRP-file
Tag Parser version		v2.0.0	-
Boot Loader version		v1.0.2 v1.0.3	-

THOMSON TG787(i)v

VoIP - SIP Server

VDNT-D(0) SIP Server Software Components			
Component		**Identification**	**Remarks**
Firmware	bootloader image	ZYYRAA8.265.bli	GoLinux BLI-image
	bootloader image	ZYYQAA8.265.rbi	GoLinux RBI-image
ADSL/POTS modem label	bcm96358_V1.0.188_ADSL_PHY_A2pBT010o.d20h		
ADSL/ISDN modem label	bcm96358_V1.0.188_ADSL_PHY_B2pBT010g.d20h		
VDSL modem label	ikanos_R822_VDSL_PHY_1.0.7r60IK105012		
Translation project		ZYPVAA8.265.tgz	TRM/TRP-file
Tag Parser version		v2.0.0	-
Boot Loader version		v1.0.3 v1.0.4	-

THOMSON TG787(i)v Business

VoIP- SIP

VDNT-D(1) SIP Software Components			
Component		**Identification**	**Remarks**
Firmware	bootloader image	ZYNAAA8.265.bli	GoLinux BLI-image
	bootloader image	ZYN9AA8.265.rbi	GoLinux RBI-image
ADSL/POTS modem label	bcm96358_V1.0.188_ADSL_PHY_A2pBT010o.d20h		
ADSL/ISDN modem label	bcm96358_V1.0.188_ADSL_PHY_B2pBT010g.d20h		
VDSL modem label	ikanos_R822_VDSL_PHY_1.0.7r60IK105012		
Translation project		ZYN2AA8.265.tgz	TRM/TRP-file
Tag Parser version		v2.0.0	-
Boot Loader version		v1.0.3 v1.0.4	-

VoIP - SIP Server

VDNT-D(1) SIP Server Software Components			
Component		**Identification**	**Remarks**
Firmware	bootloader image	ZYWFAA8.265.bli	GoLinux BLI-image
	bootloader image	ZYWEAA8.265.rbi	GoLinux RBI-image
ADSL/POTS modem label	bcm96358_V1.0.188_ADSL_PHY_A2pBT010o.d20h		
ADSL/ISDN modem label	bcm96358_V1.0.188_ADSL_PHY_B2pBT010g.d20h		
VDSL modem label	ikanos_R822_VDSL_PHY_1.0.7r60IK105012		
Translation project		ZYPUAA8.265.tgz	TRM/TRP-file
Tag Parser version		v2.0.0	-
Boot Loader version		v1.0.3 v1.0.4	-

2.2 Language Pack Deliveries

Introduction

Language Packs have been made available for all Thomson Gateway products that are released in this release. Language Packs are available for selected partners from THOMSON's partner web site at www.thomsontelecompartner.com.

Product Deliverables

THOMSON Telecom Belgium
Prins Boudewijnlaan 47
2650 Edegem

www.thomson.net

E-DOC-CRN-20100105-0002 v1.0.

THOMSON