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# **Touchstone® eMTA Firmware**



## **Release TS11.1.111.1**

Release Notes and  
Letter of Operational  
Considerations

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# Touchstone® Gateway Firmware

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## Release TS11.1.111.1

### Release Notes and Letter of Operational Considerations

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Document release	Approved, v1.0
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## Publication History

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# Table of Contents

<b>1</b>	<b>OBJECTIVES OF THIS DOCUMENT</b>	<b>1</b>
1.1	ARRIS COMMITMENT	1
1.2	PURPOSE AND SCOPE OF THIS DOCUMENT	1
1.3	PRODUCT IDENTIFICATION AND PURPOSE OF RELEASE	1
1.4	FIRMWARE FILENAME VARIANT INFORMATION	2
1.5	MINIMUM FIRMWARE BASELINE FOR HARDWARE	3
1.6	PRODUCT DOCUMENTATION	4
<b>2</b>	<b>RELEASE NOTES</b>	<b>5</b>
2.1	NEW PRODUCT FEATURES	5
2.2	RESOLVED FIELD BULLETIN(S)	9
2.3	RESOLVED PRODUCT DEFICIENCIES	10
<b>3</b>	<b>LETTER OF OPERATIONAL CONSIDERATIONS</b>	<b>21</b>
3.1	OPERATIONAL CONSIDERATIONS	21
3.2	UNSUPPORTED FEATURES	23
3.3	UPGRADE CONSIDERATIONS	24
	<b>CUSTOMER SERVICE AND SUPPORT</b>	<b>24</b>

# 1 Objectives of This Document

## 1.1 ARRIS Commitment

ARRIS is committed to developing high quality, value-added products and services to the Multiple System Operator (MSO). ARRIS continually strives toward meeting our customer's needs with solutions that will help achieve their business objectives.

## 1.2 Purpose and Scope of This Document

This document describes the value-added features and anomaly resolutions associated with this release. It also informs operators of known Operational Considerations associated with this product release that have been identified either through ARRIS' testing or field operations.

## 1.3 Product Identification and Purpose of Release

Information pertaining to support for this specific release is detailed in the table below.

<b>Product Description</b>	<b>GA – TS 11.1.111.1 – Phase 3</b>
<b>Validation Sequence</b>	<ul style="list-style-type: none"><li>• <b>Generally Available (GA)</b></li></ul>
<b>Supported DOCSIS Standard(s)</b>	<ul style="list-style-type: none"><li>• <b>DOCSIS® 3.0</b></li><li>• <b>Euro-DOCSIS® 3.0</b></li><li>• <b>DOCSIS® 3.1</b></li></ul>
<b>Supported Signaling Protocol(s)</b>	<ul style="list-style-type: none"><li>• <b>Network-Based Call Signaling (NCS)</b></li><li>• <b>Session Initiation Protocol (SIP)</b></li></ul>
<b>Supported PacketCable Standards</b>	<ul style="list-style-type: none"><li>• <b>PacketCable® 1.5</b></li><li>• <b>PacketCable® 2.0</b></li></ul>
<b>Firmware Filename</b>	<b>TS11.01.111.1_062818</b>
<b>SysDescriptor</b>	<b>SW_REV: 11.1.111.1</b>
<b>PacketACE</b>	<b>PacketACE Release 3.90 or later</b>

## 1.4 Firmware Filename Variant Information

The table below presents the filename extensions used on Touchstone products.

FILENAME EXTENSION	PURPOSE OF EXTENSION
NA	DOCSIS 3.0 North America signed firmware image
EU	DOCSIS 3.0 European signed firmware image
D31	DOCSIS 3.1 signed firmware image
simg	Secure Boot Image
70	Intel SDK 7.0
03	Supports the TM3402 hardware platforms
3	Monolithic (atomic) P7-image containing both eRouter and DOCSIS images
7	Monolithic (atomic) P7-image containing both eRouter and DOCSIS and UEFI images
MAC14	Used to validate upgrades and downgrades
NCS	Network-based Call Signaling (NCS) firmware image
SIP	Session Initiation Protocol (SIP) firmware image
PC20	PacketCable 2.0 firmware image

## 1.5 Minimum Firmware Baseline for Hardware

The table below shows the minimum firmware that has been verified to directly upgrade to this firmware release.

Hardware Model	Firmware Image
TM3402A	TS11.01.049_050817 (TS 11.1.49)
TM3402B	TS11.01.057.4_101117 (TS 11.1.57.4)

## 1.6 Product Documentation

Other relevant information is included in the following documentation:

Product
<i>Touchstone® Firmware Guide (TS11.1 August 2017 Standard 1.0)</i>
<i>Touchstone® TM3402 Telephony Modem User Guide, Standard 1.1 August 2017</i>



## 2 Release Notes

The Release Notes describe the New Product Features introduced in the Touchstone Firmware for the ARRIS Touchstone E-MTA Modem(s). Included in the Resolved Product Deficiencies section is a list of resolved operational considerations noted in previous releases.

### 2.1 New Product Features

#### Added in TS 11.1.111.1

#### DOCSIS: NCP FEC Reporting (ECN CM-OSSlv3.1-N-17.1804-1)

This firmware release provides SNMP MIB support for the table *docsIf31CmDsOfdmProfileStatsTable*, to provide NCP FEC information.

#### Intel Puma7 C-Step Support

This firmware release includes support of the new C-Step version of Puma7 SOC.

#### Extended Upstream Transmit Power MIB (PD 36650)

This firmware release includes support of the ARRIS custom MIB *arrisCmDoc30SetupExtendedUpstreamTransmitPowerValue*.

#### RCP Bypass MIB (PD 36650)

This firmware release includes support of the ARRIS custom MIB *arrisCmDoc30SetupRCPBypass*.

#### Battery MIBs

This firmware release includes support for some of the key ARRIS custom MIBs in the *arrisMtaDevPwrSupply* group.

#### Security: SSH Lockout

This firmware release includes support for SSH lockout after 3 rejected attempts.

#### Added in TS 11.1.57.5

#### SIP Signaling Support

This firmware release provides full support of the voice signaling package SIP (Session Initiated Protocol).

## PC20 Signaling Support

This firmware release provides full support of the voice signaling package PC20 (PacketCable 2.0 Session Initiated Protocol).

## TM3402B Hardware Support

This firmware release introduces support for the TM3402B DOCSIS 3.0/3.1 E-MTA product, which provides support for 2-lines of voice service and ultra-high speed data throughput based on the DOCSIS 3.1 cable modem specifications with 32x8 channel bonding. This device is dual mode, supporting both DOCSIS 3.0 and EuroDOCSIS 3.0.

## BSoD Support

This firmware release provides support for Business Services over Data (BSoD), also known as L2VPN.

## Protocol Passthru Support

This firmware release provides support for the following protocols to traverse the modem at high speeds:

- DS Lite
- 6RD
- GRE tunnels
- IPSec tunnels

## Voice Support Features

This firmware release provides support for the following voice supporting features:

- Loop Diagnostics
- Loop Voltage Management (LVM)
- Voice Quality Metrics (VQM)
- DHCP and Callp Signaling Traces

## PSM: Ignore DCC When ReinitMAC (PD 35823)

This firmware release modifies the DOCSIS behavior, while in ReinitMAC Power Save Mode, to ignore DCC requests (instead of rejecting them).

### **Added in TS 11.1.53.9**

No new features.

### **Added in TS 11.1.53.7**

No new features.

### **Added in TS 11.1.53.5**

## External Battery Support

This firmware release provides firmware and management support to operate the TM3402 with an external power supply with battery backup, model TB130. This includes full Power Save Management, supporting reinitMAC mode.

### **Added in TS 11.1.51**

## NCS: Network-based Call Signaling Support

This firmware release provides full support of the voice signaling package NCS

## TM3402 Hardware Support

This firmware release introduces support for the TM3402A DOCSIS 3.0/3.1 E-MTA product, which provides support for 2-lines of voice service and ultra-high speed data throughput based on the DOCSIS 3.1 cable modem specifications with 32x8 channel bonding. Key capabilities include:

- Compatibility with DOCSIS 3.1.
- Supports mixed-mode provisioning (for example, DOCSIS 3.1 OFDM downstreams and DOCSIS 3.0 upstreams).
- Interoperability with ARRIS and other CMTS products.
- Supports up to 32 downstream DOCSIS 3.0 bonded channels and up to eight upstream bonded channels.
- Supports up to two 192 MHz OFDM bonded downstream channels (lab trial only) and up to two 96 MHz OFDMA upstream channels.
- North American DOCSIS 3.1 loads support both 42/108 MHz and 85/108 MHz splits.
- Supports NCS telephony.
- Supports Ethernet interfaces to personal computers.
- Enhanced web-based troubleshooting interface.
- IPv4 and IPv6 addressing.

For additional description of product features, please refer to the TS 11.1 Firmware User Guide.

## 2.2 Resolved Field Bulletin(s)

The following field bulletin issues were resolved in this Touchstone firmware release or previous firmware releases.

Field Bulletin Number	Field Bulletin Title	Product Defect Number

## 2.3 Resolved Product Deficiencies

ARRIS continues to resolve any product deficiencies discovered. This Touchstone Firmware release contains closure for the detailed issues listed in the following section.

### The following issues were resolved in release TS11.1.111.1

2.3.1 Snmpwalk of the sipCfgPortEntry mib group can generate an Exception	
<i>Tracking No.</i>	PD 47975
<i>Description</i>	Snmpwalk of the sipCfgPortEntry mib group can generate an Exception via the console
<i>Impact</i>	Operational
<i>Occurrence</i>	High
2.3.2 Poland MTA template not supported	
<i>Tracking No.</i>	PD 47207
<i>Description</i>	Added support for Poland MTA template
<i>Impact</i>	Operational
<i>Occurrence</i>	High
2.3.3 Increased OFDMA US FW latency	
<i>Tracking No.</i>	PD 48425
<i>Description</i>	FW patch corrects OFDMA US latency issue
<i>Impact</i>	Operational
<i>Occurrence</i>	High
2.3.4 ACPI does not recognize correct Power Mode sometimes	
<i>Tracking No.</i>	PD 48792
<i>Description</i>	Reset the PMIC INTR flag register during PMIC initialization.
<i>Impact</i>	Operational
<i>Occurrence</i>	Occasionally

<b>2.3.5</b> EdgeHealth device management system recognizes Ethernet Interfaces as “ethernet or external switch” which causing EdgeHealth to display 5 Ethernet Interfaces	
<i>Tracking No.</i>	PD 49659
<i>Description</i>	The ifType for the Bridge interface was changed from 'ethernetCsmac(6)' to 'other(1)'
<i>Impact</i>	Operational
<i>Occurrence</i>	High
<b>2.3.6</b> CPE ports added to IfTable MIB	
<i>Tracking No.</i>	PD 48986
<i>Description</i>	CPE port entries were added to the MIB IfTable
<i>Impact</i>	Operational
<i>Occurrence</i>	High
<b>2.3.7</b> New US FW to address Layer 3 connectivity and Ping latency issues	
<i>Tracking No.</i>	PD 46408, 45495, & 44376
<i>Description</i>	New US FW from Intel was incorporated since TS11.1.53.9 to includes improvements to the handling of upstream and downstream packet flows through the INTEL packet processor. Media Access Protocol (MAP) packets are processed by embedded micro-controllers in the MAC. While running high downstream traffic along with includes upstream traffic (such as speed test), the firmware may mishandle the MAP packet and lose the opportunity to transmit. This results in increasing Ping response times and possible time-outs. This may also result in reduced upstream throughput in simultaneous bi-directional traffic testing, as well as reduced downstream TCP throughput due to TCP ACK latency in the upstream caused by the lost transmit opportunities.
<i>Impact</i>	Service
<i>Occurrence</i>	High

2.3.8 SNMP walk of MIB tree times out on upsBattery	
<i>Tracking No.</i>	PD 47193
<i>Description</i>	A MIB walk of the entire tree times out while on the upsBattery MIB.
<i>Impact</i>	Operational
<i>Occurrence</i>	High
2.3.9 Security DDoS Attack	
<i>Tracking No.</i>	PD 37373
<i>Description</i>	Certain sequences of low throughput Denial of Service attack can impact normal traffic throughput.
<i>Impact</i>	Service
<i>Occurrence</i>	High
2.3.10 DOCSIS: Downstream IP Filters Not Working	
<i>Tracking No.</i>	PD 39327
<i>Description</i>	Despite configuring filtering with <i>docsDevFilterIpTable</i> MIBs, the traffic in the downstream direction is not filtered
<i>Impact</i>	Service
<i>Occurrence</i>	High
2.3.11 PC20: Unable to Configure Line 2 Only	
<i>Tracking No.</i>	PD 38467
<i>Description</i>	Modem is unable to support the configuration of a single line if it is line 2.
<i>Impact</i>	Service
<i>Occurrence</i>	High
2.3.12 LEDs: Incorrect Pattern When on Battery	
<i>Tracking No.</i>	PD 37637
<i>Description</i>	Power LED should flash when running on battery
<i>Impact</i>	Operational
<i>Occurrence</i>	High



<b>2.3.13 Security: Access Vulnerability</b>	
<i>Tracking No.</i>	PD 35698
<i>Description</i>	Security Upgrades
<i>Impact</i>	Service
<i>Occurrence</i>	High
<b>2.3.14 Battery: Firmware Downloads Permitted</b>	
<i>Tracking No.</i>	PD 38303
<i>Description</i>	When modem is running on battery, downloads of firmware should not be allowed
<i>Impact</i>	Operational
<i>Occurrence</i>	High
<b>2.3.15 DOCSIS: OFDM Profiles Take Long Time to Update</b>	
<i>Tracking No.</i>	PD 30936
<i>Description</i>	The DOCSIS 3.1 profiles take longer to downgrade than expected.
<i>Impact</i>	Service
<i>Occurrence</i>	High
<b>2.3.16 GUI: ToD Status Incorrect</b>	
<i>Tracking No.</i>	PD 23862
<i>Description</i>	The Time of Day Status shows Not Provisioned when ToD is available.
<i>Impact</i>	Operational
<i>Occurrence</i>	High
<b>2.3.17 GUI: Downstream Counter Zero</b>	
<i>Tracking No.</i>	PD 26678
<i>Description</i>	One of the Octets counts for Downstream QAMs is always zero.
<i>Impact</i>	Operational
<i>Occurrence</i>	High

2.3.18 Security: SSH Forwarding	
<i>Tracking No.</i>	PD 35737/35741
<i>Description</i>	Security updates for SSH Forwarding
<i>Impact</i>	Service
<i>Occurrence</i>	High
2.3.19 PSM: Modem Cannot Recover after Reboot	
<i>Tracking No.</i>	PD 37480
<i>Description</i>	If a modem is already in PSM (Battery) mode, and then the device is rebooted, the modem will not be able to return to service
<i>Impact</i>	Service
<i>Occurrence</i>	High
2.3.20 PSM: SNMP Walk of entire MIB tree when on battery	
<i>Tracking No.</i>	PD 50671, 50892
<i>Description</i>	An SNMP walk of the complete MIB tree times out when operating on battery via re-init MAC (1x1).
<i>Impact</i>	Operational
<i>Occurrence</i>	High
2.3.21 Modem does not change OFDM DS profile when attenuation is applied	
<i>Tracking No.</i>	PD 50691
<i>Description</i>	Modem takes too long to switch OFDM DS profile when attenuation is applied causing MTA config file download to retry.
<i>Impact</i>	Service
<i>Occurrence</i>	High

**The following issues were resolved in release 11.1.57.5**

2.3.22 GUI: MTA Event Logs Unavailable	
<i>Tracking No.</i>	PD 30550
<i>Description</i>	MTA event logs are not available using the GUI nor the SNMP MIB group <i>pktdDevEventLogTable</i> .
<i>Impact</i>	Operational
<i>Occurrence</i>	High
2.3.23 Modem does not Recover from Reboot/Upgrade	
<i>Tracking No.</i>	PD 37445/36021
<i>Description</i>	On rare occasions, the modem does not return to service properly after a reboot, including after a firmware upgrade. Recovery usually requires power cycle
<i>Impact</i>	Service
<i>Occurrence</i>	Rare
2.3.24 PSM: Manual DCC Does Not Succeed	
<i>Tracking No.</i>	PD 34700
<i>Description</i>	When modem is on battery and running in Power Save Mode (PSM), the unit is unable to successfully perform a DCC on the upstream side
<i>Impact</i>	Service
<i>Occurrence</i>	High
2.3.25 SNMP: Invalid OID in CM Config Blocks SNMP	
<i>Tracking No.</i>	PD 35314
<i>Description</i>	If the CM Config file contains an invalid OID, SNMP will not function after CM goes Operational.
<i>Impact</i>	Service
<i>Occurrence</i>	Low
2.3.26 GUI: Unable to Access from Any Subnet from LAN Side	
<i>Tracking No.</i>	PD 31591
<i>Description</i>	From the LAN side of the modem, subscriber is not able to access the GUI at interface 192.168.100.1 from any subnet for which 192.168.100.1 is not in subnet's IP address range.
<i>Impact</i>	Operational
<i>Occurrence</i>	High

2.3.27 GUI: Incorrect Bonding Mode in PSM	
<i>Tracking No.</i>	PD 31914
<i>Description</i>	When modem unit is in Power Save Modem, GUI is not displaying 1x1 bonding mode.
<i>Impact</i>	Operational
<i>Occurrence</i>	High
2.3.28 GUI: Incorrect SW_REV on HW/FW Version Page	
<i>Tracking No.</i>	PD 35815
<i>Description</i>	The SW_REV field on the HW/FW Version GUI page incorrectly displays Intel SDK version instead of correct Touchstone release version.
<i>Impact</i>	Operational
<i>Occurrence</i>	High
2.3.29 LED: Incorrect Pattern when on Battery	
<i>Tracking No.</i>	PD 31637
<i>Description</i>	When running on battery, all of the TM3402 modem's LEDs are lit, but only Power LED should be on. In addition, Battery LED is not lit when operating on AC and battery is connected.
<i>Impact</i>	Operational
<i>Occurrence</i>	High
2.3.30 SNMP: MIB Walk of arrisCmDoc30Mibs is Empty	
<i>Tracking No.</i>	PD 26460/33130
<i>Description</i>	An SNMP MIB walk of the ARRIS custom MIB group arrisCmDoc30 returns a NULL result
<i>Impact</i>	Operational
<i>Occurrence</i>	Medium

**The following issues were resolved in release 11.1.53.9**

2.3.31 PSM: Pings Intermittent	
<i>Tracking No.</i>	PD 35569
<i>Description</i>	When modem is on battery and running in Power Save Mode (PSM), the unit's CM interface is not able to service some of the Ping requests
<i>Impact</i>	Service
<i>Occurrence</i>	Low
2.3.32 SNMP: CM Agent Accepts Any Community String	
<i>Tracking No.</i>	PD 35231/32453
<i>Description</i>	The SNMP client running on the CM interface does not enforce community string security for access.
<i>Impact</i>	Operational
<i>Occurrence</i>	High

**The following issues were resolved in release 11.1.53.7**

2.3.33 PSM: Manual Upstream DCC Unsuccessful	
<i>Tracking No.</i>	PD 34700
<i>Description</i>	When modem is on battery and running in Power Save Mode (PSM), the unit is unable to successfully perform a DCC on the upstream side
<i>Impact</i>	Service
<i>Occurrence</i>	High
2.3.34 PSM: Modem Performs ReinitMAC after 1x1	
<i>Tracking No.</i>	PD 26703
<i>Description</i>	After modem has dropped to 1x1 DOCSIS mode while in PSM, the modem runs through a reinitMAC procedure.
<i>Impact</i>	Service
<i>Occurrence</i>	Medium-Low

2.3.35 PSM: No Full Bonded Recovery if Power Reconnect During reinitMAC	
<i>Tracking No.</i>	PD 32153
<i>Description</i>	If the modem is in PSM, and the AC power is restored while the modem is executing the reinitMAC process, then the modem will not be able to return to full bonded mode.
<i>Impact</i>	Service
<i>Occurrence</i>	High

**The following issues were resolved in release 11.1.53.5**

2.3.36 Traffic: Combined Voice and Data Throughput Reduction	
<i>Tracking No.</i>	PD 29923
<i>Description</i>	Under certain combined voice and data traffic stress test models, there can be a reduction in call completion and data throughput.
<i>Impact</i>	Service
<i>Occurrence</i>	Low
2.3.37 Ping: Recovery under Ping attack	
<i>Tracking No.</i>	PD 29380
<i>Description</i>	If constant stream of Pings sent to modem from WAN side, and the modem is then re-booted, the modem is unable to recover. This has been observed with non-ARRIS CMTS equipment.
<i>Impact</i>	Service
<i>Occurrence</i>	Low
2.3.38 DS Config in TLV1 not Ignored on DCC	
<i>Tracking No.</i>	PD 21905
<i>Description</i>	The downstream frequency configuration setting is not being ignored when the CMTS sends a DCC request
<i>Impact</i>	Service
<i>Occurrence</i>	High

2.3.39 SNMP Set Reject in CM Config File disables SNMP	
<i>Tracking No.</i>	PD 27237/29212/27779
<i>Description</i>	If an SNMP set operation does not succeed in CM Config file processing, then the CM will go operational, but the CM interface will not be able to access SNMP.
<i>Impact</i>	Operational
<i>Occurrence</i>	High
2.3.40 SSH: Unable to Connect due to Key Size	
<i>Tracking No.</i>	PD 32020
<i>Description</i>	Certain SSH Clients cannot successfully connect to the modem, as the RSA key size is of insufficient size (512 bytes).
<i>Impact</i>	Operational
<i>Occurrence</i>	High
2.3.41 Security: Open Ports	
<i>Tracking No.</i>	PD 28409/32029/30281
<i>Description</i>	Open ports closed to address security concerns
<i>Impact</i>	Operational
<i>Occurrence</i>	High
2.3.42 SNMP: MIB Walk Unable to Complete in Battery Mode	
<i>Tracking No.</i>	PD 31640
<i>Description</i>	SNMP MIB walk is unable to complete if modem is running on battery.
<i>Impact</i>	Operational
<i>Occurrence</i>	High
2.3.43 SNMP: Management Unavailable After Multiple CMTS Line Card Protection Switchover	
<i>Tracking No.</i>	PD 30630
<i>Description</i>	SNMP management is not operable after observing multiple protection switchover of the CMTS line card.
<i>Impact</i>	Operational
<i>Occurrence</i>	High

2.3.44 Security: GUI Access using SSL	
<i>Tracking No.</i>	PD 30630
<i>Description</i>	HTTPS access to modem GUI is using SSL protocol.
<i>Impact</i>	Operational
<i>Occurrence</i>	High
2.3.45 TCP: Single Connection Low Throughput	
<i>Tracking No.</i>	PD 27246
<i>Description</i>	Throughput for single TCP connections observed as low as 200M.
<i>Impact</i>	Service
<i>Occurrence</i>	High

**The following issues were resolved in release 11.1.51**

2.3.46 Throughput Reduction due to CMTS Line Card Protection Switchover	
<i>Tracking No.</i>	PD 27600/29385/29068/28354/26099
<i>Description</i>	If the modem experiences a CMTS line card protection switchover, there is a reduction in the data throughput, and a potential loss of bonding. This has been observed with certain non-ARRIS CMTSs.
<i>Impact</i>	Service
<i>Occurrence</i>	Medium



### 3 Letter of Operational Considerations

The Letter of Operational Considerations is to inform operators of any system considerations for the Touchstone Firmware that may affect service, operations, or maintenance for this product release.

#### 3.1 Operational Considerations

Listed are known Operational Considerations that have been identified during ARRIS' standard quality testing that can affect normal operation. Any additional items discovered during field deployments would be noted in future *Release Notes and Letter of Operational Consideration* or *Field Bulletins*. Unless specifically noted, it is ARRIS' intention to have all considerations resolved in future product releases.

3.1.1 MTA: MIB <i>arrisMtaDevEndPntRingingWaveform</i> Override	
<i>Tracking No.</i>	PD 21984
<i>Description</i>	The MIB <i>arrisMtaDevEndPntRingingWaveform</i> , if set via post provisioning SNMP should NOT be overridden by a setting in Config file.
<i>Impact</i>	Operational
<i>Occurrence</i>	High
<i>Workaround</i>	If possible, do not include this MIB in the MTA config file.
3.1.2 An inactive 2 <sup>nd</sup> CPE device reduces traffic throughput by 10%	
<i>Tracking No.</i>	PD 47600
<i>Description</i>	An inactive 2 <sup>nd</sup> CPE device connected can cause a reduction in throughput by 10% for the 1 <sup>st</sup> or primary CPE
<i>Impact</i>	Service
<i>Occurrence</i>	High
<i>Workaround</i>	Disable CPE ports 2, 3, and 4.  Resolved in code based on Intel SDK 7.1.1

**3.1.3 Modem is slow to shift back when attenuation is removed.**

<i>Tracking No.</i>	PD 50785
<i>Description</i>	Modem does not recover in a timely manner from DS profile shift when inserted noise is removed
<i>Impact</i>	Service
<i>Occurrence</i>	High
<i>Workaround</i>	A new algorithm is being investigated in Intel's SDK 7.1.1 code base.

**3.1.4 A/NA units should prevent SNMP upgrade when on battery.**

<i>Tracking No.</i>	PD 43140
<i>Description</i>	Modem should prevent SNMP upgrade when on battery in PSM mode for TM3402A/NA units only.
<i>Impact</i>	Service
<i>Occurrence</i>	Low
<i>Workaround</i>	TM3402A/CX units work properly.

**3.1.5 An additional CPE device can on occasion obtain an IP address.**

<i>Tracking No.</i>	PD 42663, PD 21625
<i>Description</i>	More than MAXCPE number of CPE devices can on occasion obtain IP addresses
<i>Impact</i>	Service
<i>Occurrence</i>	Low
<i>Workaround</i>	Disable CPE ports in ifTable by config file

## 3.2 Unsupported Features

The following features are not supported in the TS 11.1 release at this time.

- Voice / Media Security (Encryption of RTP stream capabilities)
- Voice Payload Header Suppression
- Silence Suppression and UGS/AD Service Flows
- MIB *arrisCmDoc30SetupRCPBypass* (PD 22525)
- MIB *arrisCmDoc30SetupExtendedUpstreamTransmitPowerValue* (PD 23663)
- G.722/G.729
- SpeedTest
- Link Aggregation

### 3.3 Upgrade Considerations

The following considerations are important to take into account when upgrading to this firmware release.

None

## Customer Service and Support

For Technical Support, please visit the ARRIS Technical Support web page at <http://ask.arrisi.com>.

Other methods for contacting the support organization are listed below.

#### **North America**

Email [techsupport.na@arrisi.com](mailto:techsupport.na@arrisi.com)  
Telephone (888) 944 4357 (US toll free)  
+1 678 473 5656 (Worldwide)  
Office Hours 8:00 a.m. to 8:00 p.m. EST

#### **South America – Chile**

Email [techsupport.cala@arrisi.com](mailto:techsupport.cala@arrisi.com)  
Telephone +56 2 678 4500  
Office Hours 9:00 a.m. to 6:00 p.m. (Chile local time).

#### **Europe – Amsterdam, The Netherlands**

Email [techsupport.europe@arrisi.com](mailto:techsupport.europe@arrisi.com)  
Telephone +31 20 311 2525  
Office Hours 8:30 a.m. to 17:30 p.m. CET

#### **Japan – Tokyo**

Email [techsupport.japan@arrisi.com](mailto:techsupport.japan@arrisi.com)  
Telephone +81 (0) 3 5371 4142  
Office Hours 9:30 a.m. to 6:00 p.m. (Tokyo local time)

#### **Asia**

Email [techsupport.asia@arrisi.com](mailto:techsupport.asia@arrisi.com)  
Telephone +82 31 783 4893  
Office Hours 9:30 a.m. to 6:00 p.m. (local time)

#### **Korea**

Email [techsupport.asia@arrisi.com](mailto:techsupport.asia@arrisi.com)  
Telephone +82 31 783 4893  
Office Hours 9:30 a.m. to 6:00 p.m. (local time)

#### **Worldwide – North America**

Email [techsupport@arrisi.com](mailto:techsupport@arrisi.com)  
Telephone USA +1 678 473 5656

**Emergency support** is available after normal business hours for customers with a support contract ID via the listed contact information.



# **Touchstone® eMTA Firmware**

## **Release TS11.1.111.1**

### **Release Notes and Letter of Operational Consideration**

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