

Intel® 7 Series/C216 Chipset Family

Intel® Management Engine Firmware 8.1 SKU

5MB Readme / Release Notes - NDA

January 2013

Revision 8.1.30.1350 Maintenance Release (MR)

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Revision History

Revision Number	Description	Revision Date
8.1.0.1035	Alpha Release	December 2011
8.1.0.1143	Beta Release	March 2011
8.1.0.1265	Production Candidate (PC) Release	July 2012
8.1.0.1265	Production Candidate 2 (PC2) Release	July 2012
8.1.0.1265	Production Version (PV) Release	July 2012
8.1.2.1318	Hot Fix 2 Release	September 2012
8.1.3.1325	Hot Fix 3 Release	September 2012
8.1.10.1286	Production Version (PV) Release for Intel® Management Engine Firmware 8.1 Intel® C600 Series Express Chipset	August 2012
8.1.20.1336	Maintenance Release	November 2012
8.1.20.1336 v2	Maintenance Release	December 2012
8.1.30.1350	Maintenance Release (Intel® ME8.1 client release ONLY / PBG Romley workstation is not included in this release)	January 2013

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1 Introduction

1.1 Scope of Document

This document provides component level details of the downloaded kit and the contents of each folder in the kit.

1.2 Acronyms

Term	Description
BLU-RAY PLAYBACK	Blu-ray™ Playback
BIOS	Basic Input Output System
CCM	Client Control Mode (See: HPC)
CIM	Common Information Model
CILA	Client Initiated Local Access
CIRA	Client Initiate Remote Access, former reference to Fast Call for Help
CRB	Intel® Customer Reference Board
Intel® DAL	Intel® Dynamic Application Loader (Intel® DAL)
FITC	Flash Image Tool
FOV	Fixed Offset Variable
FW	Firmware
GbE	Gigabit Ethernet
HBC	Host Based Configuration
HECI	Host Embedded Controller Interface. Same as Intel® MEI.
ICC	Integrated Clock Control
IDER	IDE-Redirection
Intel® AMT	Intel® Active Management Technology
Intel® AT	Intel® Anti-Theft Technology
Intel® IPT	Intel® Identity Protection Technology



Term	Description
Intel® MEBX	Intel® Management Engine BIOS Extension
Intel® MEI	Intel® Management Engine Interface (interface between the Management Engine and the Host system)
Intel® PDA	Intel® Platform Debug Analyzer (platform debug tool formerly referred to as MDES or Intel® MEDebug)
Intel® PETS	Intel® Platform Enablement Test Suite
IMSS	Intel® Management and Security Status
KVM	Keyboard/Video/Mouse
LAN	Local Area Network
LMS	Local Manageability Service
MAC	Media Access Control
MOF	Managed Object Format
ISV	Independent Software Vendor
MRC	Memory Reference Code
OS	Operating System
PCH	Platform Control Hub
PKI-CH	Public Key Infrastructure with Certificate Hashing
RCFG	Remote configuration
SOL	Serial over LAN
SBT	Intel Small Business Technology
SPI	Serial Peripheral Interface
SUT	System Under Test
SVN	Security Version Number. Used in Firmware Upgrade / Downgrade capabilities
TDT	Theft Deterrence Technology. Previous name for AT-p, which is part of the Intel® Anti-Theft Technology.
UNS	User Notification Service
VCN	Version Control Number. Used in Firmware Upgrade / Downgrade capabilities
WMI	Windows Management Instrumentation
WSI	Web Services Interoperability Organization

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2 Release Kit Summary

This document covers the following Intel® Management Engine Firmware SKUs for the Panther Point and Cougar Point platforms:

- Intel® Management Engine Firmware 8.1 Intel® 7 Series Express Chipset
  - Digital Office Intel® vPro™
  - Consumer
- Intel® Management Engine Firmware 8.1 Intel® 6 Series Express Chipset
  - Digital Office Intel® vPro™
  - Consumer

Kit release information is outlined below:

2.1 Release Kit Details

Digital Office Intel® vPro™

* **Firmware Support** : Intel® Active Management Technology, Intel® Anti-Theft, PAVP, Intel® IPT

* **Release** : Intel® Management Engine Firmware 8.1 Intel® 7 Series Express Chipset MR Release – 8.1.30.1350

Intel® Management Engine Firmware 8.1 Intel® 6 Series Express Chipset MR Release - 8.1.30.1350

* **Target Platform** : Ivy Bridge or Sandy Bridge & Intel® Series 7/C216 Chipset Family

Ivy Bridge or Sandy Bridge & Cougar Point Chipset Family

* **.zip name** : ME8_5M_8.1.30.1350.zip

Contents:

- Intel® Management Engine Firmware (for Intel® 7 and 6 Series Express Chipset Family / PCH platform)
- GbE PCH SPI components
- Intel Reference System BIOS
- Intel® Management Engine BIOS Extension (MEBX) image



2.2 Kit Overview

The kit can be downloaded from VIP (https://platformsw.intel.com/).

Note: A username and password are required to access the website and to log in. User must have an account created for access.

1. After logging in, click on the link 'View All Kits' on the left side of the web page.
2. Click on the corresponding kit number that is to be downloaded.
3. Select and open the appropriate kit component.
4. The Supporting Documentation folder under the selected component contains the following supporting documentation:
    1. 5MB FW Release Notes – This document gives an overview of the contents of the entire downloaded component. Also provides the details on closed and open Sightings and bugs with this kit release.
    2. BIOS Release Notes – This document provides details of BIOS issues resolved with the kit.
5. Click on the Installation Files folder under the selected component and extract the .zip kit into a folder (Example: C:\).

2.3 Contents of Downloaded Kit

Download the kit, as previously specified, into the directory (C:\). The details of the contents and directory structure are listed below:

Drivers are included in:

- ME8_5M_8.1.30.1350.zip

2.3.1 Intel® SW Components

Installers	Description

ME_SW	• Intel® MEI is the interface between the host and the Intel® Management Engine firmware.
	• Drivers and applications on the host that wish to interact with Intel® Management Engine through the host interface use the Intel® MEI host Windows* driver.
	• Intel® MEI driver is installed by running: C:\[skuName_x.x.xxxx]\Installers\ME_SW\Setup.exe
	• The Intel® MEI driver can also be installed using the 'Have Disk' method in 'Device Manager', as follows:
	  ○ Right click '**My Computer**' and select **Properties**.
	  ○ Select the **Hardware** tab and click **Device Manager**.
	  ○ Scan for hardware changes.
	  ○ Update the particular device driver by pointing to the INF file: C:\[skuName_x.x.xxxx]\Installers\ ME_SW\Drivers\MEI\HECI.inf.
	• Local Manageability Service (LMS) is a service required for Intel® Active Management Technology and Intel® AMT tools.
	• Serial Over LAN (SOL) is an Intel® AMT driver. This driver enables the remote display of a managed client's user interface on a management console and emulates serial communication over a standard network connection.
	• The User Notification Service (UNS) is a service that can receive notifications from the Intel® AMT firmware.
	Kerberos is not supported by UNS.
	NOTE:
	Intel® ME_SW installer also installs a Microsoft* Windows* application Intel® Management and Security Status Application (IMSS) "The Intel® Management and Security Status icon indicates whether Intel® AMT, Intel® Small Business Technology, Intel® Standard Manageability and Intel® Anti-Theft are running on the platform "

ME_SW_IS	• The ME_SW_IS installer will install the same components as ME_SW but using an InstallShield wrapper.
MEI-Only Installer	• The MEI-Only Installer only installs the MEI driver.



2.3.2 Intel® AMT Tools

Intel® AMT Tools are included only in:

- ME8_5M_8.1.30.1350.zip

This folder contains tools that support Intel® Active Management Technology.

Tool	Description
Configuration Tools	• Local HBP support • Configuration Server • OS Support - Server 2003, Server 2008 R2, XP, Vista, Windows 7 and Windows 8 to set up and configure Intel® AMT systems. • Can configure Intel® AMT for local USB Configuration • Can automate Setup and Configuration process

2.3.3 Image Components

NVM Images are included in:

- ME8_5M_8.1.30.1350.zip

This folder contains the component images (BIOS image, Intel® Management Engine image, Intel® MEBX image and GbE image) that are integrated to form the final flash image. The table below lists the different images and briefly describes them.

Image	Description
BIOS	• Contains Intel Reference System BIOS. • Supported devices: Intel® 7 Series /C216 Chipset Family and Intel® 6 Series Chipset PCH Families. • After flashing a new BIOS, enter BIOS setup and 'Load Default Settings' (Press F3). Then 'Save and Exit' (Press F4) from Setup. This is a required step when updating to a new BIOS release. • BIOS image components are located in the following directory: C:\[skuName_x.x.xxxx]\Image Components\BIOS\ • For latest release information and known issues on the BIOS, please refer to the Intel® ME BIOS Writer's Guide.

Image	Description
ME	• The Intel® Management Engine firmware contains code and configuration data for Intel® Management Engine functions. • This is one of the regions that are integrated into the final flash image that is built using the Flash Image Tool, and is then programmed into the flash. **NOTES:** • For more details on building the flash image, please refer to **5MB FW Bringup Guide.pdf**, included in the downloaded kit. • For more details on the firmware and related issues, please refer to **Important Notes** section of this document.
GbE	• The GbE hardware (PCH LAN) is a component embedded in the PCH. GbE region of the flash contains bits that define the configuration of the GbE hardware. • The given Gigabit Ethernet or GbE component image should be integrated with the other images (Firmware and BIOS) using the Flash Image Tool, to create a single binary flash image. • The GbE image will be programmed into the SPI flash as part of this integrated image using the Flash Programming Tool. • The GbE folder contains images for C0 PHY silicon. Example: NAHUM5_LEWISVILLE_DESKTOP_13.bin. This image can be used with any of the Intel® Management Engine images.
ME_BIOS_Extension	• Intel® Management Engine BIOS Extension is used to provision the system with manageability options. • Intel® Reference System BIOS has Intel® Management Engine extensions integrated. If using custom BIOS, then please use the binary files in the following folder: " C:\[skuName_x.x.xxxx]\Image Components \ME_BIOS_Extension\" and merge with the BIOS. • For latest release information and known issues on the Intel® Management Engine BIOS Extension, please refer to the Intel®ME BIOS Writer's Guide.



2.3.4 System Tools

System Tools are included in:

- ME8_5M_8.1.30.1350.zip

This folder contains system tools that are common to all the firmware components. Please refer to the ***System Tools User Guide.pdf*** document for details on tool usage.

Tool	Description
Flash Image Tool – fitc.exe	• Provides both a GUI and a command line tool. • OS Support – • Windows XP SP3, Vista SP1* (32-bit & 64-bit), Windows 7 (32-bit & 64-bit), Windows 8 (32-bit & 64-bit), Windows Server 2003, Windows Server 2008 (32-bit & 64-bit). • Used to assemble the different elements of the SPI flash Descriptor, Intel Reference System BIOS, Intel® Management Engine firmware, Gigabit Ethernet (GbE) into a single binary image.

Flash Programming Tool – fpt.exe and fptw.exe	• Provided as DOS, EFI and Windows* command line tools.
	• OS Support –
	  • MS DOS 6.22 and later, DRMK and FreeDOS.
	  • EFI
	  • The Windows version (fptw.exe) will run in Windows PE, Windows XP SP3, Vista SP1, Windows 7 (32-bit & 64-bit), Windows 8 (32-bit & 64-bit), Server 2003, and 2008 R2 (32-bit & 64-bit).
	• Used to write the flash image into the SPI flash device.

FWUpdate – FWUpdLcl Tools	• Provided as DOS, EFI and Windows* command line tools.
	• OS Support –
	  • MS DOS 6.22 and later, DRMK and FreeDOS.
	  • EFI
	  • The Windows version will run in Windows PE, Windows XP SP3, Vista SP1, Windows 7 (32-bit & 64-bit), Windows 8 (32-bit & 64-bit), Server 2003, and 2008 R2 (32-bit & 64-bit).
	• Used to update the Intel® Management Engine's firmware.

Tool	Description

MEInfo	• Provided as DOS, EFI and Windows* command line tools.
	• OS Support –
	  • MS-DOS 6.22 and later, DRMK and FreeDOS.
	  • EFI
	  • Windows Command line executable for Windows (Intel® MEInfoWin) is supported on Windows PE, Windows XP SP3, Vista SP1, Windows 7 (32-bit & 64-bit), Windows 8 (32-bit & 64-bit), Server 2003, and 2008 R2 (32-bit & 64-bit).
	• Verifies that Intel® Management Engine (Intel® ME) firmware is alive and returns data about Intel® ME.

MEManuf	• Provided as DOS, EFI and Windows* command line tools.
	• Used on the manufacturing line to validate an Intel® Active Management Technology device.
	• OS Support –
	  • MS-DOS 6.22 and later, DRMK and FreeDOS.
	  • EFI
	  • Windows PE, Windows XP SP3, Vista SP1, Windows 7 (32-bit & 64-bit), Windows 8 (32-bit & 64-bit), Server 2003, and 2008 R2 (32-bit & 64-bit).

UpdParam	• Provided as a DOS command line tool. • OS Support – • MS-DOS 6.22 and later, DRMK and FreeDOS, • UpdateParam tool is used to change certain Intel® ME firmware parameters (both Intel® AMT and Kernel) after the global valid bit is set and descriptor region is locked.

2.3.5 ICC Tools

Tool	Description

Clock Commander Tool (CCT)	• ICC Tool to get ICC registers and settings, see *ICC Tools User Guide* for more information.
	• OS Support –
	  • MS-DOS 6.22 and later, DRMK and FreeDOS.
	  • EFI
	  • Windows 7 (32-bit & 64-bit) and Windows 8 (32-bit & 64-bit).



2.4 Release Version Numbering Information

Typical release version numbering is as follows,

8.x.y.z (for example: 8.1.0.xxxx) where

'8' refers to the Intel® Management Engine 8.1 Firmware SKU for the Panther Point and Cougar Point based platforms

'x' represents point releases such as 8.1 where new features or changes to existing features may be added

'y' refers to Maintenance and Hot Fix release designations

'z' refers to firmware release revision

2.5 Firmware Update Information

Intel® ME Firmware Update (either upgrade or downgrade) is evaluated based on the SVN value, the VCN value, or the PV values. These values work in unison and can impose restrictions at the same time.

2.5.1 Firmware Update Terminology

SVN (Security Version Number): will be incremented if there is a high or critical security fix in Intel® ME Firmware. A downgrade to a lower SVN value will be prohibited.

VCN (Version Control Number): will be incremented if there is a security fix, a significant firmware change or a new feature addition. A downgrade to lower VCN value will be prohibited.

PV (Production Version): Intel® ME Firmware will have a PV bit set. Upgrade to a non-PV firmware is not allowed. An update from non-PV version to a PV is allowed.

Update rules:

- If the system is at PV (Production Version) quality firmware that has PV bit set, update to non-PV firmware is not allowed. Only Non-PV to PV is allowed.
  - Example: 8.0.0.1351 PV cannot upgrade to 8.1.0.1035 Beta
- Update to firmware that has lower SVN (Security Version Number) is not allowed.
- Update to firmware that has lower VCN (Version control number) is not allowed.
- Update across major point release is not allowed for example 8.x to 9.x.
- If firmware update setting in Intel® MEBX is password protected, Intel® MEBX password must be supplied during the update.

2.5.2 VCN Firmware Upgrade / Downgrade Table

Intel® ME FW Version	SVN #	VCN #	PV (1 or 0)
8.1.30.1350 (8.1 MR)	1	2	1
8.1.20.1336 (8.1 MR)	1	2	1
8.1.3.1325 (8.1 HF3)	1	2	1
8.1.2.1318 (8.1 HF2)	1	2	1
8.1.0.1265 (8.1 PV)	1	2	1
8.1.0.1265 (8.1 PC2)	1	2	1
8.1.0.1265 (8.1 PC)	1	2	1
8.0.13.1502 (MR1 HF3)	1	2	1
8.0.10.1464 (MR1)	1	2	1
8.0.4.1441 (HF4)	1	2	1
8.1.0.1143 (Beta)	1	2	0
8.0.3.1427 (HF3)	1	2	1
8.0.2.1410 (HF2)	1	2	1
8.0.1.1399 (HF1)	1	2	1
8.0.0.1351 (PV Release)	1	2	1
8.1.0.1035 (8.1 Alpha)	1	0	0

3 Important Notes

This **MR Release** firmware supports 5MB Corporate and Consumer SKU platforms.

- Basic Moff Power flows (PP1) – Supported
- Basic M3 Power flows (PP2) -Supported
- Intel® AMT 8.1 – Supported
- Intel® AMT Web UI – Supported
- KVM – Supported
- SOL / IDER – Supported
- Intel® Anti-Theft Technology – Supported
- BLU-RAY PLAYBACK - Supported
- WLAN – Supported
- Intel® Insider™ Supported
- Intel® DAL - Supported
- Intel® Identity Protection Technology - Supported

3.1 Hardware Configurations

This release supports the following HW configurations:

- CPU: **IVB** D0 (pre-QS), E0, L0, L1 (QS) / **SNB** D2
- PCH: **PPT** C0 (pre-QS), C1 (QS) / **CPT** B1, B3

3.2 Important Issues / Notes

- **Issue #197116** - LMSService is potentially vulnerable to unquoted service path vulnerability. This issue was fixed in 8.1.30 MR. Please see customer communication attached with release announcement and CDI / IBP#: 494925.

- This Maintenance Release supports CPT client platforms only. The PBG Romley workstation platform is not included in this release.

3.3 Intel® METS

Intel® METS Intel® ME_PM_19 & Intel® ME_PM_20 Failure

- If the platform design is set to enable "SUS Well Down Disabled" (System Stays in S4/S5 in normal S4/S5 entry path when system in DC mode) –
    - Customer design PBO to G3 – Intel® METS Intel® ME_PM_19 & Intel® ME_PM_20 is expected to Pass.
        - If System goes to G3 – pass
        - If System goes to S5 – See PCH Sighting Report #3881606
    - Customer design PBO to S5 – Intel® METS Intel® ME_PM_19 & Intel® ME_PM_20 is expected to Fail.
- If the platform design is set to enabled "SUS Well Down Enabled" (System moves to G3 in normal S4/S5 entry Path when system in DC mode) –
    - Customer design PBO to G3 – Intel® METS Intel® ME_PM_19 & Intel® ME_PM_20 is expected to Pass.
        - If System goes to G3 – pass
        - If System goes to S5 – See PCH Sighting Report #3881606
    - Customer design PBO to S5 – Intel® METS Intel® ME_PM_19 & Intel® ME_PM_20 is expected to Fail.

3.4 KVM

Issue #196934 - Intel KVM does not support mouse movements on extended display in Microsoft* Windows 8 as a result of changes in mouse behavior in Microsoft* Windows 8.

3.5 Software / Tools

-
- An error may occur when executing FPT –verify after flashing a system with FPT –f. If the flash memory in the GbE NVM region(s) has been modified, FPT will have recalculated the checksum and written the new value to the GbE NVM checksum location. If the checksum value in the original binary file were



incorrect, running –verify will result in a data verification error message since the image on the SPI flash part is now different than the contents to the original binary.

- **Issue #195872:** SUT will hang at POST code 0x96 if network cable is not plugged in before running Platform Debug Analyzer (Intel® PDA) tool. For more details please review issue **195872** under section **8.2 Open – Intel® ME Kernel**

3.6 Best Known Configuration

For the latest Client Based Platform Best Known Configuration (BKC), please visit the Best Known Configuration page on Intel® PC Design Center www.intel.com/pcdc

3.7 Windows 8 Compatibility / Best Known Configuration

This release has been tested with Windows* 8 (RTM) to ensure compatibility.

For the latest Client Based Platform Best Known Configuration (BKC) for Microsoft Windows 8* (Win8) document, please see document # 481125 on CDI/IBL.

4 Kit Details

4.1 Build Details

Kit	Build Details	Changes since previous release (8.1.20.1336v2)?	Reasons for changes
Firmware Version	8.1.30.1350	Yes	FW and SW changes highlighted below.
Intel® MEBX Version	8.0.0.0069	No	N/A
CRB BIOS Version	IVB098.rom	No	N/A
Intel® MEI Driver Version	8.1.10.1275 Certified for Windows* 7/8	No	N/A
SOL Driver Version	8.1.10.1275 Certified for Windows* 7/8	No	N/A



4.2 FITC XML Compare

Changes between:				
MR 8.1.20.1336 newfiletmpl.xml		**Line**		**MR 8.1.30.1350 newfiletmpl.xml**
1	<?xml version="1.0" encoding="utf-8"?>	=	1	<?xml version="1.0" encoding="utf-8"?>
2	<ftoolRoot version="47">	=	2	<ftoolRoot version="47">
3 4 5 6 7 8				<No Change>

Note:

- For information on the values that need to be entered for the setup procedure below, please refer to the **Intel® Series 7/C216 Chipset Family EDS** and the SPI flash's datasheet. Vendor ID, Device ID 0 and Device ID 1 are all derived from the output of the JEDEC ID command which can be found in the vendor datasheet for the specific SPI Flash part. In the Panther Point EDS, **22.2.7.2 VSCC0—Vendor Specific Component Capabilities 0** describes the 32 bit VSCC register value.
- For access to the Intel® Panther Point Chipset Family EDS document, please contact your Intel representative.

Open the Flash image Tool (double-click on fitc.exe) and follow the steps below:

a. Under Descriptor Region node, right-click on VSCC Table, and select 'Add Table Entry…'
b. Enter an Entry name.
c. Add values for the fields: Vendor ID, Device ID 0, Device ID 1 and VSCC register value. These fields are with respect to the 'Entry Name' entered above in step b.

Please refer to the 5MB FW Bringup Guide.pdf for more details. This document is available in the downloaded kit.

5 Intel® ME New Features

5.1 RCR Update

RCR #	Description / Background	Build
CCG0100010280	**Description:** Extend DID WDT timeout for Intel® C216 Series Express workstation SKUs from 15 seconds to 6 minutes. **Background:** As a platform boots, Intel® ME expects to receive a DID message from BIOS within 15 seconds in order to be able to use the RAM memory. Should it not receive the message in time, it will initiate a recovery flow. Workstation BIOS which may use a large amount of memory and have additional board devices and as a result, may not always send the DID message in time causing no boot, no display issues on the factory line.	8.1.30.1350
CCG0100010197	**Description:** Expand Intel® IPT to all Intel® Core™ and Xeon™ based platforms (including mobile and AIO). **Background:** Current implementation of Intel® IPT on Intel® ME 8.1 allows running Intel® IPT applets on Ultrabook™ or Intel® vPro™ or Intel® Core™ Desktop, but not on mobile or AIP (All-In-One Innovation Program) mobile systems.	8.1.30.1350
CCG0100010150	**Description:** Eliminate Intel® ME event log writes when Intel® AMT is un-provisioned. **Background:** Removes unnecessary writing to event log for unmanaged systems thereby also minimizing Intel® ME maintenance tasks.	8.1.30.1350



RCR #	Description / Background	Build
CCG0100009724	**Description:** Add Embedded Host Based Configuration (EHBC) **Background:** Embedded systems have a need for a provisioning method similar to HBC but without any restrictions (ACM mode). This new method will be disabled by default and enabled only by FITC and SPI settings at manufacturing based on a request from embedded customers.	8.1.20.1336
CCG0100010162	**Description:** Intel® ME FW support for the UM77 PCH / i3-2365M and i3-2375M Core processors combination**.** **Background:** Amendment to CCG0100010084 RCR.	8.1.3.1325
CCG0100010084	**Description:** Intel® ME FW support for the UM77 PCH / Intel® Y Series 3rd Generation Core® Processors combination. **Background:** A new ULX processor for low TDP designs and has been added to the Intel® 3rd Generation Core® Processor product roadmap.	8.1.2.1318
CCG0100009956	**Description:** Add Microsoft* Windows 8 uEFI native boot mode support for Intel® ME MEInfowin and MEManufwin manufacturing tools. **Background:** Intel® ME 8 Tools PRD did not specifically include Windows 8 uEFI native boot mode support for MEInfowin and MEManuf. This is needed for Microsoft's Logo requirement with Windows 8 Secure Boot.	8.1.0.1265
CCG0100190265	**Description:** Change IFR service to automatically start during IFR flow. **Background:** Improves the user experience of IFR by reducing the delay while an IFR is in progress.	8.1.0.1265

RCR #	Description / Background	Build

CCG0100009844	**Description:**
	Intel is changing the implementation of Code 10 violation of the Ethernet controller after G3->S5->WoL bug fix.
	• ME FW automatically detects impacted platforms
	• On impacted platforms, FW adds a 50ms delay in FW
	• Impacted platforms include those that:
	  ○ Do not support ME operation in M3 (APWROK and PCH_PWROK are tied together)
	  ○ Using Intel LAN
	• LAN MAC Delay Timer (ME soft strap 10 bit 26) configuration option has been removed from FITC
	Background:
	This implementation change was made in Intel® ME FW 8.0.10.1464 MR and carries over to 8.1.0.1265. Intel had observed a Code 10 violation of the Ethernet controller on ME 8.0 platforms during the G3-S5 state followed by WOL. Symptom is no LAN connectivity during WOL (inoperable LAN connection) operation.
		8.1.0.1265

CCG0100009815	**Description:** Add CPU model Intel® Core™i3-2377M processor to Intel® microarchitecture code name Sandy Bridge Ultrabook™ CPU list to allow Intel® IPT availability with this model. **Background:** CPU model did not have Intel® IPT support; a requirement for Ultrabook™.	8.1.0.1265
CCG0100009823	**Description:** MEManuf EOL support for systems with Intel® Integrated LAN disabled. **Background:** Add a check to MEManuf –EOL in cases where Intel® Integrated LAN Enable is set to False in FITC.	8.1.0.1265
CCG0100181360	**Description:** Add support in FITC for configuring Romley Patsburg –J SKU. **Background:** While Patsburg –J SKU was a valid SKU, this implements the drop down selection in FITC.	8.1.0.1143



RCR #	Description / Background	Build
CCG0100009760	**Description:** Updates the FPT tool to retain MAC/SSID/SVID when flashing image. **Background:** FPT failure to recognize the correct MAC/SSID/SVID and overwriting them.	8.1.0.1143
CCG0100009719	**Description:** Implement Recovery Mode check in MEManuf. **Background:** MEManuf passed while system is in recovery mode and ME not fully functioning.	8.1.0.1143
1024025	**Description:** Add current version of Microsoft Visual Studio VC++ redistributables to ME_SW Installer. **Background:** Installer does not complete the installation of all ME SW components when trying to install newer version of Microsoft Visual Studio VC++ redistributables than exists on system.	8.1.0.1143
CCG0100125704	**Description:** FW BIST Integrated in the ME early boot **Background:** In the manufacturing line, the BIST result is not available until software tool requests FW to run the BIST. In order to perform BIST, OEM has to (a) boot to OS (b) run MEMANUF test (c) incur power cycle reset (d) boot to OS after Power cycle reset (e) run MEMANUF again to retrieve results. If ME were to automate the BIST process itself then in the aforementioned sequence, steps a) and b) can be avoided saving many seconds in the flow.	8.1.0.1035
CCG0100009277	**Description:** ME FW mechanism to check MFS status **Background:** Improve robustness of MFS and ME stability so that ME doesn't get into a bad state and if it does, identify cause for customers.	8.1.0.1035

RCR #	Description / Background	Build
CCG0100115620	**Description:** OEM option to OPT-OUT from IFR Updates **Background:** Having hard OPT OUT option from IFR will allow customers to validate and expedite critical FW updates instead of utilizing Intel's Firmware Recovery.	8.1.0.1035
CCG0100009035	**Description:** Partial un-provisioning to remove non-secure DNS suffix and move back to original secure mode. **Background:** In Secure DNS mode, the PKI DNS Suffix on the client is pre-set by the manufacturer.	8.1.0.1035
CCG0100008582	**Description:** Support screen rotation in Intel® KVM viewer **Background:** Adds support for screen rotation of 90, 180 and 270 degrees.	8.1.0.1035
CCG0100134301	**Description:** Request for an Anti-Theft option to prevent PBA Logon Timer restart on warm reset **Background:** Client systems using Self Encrypted Drives (SEDs) shutdown unless a command is sent to stop PBALogon timer after the disk is unlocked and the data partition is revealed.	8.1.0.1035
CCG0100128347	**Description:** FITC VSCC cleanup. **Background:** VSCC cleanup – Removal of parts no longer used in current generation platforms (i.e. AT26DF321), and simplifying the VSCC register value to one universal value for all SPI parts (0x20052005).	8.1.0.1035
CCG0100129713	**Description:** Support diagnostic PET over PLDM **Background:** Ability for ME to translate platform monitoring events sent from EC/SIO to WSMan Events and send them to the management station.	8.1.0.1035



RCR #	Description / Background	Build
CCG0100008979	**Description:** Support for vPro™ Downgrade **Background:** Provides mechanism to allow BIOS to downgrade vPro™ when BIOS detects not all parts are vPro™ capable.	8.1.0.1035
CCG0100119911	**Description:** WYSIWYS Support for Remote and Local Bitmap Rendering **Background:** WYSIWYS (what you see is what you sign) enables user presence, verification and identification usages and hardens anti-spoofing mechanisms. WYSIWYS is using PAVP to create a secure path from an ISV, Web Property or IT to the end user thus eliminating ability of malware to impersonate to the user.	8.1.0.1035
CCG0100103738	**Description:** Support for SIGMA spec 0.88 **Background:** Adds SIGMA support for multiple clients e.g. CLS, JOM, PAVP and others.	8.1.0.1035
CCG0100009226	**Description:** Certification for Platform Embedded Asymmetric Token (PEAT) **Background:** The purpose of Platform Embedded Asymmetric Token is to enable embedded asymmetric key (private key) based tokens within the secure processing element of Intel platforms.	8.1.0.1035
CCG0100009168	**Description:** ME 8.0 support for XP on workstation and client platforms **Background:** Adds full feature support for Windows* XP SP3 workstation and client platforms with exception of USB3 and wireless display features.	8.1.0.1035

RCR #	Description / Background	Build
CCG0100008852	**Description:** FOV support to configure ODM ID and System integrator ID NVARs during manufacturing (post image flash) and addition to MEInfo to present these NVARs. **Background:** In order to address OEM request (HP) to be able to configure ODM ID (used by Intel Services) in manufacturing and verify by MEInfo	8.1.0.1035



6 Issue Status Definitions

This document provides sightings and bugs report for Intel® Management Engine Firmware 8.0 SKU, Software and Tools for Intel AMT on the Panther Point and Cougar Point Family / PCH platforms. Each report contains a snapshot of sightings and critical internal bugs dating to the Friday of the week in which it was released. At the time of a milestone release, this report will be distributed with the Intel® ME Kit and will provide information on new issues and the status of old issues (replacing the Release Notes document).

The issues are separated into sub-groups to assist in understanding the status of the issues and what action, if any, needs to be done to address the issue. The names and definitions of the sub-groups are detailed below.

Closed Issues: Issues will not be classified as "Closed" until the fix is verified with the appropriate firmware version or disposition given below. Closed issues are separated into three different categories:

- **Closed – Fixed in Firmware Kit:** All issues detailed in this section have been fixed in the firmware version identified in the individual sighting details.
- **Closed – No Plan to Fix**: All issues detailed in this section are not planned to be fixed in any revision of the firmware.
- **Closed – Documentation Change:** All issues detailed in this section require a change to either a specification and/or a documentation change. The specific revisions to the appropriate documentation/specification are identified in the issue details.

Open Issues: New sightings and bugs will be classified as "Open" issues until the fix is verified with the appropriate firmware version. Open issues are separated into the following categories:

- **Open – Under Investigation:** All issues in this status are still under investigation. Issues may or may not be root caused.

Note: Any issues that are still open for production revisions of the components will be documented in the respective specification update documents.

Sightings listed in this document apply to ALL Panther Point Family CRB SKU's unless otherwise noted either in this document or in the sightings tracking systems.

7 Closed Issues

7.1 Closed - Intel® AMT

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
197122	KVM Error 0x80862400 (Sprite Failure) with an eDP built-in display	**Affected Component** – FW.AMT.KVM **Impact:** Sporadic connection failures when attempting to establish KVM session over wireless. **Workaround:** Re-attempt KVM session. **Notes**: Replication Steps: 1. Provision SUT. 2. Configure/Enable KVM. 3. Initiate KVM session request from management console and enter consent code when appears on remote SUT. 4. After entering the user consent code, the KVM will briefly connect to the SUT and begin to draw the contents of the screen, then suddenly disconnect with error code 0x80862400. 5. May require several attempts to reproduce.	8.1.30.1350
197094	Platform hangs with a firmware status code of 0x65 after running global resets stress tests.	**Affected Component:** FW.AMT.WSMAN_GEN **Impact:** Platform hangs with a FW status code of 0x65 during global reset stress testing. **Notes:** Reproduction Steps: 1. Configure BIOS, Intel® ME, and Microsoft* Windows settings. 2. Run a Power Management tester such as the PM Intel® PETS software with global resets.	8.1.30.1350



Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
197082	Intel® AMT crashes after pushing SMBIOS table with long strings.	**Affected Component:** FW.AMT.HW Asset **Impact:** Unable to update SMBIOS tables in addition to loss of local and remote connectivity to Intel® AMT. **Workaround:** No recovery. Must reflash. **Notes:**	8.1.30.1350
197045	CILA WS-Events are buffered for ~30 seconds and are not sent immediately.	**Affected Component:** FW.AMT.WS-Eventing **Impact:** Delayed response to user's Fast Call for Help request. **Notes:** Most WS-Events are buffered for 20-30 seconds however to provide a quicker support response, Fast Call for Help events should be sent without delay. Reproduction Steps: 1. Provision SUT. 2. Subscribe for the "Intel(r) AMT:All" event using the appropriate instance 3. Restart the SUT and press CTRL+ALT+F1 in the boot screen to start a user-initiated session. 4. Using a WS-Eventing console, a CILA WS-Event is sent after 20-30 seconds instead of being sent immediately.	8.1.30.1350
197076	System shutdown when performing warm reset in factory where Intel® AMT is disabled but networking is enabled.	**Affected Component:** FW.AMT.General **Impact:** SUT will shut down instead of performing a warm reset. **Notes:** Only occurs after a warm reset when Intel® AMT is disabled *and* network services are enabled and connected to a high traffic network.	8.1.20.1336
196970	Intel® AMT fails to represent SUT memory device over WSMAN interface if its internal key contains a prefix of whitespaces.	**Affected Component** – FW.AMT.WSMAN_GEN **Impact:** Potentially a tool using an Intel® AMT API that retrieves information about a SUT's low level memory devices over a WS-MAN interface may fail to display the correct information. **Workaround:** None.	8.1.20.1336

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
196793	TLS session can't be established when using TLS 1.1 version.	**Affected Component:** FW.AMT.Security.TLS **Impact:** When Client opens a TLS session with TLS 1.1 protocol (in "Client Hello" packet), Intel® AMT answers "Server Hello" with TLS 1.1 protocol, but the session fails with "internal error" message. **Workaround:** N/A. **Notes:** This was fixed in 8.1.0.1265 (PC/PV) but was not documented and thus highlighted as a change. Reproduction Steps: 1. Provision Intel® AMT and enable TLS. 2. Enable TLS 1.1 within the web browser. 3. Establish a WebUI connection from management console to SUT. 4. Session fails with "internal error" message.	8.1.0.1265
100168637	Wireless SOL and IDER sessions occasionally end unexpectedly.	**Affected Component:** FW.AMT.WiAMT **Impact:** Intel® PETS AMT_Demo_013 and AMT_Demo_015 fail. **Workaround:** **Notes:** Related to 100156540 / 196879.	8.1.20.1336
100168125	Wireless Access Point fails to connect WiAMT when SUT is in Sx/M3 state.	**Affected Component:** FW.AMT.WiAMT **Impact:** No wireless Intel® AMT when system is in Sx state. **Workaround:** Allow system ~1-2 minutes to reattempt and successfully connect to AP. **Notes:** Reproduction Steps: 1. Provision SUT. 2. Setup wireless AMT via WebUI. 3. Confirm Intel® ME connection has been established and SUT is in S0/M0 state (ping SUT). 4. Move SUT to S3/M3 state. 5. Confirm Intel® ME connection via WebUI via a ping. WebUI shows that SUT remains in S3/M3 and does not respond to pings.	8.1.20.1336

Closed Issues



Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
100161484	Intel® ME doesn't wake when opening a KVM session over port 5900 in WLAN connections.	**Affected Component:** FW.AMT.WiAMT **Impact:** Unable to wake Intel® ME when attempting to establish a KVM session over 5900 port. **Workaround:** Use KVM or wake system over port 16994. **Notes:** Issue not reproduced over LAN connections.	8.1.20.1336
196359	Sending a WS-MAN command with special parameters will trigger a FW exception.	**Affected Component** – FW.AMT.WSMAN_GEN **Impact:** Remote attacker with valid credential may take down Intel® ME until the next Moff -> M0 transition. **Workaround:** None. **Notes:** Issue fixed in 8.1.3.1325 but not documented. CVSSv2: (Medium - 4.6) (AV:L/AC:L/Au:S/C:N/I:N/A:C)	8.1.3.1325
196853	When configured in TLS Mutual Authentication mode, Intel ® ME FW may accept client certificate with unauthorized x509v3 certificate subject name suffix.	**Affected Component:** FW.AMT.Security.TLS **Impact:** In such a scenario, the 2nd factor authentication could be potentially compromised. Note this would happen only if one of the Trusted CA, configured by IT into Intel® ME Certificate Store, will issue such client certificate. CVSSv2 score: 4.0 Moderate (AV:N/AC:L/Au:S/C:N/I:P/A:N) **Workaround:** N/A. **Notes:**	8.1.0.1265
196795	After Full Un-provision, DDNSUpdateByDHCPServerEnabled value is not reset to 1.	**Affected Component** – FW.AMT.NETP **Impact:** Incomplete manual configuration or HBP CMM un-provisioning. **Workaround:** None **Notes**:	8.1.0.1265

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
196647	When Gfx driver is installed but has yellow bang in Device Manager, the KVM and Sprite may not function correctly.	**Affected Component** – FW.AMT.KVM **Impact:** Unable to accept User Consent or to switch the Sprite to another display pipe **Workaround:** Reboot SUT. **Notes**: Replication Steps: 1. Provision Intel® AMT setting KVM with User OptIn. 2. Boot system to host OS. 3. Cause yellow bang on Gfx driver (e.g. an incorrect or corrupt driver). 4. Confirm Intel® IMSS is running and display in systray. 5. Open a KVM session. Observe the Consent Sprite is not shown on the screen and that Viewer expects Consent numbers.	8.1.0.1265
196595	During a partial FW Update in Windows and starting S3 stress testing, system displays "System unexpectedly restarts during standby/resume" error after the first S0->S3->S0 resume.	**Affected Component** – FW.Kernel.FWUpdate **Impact:** During a partial FW Update process, ICV may not get updated properly triggering Intel® ME to reset. **Workaround:** N/A **Notes:** Reproduction Steps: 1. Flash a FW image with a WCOD partition mismatching the WLAN NIC in the system. 2. Provision Intel® AMT and set idle timeout to 1. 3. Boot to Windows and perform a Partial FW Update. 4. Put system in S0->S3->S0 cycling. 5. Disconnect wired LAN to ensure system moves from Moff -> M3 after 1 minute. 6. Connect wired LAN to wake the Intel® ME. Global reset occurs.	8.1.0.1265



Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
196397	Intel® ME is not accessible after soft reboot cycles in Windows* 7.	**Affected Component** – FW.Kernel **Impact:** Loss of Intel® ME until system is rebooted. **Workaround:** N/A **Notes:** Issue typically seen after 3000 cycles. Issue does not occur when booting from DOS. Reproduction Steps: 1. Install Windows* 7 64-bit. Perform continuous warm reboot cycling until Intel® ME is not accessible (may exceed 3000 cycles).	8.1.0.1265
196555	FW returns error code 5 when RW configuration is sent after multiple iterations of S0->S4->S0 stress testing.	**Affected Component:** FW.mDNSProxy **Impact:** Customers may not be able to activate UDP – Remote Wake. **Workaround:** none. **Notes:** Reproduction Steps: 1. Send RW configuration. 2. Move SUT from S0 to S4. 3. Verify the UDP packets were sent. 4. Wake SUT with Magic Packet.	8.1.0.1265
196593	Intel® ME enters recovery mode due to unexpected power loss of Intel® ME during Intel® AMT un-configuration process.	**Affected Component:** FW.AMT.General **Impact:** Intel® ME may not be able to boot properly. **Workaround:** Re-flash ME region. **Notes:**	8.1.0.1265
194353	During KVM session, if display order changes when waking from Sx, user consent sprite does not disappear after display timeout.	**Affected Component** – FW.AMT.KVM **Impact:** KVM session lost and consent sprite remains on user's system. **Workaround:** none. **Notes**	8.1.0.1265

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
192848	UNS sends WMI event 63 "Sprite configuration changed" after failed attempt to change the sprite configuration leading the user to believe that the sprite configuration was successful.	**Affected Component** – FW.AMT.WS-Eventing **Impact:** False positive result sent to WMI Event log. **Workaround:** none. **Notes:** Reproduction Steps 1. Set PartialFWUImagePath key in the registry to a path that doesn't exist (unused drive letter for example). 2. Restart the UNS service 3. Make sure the sprite language is set to the OS language. 4. Monitor UNS WMI events. 5. Try to change the sprite language (via IMSS for example). 6. Look at the WMI events the UNS raised. 7. Query the current sprite configuration language settings.	8.1.0.1265
195957	WebUI does not display correctly in Microsoft* Internet Explorer 10 within Windows 8.	**Affected Component:** FW.AMT.WEB UI **Impact:** Some Web UI fields are empty and/or misaligned in Internet Explorer 10 web browser. **Workaround:** View page using browser's Compatibility Mode option. **Notes:**	8.1.0.1143
195657	AMT performs DHCP request when resuming from S3 when it should be passive when host makes DHCP request.	**Affected Component** – FW.AMT.NETP **Impact:** Duplicate network traffic **Workaround:** none. **Notes**:	8.1.0.1143
195640	Magic Packet does not wake system from ACDC-S5 after G3.	**Affected Component** – FW.AMT.OS Drivers **Impact:** Unable to remotely wake system. **Workaround:** Power button restart. **Notes**: Only occurs in PP2.	8.1.0.1143
195612	Performing IPS_IEEE8021xSettings.Put with AuthenticationProtocol=2 (EAP-PEAP) and empty ServerCertificateNameComparison puts a value of '2' in ServerCertificateNameComparison.	**Affected Component** – FW.AMT.1x **Impact:** Blocks EAP-PEAP authentication. **Workaround:** none. **Notes**:	8.1.0.1143

Closed Issues



Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
195611	AMT can't hold an authenticated 802.1 x session for over 10 minutes.	**Affected Component** – FW.AMT.1x **Impact:** Connectivity loss. AMT fails to re-authenticate and loses connection **Workaround:** **Notes**:	8.1.0.1143
195567	LAN driver configures the MAC to pass EAPOL frames only with "Nearest" MAC.	**Affected Component** – FW.AMT.1x **Impact:** Prevents AMT from authenticating when multi-domain mode configured on switch port. **Workaround:** none. **Notes**:	8.1.0.1143
195449	During stress testing of S0<->S5 stress with PWR button trigger, ME lost connectivity in S5. Connection regained after ~10 minutes.	**Affected Component** – FW.AMT.OS Drivers **Impact:** Temporary ME connectivity loss. **Workaround:** none. **Notes**:	8.1.0.1143
195304 / 195291	Serial over LAN device is present in OS with HM77 SKU	**Affected Component** – FW.AMT.Redirection **Impact:** SOL is exposed in SBA platforms. **Workaround:** none. **Notes**:	8.1.0.1143
195282	MEManuf and MEInfo report UUID as all zeros when AMT is set to ship state disabled in FITC.	**Affected Component** – FW.AMT.HW Asset **Impact:** When AMT is set to ship state disabled in FITC, MEManuf and MEInfo will report UUIS as all zeros **Workaround:** Enable AMT (e.g. via MEBX). **Notes**:	8.1.0.1143
195024	AMT fails TLS negotiation when TLS 1.2 is supported by client and TLS 1.1 and 1.2 is configured	**Affected Component** – FW.AMT.Security.TLS **Impact:** A TLS session cannot be established when configured to TLS 1.1 and 1.2 **Workaround:** none. **Notes**:	8.1.0.1143
194832	After a few seconds of sending data via SOL from SUT over a CIRA wireless session with ME preference SOL, the session is closed.	**Affected Component** – FW.AMT.RemoteConnectivity **Impact:** Session is closed during CIRA wireless connections. **Notes:** Issue is not observed during wired CIRA sessions.	8.1.0.1143
194763	When performing boot to IDER CD or DVD with SOL in a loop, connectivity is lost.	**Affected Component** – FW.AMT.Redirection **Impact:** Sporadic loss of connectivity during SOL / IDER sessions. **Notes:**	8.1.0.1143

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
194707	Over SOAP interface, MCT can be set to 0 when invoking SetKerberosOption()	**Affected Component** – FW.AMT.Kerberos **Impact:** The value (0) is returned when invoking GetKerberosOption() via SOAP, and when invoking AMT_KerberosSettingData() via WSMan. **Workaround:** none. **Notes:**	8.1.0.1143
194338	AMT can't hold a continuous authenticated 802.1 x sessions for an extended time (~45 minutes).	**Affected Component** – FW.AMT.1x **Impact:** Connectivity loss. **Workaround:** none. **Notes**: Fixed in future merge.	8.1.0.1143
193588	CD/DVD device is not available during IDEr session to Windows 8 system.	**Affected Component** – FW.AMT.Redirection **Impact:** Optical drive devices not available in remote management. **Workaround:** none. **Notes:** Floppy drive is listed in Windows Explorer and Device Manager. Optical drives are not.	8.1.0.1143
193221	KVM session was closed unexpectedly during local reboot stress	**Affected Component** – FW.AMT.Redirection **Impact:** May impact KVM testing. **Workaround:** Re-connect KVM session. **Notes:** Fixed in future merge. Reproduction Steps: 1. Disable Wi-Fi radio(s) on system under test to prevent interference. 2. Flash SUT and clear CMOS 3. Provision SUT 4. Enable redirection and 5900 ports. 5. Open KVM, SOL and IDER sessions. 6. Perform Local Reboot stress test. 7. All sessions should be maintained however close unexpectedly.	8.1.0.1143
100156976/ 3525069	ME sometimes fails to respond on WLAN or LAN during S0 to S5/M3 stress with WLAN connected	**Affected Component:** FW.AMT.WiAMT **Impact:** ME non-responsive. **Workaround:** Recovery via G3. **Notes:**	8.1.0.1143

Closed Issues



Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
193017	Opening of SOL session is blocked for ~30 seconds after closing, and IDER fails to open when monitor is turned off by driver.	**Affected Component** – FW.AMT.UserConsent **Impact:** Must wait >30 seconds to re-connect a SOL session and IDER sessions fail if powering off monitor is enabled by driver. **Workaround:** none. **Notes:** Fixed in future merge**.** Reproduction Steps 1. Burn image and provision Intel AMT. 2. Enable listener 3. Configure OS to turn off monitor (for testing purposes, set to turn off after 1 minute). 4. Wait 1 minute for monitor to turn off. 5. Continuously attempt to open SOL and IDER sessions.	8.1.0.1143
194087	IDER performance over CIRA/WAN is less than expected with 80% degradation compared to earlier builds.	**Affected Component** – FW.AMT.Redirection **Impact:** CIRA/WAN performance degradation affecting testing. **Workaround:** none. **Notes:**	8.0.0.1240 eng drop
193618	KVM session disconnection on sprite failure when XP OS and GfX driver loads	**Affected Component** – FW.AMT.KVM **Impact:** Windows XP GfX drivers cause KVM session to disconnect when OS and driver load. Session disconnect on "Sprite failure" **Workaround:** none. **Notes:** N/A	8.0.0.1240 eng drop

7.2 Closed – Intel® ME Kernel

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
197134 / 3708793	Integrated graphic adapter VGA/HDMI/DVI cannot display and system may not boot under temperature sensitive conditions.	**Affected Component** – FW.Bringup **Impact:** No display from integrated graphics adapter and system may not boot. **Notes:** Affects Intel® 6 Series and Intel® C200 Series Chipset and Intel® 7 Series and Intel® C206 Series Chipset platforms using Intel® ME8 FW.	8.1.30.1350
196979	Rare ME File System Corruption Issue.	**Affected Component:** FW.Kernel.StorageMgr **Impact:** Under rare corner case conditions involving power loss during manufacturing or ME un-configuration (via BIOS or CMOS clear), ME file system may be corrupted. **Workaround:** Re-flash **Notes:** • 5 MB firmware in both flows – configured and un-configured. • 1.5 MB firmware in Intel® ME un-configuration flow only	8.1.20.1336
197044/ 197046	Integrated VGA does not display after AC-Power/CLR CMOS jumper operations.	**Affected Component** – FW.Bringup **Impact:** No display from integrated graphics adapter. **Workaround:** Reflash firmware. **Notes:** Reproduction Steps: 1. Disconnect AC power (G3). 2. Short CLR_CMOS jumper. 3. Re-connect AC power (leave CLR_CMOS shorted). 4. Remove CLR CMOS jumper 5. Press PWR button. 6. Do G3 again then PWR on SUT. 7. PWR on. SUT halts at 0xD6 without VGA output.	8.1.2.1318



Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
196990	Under rare corner case conditions involving power loss during manufacturing or Intel® ME un-configuration (via BIOS or CMOS clear), ME file system may become corrupted.	**Affected Component** – FW.Kernel.StorageMgr **Impact:** Intel® ME halts and is unresponsive. **Notes:** Recovery via re-flashing firmware. This affects: • 5 MB firmware in both flows – configured and un-configured. • 1.5 MB firmware in Intel® ME un-configuration flow only • The defect exists in all ME 8.x releases prior to 8.1.2. • OEM customers are reminded to ensure that no unplanned power loss occurs during manufacturing or during Intel® ME un-configuration.	8.1.2.1318
196962/ 196875	Thermal reporting does not work when Intel® ME is in a disabled/error state (e.g., recovery mode).	**Affected Component** – FW.Bringup **Impact:** Thermal reporting may not be available when Intel® ME is in a disabled/error state. **Workaround:** None. **Notes:** Recovery via reflash.	8.1.2.1318
196833	Sporadically after system moves to S3, it moves to 'S0-lite' and becomes stuck instead to moving to a S4 state.	**Affected Component:** FW.Kernel.FFS **Impact:** System hangs in S0-lite state fails to move to S4. **Workaround:** None. **Notes:** Reproduction Steps: 1. Configure system to FFS. 2. Power system up to S0/H0 state and add a valid Intel® ME profile. 3. Move system to S3. Observe system becomes stuck in 'S0-lite' state instead of moving to S4.	8.1.0.1265

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
196719	BIOS hang after unexpected TXT reset caused by HECI buffer not clearing.	**Affected Component** – FW.Kernel.Drivers **Impact:** BIOS hang after unexpected TXT reset. **Workaround:** N/A **Notes:** Intel® ME FW did not properly handle the extra reset on a platform with TXT enabled. Reproduction Steps: 1. Enable TXT and Intel® ME. 2. Ensure TPM is provisioned correctly and enable VTd and TXT. 3. Boot to EFI shell. 4. Using getsec (32 or 64-bit) EFI tool, run: getsec64 -l senter -a IVB_SINIT ACM. 5. Reset SUT. 6. Confirm during warm reset boot sequence hangs at POST code 96.	8.1.0.1265
196595	During a partial FW Update in Windows and starting S3 stress testing, system displays "System unexpectedly restarts during standby/resume" error after the first S0->S3->S0 resume.	**Affected Component** – FW.Kernel.FWUpdate **Impact:** During a partial FW Update process, ICV may not get updated properly triggering Intel® ME to reset. **Workaround:** N/A **Notes:** Reproduction Steps: 7. Flash a FW image with a WCOD partition mismatching the WLAN NIC in the system. 8. Provision Intel® AMT and set idle timeout to 1. 9. Boot to Windows and perform a Partial FW Update. 10. Put system in S0->S3->S0 cycling. 11. Disconnect wired LAN to ensure system moves from Moff -> M3 after 1 minute. 12. Connect wired LAN to wake the Intel® ME. Global reset occurs.	8.1.0.1265



Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
196397	Intel® ME is not accessible after soft reboot cycles in Windows* 7.	**Affected Component** – FW.Kernel **Impact:** Loss of Intel® ME until system is rebooted. **Workaround:** N/A **Notes:** Issue typically seen after 3000 cycles. Issue does not occur when booting from DOS. **Reproduction Steps:** 2. Install Windows* 7 64-bit. Perform continuous warm reboot cycling until Intel® ME is not accessible (may exceed 3000 cycles).	8.1.0.1265
196555	FW returns error code 5 when RW configuration is sent after multiple iterations of S0->S4->S0 stress testing.	**Affected Component:** FW.mDNSProxy **Impact:** Customers may not be able to activate UDP – Remote Wake. **Workaround:** none. **Notes:** Reproduction Steps: 5. Send RW configuration. 6. Move SUT from S0 to S4. 7. Verify the UDP packets were sent. 8. Wake SUT with Magic Packet.	8.1.0.1265
196356 / 196243	FW doesn't check for UTF-8 validity when adding a wireless profile via WebUI.	**Affected Component** – FW.AMT.WEB UI **Impact:** Unable to remote a profile with a non UTF-8 name. **Workaround:** None. **Notes:** This issue was fixed in the 8.1.0.1265 PC release but was not documented as having been closed.	8.1.0.1265
196442	Intel® ME is stuck in an initialization phase during power cycling after Memory Protection Range (MPR) violations.	**Affected Component:** FW.Kernel **Impact:** Loss of Intel® ME functionality and MEInfo –fwsts will display an ME debug error. **Workaround:** Recovery via G3 **Notes:** Occurs sporadically during power cycle stress testing.	8.1.0.1143
196471	System hangs in host OS after S3 resume.	**Affected Component:** FW.Kernel.PowerManagement **Impact:** The system could hang when Intel® ME is initializing after a MPR violation or multiple Intel® ME exceptions. **Workaround:** Recovery via G3 **Notes:**	8.1.0.1143

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
196459	Intel® ME enters recovery mode when running warm reset cycles.	**Affected Component:** FW.Kernel **Impact:** Sporadic loss of Intel® ME functionality during warm reset cycling. **Workaround:** Recovery via G3 **Notes:**	8.1.0.1143
196387	SkuMgr sets the Platform type for River City Workstation as Desktop.	**Affected Component:** FW.Kernel.Sku Mgr **Impact:** . **Workaround:** Recovery via G3 **Notes:** Reproduction Steps: 1. Boot River City workstation CRB with Intel® ME 8.1 firmware. 2. Check SkuMgr platform rule.	8.1.0.1143
195545	MFS Corruption Not Sent to BIOS on M3 Flows	**Affected Component** – FW.Kernel.StorageMgr **Impact:** MFS corruption data is not being sent correctly to BIOS during M3 flows when the MFS corruption doesn't include ME resets. **Workaround:** none **Notes:**	8.1.0.1143
195201	Platform halts when performing full FW update after clearing CMOS while FW was in recovery state.	**Affected Component** – FW.Kernel **Impact:** SUT halts after performing full FW update if CMOS was cleared while FW was in recovery state. **Workaround:** none **Notes:**	8.1.0.1143
195164	ME enters FW Recovery mode when HDA_SDO (hot key sequence) is performed when AT is Enrolled	**Affected Component** – FW.MCTP **Impact:** SUT goes into FW Recovery mode when enrolling AT. **Workaround:** none **Notes:** None.	8.1.0.1143
N/A	Deep S3 disabled platforms attempt to enter Deep SX instead of S3 (FW incorrectly interprets RCBA value)	**Affected Component** – FW.Kernel **Impact:** SUT goes into S5 instead of S3. **Workaround:** none **Notes:**	8.1.0.1143



Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
196069	Due to lack of validity check in Intel® ME against parameters passed in by the host, malformed FW update messages sent to ME through Intel® MEI may result in ungraceful FW reset.	**Affected Component:** FW.Kernel.FWUpdate **Impact:** Malware that has administrator privilege can send malformed FW update Intel® MEI messages to ME and triggers ungraceful ME reset. Three consecutive ME reset within 60 seconds result in ME halt. CVSS: 4.7 (AV:L/AC:L/Au:N/C:N/I:N/A:C/E:F/RL:ND/RC:ND) **Workaround:** N/A **Note:** Exploitable by local malware that has administrator privilege. Not exploitable over network.	8.1.0.1143
193490	SMS GpsLocationBeaconingNotification fails to detect beacon messages from FW after resume from ME RESET with trigger mask 0xF.	**Affected Component** – FW.MCTP **Impact:** FW unable to send beaconing message after ME Reset. **Workaround:** Warm reset. **Notes:**	8.0.0.1221 eng drop

7.3 Closed – Integrated Clock Control (ICC)

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
		Affected Component: **Impact:** **Workaround:** **Notes:** Reproduction Steps:	

7.4 Closed – Software / Tools

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
197116	LMSService is potentially vulnerable to unquoted service path vulnerability.	**Affected Component** – SW.AMT.Services **Impact:** This potential vulnerability may allow a local user to gain system privilege access. The attack requires local access permission to the drive where Windows OS is installed. Please see customer communication attached with release announcement and CDI / IBP#: 494925. CVSS v2: AV:L/AC:L/Au:N/C:C/I:C/A:C := base score 7.2 **Notes:** Applicable to systems with LMS service installed.	8.1.30.1350
197110	MEManuf displays "Error 9271: Flash ID 0xC22017 Intel(R) ME VSCC value mismatch."	**Affected Component** – SW.Tools.MeManuf **Impact:** MEManu failure. **Workaround:** Use MEManuf in 8.1.3.1325. **Notes:** Affects customer BIOS not following the PREOP/OPMENU configuration used in the Intel CRB BIOS and MEManuf in 8.1.20.1318 MR kit. MEManuf in this release will use HW Sequencing to fix above scenario. Reproduction Steps: 1. Create SPI image with the following BIOS modifications. a. OPMENU (SPIBAR + 98h) to 05 01 03 02 D8 20 9F FF. b. PREOP (SPIBAR + 96h) to 0x0FE4 c. Set HSFS.FLOCKDN (SPIBAR + 04h bit14) to 1 2. Run MEManuf 0s0 –verbose 3. Error 9271: Flash ID 0xC22017 Intel(R) ME VSCC value mismatch."	8.1.30.1350



Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
197023	Text within Intel® MEI uninstallation dialog box is illegible and/or truncated when uninstalling Intel® MEI software on Brazilian/Portuguese language OS systems.	**Affected Component** –Installer **Impact:** Does not interrupt process uninstalling however user will not be able to read the full text or information displayed. **Workaround:** None. **Notes:** Reported Brazilian/Portuguese language OS systems. Reproduction Steps: 1. Boot to a Microsoft* Windows 7 or Windows 8 set to Brazil/Portuguese language. 2. Uninstall Intel® Management Engine Driver from control panel. 3. Intel® Management Engine uninstallation dialog box will appear. Near bottom of dialog box, the recommendation to close all programs before proceeding with uninstalling the program is difficult to read.	8.1.30.1350
196830	When executing the command MEManuf -eol var -verbose with the correct ReqVal= value, OEM Certificates display both a Data Match and a Mismatch.	**Affected Component** – SW.Tools.MeManuf **Impact:** Fails the End-Of-Line test. **Notes:** OEM Customizable/Default Certificate #'s should appear as only 1 Variable and say "Data Match!", passing the End-Of-Line Test but instead appear as 2 variables "Data Match!" and "Data Mismatch!".	8.1.30.1350

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
197086	FWUpdLcl tool fails when performing a full firmware update on non-English Microsoft* Windows 8 with Taylor Peak WLAN card.	**Affected Component** – SW.Tools.FwUpdLcl **Impact:** Tool does not perform firmware update on non-English Microsoft* Windows 8 system and exits. **Workaround:** Set language to English in IMSS before running tool. Note that after the failure has occurred, the system should be restarted before changing the language to English. The language can be set back to the prior setting after the firmware update process is completed. **Notes:** Reproduction Steps: 1. Install Taylor Peak WLAN card. 2. Install non-English version of Microsoft* Windows 8 RTM 64-bit (Pro or Standard edition). 3. Install PCH and ME drivers (w/ IMSS). 4. Ensure that IMSS language is set to Japanese or Windows OS [Japanese]. 5. Run FWUpdLcl tool. Tool exits without updating firmware.	8.1.20.1336
197081	IMSS causes extended S3 resume time.	**Affected Component** –SW.AMT.Icon **Impact:** Delay during S3 resume IMSS is enabled on SUT. **Workaround:** Disable IMSS. **Notes:** Issue only replicated with Microsoft* Windows 8. Reproduction Steps: 1. Run the Suspend Performance Microsoft* ADK test. 2. Confirm that WinPrvSe.exe resume time is not impacted; affecting overall S3 resume time.	8.1.20.1336
4693450	Intel® IMSS fails to install on Microsoft Windows* XP (32-bit and 64-bit). Intel® IMSS shortcut fails to be created.	**Affected Component:** Installer **Impact:** Intel® IMSS fails to install on Microsoft Windows* XP (32-bit and 64-bit). Intel® IMSS shortcut fails to be created. **Workaround:** On a Windows* XP target system, use the "-noimss" switch when installing but note that Intel® IMSS will not be installed with the other software components.	8.1.0.1265 PC2

Closed Issues



Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
196604	'MEinfowin32/64.exe –EOL' and 'MEinfowin32/64.exe' stop running on Win8x64 UEFI native boot OS environment.	**Affected Component** – SW.Tools.MeManuf **Impact:** MEInfo and MEManuf –EOL doesn't work on EFI native boot OS environment. **Workaround:** Tools functional in UEFI native mode **Notes:** This issue was fixed in the 8.1.0.1265 PC release but was not documented as having been closed. See RCR CCG0100009956 above for more details.	8.1.0.1265
196896	MEInfoWin and MEManufWin error: "Entry Point Not Found The procedure entry point GetSystemFirmwareTable could not be located in the dynamic link library KERNEL32.dll".	**Affected Component:** SW.Tools.MEInfo **Impact:** API is missing in KERNEL32.dll on Microsoft* Windows XP 32-bit systems causing Windows version of MEInfo to crash. **Workaround:** None. **Notes:** Error does not occur with 64-bit version of Windows XP.	8.1.0.1265
196851	MEManuf tool has been updated to provide a check for firmware incorrectly reporting EPID Group IDs	**Affected Component:** SW.Tools.MEManuf **Impact:** Enables check for firmware incorrectly reporting EPID Group IDs. **Workaround:** None. **Notes:** Refer to the Customer Communication provided separately with this release.	8.1.0.1265
196823	When the connection status in Intel® IMSS is "connected" and connection type is "unknown", "Disconnect" button doesn't respond.	**Affected Component** –SW.AMT.Icon **Impact:** Intel® IMSS does not disconnect CIRA connection **Workaround:** N/A **Notes:**	8.1.0.1265

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
196117	Intel® ME FW Recovery Agent reports IFR update failed after the update was interrupted but still finished successfully	**Affected Component:** SW.IFR.TCAgent **Impact:** IFR update incorrectly reports "Failed" when an interrupted IFR Update process successfully rolls back the update. **Workaround:** None. **Notes:** Reproduction Steps: 1. Enable IFR Update in the Intel® ME. 2. Install Intel® FW Recovery Agent. 3. Check for and start an IFR update. 4. Interrupt IFR update (e.g. power loss in FW update step). 5. Continue the update or perform second power loss to initiate rollback operation. 6. Open the Intel® ME FW Recovery Agent window. 7. View the Intel® FW Recovery Agent log. Failed is reported instead of update successful or update failed and rollback completed successfully.	8.1.0.1265
196670	IFR update fails with "Error 8787: Verify that Intel® ME Service is installed and running" due to a delay during startup of IntelMEFWService.	**Affected Component:** SW.IFR.Windowservice **Impact:** IFR update failure. **Workaround:** Manually start IntelMEFWService after every phase of IFR reboots. **Notes:** Fixed in 8.0.10.1464v2 Reproduction Steps: 1. Flash SPI image with IFR Enabled. 2. Boot to host OS. 3. Start IntelMeFwService.exe 4. Reboot system. **5.** Run the following command: "*IntelMeFwService.exe –query*".	8.1.0.1265
196540	"Intel® ME Service" is shown to be "unknown" in System configuration.	**Affected Component:** SW.IFR.Windowservice **Impact:** After installing the driver, the "ME Service" in the Windows* System Configuration utility is displayed as "unknown" in the "Manufacturer" field. **Workaround:** None. **Notes:** Fixed in 8.0.10.1464v2 Reproduction Steps:	8.1.0.1265



Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
196511	During reinstallation of Intel® ME software, UNS displays an error message: "UNS is unable to delete service."	**Affected Component** – SW.AMT.Drivers **Impact:** Unable to reinstall Intel® ME software. **Workaround:** None. **Notes:** Fixed in 8.0.10.1464v2	8.1.0.1265
196502	SKU manager in all FPTW tool commands fail on HM67, QS67 and UM67 SKUs.	**Affected Component:** SW.Tools.FlashProgrammingTool **Impact:** Support for QS67, HM67, and UM67 had been incorrectly removed. **Workaround:** N/A **Notes:**	8.1.0.1265
196495	MAC address becomes corrupt after updating SPI using FPT –savemac command.	**Affected Component:** SW.Tools.FlashProgrammingTool **Impact:** Invalid MAC address (all 00) after update SPI by using FPT –savemac command. **Workaround:** N/A **Notes:** Fixed in 8.0.10.1464v2 Reproduction Steps: 1. Set MAC address to 001122334455. 2. Perform Global Reset. 3. Flash SPI image with -savemac parameter. 4. Perform Global Reset. 5. Check current MAC address setting (may display as 0x00000000).	8.1.0.1265
196454	System cannot execute FwUpdLcl.efi under EFI shell in x64 environment.	**Affected Component:** SW.Tools.FwUpdLcl **Impact:** FwUpdLcl.efi tool execution failure. **Workaround:** N/A **Notes:** Fixed in 8.0.10.1464v2 Reproduction Steps: **1.** Boot to EFI shell. **2.** Execute Fwupdlcl.efi -f ME.bin **3.** FwUpdLcl.efi returns "Failed: file "\..\Common\Port\Efi64\Efiwrap.c, line93".	8.1.0.1265

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
196415	FPT from Intel® ME 8.0.3.1427 release fails to complete SPI flash operation if the image does not contain a GbE region.	**Affected Component:** Installer **Impact:** FPT cannot update full SPI flash image when SPI image does not contain a GbE region. **Workaround:** N/A **Notes:** Fixed in 8.0.10.1464v2 Issue occurs with all OS versions of FPT in HF3. Reproduction Steps: 1. Flash SPI image which does not contain a GbE region using FPT from earlier kit. 2. Perform a global reset. 3. Flash a new SPI image with FPT from Intel® ME8 HF3. 4. FPT will display "GbE Region does not exist.". Windows version of FPT will display an Intel® Flash Programming Tool error message that FPT has stopped working and a prompt to Check online or Close the program.	8.1.0.1265
196056	FWUpdLcl does not display warning message "*Warning: Do not exit the process or power off the machine before the firmware update process ends*".	**Affected Component** – SW.Tools.FWUpdLcl **Impact:** When performing FW update, FW update tool does not display warning message "*Warning: Do not exit the process or power off the machine before the firmware update process ends*" **Workaround:** N/A **Notes:**	8.1.0.1265
195894	Access Monitor button in IMSS is shown with a smaller font than other buttons under advanced options tab.	**Affected Component** – SW.AMT.Icon.Localization **Impact:** Sporadically Access Monitor button in IMSS has a smaller font size than other buttons (Traditional Chinese and Simplified Chinese). **Workaround:** N/A **Notes:** Fixed in 8.0.10.1464v2 Reproduction Steps: 1. Boot to OS. 2. Open Intel IMSS. 3. Select Advanced Options. 4. Access monitor has smaller font than other options.	8.1.0.1265



Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
196415	FPT fails to complete SPI flash operation if the image does not contain a GbE region.	**Affected Component:** Installer **Impact:** FPT cannot update full SPI flash image when SPI image does not contain a GbE region. **Workaround:** Use FPT from Intel® ME 8.0.2.1410 HF2 as a temporary solution. **Note:** Intel's normal guidance is to use the version from the kit release. **Notes:** Issue occurs with all OS versions of FPT in HF3 and has been fixed in a future release. Reproduction Steps: 1. Flash SPI image which does not contain a GbE region using FPT from earlier kit. 2. Perform a global reset. 3. Flash a new SPI image with FPT from Intel® ME8 HF3. 4. FPT will display "GbE Region does not exist.". Windows versions of FPT will display an Intel® Flash Programming Tool error message that FPT has stopped working and a prompt to Check online or Close the program.	8.1.0.1265
196394	FITC build error with Flash Part: PM25LQ032C is added to VSCC table	**Affected Component** – SW.Tools.FlashProgrammingTool **Impact:** The image cannot build successfully. **Workaround:** None. **Notes:**	8.1.0.1265
196048	Management Engine Interface (Intel® MEI) driver installation fails.	**Affected Component** – Installer **Impact:** Unsuccessful Intel® MEI driver installation installation **Workaround:** Install using –novc switch. **Notes:** When re-installing Intel® MEI driver using swsetup.exe from Intel® MEFW 8.0.0.1351 kit, installation process gets to vcredist_x86.exe when an error message appears "The program failed to start...will exit".	8.1.0.1265
195788	FW Update tool does not decode UPDATE_IMAGE_BLACKLISTED status returned from the FW	**Affected Component** – SW.Tools.FwUpdLcl **Impact:** Tool displays error message when attempting to downgrade firmware instead of expected message that downgrade to blacklisted FW is not supported. **Notes:**	8.1.0.1265

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
195352	LAN and WLAN driver information in IMSS on a Microsoft* Windows 8 system may not be available and drivers displayed as being disabled.	**Affected Component** – SW.AMT.Icon **Impact:** LAN and WLAN driver information is not displayed in IMSS. **Workaround:** None. **Notes:** Occurs with Windows 8 systems. Reproduction Steps: 1. Start IMSS on a Windows 8 system. 2. Cause a windows device events such as disconnecting and reconnecting display monitor. 3. Open extended system details in Host Information and confirm driver information is not available.	8.1.0.1265
195818	If a computer name contains non-Latin symbols (e.g. Cyrillic), then all WMI WS-man commands fail with error AMT_STATUS_INTERNAL_ERROR.	**Affected Component** – SW.AMT.Services **Impact:** If a computer name contains non-Latin symbols (e.g. Cyrillic), then all WMI WS-man commands fail with error AMT_STATUS_INTERNAL_ERROR. **Notes:** Reproduction Steps	8.1.0.1143
195596	UNS creates excessive number of empty folders in registry on Windows XP systems.	**Affected Component** – SW.AMT.Services **Impact:** Unnecessary empty folders are created in Windows XP registry for each USB insert or WS-MAN operation**.** **Notes:** Reproduction Steps	8.1.0.1143
195532	IMSS in Windows 8 presents the LAN and WLAN drivers as disabled.	**Affected Component** – SW.AMT.Icon **Impact:** LAN and WLAN driver information is not displayed in IMSS Extended System Details. **Notes:** Reproduction Steps	8.1.0.1143
195020	START and EXIT buttons are not shown in IFR GUI when using low resolution screen (800x600/1024x768)	**Affected Component** – SW.IFR.FWupdate **Impact:** When using resolutions lower than 1280x960 , "START" and "EXIT" buttons will not be shown in IFR GUI **Workaround:** Change screen resolution to a higher value. **Notes:** Fixed in future merge. Reproduction Steps:	8.1.0.1143



Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
194995	UNS service hangs after performing partial FWUpdate and immediately exiting IMSS.	**Affected Component** – SW.AMT.Services **Impact:** UNS process hangs; IMSS will not open after performing Partial FW Update and immediately exiting IMSS. **Notes:** Fixed in future merge. Reproduction Steps:	8.1.0.1143
193241 / 195818	If the computer name contains non-Latin symbols (e.g. Cyrillic), then all UNS's local WS-MAN calls fail. WebUI and VisualCIM over local are working.	**Affected Component** – SW.AMT.Services **Impact:** Privacy issue. User will not be able to cancel redirection sessions. **Workaround:** N/A **Notes:** Reproduction Steps: N/A	8.1.0.1143
193805	KVM session closes with Protocol Violation during reset from Windows to DOS.	**Affected Component** – SW.AMT.SDK.KVM.RealVNC **Impact:** Intel KVM Viewer disconnects session due to error. **Workaround:** Does not occur with KVMTray or UltraVNC. **Notes:** Reproduction Steps: 1. Boot system to Windows. 2. Open KVM session. 3. Reset remote system through RCO or local reset to moved system to ODS mode (need to run chkdsk or create BSOD). 4. KVM session should remain connected however closes session with "Connection to remote machine stopped. Reason: Error: 0x80862602: KVM protocol violation"	8.1.0.1143

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
193820 / 193950	IMSS hung when pressing extended system details immediately after loading the application on Windows 8.	**Affected Component** – SW.AMT.Icon **Impact:** IMSS application is unresponsive. **Workaround:** Recovery by killing process. **Notes:** Only seen on Windows 8 32-bit. **Reproduction Steps:** 1. Burn image. 2. Do not provision Windows 8 system. 3. Start IMSS (If already started, open icon and select Exit and restart IMSS again). 4. Go to the advanced tab in IMSS. Press Extended System Details. 5. Application hangs.	8.1.0.1143
194631 / 194715	EFI and Windows 64-bit versions of FPT fail to consume values for MEIdleTimeout FOV	**Affected Component** – SW.Tools.FlashProgrammingTool **Impact:** **Workaround:** Reopen application reset the strings changes and the strings return to the localized language. **Notes:**	8.0.0.1240 eng drop
193704	IFR Update Agent will not install on Windows XP 32-bit or Windows XP 64-bit system	**Affected Component** – Installer **Impact:** Unable to install IFR Update Agent on Windows XP 32 and 64 bit systems. **Workaround:** N/A **Notes:**	8.0.0.1240 eng drop
193488	After flashing image, FWUPDLCL returns "Error 8769: Polling for FW Update Failed." And "Error 8707: Firmware update failed due to an internal error."	**Affected Component** – SW.Tools.FwUpdLcl **Impact:** Intermittent failures to upgrade FW images using FWUpdLcl. **Workaround:** N/A **Notes:**	8.0.0.1240 eng drop



7.5 Closed – Intel® Anti-Theft Technology

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
		Affected Component – **Impact:** **Workaround:** **Notes:** Reproduction Steps:	

7.6 Closed – Intel® Upgrade Service

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
		Affected Component – **Impact:** **Workaround:** **Notes:** Reproduction Steps:	

7.7 Closed – Not Firmware Issue

Issue #	Description	Affected Component/Impact / Workaround/Notes
196554	HECI failures with Microsoft* Windows 8 Build 8250.	**Affected Component** –SW.HECI Driver **Impact:** Unable to use tools dependent on HECI such as MEINFO with Windows 8 Build 8250. **Workaround:** N/A **Notes:** Expected behavior in Microsoft* Windows. Error does not occur when installation while logged in as "Administrator" user account or by invoking "Run as Administrator" when launching MEInfo utility. Reproduction Steps: 1. Run MEInfo 2. Instead of displaying information requested, the following error occurs: MeInfowin Error: 9470: 'Fail to load driver <PCI access for windows>'.

Issue #	Description	Affected Component/Impact / Workaround/Notes
194922	802.1x EAP-PEAP authentication fails with Microsoft's NPS RADIUS, and Cisco's ACS RADIUS.	**Affected Component** – FW.AMT.1x **Impact:** 802.1x connectivity loss. **Notes:** During debug, the failure was confirmed to be a configuration issue with NPS.
3525268 / 3707483	Intel® AMT IP address is shown incorrectly after loading Intel Fast Call For Help	**Affected Component** – MEBX **Impact:** May be unable to connect to remote system. **Workaround:** N/A **Notes:** Reproduction Steps: 1. Set up Fast Call For Help environment. 2. Provision AMT 3. Reboot and enter Intel Fast Call For Help 4. Check IP information
194427	Alarm Clock fails to wake the system from S3.	**Affected Component** – FW.Kernel.AlarmClock **Impact:** System may not wake from S3 by Alarm Clock. **Workaround:** none **Notes:** Reproduction Steps: 1. Flash image on system under test. 2. Provision SUT. 3. Add Alarm for >4 minutes. 4. Move SUT to S3. 5. Wait approximately 6 minutes. 6. SUT should wake to S0 but remains in S3 6 of 10 tests.

Closed Issues



Issue #	Description	Affected Component/Impact / Workaround/Notes
191570	FPTW.exe -ERASE fails at 69% if system has been previously resumed from S3.	**Affected Component** – ClientBIOS **Impact:** **Workaround:** DOS version (FPT.exe) is not affected and can be used. **Notes:** Reproduction Steps: 1. Boot system to Windows 2. Place system in S3 3. Resume system from S3 4. Run FPTW.exe –ERASE from a Windows command line Command should successfully complete however, will fail with following message -Erasing Flash Block [0x580000] - 69% complete. Error 8: Software sequencing failed. Make sure that you have access to target flash area!
193696/ 193721	Connecting Intel KVM Viewer session to an active pipe with unsupported display resolution displays protocol violation error during code/enter screen.	**Affected Component** – SW.AMT.SDK.KVM.RealVNC **Impact:** Intel KVM Viewer will fail to connect session on first attempt is remote system has unsupported display resolution. **Workaround:** Open KVM session again. **Notes:**
193874	LMS hangs when disconnected from the network cable on Windows 8 32-bit system.	**Affected Component** – SW.AMT.Services **Impact:** Network connectivity loss only observed on Windows 8 32-bit OS. **Workaround:** Restart LMS. **Notes:** No longer reproduced on latest Windows 8 build.

Issue #	Description	Affected Component/Impact / Workaround/Notes
194722	Machine restart and stuck in 009A code when try to wake ME after the first time entered to Moff with current NIC	**Affected Component** – ClientBIOS **Impact:** When trying to wake ME from Moff after the first time, SUT reset and stuck in post code 009A **Workaround:** Recovery by G3 **Notes:** Reproduction Steps: 1. Boot SUT with different network adapter. 2. Add a valid profile to ME store 3. Move SUT to Sx and ensure WiAMT connectivity. 4. Wait for ME to enter Moff state (idle timeout =1). 5. When ME is in Moff, wake ME vy ARP, NDP, ping etc. 6. ME should move to M3 in Sx state but instead SUT resets and hangs at 009A code.
194680	"AMT on Wireless" is not available in Level 3 Upgrade.	**Affected Component** – ClientBIOS **Impact:** After making Level 3 Upgrade on B75 machine and provisioning, the Wireless submenu is missing from WebUI. The user cannot create a new wireless profile. **Workaround:** none **Notes:**



Issue #	Description	Affected Component/Impact / Workaround/Notes
193637	Caps Lock does not function on remote system with Scancode Extension.	**Affected Component** – SW.AMT.SDK.KVM.RealVNC **Impact:** Caps Lock key cannot be used in KVM sessions. **Workaround:** N/A **Notes:** When working with Linux library and using the scancode extension, the caps lock; number lock and Alt+key events on the console side are not forwarded to the server. Reproduction Steps: 1. After burning image on system, enter Intel® MEBX. 2. Enable SOL/IDER 3. Configure system to enterprise mode with PID and PPS. 4. Wait for machine to be in Post Provision state. 5. Boot to host OS. 6. Enable AMT_RedirectionService listener via WSMAN. 7. Enable CIM_RedirectionService via CIM_KVMRedirectionSAP.RequestStatChange (moving it into 2) 8. Enable Port 5900 via IPS_KVMRedirectionSettingData.put method. 9. Compile linux vncgui sample. 10. Run vncgui with Scancode extension enabled. 11. Press Caps Lock on console side. 12. CAPS lock should respond to input from management console but doesn't.

Issue #	Description	Affected Component/Impact / Workaround/Notes
192024	Power Package tests passing with Intel® AMT enabled and PP2 disabled.	**Affected Component** – FW.AMT.BIST **Impact:** Desktop platforms with DeepSx support unexpectedly pass Power Package tests when PP2 is disabled. **Workaround:** N/A **Notes:** Unable to reproduce Desktop Only issue. Reproduction Steps 1. Take the DESKTOP image, edit it in FITC and disable PowerPackage 2 2. By default Intel® AMT isn't disabled, make sure this is the case. 3. Burn image. Run memanuf.
191570	FPTW.exe -ERASE fails at 69% if system has been previously resumed from S3.	**Affected Component** – ClientBIOS **Impact:** **Workaround:** DOS version (FPT.exe) is not affected and can be used. **Notes:** Reproduction Steps: 5. Boot system to Windows 6. Place system in S3 7. Resume system from S3 8. Run FPTW.exe –ERASE from a Windows command line Command should successfully complete however, will fail with following message -Erasing Flash Block [0x580000] - 69% complete. Error 8: Software sequencing failed. Make sure that you have access to target flash area!

Closed Issues



Issue #	Description	Affected Component/Impact / Workaround/Notes
194001	FWUPDLCL failed to update using restore point bin file after flashing previous_oem_image	**Affected Component** – FW.Kernel.FwUpdLcl **Impact:** MEFW Updates using restore points fail. **Workaround:** N/A **Notes:** Reproduction Steps: 1. Flash image. 2. Execute fwupdlcl.exe -save store.bin 3. Flash previous kit image. 4. Execute fwupdlcl.exe –f store.bin –forcereset 5. System displays Error 8741: FW Update Failed and Error 8707: Firmware update failed due to an internal error.
192024	Power Package tests passing with Intel AMT enabled and PP2 disabled.	**Affected Component** – FW.AMT.BIST **Impact:** Desktop platforms with DeepSx support unexpectedly pass Power Package tests when PP2 is disabled. **Workaround:** N/A **Notes:** Unable to reproduce. Desktop Only issue. Reproduction Steps 4. Take the DESKTOP image, edit it in FITC and disable PowerPackage 2 5. By default Intel AMT isn't disabled, make sure this is the case. 6. Burn image. 7. Run memanuf.

7.8 Closed – No Plan to Fix

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
196855/ 196856	When Intel® AMT failed to connect to MPS by alert policy the "Get Technical Help" button changed to "Cancel" while UI policy has defined the "Cancel" button as enabled.	**Affected Component** –SW.AMT.Icon **Impact:** Get Technical Help button is not enabled as defined by policy. **Workaround:** N/A **Notes:** Reproduction Steps: 1. Provision Intel® AMT. 2. Add alert policy and UI policy in MPS. 3. Initiate CIRA connection alert. 4. Unplug MPS network connection. 5. Verify the status is "Connecting" 6. The Get Technical Help button changes to "Cancel".	Deferred to Future Projects
191222 / 195816	After few seconds of sending text via SOL session in CIRA from and to AMT in the same time, sending is stuck and session closed.	**Affected Component** – FW.AMT.Redirection **Impact:** SOL session closes. **Workaround:** N/A **Notes:**	Deferred to Future Projects
193574	During Intel Firmware Recovery (IFR) at **Stage 2 of 2**, if system is allowed to go to S3/S4, upon system resume, the Firmware Update (FWU) tool displays error "A general FW issue has occurred. Please try reinstalling the Intel ME FW Tool".	**Affected Component** – SW.Tools.FwUpdLcl **Impact:** IFR firmware update is unsuccessful if system is allowed to go to S3/S4 state during update. **Workaround:** N/A **Notes:** Reproduction Steps: 1. Run MEFWR.exe and then when process gets to **Stage 2 of 2**, put the system to S3 or S4. 2. Resume system 3. An error will be displayed "A general FW issue has occurred. Please try reinstalling the Intel ME FW Tool".	Not a current requirement



Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
193573	During Intel Firmware Recovery (IFR) at **Stage 1 of 2**, if system is allowed to go to S3/S4, upon system resume, the Firmware Update (FWU) tool displays error "A general FW issue has occurred. Please try reinstalling the Intel ME FW Tool".	**ffected Component** – SW.Tools.FwUpdLcl **Impact:** IFR firmware update is unsuccessful if system is allowed to go to S3/S4 state during update. **Workaround:** N/A **Notes:** Reproduction Steps: 1. Run MEFWR.exe and then when process gets to **Stage 1 of 2**, put the system to S3 or S4. 2. Resume system 3. An error will be displayed "A general FW issue has occurred. Please try reinstalling the Intel ME FW Tool".	Not a current requirement
195605	AMT turns passive when DHCP discover is sent by host after 802.1x authentication before the AMT received an IP address.	**Affected Component** – FW.AMT.OS Drivers **Impact:** Unable to remotely wake system. **Workaround:** Power button. **Notes**:	Deferred to Future Projects
191185	When running client application (e.g. MEInfo) over MEI and then aborting it after connection has been established, the MEI driver resets.	**Affected Component** – SW.HECI Driver **Impact:** May affect operation of other software including customer's which makes calls to MEI driver and suddenly stop the application. **Workaround:** N/A **Notes:** Reproduction Steps: N/A	N/A
194993	IMSS is not displayed to the user nor is a lack of communication status for COM/UNS when UNS is stuck.	**Affected Component** – SW.AMT.Icon **Impact:** IMSS GUI cannot be loaded when UNS is stuck. **Notes:** Reproduction Steps:	Deferred to Future Projects

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
193914	ME Debug viewer displays [EVT_GRP_CHECKPOINT] & [EVT_GRP_PWRMGMT] error messages while running Intel® ME Test Suite, ME_PM_20.1, 20.4, 20.5, 20.6 and 20.7.	**Affected Component** – SW.Tools.MEDebug **Impact:** **Workaround:** N/A **Notes:** Reproduction Steps: 1. Boot system and activate AMT. 2. Boot to OS. 3. Configure ME Debug viewer to collect log information from SUT. 4. Run Intel® ME Test Suite and choose Package->open->PPT->5MB_Firmware->Mobile->Wireless->Compliance_Power_G3-S5.xml 5. Select ME_PM_20.6 (or one of the others listed) and run it. 6. ME Debug Viewer displays the following: "Power Button pressed for 5sec - transitions to S4->S5" to "Wait until the machine transitions to S5".	Deferred to Future Projects

7.9 Closed – Documentation Change

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
196559	Non Unicode languages (e.g. Chinese) in Message Language menu may be displayed corrupted or inversely in Windows XP.	**Affected Component** – SW.AMT.Docs **Impact:** **Workaround:** Can be resolved by opening Regional and Language then selecting to install the proper languages. **Notes:** Windows XP and earlier versions didn't include the Chinese language pack by default and may not have been installed with Microsoft* Windows.	8.1.0.1265



Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in Kit#
196736	Incorrect VSCC values for SST and Chingis SPI parts in vsccommn.bin.	**Affected Component** – Documentation.SPIFlashProgrammingGuide **Impact:** System will fail to boot. **Workaround:** **Notes:** vsccommn.bin file rev 2.7 was updated with the following changes: Updated vscc value with 0x2009 and 0x2005 in vsccommn.bin for SST25VF016B, SST25VF032B, SST25VF040B, SST25F080B. and Updated Chingis device ID with 7F44h, 7F45h, 7F46h in vsccommn.bin for PM25LQ080C, PM25LQ016C, and PM25LQ032C	8.1.0.1265

8 Known Issues

8.1 Open – Intel® AMT

Issue #	Description	Affected Component/Impact / Workaround/Notes
197140	SOL over 802.1x is closed during reset When LAN driver is disabled SOL stays open.	**Affected Component** – FW.AMT.1x **Impact:** SOL session is closed unexpectedly **Workaround:** Re-attempt SOL session. **Notes**:
197045	CILA WS-Event should be sent out immediately and not after ~30 seconds.	**Affected Component** – FW.AMT.WS-Eventing **Impact:** Request for assistance delayed. **Workaround:** None. **Notes:** Observed when wireless profile in Sx is enabled and only when provisioned with PSK. Reproduction Steps: 1. Provision system. 2. Subscribe for the "Intel(r) AMT:All" event using the appropriate "CIM_FilterCollection" instance. 3. Restart the system and press CTRL+ALT+F1 in the boot screen to start a user-initiated session. 4. Event can be viewed using a WS-Eventing console. 5. A CILA WS-Event is sent after 20-30 seconds.
197036	In public networks, Intel® ME doesn't move to Moff after the idle timeout or after >5min of no traffic.	**Affected Component** – FW.AMT.General **Impact:** Intel® AMT may be not be accessible. **Workaround:** None. **Notes:** Observed when wireless profile in Sx is enabled and only when provisioned with PSK. Reproduction Steps: 1. Provision SUT using PSK and idle timeout to '1'. 2. Add a valid wireless profile. 3. Enable wireless in Sx. 4. Move SUT to Sx 5. Ensure you can connect to SUT through WebUI. 6. Intel® ME should enter Moff after ~1 min of no traffic but does not.



Issue #	Description	Affected Component/Impact / Workaround/Notes
196794	Intel® AMT doesn't send a DDNS update when disabling/enabling DDNS in a shared FQDN with a pure wireless IPv4 environment.	**Affected Component** – FW.AMT.NETP **Impact:** Intel® AMT may be not be accessible. **Workaround:** None. **Notes:** Reproduction Steps: 7. Remove LAN cable from system. 8. Disable the wireless LAN driver. 9. In WebUI, go to Wireless Settings and Enable Wireless and set a valid Wireless Profile. 10. In WebUI, go to System Name Settings and set: a. Shared FQDN and Enable. b. Disable DDNS. c. Enable DDNS. 11. Use a sniffer to monitor DNS packets. 12. Intel® AMT should send DDNS update but doesn't.
100156540 / 196879	When a restart is performed during a wireless SOL or IDE redirection session, the session sometimes ends unexpectedly during the restart.	**Affected Component** – FW.AMT.Redirection **Impact:** Wireless SOL and IDER sessions sometimes end unexpectedly. **Workaround:** Recovery by reopening redirection session. **Notes:**
195605	Intel® AMT turns passive when DHCP discover is sent by host after 802.1x authentication before the AMT received an IP address.	**Affected Component** – FW.AMT.1x **Impact:** Unable to remotely wake system. **Workaround:** Power button. **Notes**:

8.2 Open – ME Kernel

Issue #	Description	Affected Component/Impact / Workaround/Notes
		Affected Component: **Impact:** **Workaround:** **Notes:** Reproduction Steps:

8.3 Open - Integrated Clock Control (ICC)

Issue #	Description	Affected Component/Impact / Workaround/Notes
		Affected Component: **Impact:** **Workaround:** **Notes:** Reproduction Steps:

8.4 Open – Software / Tools

Issue #	Description	Affected Component/Impact / Workaround/Notes
197125	Unable to install Intel® IMSS on Microsoft* Windows XP.	**Affected Component** –Installer **Impact:** Installer fails to complete the installation. **Workaround:** N/A **Notes:** N/A
196904	'MEinfowin32/64.exe –EOL' and 'MEinfowin32/64.exe' stop running on Win8x64 UEFI native boot OS environment.	**Affected Component** –SW.Tools.MeManuf **Impact:** MEInfo and MEManuf –EOL doesn't work on EFI native boot OS environment. **Workaround:** N/A **Notes:** Reproduction Steps:
195872	SUT will hang at POST code 0x96 if network cable is not plugged in before running Platform Debug Analyzer (Intel® PDA) tool.	**Affected Component** – FW.Kernel.MDES **Impact:** Only occurs with a MDES enabled image and when the network cable is not connected. **Notes:**

8.5 Open – Intel® Anti-Theft Technology

Issue #	Description	Affected Component/Impact / Workaround/Notes
		Affected Component – **Impact:** **Workaround:** **Notes:** Reproduction Steps:



8.6 Open – Intel® Identity Protection Technology

Issue #	Description	Affected Component/Impact / Workaround/Notes
		Affected Component – **Impact:** **Workaround:** **Notes:** Reproduction Steps

8.7 Open – Intel® Upgrade Service

Issue #	Description	Affected Component/Impact / Workaround/Notes
		Affected Component – **Impact:** **Workaround:**. **Notes:** Reproduction Steps

8.8 Open – Not Firmware Related

Issue #	Description	Affected Component/Impact / Workaround/Notes

8.9 Open – Documentation

Issue #	Description	Affected Component/Impact / Workaround/Notes
194228	Error codes for partial FW update failures (both uCode and language) are not documented.	**Affected Component** – SW.AMT.Docs **Impact:** UNS adds failure message for partial FW update with error code and user will not have indication about failure reason. **Workaround:** N/A **Notes:**

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