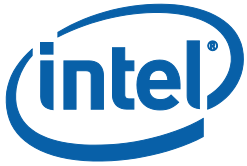

Intel® Management Engine 11 (Intel® ME) Software

Release Notes - NDA

6th Generation Intel® Processor Families I/O Platform
5th Generation Intel® Core™ Processor (U series) Platform I/O
Intel® Core™ M Processor Family Platform I/O
4th Generation Intel® Core™ Processor U-Series Platform I/O
Intel® 8 Series/C220 Series Chipset Family
Intel® 7 Series/C216 Chipset Family
Intel® C610 Express Chipset
Intel® C600 Series Express Chipset with Intel® ME 8.1

July 2019

Revision 11.0.6.1194v3 Hot Fix Release

Intel Confidential

Contents

Revision History

Revision Number	Description	Revision Date
11.0.0.1153	Intel® ME 11 PV Release (Windows* 10 PV for Legacy Firmware platforms) Software-Only Kit	June 2015
11.0.0.1156	Intel® ME 11 Hot Fix Release Software-Only Kit	July 2015
11.0.0.1158	Intel® ME 11 Hot Fix Release Software-Only Kit	July 2015
11.0.0.1173	Intel® ME 11 Hot Fix Release Software-Only Kit	October 2015
11.0.2.1183	Intel® ME 11 Hot Fix Release Software-Only Kit	February 2016
11.0.3.1184	Intel® ME 11 Hot Fix Release Software-Only Kit	March 2016
11.0.4.1186	Intel® ME 11 Hot Fix Release Software-Only Kit	March 2016
11.0.5.1192	Intel® ME 11 Hot Fix Release Software-Only Kit	April 2016
11.0.5.1192	Reposted RNs for Intel® ME 11 Hot Fix Release Software-Only Kit - Intel® MEI driver version corrected to 11.0.5.1189	April 2016
11.0.6.1193	Intel® ME 11 Hot Fix Release Software-Only Kit	May 2016
11.0.6.1194	Intel® ME 11 Hot Fix Release Software-Only Kit Contents identical to Intel® ME 11.0.6.1193 but with correct version number	May 2016
11.0.6.1194v3	Hot Fix Release	July 2019

1 Introduction

1.1 Scope of Document

This document describes the content of this release and the changes since the previous versions.

This document covers the following Intel® Management Engine (Intel® ME) Software for the Intel® 7 and 8 Series Chipset Family and 4th generation Intel® Core™ processors based platforms.

- Digital Office Intel® vPro™
- Consumer

2 End of Maintenance

Intel® Management Engine 11 software reached end of maintenance on September 30, 2018. This product will no longer be supported with functional and security updates.This product will no longer be supported with functional and security updates.

Intel® Management Engine 11.0.6 software is compatible with Intel® Management Engine 8 firmware, Intel® Management Engine 9 firmware and Intel® Management Engine 10 firmware.

Additional information about end of maintenance policy can be found on https://cdrdv2.intel.com/v1/dl/getContent/576893

3 Important Notes about This Release

Sections of this document that have been updated since the previous version are highlighted in yellow.

Intel® Management Engine 11 Software has been updated to remove certain 3rd party components. Updates include:

- Intel® Trusted Connect Service (TCS) Client component was removed from the Management Engine Interface (MEI) installer. Intel® TCS Client is used when a re-key flow is required. Intel® Management Engine 8, Intel® Management Engine 9 and Intel® Management Engine 10 firmware don't currently use a re-key process, so this component is unnecessary.

- Intel recommends that customers use the latest Intel® ME 11.0.6 Software (refer to the customer release communication for details of the software kit, including VIP kit number).
  Current release [July 2019] is Intel® ME SW version 11.0.6.1194v3 for Ivy Bridge, Haswell and Broadwell 1.5MB SKUs [VIP. Kit 132221]) and is Intel® ME SW version 11.0.6.1194v3 for Ivy Bridge, Haswell and Broadwell 5MB SKUs [VIP. Kit 132220]).

- **System manufacturers must use the new driver to fully apply the changes provided. If you have systems manufactured with a previous driver you must uninstall the previous version and update with the version provided in the referred kit.**

- **With the new driver installed, Intel® TPM Provisioning Service and Intel® Capability Licensing Service will no longer be displayed in Windows Services list.**

- This release includes:
  - **Bug fixes.** See Issues Closed in this Release.
- The release does not include any new RCRs.
- Updates made to this document for this release are highlighted in yellow.

- Intel® ME Software 11.0.6.1193 was released with an incorrect version number. Intel® ME Software 11.0.6.1194 has the same content as Intel® ME Software 11.0.6.1193, but contains a correct version number.

Support for Intel® TA has been removed from the Intel® ME Software installer.

The SW contained within this kit supports the following platforms.

- 6th Generation Intel® Processor Families I/O Platform
- 5th Gen Intel® Core™ Processor (U series) Platform I/O
- Intel® Core™ M Processor Family Platform I/O
- 4th Generation Intel® Core™ Processor U-Series Platform I/O
- Intel® 8 Series/C220 Series Chipset Family
- Intel® 7 Series/C216 Chipset Family
- Intel® C610 Express Chipset
- Intel® C600 Series Express Chipset with Intel® ME 8.1

Beginning with Intel® ME10, the software installer has been converted to an MSI format. This change provides a secure single package executable instead of the Intel Installation Framework 2.0 (IIF2) package and the unpackaged installers that where provided in previous releases.

- Intel® ME Software HF 11.0.5.1192 HF included an updated MEI driver: 11.0.5.1189, submission ID: 1827251

4 Kit Details

4.1 Build Details

Kit	Build Details	Changes since previous SW-Only release	Reasons for changes
Intel® MEI Driver Version	11.0.5.1189 Certified for Windows* 7/8/8.1/10 Submission ID: 1827251	No	N/A
SOL Driver Version	11.0.0.1136 Certified for Windows* 7/8/8.1/10 Submission ID: 1726750, 1730516	N/A	N/A

5 Issue Status Definitions

This document provides sightings and bugs report for Intel® Management Engine Firmware 10.0 SKU, Software and Tools for Intel® AMT on the Intel® 8 Series/C220 Series Chipset Family based 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 Software 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.

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 Broadwell CRB SKU's unless otherwise noted either in this document or in the sightings tracking systems

6 Issues Closed in this Release

Issue #	Description	Affected Component/Impact / Workaround/Notes	Affected Platform(s) when using SW
227966	Unsigned Intel® MEI driver sys files	**Affected Component** – Build **Impact:** HLK test failure	All
227943 1207858954 1207875098	BSOD 133 in S4 cycle test	**Affected Component** – SW.HECI.Driver **Impact:** BSOD **Reproduction steps:** Run S4 cycle stress test	All
228001	BSOD 0xD1 in S4 cycle test	**Affected Component** – SW.HECI.Driver **Impact:** BSOD **Reproduction steps:** Run S4 cycle stress test	All

7 Issues Closed in 11.0.5.1192

Issue #	Description	Affected Component/Impact / Workaround/Notes	Affected Platform(s) when using SW
10070180	Intel® ME Software Installation failed on systems with Visual C++ Redistributable for Visual Studio 2015 14.0.23506	**Affected Component** – Installer **Impact:** Installation fails with error 1638, "Another version of this product is already installed" **Reproduction steps:** 1. Download VCRT 14.0.23506, https://www.microsoft.com/en-us/download/details.aspx?id=49984 2. Install VCRT 14.0.23506 3. Run SetupME.exe	All
10070109	Intel® ME Software Installation failed on Windows* 7	**Affected Component** – Installer **Impact:** The setup program ends prematurely with the following error message: Fatal error during installation. Reproduction steps: 1. Download VCRT 14.0.23506, https://www.microsoft.com/en-us/download/details.aspx?id=49984 2. Install VCRT 14.0.23506 3. Run SetupME.exe	All

8 Issues Closed in 11.0.4.1186

Issue #	Description	Affected Component/Impact / Workaround/Notes	Affected Platform(s) when using SW
227907	DAL: Slow MFA performance when resuming from Sx.	**Affected Component** – SW.AMT.Services **Impact:** Delayed MFA login when resuming from Sx **Reproduction steps:** 1. Transition platform using MFA to Sx. 2. Wake platform to S0.	Corporate

- In Intel® ME 11.0.4.1186 Software Hotfix, a **new IPT stack** (5.0) was integrated, including:
    - Intel® IPT with PTD (Protected Transaction Display) support for MPO (Multi Plane Overlay / DX11) on Microsoft Windows 10. This is required for Intel® Authenticate.

9 Issues Closed in 11.0.3.1184

Issue #	Description	Affected Component/Impact / Workaround/Notes	Affected Platform(s) when using SW
227470	Clicking "Learn more" in Intel® Management and Security Status application displays the help in Internet Explorer instead of in Microsoft Edge.	**Affected Component** – SW. AMT.Icon **Reproduction steps:** 1. In Microsoft Windows 10, open Intel® Management and Security Status. 2. Click "Learn more".	Corporate

- In addition, 11.0.3.1184 HF included an updated iCLS library with a fix for the following issue:
  - **Description**: Incorrect signature on an iCLS library.
  - **Impact**: Applications calling iCLS libraries and attempting to verify the libraries' digital signatures would fail to launch (e.g., Intel® Insider™ would fail to launch).

10 Issues Closed in 11.0.2.1183

Issue #	Description	Affected Component/Impact / Workaround/Notes	Affected Platform(s) when using SW
227449	System does not shut down when rebooted after exiting from Connected Standby	**Affected Component** – SW. HECI Driver **Impact:** System hangs **Reproduction steps:** 1. Boot to the OS. 2. Leave the system idle for 1 min, allowing the system to enter Connected Standby mode. 3. Wait for several minutes. 4. Wake up the system 5. If the event viewer log shows an MEI reset message, restart the system. If it does not, repeat Steps 2 through 4 until the message appears and then restart.	All
227448 227401	DAL: MFA: Delayed responsiveness when exiting from Sx	**Affected Component –** SW.JoM.JHI **Impact:** Intel Authenticate is available for user login 10-15 seconds after exiting S3/S4 **Reproduction steps:** Wake platform from S3/S4 state. **Workaround:** N/A	All
227382	BSOD during S0-S4 power cycling stress test	**Affected Component** – SW. HECI Driver **Impact:** BSOD **Reproduction steps:** 1. Install Windows 10 build 10586 2. Run S0-S4 stress test	All

Issue #	Description	Affected Component/Impact / Workaround/Notes	Affected Platform(s) when using SW
227542	Intel Security Assist Helper – Manufacturer Name appears as Unknown	**Affected Component** – Installer **Reproduction steps:** 1. Install Intel® ME drivers 2. Run msconfig.exe 3. In the Services tab, view the Manufacturer.	All

11 Intel® ME New Features (RCRs) in this Release

None.

12 Intel® ME New Features (RCRs) in earlier Releases

RCR #	Details	Released in Kit	Relevant SKUs
2262121	**Description**:. **Impact**: Changes made to ME 11.0.0.1173 software installer break Intel® DAL backward compatibility on the following legacy platforms: • Intel® ME 8.X • Intel® ME 9.0.X • Intel® ME 9.1.0 up to Intel® ME 9.1.32 • Intel® ME 9.5.0 up to Intel® ME 9.5.52 DLLs which have been removed from Intel® ME 11.0.0.1173 software will cause Intel® DAL failures, breaking Intel® Identity Protection Technology (Intel® IPT) and True Key functionalities. **Workaround**:To enable the impacted firmware releases above to work with	11.0.0.1173	All

RCR #	Details	Released in Kit	Relevant SKUs
	Intel® ME Software 11.0.0.1173 and later, Intel has released a standalone installer on VIP that installs the missing DLLs (Intel® DAL G-Plugin Update.zip). This installer should be run after installing the Intel® ME Software.		

13 Archive – Fixes in Previous Releases

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in release	Affected Platforms when using SW
226462, 321381, 5307302	On a PG-enabled platform, the system fails to enter S3	**Affected Component** – SW.HECI.Driver	11.0.0.1205	All
8159308	After upgrading from an Intel® ME 10 Software version, the 86x installer files are located in C:\Program files instead of C:\Program Files (x86).	**Affected Component** – Installer **Impact:** Installation files stored in wrong directory **Workaround:** N/A	11.0.0.1205	All

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in release
227179	Running S4 stress testing causes Windows* to blue screen (0x7E)	**Affected Component** – SW.HECI Driver **Impact** BSOD 0x7E **Workaround:** None **Notes:**	11.0.0.1202
227169	Running S4 stress testing causes Windows* to blue screen (0x133)	**Affected Component** – SW.HECI Driver **Impact** BSOD 0x133 **Workaround:** None **Notes:**	11.0.0.1202
227050	Cannot set OptInPolicy to 0x11 (KVM-only Opt-In - Remote IT Opt-In change allowed) via Intel® FPT.	**Affected Component** – SW.Tools.FlashProgrammingTool **Impact** Valid OptInPolicy config could not be applied via Intel® FPT. **Workaround:** None **Notes:**	11.0.0.1202
227052	Proper validation of OptInPolicy not occurring on input parameters by FPT.	**Affected Component** – SW.Tools.FlashProgrammingTool **Impact** Incorrect values could be input with no error messages. **Workaround:** None **Notes:**	11.0.0.1202

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in release
227034	Intel® FPT IdleTO variable is not being applied to the Intel® MEBX timeout correctly.	**Affected Component** – SW.Tools.FlashProgrammingTool **Impact** Idle timeout may not be programmed to the expected value. **Workaround:** None **Notes:**	11.0.0.1202
226684	Intel® FWUpdLcL tool hangs when ran on Windows* 7 OS.	**Affected Component** – SW.Tools.FwUpdLcl **Impact:** Intel® FWUpdLcl may hang in Windows* 7 OS. **Workaround:** None **Notes:**	11.0.0.1192
226594	Switching ICC profiles via Intel® FIT from Adaptive to Standard, does not apply the correct frequencies.	**Affected Component** – SW.Tools.FlashImageTool **Impact:** Incorrect frequencies applied when switching ICC profiles. **Workaround:** None **Notes:**	11.0.0.1192
226610	Running Intel® MEManuf –EOL will not be able to run and display errors.	**Affected Component** – SW.Tools.MEInfo **Impact:** Intel® MEManuf –EOL may not run. **Workaround:** None **Notes:**	11.0.0.1191
226609	Running Intel® FPT –I will display a module error message.	**Affected Component** – SW.Tools.MEInfo **Impact:** Intel® FPT displays an error message. **Workaround:** None **Notes:**	11.0.0.1191
226608	Running Intel® MEInfo –Verbose will not display SM BIOS tables.	**Affected Component** – SW.Tools.MEInfo **Impact:** Intel® MEInfo missing the SM BIOS tables. **Workaround:** None **Notes:**	11.0.0.1191

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in release
226497	After multiple hour long stress of running Intel® MEManuf, the tool will eventually display failures.	**Affected Component** – SW.Tools.MEManuf **Impact:** Intel® MEManuf will error after multiple errors. **Workaround:** None **Notes:** Reproduction Steps: 1. Boot to DOS. 2. Run Intel® MEManuf.exe –S0 3. Reboot and repeat.	11.0.0.1187
226467	Disabling Clock Gating via Intel® FIT still shows as enabled through the XML.	**Affected Component –** SW.Tools.FlashImageTool **Impact:** Clock Gating does not disable via Intel® FIT UI. **Workaround:** **Notes:**	11.0.0.1183
226462	When SharkBay consumer platform with Intel® ME 9.5 firmware which does not support Microsoft InstantGo* is left alone in S0 for a prolonged amount of time, platform will not be able to enter Sleep/S3.	**Affected Component –** SW.HECI Driver **Impact:** Sleep/S3 may not function after prolonged amount of time. **Workaround:** **Notes:**	11.0.0.1183
226341	Running Intel® MEManuf from USB drive may indicate Hibernation/S4 flow is not supported on platform.	**Affected Component –** SW.Tools.MEManuf **Impact:** Intel® MEManuf warns Hibernation is not supported. **Workaround:** **Notes:**	11.0.0.1183
226278	Running Intel® MEManuf –ISH –Test 3 will falsely pass even when an ISH sensor is not physically attached.	**Affected Component –** SW.Tools.MEManuf **Impact:** Intel® MEManuf test will falsely pass an ISH test. **Workaround:** **Notes:**	11.0.0.1180
226284	Running Intel® CCT in DOS displays an initialization failed error.	**Affected Component –** SW.Tools.CCT **Impact:** Intel® CCT may not run in DOS. **Workaround:** **Notes:**	11.0.0.1180

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in release
200334	During stress cycles, the Intel® MEI driver may be displayed as a yellow bang during Sx resume on a Windows* 8.1 platform	**Affected Component –** SW.HECI Driver **Impact:** Intel® ME communication will halt and result in a yellow bang in Windows* device manager. **Workaround:** **Notes:**	11.0.0.1173
226177	When waking from an S3 sleep state, HECI is in a yellow bang state due to using a non-zero Bootguard Profile.	**Affected Component** – SW.HECI Driver **Impact:** Intel® MEI yellow bang. **Workaround:** None **Notes:**	11.0.0.1173
225920	Running S3/S4 stress testing causes Windows* to blue screen.	**Affected Component** – SW.HECI Driver **Impact:** BSOD 0x09F and 0x07E ME TeeDriverx64.sys occurs when running Sx stress. **Workaround:** None **Notes:**	11.0.0.1168
225849	Sending HECI commands while the platform is transitioning down to different Sx states, causes a BSOD	**Affected Component** – SW.HECI Driver **Impact:** BSOD occurs when sending HECI commands while in SX states. **Workaround:** None **Notes:** Reproduction Steps: 1. Flash image. 2. Move platform to different Sx states (S3,S4,S5) 3. Send Intel® MEI command as connect. 4. BSOD occurs.	11.0.0.1168
225810	When using Intel® FPT to commit FPF fuses and close the Manufacturing bit, the platforms still behaves as if FPF were never fused.	**Affected Component** – SW.Tools.FlashProgrammingTool **Impact:** Close manufacture flow may not function. **Workaround:** None **Notes:**	11.0.0.1165

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in release
225245	Intel® ICC configurations values that have been set in Intel® FIT do not hold once an Intel® FPT –closemnf flow has been initiated.	**Affected Component** – SW.Tools.FlashImageTool **Impact:** Intel® ICC configurations returns to default after an Intel® FPT –closemnf. **Workaround:** None **Notes:**	11.0.0.1163
225944	Intel® MEManuf reports an error message with the command "-s0 –nowlan" when a PCIEx16 VGA card is installed.	**Affected Component** – SW.Tools.MEManuf **Impact:** Intel® MEmanuf error when a PCIEx16 card is installed on board. **Workaround:** None **Notes:**	11.0.0.1163
226008	When running Intel® MEManuf Bist test and disabling Intel® Required tests flows, Intel® MEManuf will end with an Operation Passed (with warnings) but the errorlevel will return 1.	**Affected Component** – SW.Tools.MEManuf **Impact:** Intel® MEManuf returns errorlevel 1 when disabling Intel® Required Bist tests. **Workaround:** None **Notes:**	11.0.0.1163
225708	During a BIOS flash via Intel® FPT, using the -savemac command does not save current MAC address when verifying in the BIOS.	**Affected Component** – SW.Tools.FlashProgrammingTool **Impact:** Intel® FPT unable to save MAC address. **Workaround:** None **Notes:** 1. Flash BIOS via "Intel FPT -f xx.bin –savemac" 2. After flashing BIOS "Intel® FPT –greset" to global restart SUT. 3. Go to BIOS, check MAC address.	11.0.0.1163
225760	Windows* Intel® FPT hangs when trying to update EHBCState parameter via Intel® FPTW64.exe –u –n Ehbcstate –v 0x01.	**Affected Component** – SW.Tools.FlashProgrammingTool **Impact:** Intel® FPT hangs when updating EHBCState. **Workaround:** None **Notes:**	11.0.0.1160

Issue #	Description	Affected Component/Impact / Workaround/Notes	Fixed in release
225500	Using Intel® FPT to update OEM Certificate throws an incorrect error message regarding how many characters are in the RawHashFile length located in the Intel® FPT cfg file.	**Affected Component** – SW.Tools.FlashProgrammingTool **Impact:** Incorrect error message thrown when trying to update OEM Certificate. **Workaround:** None **Notes:**	11.0.0.1160
225234	When reading OptInPolicy using command line via Intel® FPT –r OptInPolicy, the value outputs an incorrect hex format value.	**Affected Component** – SW.Tools.FlashProgrammingTool **Impact:** OptInPolicy may have a misleading output value. **Workaround:** None **Notes:**	11.0.0.1160
321317	MEI: connectivity loss from local (WebUI , VC) after running WS-MAN commands from local.	**Affected Component** – SW.HECI.Driver **Impact:** Sporadically, applications writing to the Intel® MEI driver (e.g., Web UI, Intel® MSS, JHI) may hang **Workaround:** N/A	11.0.0.1158
225815	BSOD when installing Intel® ME Software on Intel® ME 9.1 and Intel® ME 8.1 Software and Microsoft Windows* 7	**Affected Component** – SW.HECI.Driver **Impact:** BSOD **Workaround:** N/A **Notes:**	11.0.0.1156
225681	BSOD when disabling MEI driver, with verifier configuration	**Affected Component** – SW.HECI.Driver **Impact:** BSOD. Applies to all operating systems including Microsoft Windows* 10. **Workaround:** N/A	11.0.0.1156
5254255	Installer: Component size missing for Intel(R) Management Engine Components in Control Panel	**Affected Component** – Installer **Impact:** Missing missing in Control Panel. **Workaround:** N/A	11.0.0.1156

14 Known Issues

14.1 Open – Software

Issue #	Description	Affected Component/Impact / Workaround/Notes	Affected Platform(s) when using SW
225639	Intel® CSME Unable to enter PG when AMT is Provisioned with Windows 7	**Affected Component** – SW.HECI.Driver **Impact:** platform cannot enter Power Gating. **Workaround:** N/A **Notes:** Lan is disconnected. Reproduction Steps: 1. Provision AMT 2. Boot to OS 3. Check Power Gating FW is blocking PG entry	All
225741	When a Watchdog message Reply is concatenated with another message, the MEI driver does not read the other message.	**Affected Component** – SW.HECI.Driver **Impact:** Possible that can cause HECI Link Reset **Workaround:** N/A **Notes:**	All
22567	LMS not functioning when when verifier is running on MEI	**Affected Component** – SW.HECI.Driver **Impact:** **Workaround:** N/A	All