

# ME1210 Edelweiss (Software Update Package)

PCN no.: 2525

Revision	Brief Description of Changes	Date of Issue
1.0	Initial issue	2025-07-04

## 1. Description of the change

This PCN includes firmware modifications contributing to the fix of multiple issues and added improvements for the BMC.

Please refer to the following table for the list of updated components:

Product	Component	Daisy	Edelweiss
ME1210	BIOS	1.04.0976F51B	1.05.09889CCE
	BMC	2.14.0176E386	2.16.01940CF8
	FPGA	1.5.0800DBCC	(SAME)
	NOS*	2.26.016A3532	(SAME)

\*The NOS version is independent from this software package, but Kontron strongly suggest using the latest available version.

## 2. Change Classification

<b>Classification</b>	<ul style="list-style-type: none"> <li>Maintenance release, Product improvement</li> </ul>
<b>Applicability</b>	<ul style="list-style-type: none"> <li>This package is field-upgradable; please download the bundle from the FIRMWARE section of the ME1210 page of Kontron's corporate website : <a href="#">Here</a></li> </ul>

## 3. Impact on customer's application and recommended actions

For all ME1210 units deployed with older FWs, it is recommended to apply this FW upgrade as soon as is practical. Please refer to the firmware upgrade procedure found below for a step-by-step upgrade process.

## 4. Firmware upgrade procedure

The following procedures will upgrade the BMC/FPGA/BIOS

### Prerequisites

For BMC/FPGA using Redfish: The .tar file provided by Kontron was downloaded on the remote computer and access to the BMC Redfish interface is required.

For BMC/FPGA using the Web UI: The .tar file provided by Kontron was downloaded on the remote computer and access to the BMC Web UI is required.

For UEFI/BIOS using built-in EUFI shell: The .zip archive provided by Kontron has been decompressed on a Linux OS installed on the platform and access to the UEFI/BIOS menu is required.

For UEFI/BIOS from a Linux-based operating system: The tar.gz archive provided by Kontron has been decompressed on a Linux OS installed on the platform and a Linux-based OS is installed on the platform.

## 4.1. Upgrading BMC and FPGA

The BMC and FPGA firmware can be upgraded using Redfish or the Web UI.

NOTE: For the upgrade to work, the upgrade image version must be different from the one running on the BMC. In other words, it is not possible to upgrade with the same version.

### 4.1.1. Upgrading the firmware of the BMC and the FPGA using Redfish

#### Prerequisites

1	The .tar file provided by Kontron was downloaded on the remote computer.
2	Access to the BMC Redfish interface is required.

#### Procedure

Step_1	<p>From the BMC Redfish interface, verify the current firmware version.</p> <p>RemoteComputer_OSPrompt:~\$ curl -k -s --request GET --url https://[user:password@bmc_ip]/redfish/v1/Managers/bmc   jq .FirmwareVersion</p> <pre>\$ curl -k -s --request GET --url https://admin:ready2go@172.16.182.31/redfish/v1/Managers/bmc   jq .FirmwareVersion "2.00.0159fce6"</pre>
Step_2	<p>Verify that the new firmware isn't already uploaded to the platform using the URL returned by this command. Otherwise, the BMC will return an error message upon launching the update.</p> <p>RemoteComputer_OSPrompt:~\$ curl -k -s --request GET --url https://[user:password@bmc_ip]/redfish/v1/UpdateService/FirmwareInventory   jq</p> <pre>\$ curl -k -s --request GET --url https://admin:ready2go@172.16.182.31/redfish/v1/UpdateService/FirmwareInventory   jq {   "@odata.id": "/redfish/v1/UpdateService/FirmwareInventory",   "@odata.type": "#SoftwareInventoryCollection.SoftwareInventoryCollection",   "Members": [     {       "@odata.id": "/redfish/v1/UpdateService/FirmwareInventory/8c50fd55"     },     {       "@odata.id": "/redfish/v1/UpdateService/FirmwareInventory/c172d3d8"     },     {       "@odata.id": "/redfish/v1/UpdateService/FirmwareInventory/d6bcd2a6"     },     {       "@odata.id": "/redfish/v1/UpdateService/FirmwareInventory/ebbd5d7b"     }   ],   "Members@odata.count": 4,   "Name": "Software Inventory Collection" }</pre>
Step_3	<p>Verify that the new firmware version doesn't match the version of a firmware inventory entry. If necessary, repeat for all firmware inventory entries.</p> <p>RemoteComputer_OSPrompt:~\$ curl -k -s --request GET --url https://[user:password@bmc_ip]/redfish/v1/UpdateService/FirmwareInventory/[FIRMWARE_ID]   jq .Version</p>

	<pre>\$ curl -k -s --request GET --url https://admin:ready2go@172.16.182.31/redfish/v1/UpdateService/FirmwareInventory/d6bcd2a6   jq .Version [   "1.02.09579455" ]</pre>
Step_4	<p>Set the apply time of the firmware update to OnReset.</p> <p>RemoteComputer_OSPrompt:~\$ curl -k -s --request PATCH --url https://[user:password@bmc_ip]/redfish/v1/UpdateService --header 'Content-Type: application/json' --data '{"HttpPushUriOptions": {"HttpPushUriApplyTime": {"ApplyTime": "OnReset"}}}'   jq</p>
	<pre>\$ curl -k -s --request PATCH --url https://admin:ready2go@172.16.182.31/redfish/v1/UpdateService --header 'Content-Type: application/json' --data '{"HttpPushUriOptions": {"HttpPushUriApplyTime": {"ApplyTime": "OnReset"}}}'   jq</pre>
Step_5	<p>Upload the BMC firmware by executing the following command. The BMC should return a TaskService URL.</p> <p>RemoteComputer_OSPrompt:~\$ curl -k -s --request POST --url https://[user:password@bmc_ip]/redfish/v1/UpdateService --header 'Content-Type: application/octet-stream' --upload-file '[file.tar]'   jq</p>
	<pre>\$ curl -k -s --request POST --url https://admin:ready2go@172.16.182.31/redfish/v1/UpdateService --header 'Content-Type: application/octet-stream' --upload-file 'update.tar'   jq {   "@odata.id": "/redfish/v1/TaskService/Tasks/1",   "@odata.type": "#Task.v1_4_3.Task",   "Id": "1",   "TaskState": "Running",   "TaskStatus": "OK" }</pre>
Step_6	<p>Using the URL returned by the previous step, ensure that the task is completed. PercentComplete value should be 100 before proceeding with the next steps. It may take several seconds.</p> <p>RemoteComputer_OSPrompt:~\$ curl -k -s --request GET --url https://[user:password@bmc_ip]/redfish/v1/TaskService/Tasks/[TASK_ID]   jq .PercentComplete</p>
	<pre>\$ curl -k -s --request GET --url https://admin:ready2go@172.16.182.31/redfish/v1/TaskService/Tasks/1   jq .PercentComplete [   100 ]</pre>
Step_7	<p>Reboot the BMC and wait for the BMC to power on.</p> <p>RemoteComputer_OSPrompt:~\$ curl -k -s --request POST --url https://[user:password@bmc_ip]/redfish/v1/Managers/bmc/Actions/Manager.Reset --header 'Content-Type: application/json' --data '{"ResetType": "GracefulRestart"}'   jq</p> <p>NOTE: When upgrading the FPGA firmware, the firmware activation process will automatically reboot the BMC.</p>
	<pre>\$ curl -k -s --request POST --url https://admin:ready2go@172.16.182.31/redfish/v1/Managers/bmc/Actions/Manager.Reset --header 'Content-Type: application/json' --data '{"ResetType": "GracefulRestart"}'   jq {   "@Message.ExtendedInfo": [     {       "@odata.type": "#Message.v1_1_1.Message",       "Message": "Successfully Completed Request",       "MessageArgs": [],       "MessageId": "Base.1.8.1.Success",       "MessageSeverity": "OK",       "Resolution": "None"     }   ] }</pre>
Step_8	<p>Once the BMC becomes available again, verify that the firmware version has changed.</p> <p>RemoteComputer_OSPrompt:~\$ curl -k -s --request GET --url https://[user:password@bmc_ip]/redfish/v1/Managers/bmc   jq .FirmwareVersion</p> <pre>\$ curl -k -s --request GET --url https://admin:ready2go@172.16.182.31/redfish/v1/Managers/bmc   jq .FirmwareVersion "2.00.015afdb"</pre>

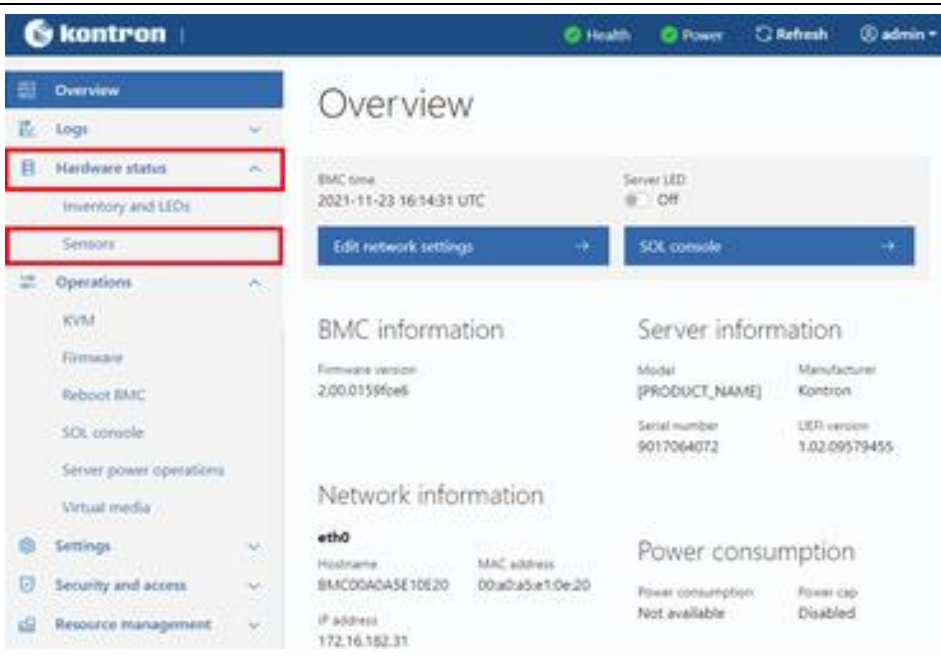
4.1.2. Upgrading the firmware of the BMC and FPGA using the Web UI

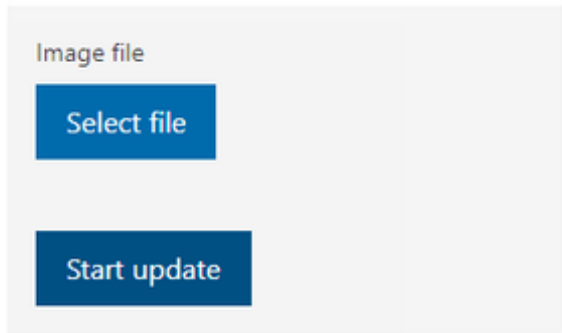
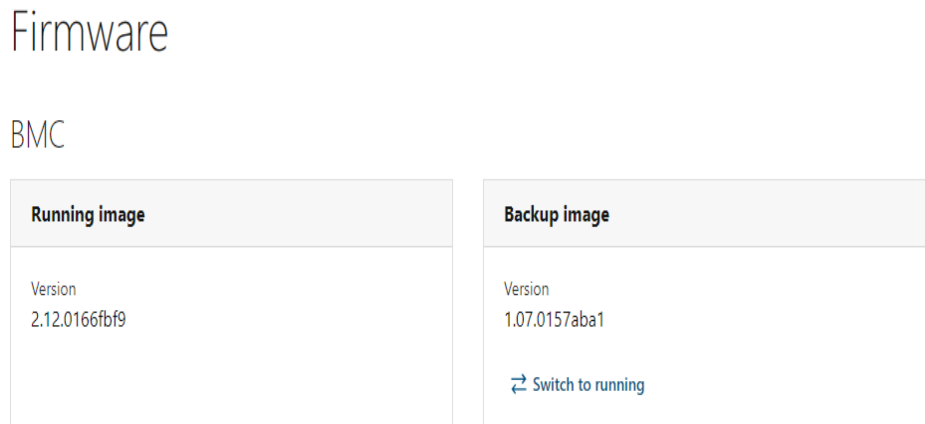
Prerequisites

1	The .tar file provided by Kontron was downloaded on the remote computer.
2	Access to the BMC Web UI is required.

Procedure

The following procedure is for upgrading the firmware of a BMC and can be applied to upgrade the firmware of an FPGA.

Step_1	From the left-side menu of the BMC Web UI, click on <b>Operations</b> and then on <b>Firmware</b> .					
Step_2	Verify the current firmware version. Make sure that the new firmware is more recent.	<div>Firmware</div> <div>BMC</div> <table><tr><th>Running image</th><th>Backup image</th></tr><tr><td>Version 2.12.0166bf9</td><td>Version 1.07.0157aba1 <a href="#">↔ Switch to running</a></td></tr></table>	Running image	Backup image	Version 2.12.0166bf9	Version 1.07.0157aba1 <a href="#">↔ Switch to running</a>
Running image	Backup image					
Version 2.12.0166bf9	Version 1.07.0157aba1 <a href="#">↔ Switch to running</a>					

Step_3	From the <b>Update firmware</b> section , choose a <b>.tar</b> file to upload for the BMC by clicking on <b>Select file</b> .	
Step_4	Click on <b>Start update</b> .	
Step_5	When the file has successfully been uploaded, a success message should appear in the top right corner.	
Step_6	Wait for the BMC to update. The page should refresh automatically once the update succeeded.	
Step_7	Once the BMC becomes available again, verify that the firmware version has changed.	

## 4.2. Upgrading UEFI/BIOS

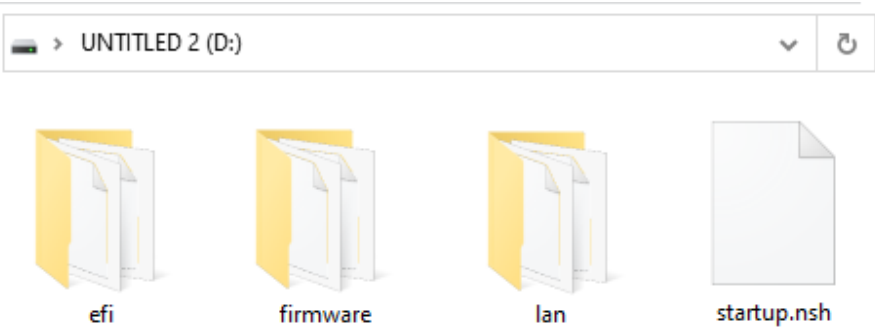
The UEFI/BIOS firmware can be upgraded using the built-in UEFI shell and USB storage device or a Linux-based operation system.

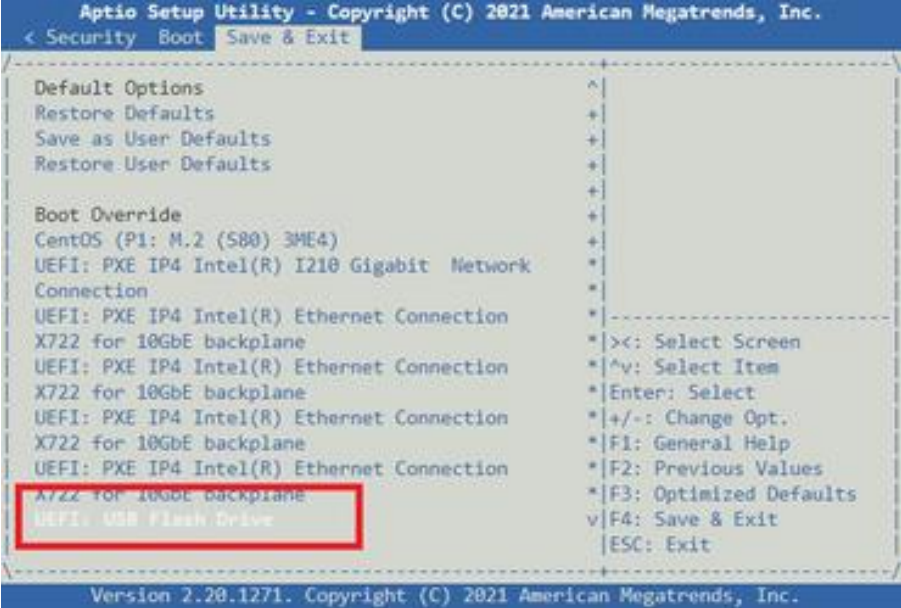
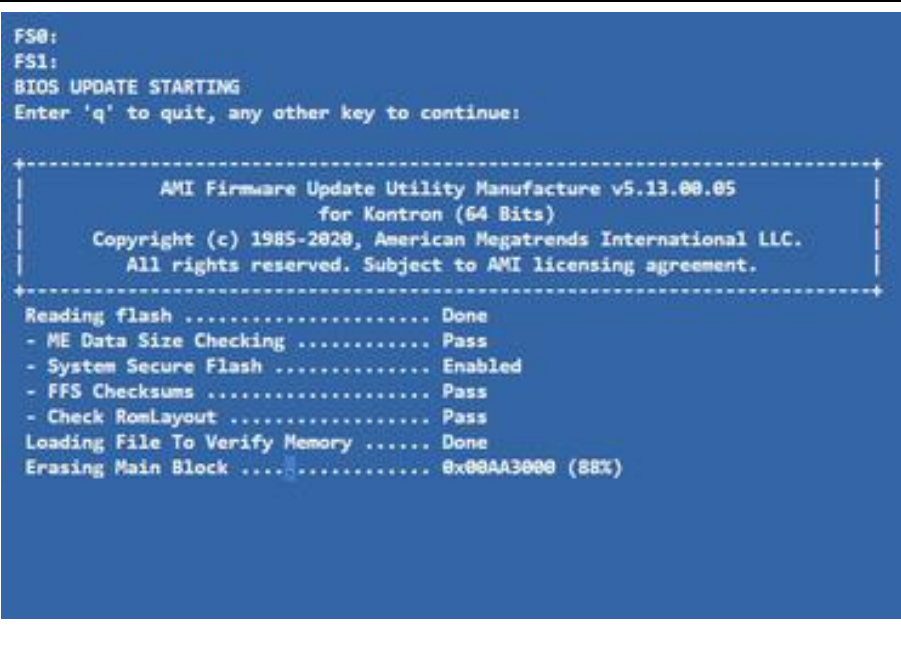
### 4.2.1. Using the built-in UEFI shell and a USB storage device

#### Prerequisites

1	The <b>.zip</b> archive provided by Kontron has been downloaded.
2	Access to the UEFI/BIOS menu is required.
3	The USB storage device was formatted using <b>fat32</b> .

#### Procedure

Step_1	<p>From another computer, extract the archive content provided by Kontron to a USB storage device. The <b>startup.nsh</b> file should be located directly in the root folder of the USB storage device.</p> <p><b>NOTE:</b> Some of the archive content can change depending on the upgrade version.</p>	
Step_2	Insert the USB storage device in one of the USB ports of the front panel.	
Step_3	Power on the platform and access the UEFI/BIOS setup menu.	

Step_4	<p>Navigate to the <b>Save &amp; Exit</b> menu and then to the <b>Boot Override</b> section. Select the option that represents the USB storage device and press <b>Enter</b>.</p> <p>The built-in EFI Shell should launch.</p>	
Step_5	<p>Press any key other than 'q' to continue. The UEFI/BIOS upgrade should start.</p>	
Step_6	<p>Once completed, the BMC and the platform will automatically reset. It may take several seconds to complete the power cycle and the remote connection might be lost.</p>	



## 4.2.2. Upgrading EUFI/BIOS firmware from the server operating system

### Prerequisites

1	The <b>.tar.gz</b> archive provided by Kontron has been decompressed on a Linux OS installed on the platform.
2	A Linux-based OS is installed on the platform.

### Procedure

Step_1	Access the operating system and open a command line interface.
Step_2	Uncompress the <b>.tar.gz</b> archive on the Linux OS installed on the platform.  LocalServer_OSPrompt:~# <b>tar -xvf &lt;FILE_NAME&gt;.tar.gz</b>
Step_3	Access the folder created by the archive.  LocalServer_OSPrompt:~# <b>cd &lt;FILE_NAME&gt;</b>
Step_4	Execute the upgrade script.  LocalServer_OSPrompt:~# <b>./update.sh</b>  <b>NOTE:</b> It may take a moment for the UEFI/BIOS firmware upgrade to complete.

## 5. Individual Changelogs

### 5.1. BIOS

#### 5.1.1. Changes since Daisy

- None

#### 5.1.2. Changes since Clover

- Modified the update scripts and the bundle creation to reflect the tool name change (ME1210-3129)
- Updated the x722 LAN image to Intel's latest one (ME1210-3129)
- Improved bios-update.sh script to port MAC addresses on updates. (ME1210-3008)

#### 5.1.3. Changes since Buttercup

- Added missing mapping ID's for some PowerManagement module BIOS settings to be accessible via Redfish. (ME1210-3032)
- Fixed ME update issue. (ME1210-2907)
- Fixed synch issues between the update state and the progression information displayed. (ME1210-3132)
- Passwords to access the EUFI setup menu are now case sensitive. (ME1210-3108)
- Fixed OS application LED status. (ME1210-2960)
- Corrected BIOS splash screen replacing 'ME1210 Firmware Version' by 'ME1210 System BIOS Version'. (ME1210-2960)
- Fixed issue that allowed user password to modify several menu option and override boot device in BIOS. (ME1210-3058)

#### 5.1.4. Changes since Astrantia

- None

#### 5.1.5. Changes since Initial release

- Disabling the FRB-2 Timer and FRB-2 Timeout options to avoid watchdog kicking in every 60 secs (ME1210-2882)
- Fixed issue with Linux update script for Centos where the system would not power cycle following the update (ME1210-2776)
- Fixed issue with EFI update script where it would not provide a message informing of power cycle (ME1210-2397)

### 5.2. BMC

#### 5.2.1. Changes since Daisy

- Fixed issue where a admin user could modify functionality of their own account resulting in a lock-out (RD10049-1387)
- Fixed issue where users were not kicked due to the timeout (ME1210-3190)
- Fixed issue where a certificate was no longer valid due to wrong timestamp (12hrs vs 24hrs) (ME1210-3186)

- Fixed issue where Fan events were unnecessarily logged when ambient temperature was at a certain level (ME1210-3056)
- Fixed issue where the Manufacturing Dates were incorrect on the WebUI (RD10049-1300)
- Fixed issue where a graceful off was converted to a Force off when taking too long (ME1210-2873)
- Fixed Issue where thresholds could be put out of value (ME1310-1558)
- Improved IPv6 functionality (ME1310-1184)
- Improved the Chassis Intrusion support (RD10049-1389)
- Improved the sync of FRU in the flash (RD10049-1381)
- Added a new humidity sensor (ME1210-3186)
- Added feature where you can access Diagnostic Collection Dumps via Redfish (ME1210-3175)
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### 5.2.2. Changes since Clover

- Fixed issue where enabling NIC interface on WebUI would erase the previously saved values for IP, Gateway and Netmask. (ME1210-3160)
- Fixed issue where PSU sensors thresholds were missing or invalid (ME1210-3157, 3146 & 3161)
- Fixed issue where setting a static IP address on the WebUI, would not save default gateway properly. (ME1210-3153)
- Fixed issue where the BMC was unresponsive if power was disrupted during upgrade. (ME1210-3110)
- Added SNMPv3 user management support (ME1310-1178)
- Fixed issue where Unauthorized (401) responses were not the correct ones. (ME1210-3150)
- Fixed issue where sending a GracefulRestart command from redfish will cause a poweroff (ME1310-1971)
- Fixed issue where when setting Static IP Address on WebUI would force to set Default Gateway (ME1210-3117 - 1913)
- Fixed issue where when setting a "weak" password a generic message was sent. Message now clearer (ME1210-3020)
- Added the 'Full System Power Cycle' feature for users (thru webui, redfish). (ME1210-3122)
- Fixed issue where if the payload is booting and a ipmitool power reset is sent, the BMC NCSI link on the 10gb will be unreachable (ME1210-2959)
- Updated the BMC web to match the 2023 rebranding of Kontron (ME1310-1952)

### 5.2.3. Changes since Buttercup

- Clover release v2.13. (ME1210-3131)
- Add toggle for Telco Alarm sensor logging. (ME1210-2888)
- Enable USB Host support and mass-storage in BMC. (ME1310-1886)
- Fixed errors on Device ID string for Type 12 Records. (ME1210-3045)
- Fixed BoardSensor service occasional crashes. (ME1210-3065)
- Improve "unexpected power loss" events generation in Redfish log. (ME1210-3052)
- Fixed false voltage events in SEL during boot up. (ME1210-3049)
- Fixed host watchdog not performing power cycle action (ME1310-1789)
- Fixed crash if UEFI send a packet bigger than 1500. (ME1210-2966)
- Re-enable SNMP support. (ME1210-3053)
- Move to monotonic timers in some services. (ME1310-1778)
- Fix SMBIOS Table 42 Redfish Host Interface reporting. (ME1310-1392)
- Improve thresholds for DC PSU Inlet and Regulator. (ME1310-1672)
- Fixed network save button always reporting an error. (ME1310-1734)
- Fixed NCSI not working when payload power off. (ME1310-1573)
- Reinstate and fix thresholds on PCIe/M2 Voltage sensors. (ME1210-2887)

- Improve ForceRestart redfish action. (ME1310-1571)

#### 5.2.4. Changes since Astrantia

- Upgrade from OpenBMC upstream, version 2.7 to 2.9.
- Security fix, cipher 3 has been removed, only cipher 17 is available via IOL.
- Fix Security Advisory for CVE-2020-1416 (Network IPMI files permissions)
- Fix for Dirty Pipe exploit CVE-2022-0847.
- New GUI that includes OpenBMC layout
- Add/fix support for Certificate management of LDAP/LDAPS
- Modification of certain sensor names for better description or correct IPMI name length (See Appendix 1)
- New sensors have been added (See Appendix 2)
- Removal of duplicate sensors (See Appendix 3)
- Lowered DIMM temperature threshold and made it configurable by the user
- Discrete sensors behavior have been corrected to use correct sensor type without analog value (See Appendix 4)
- Web Interface has been modified to reflect user role
- Fix to user roles. Previously, all user had 'admin' rights
- Next boot option is now available via Web UI
- Addition of Redfish Event subscriptions
- Addition of Switch CLI in the Serial Over Lan page via the Web UI
- Addition of active session viewer via Web UI
- Redfish update service behavior has been modified with the schema update
- Redfish schema has been updated (See Appendix 5)
- Improvement to IPMI service response time (inband/outband)
- Fixed issue where while the payload is booting and an ipmitool power reset was performed, the BMC NCSI link on the 10Gb interface would become unreachable until the network driver is reloaded in the OS
- Fixed instability issue where the IPMI sensor list would provide partial result
- IPMI set sel time now returns 'Commands not supported in present state' if NTP is enabled instead of unknown error
- Improve Web UI stability
- Sensor name for PSU-DC with unit serial numbers 9017081139 and above has been modified (See appendix 6)

#### 5.2.5. Changes since Initial release

- Fixed an issue that would make fans run at 100% after a reboot (ME1210-2890)
- Fixed issue with the FPGA upgrade where there was no failed event created following interruption. (ME1210-2015)
- Fixed issue with the Board FRU and Product FRU IDs where there was XXX displayed instead of decimal digits (ME1210-2826)
- Fixed issue that would prevent unit from responding to power commands following a soft power request (ME1210-2424)

#### Known Limitations

- Fan deviation events are logged repeatedly when temperature Inlet is near 10 Celsius (-1 Celsius ambient) (ME1210-3056)
- The power restore policy AlwaysOn is not always applied, the unit's power will remain OFF after platform power cycle (ME1210-3055)

- Updating the FPGA via Redfish unexpectedly reboots the system (ME1210-2915)
- Name convention had changed in the Redfish tree structure (ME1210-2909)
- Sensor thresholds are overwritten when modifications have been made via Redfish followed by a FW update (ME1210-2498)
- A kernel panic occurs while booting EUFI when a Gigabyte video card is inserted (ME120-2975)
- Serial console receives inputs from unknown source (ME1210-2940)

## 5.3. FPGA

### 5.3.1. Changes since Clover

- No Changes

### 5.3.2. Changes since Buttercup

- Fixed issue where normal power on could cause false voltage event under SEL. (ME1210-2887)
- Fixed issue where serial console received input from unknown source. (ME1210-2940)

### 5.3.3. Changes since Astrantia

- Added a Watchdog to the switch module that sends a reset signal when the switch does not boot after a system restart

### 5.3.4. Changes since Initial release

- Fixed issue that allows an improve control of the fans at low speeds

## Appendix

### 1. Modification to certain sensor names for description to be more significant or correct IPMI name length

- "DC PSU Temp1" to "DC PSU Regulator"
- "DC PSU Temp2" to "DC PSU HoldUp"
- "DC PSU Temp3" to "DC PSU Inlet"
- "Temp P3iMB Local PCIeX" to "T P3iMB Local SX" (X is the PCIe Slot number)
- "Temp ACC100 TSDE PCIeX" to "T ACC100 TSDE SX" (X is the PCIe Slot number)
- "Temp ACC100 TSDW PCIeX" to "T ACC100 TSDW SX" (X is the PCIe Slot number)
- "DIMM XY CPU1" to "Temp DIMMXY" (XY is Memory channel and memory slot)
- "Die CPU1" to "Temp CPU"

### 2. New sensors have been added

- "AC PSU Vin"
- "AC PSU Pin"
- "Intrusion"
- "Jumper Status"

### 3. Removal of duplicate sensors

- "DTS CPU1" already covered by "Temp CPU"

### 4. Discrete sensors behavior have been corrected to use correct sensor type without analog value

- "BoardReset"
- "IPMIWatchdog"
- TelcoAlarmX (X is the alarm number)
- Heater CPU
- Heater PCIe1
- Heater PCIe2

## 5. Redfish schema was updated

Urls	Version 1.07	Version 2.06
/redfish/v1	ServiceRoot.v1_5_0	ServiceRoot.v1_5_0
/redfish/v1/AccountService	AccountService.v1_4_0	AccountService.v1_5_0
/redfish/v1/AccountService/Accounts	ManagerAccountCollection	ManagerAccountCollection
/redfish/v1/AccountService/Accounts/<UserId]	ManagerAccount.v1_0_3	ManagerAccount.v1_4_0
/redfish/v1/AccountService/LDAP/Certificates	CertificateCollection	CertificateCollection
/redfish/v1/AccountService/Roles	RoleCollection	RoleCollection
/redfish/v1/AccountService/Roles/<RoleId]	Role.v1_2_2	Role.v1_2_2
/redfish/v1/CertificateService	CertificateService.v1_0_0	CertificateService.v1_0_0
/redfish/v1/CertificateService/CertificateLocations	CertificateLocations.v1_0_0	CertificateLocations.v1_0_0
/redfish/v1/Chassis	ChassisCollection	ChassisCollection
/redfish/v1/Chassis/<ChassisId]	Chassis.v1_4_0	Chassis.v1_14_0
/redfish/v1/Chassis/<ChassisId]/PCleDevices	PCleDeviceCollection	move to /redfish/v1/Systems/system /PCleDevices
/redfish/v1/Chassis/<ChassisId]/Power	Power.v1_5_2	Power.v1_5_2
/redfish/v1/Chassis/<ChassisId]/ResetActionInfo	NA	ActionInfo.v1_1_2
/redfish/v1/Chassis/<ChassisId]/Sensors	NA	SensorCollection
/redfish/v1/Chassis/<ChassisId]/Thermal	Thermal.v1_4_0	Thermal.v1_4_0
/redfish/v1/EventService	NA	EventService.v1_5_0
/redfish/v1/EventService/Subscriptions	NA	EventDestinationCollection
/redfish/v1/Managers	ManagerCollection	ManagerCollection
/redfish/v1/Managers/bmc	Manager.v1_3_0	Manager.v1_11_0
/redfish/v1/Managers/bmc#/Oem	OemManager.LinearControllers	Manager.v1_11_0
/redfish/v1/Managers/bmc#/Oem/OpenBmc	OemManager.LinearControllers	Manager.v1_11_0
/redfish/v1/Managers/bmc#/Oem/OpenBmc/Fan	OemManager.LinearControllers	Manager.v1_11_0
/redfish/v1/Managers/bmc#/Oem/OpenBmc/Fan/FanControllers	OemManager.LinearControllers	Manager.v1_11_0
/redfish/v1/Managers/bmc#/Oem/OpenBmc/Fan/FanControllers/Fan_Controller	OemManager.LinearControllers	Manager.v1_11_0
/redfish/v1/Managers/bmc#/Oem/OpenBmc/Fan/FanZones	OemManager.LinearControllers	Manager.v1_11_0

/redfish/v1/Managers/bmc#/Oem/OpenBmc/Fan/FanZones/Zone_1	OemManager.LinearControllers	Manager.v1_11_0
/redfish/v1/Managers/bmc#/Oem/OpenBmc/Fan/PidControllers	OemManager.LinearControllers	Manager.v1_11_0
/redfish/v1/Managers/bmc#/Oem/OpenBmc/Fan/StepwiseControllers	OemManager.LinearControllers	Manager.v1_11_0
/redfish/v1/Managers/bmc#/Oem/OpenBmc/Fan/LinearControllers	OemManager.LinearControllers	Manager.v1_11_0
/redfish/v1/Managers/bmc/EthernetInterfaces	EthernetInterfaceCollection	EthernetInterfaceCollection
/redfish/v1/Managers/bmc/LogServices	LogServiceCollection	LogServiceCollection
/redfish/v1/Managers/bmc/NetworkProtocol	ManagerNetworkProtocol.v1_4_0	ManagerNetworkProtocol.v1_5_0
/redfish/v1/Managers/bmc/NetworkProtocol/HTTPS/Certificates	CertificateCollection	CertificateCollection
/redfish/v1/Managers/bmc/ResetActionInfo	NA	ActionInfo.v1_1_2
/redfish/v1/Managers/bmc/Truststore/Certificates	NA	CertificateCollection
/redfish/v1/Registries	MessageRegistryFileCollection	MessageRegistryFileCollection
/redfish/v1/Registries/<RegistriesId]	Supported - Unknown	MessageRegistryFile.v1_1_0
/redfish/v1/SessionService	SessionService.v1_0_2	SessionService.v1_0_2
/redfish/v1/SessionService/Sessions	SessionCollection	SessionCollection
/redfish/v1/Systems	ComputerSystemCollection	ComputerSystemCollection
/redfish/v1/Systems/system	ComputerSystem.v1_6_0	ComputerSystem.v1_15_0
/redfish/v1/Systems/system/Bios	Bios.v1_1_0	Bios.v1_1_0
/redfish/v1/Systems/system/LogServices	LogServiceCollection	LogServiceCollection
/redfish/v1/Systems/system/LogServices/EventLog	LogService.v1_1_0	LogService.v1_1_0
/redfish/v1/Systems/system/LogServices/EventLog/Entries	LogEntryCollection	LogEntryCollection
/redfish/v1/Systems/system/LogServices/PostCodes	LogService.v1_1_0	LogService.v1_1_0
/redfish/v1/Systems/system/LogServices/PostCodes/Entries	LogEntryCollection	LogEntryCollection
/redfish/v1/Systems/system/Memory	MemoryCollection	MemoryCollection
/redfish/v1/Systems/system/PCIeDevices	NA	PCIeDeviceCollection
/redfish/v1/Systems/system/Processors	ProcessorCollection	ProcessorCollection
/redfish/v1/UpdateService	UpdateService.v1_2_0	UpdateService.v1_5_0
/redfish/v1/Systems/system/ResetActionInfo	NA	ActionInfo.v1_1_2
/redfish/v1/Systems/system/Storage	NA	StorageCollection



/redfish/v1/TaskService	NA	TaskService.v1_1_4
/redfish/v1/TaskService/Tasks	NA	TaskCollection
/redfish/v1/TelemetryService	NA	TelemetryService.v1_2_1
/redfish/v1/TelemetryService/MetricReportDefinitions	NA	MetricReportDefinitionCollection
/redfish/v1/TelemetryService/MetricReports	NA	MetricReportCollection
/redfish/v1/UpdateService/FirmwareInventory	NA	SoftwareInventoryCollection

6. Sensor name for PSU-DC with unit serial numbers 9017081139 and above has been modified

BMC version 1.07	BMC version 2.x
Sensor Name	Sensor Name
DC PSU Temp1***	DC PSU Regulator
DC PSU Temp2	DC PSU HoldUp
DC PSU Temp3	DC PSU Inlet



#### About Kontron

Kontron, a global leader in embedded computing technology and trusted advisor in IoT, works closely with its customers, allowing them to focus on their core competencies by offering a complete and integrated portfolio of hardware, software and services designed to help them make the most of their applications.

With a significant percentage of employees in research and development, Kontron creates many of the standards that drive the world's embedded computing platforms; bringing to life numerous technologies and applications that touch millions of lives. The result is an accelerated time-to-market, reduced total-cost-of-ownership, product longevity and the best possible overall application with leading edge, highest reliability embedded technology.

Kontron is a listed company. Its shares are traded in the Prime Standard segment of the Frankfurt Stock Exchange and on other exchanges under the symbol "KBC".

For more information, please visit: <http://www.kontron.com/>