COM-HPC-ALT Release Note

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| Date | 2023/11/16 |
| Author | David Chang |
| SW Version | 2.09 |

**Version History**

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| --- | --- | --- | --- |
| **SW version** | **Date** | **Edited by** | **Status/comments** |
| 1.01 | 2021/08/31 | David Chang |  |
| 1.02 | 2021/09/16 | David Chang |  |
| 1.03 | 2021/09/27 | David Chang |  |
| 1.04 | 2021/11/10 | David Chang |  |
| 2.00 | 2021/11/23 | David Chang |  |
| 2.01 | 2022/02/09 | David Chang |  |
| 2.02 | 2022/03/17 | David Chang |  |
| 2.03 | 2022/03/18 | David Chang |  |
| 2.04 | 2022/06/17 | David Chang |  |
| 2.05 | 2022/07/18 | David Chang |  |
| 2.06 | 2022/08/16 | David Chang |  |
| 2.07 | 2022/09/26 | David Chang |  |
| 2.08 | 2023/09/14 | David Chang |  |
| 2.09 | 2023/11/16 | David Chang |  |
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**Approved by**

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# PACKAGE IDENTIFICATION DETAILS

## Binaries

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| --- | --- | --- | --- |
| Package Name | Description | Date | MD5SUM |
| IPMC\_HPM\_COM-HPC-ALT\_2\_09.img | V2.09  hpm image | 2023/11/16 | 4be15a8d1fe441eec4a293faa6ec9cae |

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| --- | --- | --- | --- |
| Package Name | Description | Date | MD5SUM |
| IPMC\_COM-HPC-ALT\_2.09.hex | V2.09  HEX format | 2023/11/16 | 1383bd54da15942590ba6103f01a3e59 |

## Documentation

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| Document Name | Description |
| ALT-A2-V2.09-ATMEGA128燒錄注意事項.docx | ATMEGA128燒錄注意事項(V2.09) |
| win\_ipmi\_tool\_v1.8.13.7z | windows ipmitool v1.8.13 |
| COM-HPC-MMC\_FW\_upgrade\_SOP\_v0.1.docx | COM-HPC-MMC\_FW\_upgrade\_SOP\_v0.1 |
| COM-HPC-ALT\_IPMC\_eSW Specification\_v2.2.docx | COM-HPC-ALT\_IPMC\_eSW Specification\_v2.2.docx |
| COM-HPC-ALT\_Release\_Note\_2.09.docx | COM-HPC-ALT\_Release\_Note\_2.09 |

# Version Change Log

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| --- | --- |
| FW Ver. | Description |
| V1.01 | 1. Fix Jira “COMHPCALT-365” issue   “USB will lost when press reset button in ATX mdoe”   1. Fix Jira “COMHPCALT-366” issue   “System will resume after press power button for power down after install Ubuntu 20.04”   1. Fix Jira “COMHPCALT-378” issue   “System don't WOL from S5 (Onboard I210)”   1. Fix Jira “COMHPCALT-379” issue   “System don't WOL from S5 (Add-on: Intel I350-T2)”   1. Fix Jira “COMHPCALT-382” issue   “System power off directly in OS when press power button”   1. Fix Jira “COMHPCALT-404” issue   “[MMC] Product Name is incorrect.” |
| V1.02 | 1. Fix Jira “COMHPCALT-418” issue   “The Oem\_Reset\_Host command is not defined completely.”   1. Fix Jira “COMHPCALT-405” issue   “Set Watchdog Timer Action to "Hard Reset", the system does not have any respond after watchdog timer timeout”   1. Fix Jira “COMHPCALT-406” issue   “It returns error message when setting Watchdog Timer Action to "Power Down" and "Power Cycle" “” |
| V1.03 | 1. Fix Jira “COMHPCALT-420” issue   “It returns error message when running "Query Self-Test Results" HPM command.”   1. Fix Jira “COMHPCALT-421” issue   “Run HPM check command, the "COM-HPC F/W" name is duplicated.” |

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| V1.04 | 1. Fix Jira “COMHPCALT-462” issue   “All threshold values do not match eSW Specification.” |

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| V2.00 | 1. For COM-HPC-ALT PCB A2 release   ．Add "Module\_power" sensor  ．Add FAN Control function  ．Add LAN\_MCU Control OEM command. |

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| V2.01 | 1. Fix Jira “COMHPCALT-429” issue   “It needs pressing button and holding over 4 seconds then release to shutdown the system in BIOS”   1. Fix Jira “COMHPCALT-527” issue   “FW version is incorrect when using HPM command to check.” |

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| V2.02 | 1. Fix Jira “COMHPCALT-552” issue   “The sensor count does not match between "ipmitool sensor" command and "ipmitool raw 0x04 0x20" command.”   1. Fix Jira “COMHPCALT-555” issue   “After doing software reset, the power button and reset button does not work.” |

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| V2.03 | 1. Fix some module can’t boot at ATX mode |

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| V2.04 | 1. "Power OFF/Reset" OEM command return status value   0 : unsucceful , under power on state  1 : succeful , power OFF/Reset payload system.   1. When CPU temperature reach 120C will auto power OFF the payload system 2. When System Power ON, immediately (in 7 secs) press “reset BTN” can be auto recovery. ( Need HW rework ) |

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| V2.05 | 1. Adjusting access time on I2C3 for bus locked issue.   Change CPU temperature sensor access time to 2 secs. |

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| V2.06 | 1. Fix Jira “COMHPCALT-596” issue   “EDKII item "Wake On LAN" disabled function can't work”   1. Fix Jira “COMHPCALT-597” issue   “WOL function can't work after the AC power resume at the S5 state.” |

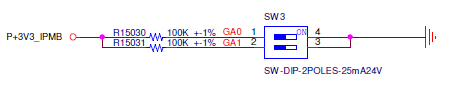
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| V2.07 | 1. Fix Jira “COMHPCALT-647” issue   “After pressing the reset button, the display will wait approximately 30 seconds to refresh |

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| V2.08 | 1 Chage “ACPI force shutdown” time from 3 secs to 5 secs. ( press power BTN ) |

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| V2.09 | 1 Fix module can’t boot from Carrier Board BIOS SPI flash |

New GA pin define :

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| Address Mapping | | | |
| Geo. Addr.  GA1 GA0 | IPMB Addr. | Geo. Addr.  GA1 GA0 | IPMB Addr. |
| H H | 0x82 | G G | 0x84 |
| G H | 0x86 | H G | 0x88 |



# Root Cause

**V1.01**

| **Jira Fault ID** | **Root Cause Analysis** |
| --- | --- |
| COMHPCALT-365 | **Symptom:** USB will lost when press reset button in ATX mdoe.  **Root Cause:**. Didn’t send Platform reset to carrier.  **Solution:** After all system power good (PG\_PCP\_S0 PIN) need send Platform reset (S0\_PLTRST\_L PIN) to carrier. |
| COMHPCALT-366 | **Symptom:** System will resume after press power button for power down after install Ubuntu 20.04..  **Root Cause:** The power ON/OFF control algorithm bug.  **Solution:** Set power ON/OFF and resume flag for power ON/OFF control. |
| COMHPCALT-378 | **Symptom:** System don't WOL from S5 (Onboard I210)  **Root Cause:** Didn’t check “X\_PCIE\_WAKE-L” PIN  **Solution:** Check the “X\_PCIE\_WAKE-L” PIN and wake the payload system |
| COMHPCALT-379 | **Symptom:** System don't WOL from S5 (Add-on: Intel I350-T2)  **Root Cause:** Didn’t check “X\_PCIE\_WAKE-L” PIN  **Solution:** Check the “X\_PCIE\_WAKE-L” PIN and wake the payload system |
| COMHPCALT-382 | **Symptom:** System power off directly in OS when press power button  **Root Cause:** Power OFF didn’t send “S0\_SHD\_REQ\_L” PIN  **Solution:** Power OFF need “S0\_SHD\_REQ\_L” PIN and wait the “S0\_SHD\_ACK\_L ” PIN for power OFF control. |
| COMHPCALT-404 | **Symptom:** [MMC] Product Name is incorrect.  **Root Cause:** PID is Adlink old product  **Solution:** Change PID to 0x2101 for COM-HPC-ALT product. |
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**V1.02**

| **Jira Fault ID** | **Root Cause Analysis** |
| --- | --- |
| COMHPCALT-418 | **Symptom:** The Oem\_Reset\_Host command is not defined completely.  **Root Cause:**. The Oem\_Reset\_Host command define error  **Solution:** Re-define the Oem\_Reset\_Host command to meet e-SW spec. |
| COMHPCALT-405 | **Symptom:** Set Watchdog Timer Action to "Hard Reset", the system does not have any respond after watchdog timer timeout.  **Root Cause:** Not enable the Watchdog Timer Action to "Hard Reset"  **Solution:** Code enable the Watchdog Timer Action to "Hard Reset”. |
| COMHPCALT-406 | **Symptom:** It returns error message when setting Watchdog Timer Action to "Power Down" and "Power Cycle"  **Root Cause:** Not enable the Watchdog Timer Action to "Power Down" and "Power Cycle".  **Solution:** Code enable the Watchdog Timer Action to "Power Down" and "Power Cycle". |

**V1.03**

| **Jira Fault ID** | **Root Cause Analysis** |
| --- | --- |
| COMHPCALT-420 | **Symptom:** It returns error message when running "Query Self-Test Results" HPM command  **Root Cause:**. Didn’t enable selftest results function.  **Solution:** Enable HPM.1 selftest results function. |
| COMHPCALT-421 | **Symptom:** Run HPM check command, the "COM-HPC F/W" name is duplicated.  **Root Cause:** "COM-HPC F/W" string name is duplicated.  **Solution:** Add "COM-HPC B/L" string name |

**V1.04**

| **Jira Fault ID** | **Root Cause Analysis** |
| --- | --- |
| COMHPCALT-462 | **Symptom:** All threshold values do not match eSW Specification  **Root Cause:**. SDR.inf threshold values have offset.  **Solution:** Modify SDR.inf file and correct eSW Specification threshold values. |

**V2.01**

| **Jira Fault ID** | **Root Cause Analysis** |
| --- | --- |
| COMHPCALT-429 | **Symptom:** It needs pressing button and holding over 4 seconds then release to shutdown the system in BIOS  **Root Cause:**. BIOS didn’t develop MMC IPMI OEM command  **Solution:** BIOS add IPMI OEM command to MMC and MMC update new F/W |

| **Jira Fault ID** | **Root Cause Analysis** |
| --- | --- |
| COMHPCALT- 527 | **Symptom:** Accessing MMC from serial interface will show "Serial response is invalid“  **Root Cause:**. Compile didn’t clean configure structure.  **Solution:** Clean configure structureand re-compile code. |

**V2.02**

| **Jira Fault ID** | **Root Cause Analysis** |
| --- | --- |
| COMHPCALT-552 | **Symptom:** The sensor count does not match between "ipmitool sensor" command and "ipmitool raw 0x04 0x20" command.  **Root Cause:** Sensor count error at code.  **Solution:** Corrected the sensor count number. |
| COMHPCALT-555 | **Symptom:** After doing software reset, the power button and reset button does not work.  **Root Cause:** When do software reset , "sysreset\_l" PIN will be locked, can’t change state at next command.  **Solution:** After reset command need set "sysreset\_l" PIN to INPUT state. |

**V2.03**

| **Jira Fault ID** | **Root Cause Analysis** |
| --- | --- |
|  | **Symptom:** Some module can’t boot at ATX mode  **Root Cause:** V2.02 power control not stable.  **Solution:** Base on V2.01 power control code base, only set "sysreset\_l" PIN to INPUT state when end of “payload\_reset” procedure. |

**V2.04**

| **Jira Fault ID** | **Root Cause Analysis** |
| --- | --- |
|  | **Symptom:** After "Power ON" OEM command then immediately (in 7 secs) send "Power OFF/Reset" OEM command will cause system hang up.  **Root Cause:** SCP FW under boot state can’t “power OFF/reset”  **Solution:** Add flags for "Power OFF/Reset" OEM command return status value  0 : unsucceful , under power on state  1 : succeful , power OFF/Reset payload system. |
|  | **Symptom:** When System Power ON, immediately (in 7 secs) press “reset BTN” will cause system hang up.  **Root Cause:** SCP FW under boot state can’t “power OFF/reset”  **Solution:** Because “reset BTN” direct connected to CPU reset PIN, so need HW rework and FW to do DC 3.3V power OFF for auto recovery. |

**V2.05**

| **Jira Fault ID** | **Root Cause Analysis** |
| --- | --- |
|  | **Symptom:** I2C3 bus which provide HW information to MMC is locked when install full of bear card on PCIE slot  **Root Cause:** CPU SCP FW can’t access too fast.  **Solution:** Change CPU temperature sensor access time to 2 secs. |

**V2.06**

| **Jira Fault ID** | **Root Cause Analysis** |
| --- | --- |
| COMHPCALT-596 | **Symptom:** EDKII item "Wake On LAN" disabled function can't work  **Root Cause:** EDKII can’t control the "Wake On LAN" function  **Solution:** Add IPMI OEM command for EDKII BIOS enable/disable the "Wake On LAN" function |
| COMHPCALT-597 | **Symptom:** WOL function can't work after the AC power resume at the S5 state.  **Root Cause:** WOL function didn’t check at AC ON state  **Solution:** Add flag to check the WOL function at AC ON state. |

**V2.07**

| **Jira Fault ID** | **Root Cause Analysis** |
| --- | --- |
| COMHPCALT-647 | **Symptom:** After pressing the reset button, the display will wait approximately 30 seconds to refresh.  **Root Cause:** MMC didn’t check HW “reset button”  **Solution:** MMC add check HW “reset button” and deactive “pltrst\_l\_signal” when reset bottom press. |

**V2.08**

| **Jira Fault ID** | **Root Cause Analysis** |
| --- | --- |
|  | **Symptom:** “ACPI force shutdown” too short.  **Root Cause:** Original time is 3 secs.  **Solution:** Chage “ACPI force shutdown” time to 5 secs. ( press power BTN ). |

**V2.09**

| **Jira Fault ID** | **Root Cause Analysis** |
| --- | --- |
|  | **Symptom:** Module can’t boot from Carrier Board(A2) BIOS SPI flash  **Root Cause:** Carrier Board BIOS selection PIN not ready when MMC boot, because MMC boot too fast.  **Solution:** Put MMC detect BIOS selection PIN function at last inintial state. |