

Release Note for AIC SAS3 4U108 JBOD BMC

October 28, 2025

* Firmware REV : 4U108BC018050_AR14
* Platform : 4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : Andy Fang
* Approved By : Hanlin Lin
* RELEASE DATE : 2025/10/28 (YYYY/MM/DD)

HISTORY:

1. [Feature] Implement a Mutex lock for UART
2. [Fix] Improve the stability of setting zonecount
3. [Fix] Fixed the MFG Date time error

NOTE:

1. Please use WEB GUI or Yafuflash to update BMC firmware.
2. Please use Chrome to update expander firmware.

* Firmware REV : 4U108BC018050_AR13
* Platform : 4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : Andy Fang
* Approved By : Hanlin Lin
* RELEASE DATE : 2025/10/15 (YYYY/MM/DD)

HISTORY:

4. [Fix] Fix the issue for java sol page in web site
5. [Feature] Added default MAC:00:15:B2:FF:FF:FF.
6. [Feature] Added IPMI OEM command: Get /Set BMC restarts using image (NetFn: 0x36, Command: 0x55)
7. [Feature] Added webpage for setting SNMP community strings.
8. [Feature] Added readable SEL logs for web downloading.
9. [Feature] Added UC threshold of PSU_watt.
10. [Fix] Fix Fru checksum invalid issue.
11. [Fix] Fix invalid checksum when writing Fru without using ipmi library
12. [Feature] Cancel the refresh event of the adjustment window
13. [Feature] Synchronize power restore policy with MCU.
14. [Feature] Implement the function of zonecount option add 3

NOTE:

1. Please use WEB GUI or Yafuflash to update BMC firmware.
2. Please use Chrome to update expander firmware.

* Firmware REV : 4U108BC018050_AR12
* Platform : 4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : Andy Fang
* Approved By : Hanlin Lin
* RELEASE DATE : 2024/01/24 (YYYY/MM/DD)

HISTORY:

1. The version number is unified to AR12
2. [Feature] Add snmp node of AIC sensor

NOTE:

1. Please use WEB GUI or Yafuflash to update BMC firmware.
2. Please use Chrome to update expander firmware.

* Firmware REV : 4U108BC018050_AR10
* Platform : 4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : Andy Fang
* Approved By : Hanlin Lin
* RELEASE DATE : 2023/06/27 (YYYY/MM/DD)

HISTORY:

1. [Feature] Support updating BMC via Yafuflash.

NOTE:

1. Please use WEB GUI or Yafuflash to update BMC firmware.
2. Please use Chrome to update expander firmware.

* Firmware REV : 4U108BC018050_AR9
* Platform : 4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : Andy Fang
* Approved By : Hanlin Lin
* RELEASE DATE : 2023/06/15 (YYYY/MM/DD)

HISTORY:

1. [Fix] Fix zonecount setting issue when only one hub.

* Firmware REV : 4U108BC018050_AR8
* Platform : 4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : Andy Fang
* Approved By : Hanlin Lin
* RELEASE DATE : 2022/09/27 (YYYY/MM/DD)

HISTORY:

1. [Feature] Support PEC check when reading PMBUS.
 2. [Modify] Increase the error count of the PSU sensor.
 3. [Modify] Changed filename check for full update Expander.
- (4U78_SE_4U108_SE_12G_Edge_12G_Hub.tar)

NOTE:

1. Please use WEB GUI to update BMC firmware.
2. Please use Chrome to update expander firmware.
3. 4U78 and 4U108 are divided into two firmware files from 4UxxxBC018050.

* Firmware REV : 4U108BC018050_AR7
* Platform : 4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : Andy Fang
* Approved By : Hanlin Lin
* RELEASE DATE : 2022/09/13 (YYYY/MM/DD)

HISTORY:

1. [Feature] Support Web GUI blocking Expander updates when the power is off.

NOTE:

1. Please use WEB GUI to update BMC firmware.
2. Please use Chrome to update expander firmware.
3. 4U78 and 4U108 are divided into two firmware files from 4UxxxBC018050.

* Firmware REV : 4U108BC018050_AR6
* Platform : 4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : Andy Fang
* Approved By : Hanlin Lin
* RELEASE DATE : 2022/09/02 (YYYY/MM/DD)

HISTORY:

1. [Feature] Support Web GUI Complete update of Expander firmware for Hub and Edge.

NOTE:

1. Please use WEB GUI to update BMC firmware.
2. Please use Chrome to update expander firmware.
3. 4U78 and 4U108 are divided into two firmware files from 4UxxxBC018050.

* Firmware REV : 4U108BC018050_AR5
* Platform : 4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : Jerry Wan
* Approved By : Hanlin Lin
* RELEASE DATE : 2021/04/27 (YYYY/MM/DD)

HISTORY:

1. [Fixed] Support sensor reading via UART while SOL is activated.
2. [Modify] When the zone count is set by users, the local BMC will send the new zone count to the other BMC
before setting the new zone count on its local expanders. The BMC which receives the new zone count from the other BMC will set the received zone count on its local expanders.

NOTE:

1. Please use WEB GUI to update BMC firmware.
2. Please use Chrome to update expander firmware.
3. 4U78 and 4U108 are divided into two firmware files from 4UxxxBC018050.

* Firmware REV : 4U108BC018050_AR3
* Platform : 4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : Julia Tsai
* Approved By : Jack Hsu
* RELEASE DATE : 2020/08/07 (YYYY/MM/DD)

HISTORY:

1. [Issue] Switch uart fail on expander update web page.
[Fixed] Add delay to do switch uart command before entering update mode.
2. [Issue] When login with chrome https, dashboard web page shows abnormal.
[Fixed] Auto click dashboard button after login.
3. [Modify] Remove unnecessary description for web GUI.
4. [Modify] Modify threshold of expander fan and temperature sensors.

NOTE:

1. Please use WEB GUI to update BMC firmware.
2. Please use Chrome to update expander firmware.
3. 4U78 and 4U108 are divided into two firmware files from 4UxxxBC018050.

* Firmware REV : 4U108BC018050_AR2
* Platform : 4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : Julia Tsai
* Approved By : Jack Hsu
* RELEASE DATE : 2020/04/28 (YYYY/MM/DD)

HISTORY:

1. [Issue] When user select preserve configuration and disable IPv6 option then update firmware, it will cause network malfunction. After firmware update, user is not able connect to BMC via LAN.

[Fixed] After firmware update, network configuration will sync with user setting IP.

NOTE:

1. Please use WEB GUI to update BMC firmware.
2. Please use Chrome to update expander firmware.
3. 4U78 and 4U108 are divided into two firmware files from 4UxxxBC018050.

* Firmware REV : 4U78JBC018050_AR1
* Platform : 4U78
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : Julia Tsai
* Approved By : Jack Hsu
* RELEASE DATE : 2020/04/08 (YYYY/MM/DD)

HISTORY:

1. [Issue] UART switched to the wrong edge before sol activating.
[Fixed] Fix to switch UART after sol activating.
2. [Feature] Remove Edge-3 temperature sensors.

NOTE:

1. Please use WEB GUI to update BMC firmware.
2. Please use Chrome to update expander firmware.
3. 4U78 and 4U108 are divided into two firmware files from 4UxxxBC018050.

* Firmware REV : 4U78JBC017040_AR9 / 4U108BC017040_AR9
* Platform : 4U78/4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : Julia Tsai
* Approved By : Jack Hsu
* RELEASE DATE : 2020/03/30 (YYYY/MM/DD)

HISTORY:

1. [Issue] Temperature sensor reading can't higher than threshold.
[Fixed] Fix parameter limit of error reading times.
2. [Issue] Sensor reading would keep old data when get nothing from edge expander.
[Fixed] Fix sensors to show no reading when get nothing from edge expander.

NOTE:

1. Please use WEB GUI to update BMC firmware.
2. Please use Chrome to update expander firmware.

* Firmware REV : 4U78JBC017040_AR8 / 4U108BC017040_AR8
* Platform : 4U78/4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : Julia Tsai
* Approved By : Jack Hsu
* RELEASE DATE : 2020/03/26 (YYYY/MM/DD)

HISTORY:

1. [Issue] BMC sometimes log false alarm event.
[Fixed] Add filtering mechanism during getting data from expander.
2. [Feature] Change to get expander temperature sensor readings from Hub expander to edge expander UART interface.

NOTE:

1. Please use WEB GUI to update BMC firmware.
2. Please use Chrome to update expander firmware.

* Firmware REV : 4U78JBC017040_AR7 / 4U108BC017040_AR7
* Platform : 4U78/4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : Julia Tsai
* Approved By : Jack Hsu
* RELEASE DATE : 2020/03/19 (YYYY/MM/DD)

HISTORY:

1. [Issue] Temperature sensors show 240 when get 0.
[Fixed] Fixed temperature sensor reading value conversion.

NOTE:

1. Please use WEB GUI to update BMC firmware.
2. Please use Chrome to update expander firmware.

* Firmware REV : 4U78JBC017040_AR6 / 4U108BC017040_AR6
* Platform : 4U78/4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : Julia Tsai
* Approved By : Jack Hsu
* RELEASE DATE : 2020/03/16 (YYYY/MM/DD)

HISTORY:

1. [Feature] Add preserve configuration function to web gui.

NOTE:

1. Please use WEB GUI to update BMC firmware.
2. Please use Chrome to update expander firmware.

* Firmware REV : 4U78JBC017040_AR5 / 4U108BC017040_AR5
* Platform : 4U78/4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : Julia Tsai
* Approved By : Jack Hsu
* RELEASE DATE : 2020/03/11 (YYYY/MM/DD)

HISTORY:

1. [Issue] Temperature sensors show wrong value when over temperature.
[Fixed] Fixed to show right value when over temperature.

NOTE:

1. Please use WEB GUI to update BMC firmware.
2. Please use Chrome to update expander firmware.

* Firmware REV : 4U78JBC017040_AR4 / 4U108BC017040_AR4
* Platform : 4U78/4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : Julia Tsai
* Approved By : Jack Hsu
* RELEASE DATE : 2020/03/09 (YYYY/MM/DD)

HISTORY:

1. [Issue] The temperature sensors alarm are not match system temperature alarm LED.
[Fixed] Modify sensors alarm threshold to match system alarm LED.
2. [Issue] Disconnect UART connector, temprature sensors show abnormal value.
[Fixed] Initial temperature sensors reading to 0.

NOTE:

1. Please use WEB GUI to update BMC firmware.
2. Please use Chrome to update expander firmware.

* Firmware REV : 4U78JBC017040_AR3 / 4U108BC017040_AR3
* Platform : 4U78/4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : Samuel Yang
* Approved By : Jack Hsu
* RELEASE DATE : 2020/02/21 (YYYY/MM/DD)

HISTORY:

1. [Issue] HDD status page did not refresh after the operation of HDD power control on 4U108.

[Fixed] Modify HDD power control method.

NOTE:

1. Please use WEB GUI to update BMC firmware.
2. Please use Chrome to update expander firmware.

* Firmware REV : 4U78JBC017040_AR2 / 4U108BC017040_AR2
* Platform : 4U78/4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : Samuel Yang
* Approved By : Jack Hsu
* RELEASE DATE : 2020/02/18 (YYYY/MM/DD)

HISTORY:

1. [Feature] Add expander update foolproof function on web.
2. [Issue] Temperature sensors show wrong value.
[Fixed] Fixed temperature sensor readings.

NOTE:

1. Please use WEB GUI to update BMC firmware.
2. Please use Chrome to update expander firmware.

* Firmware REV : 4U78JBC017040 / 4U108BC017040
* Platform : 4U78/4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : Julia Tsai
* Approved By : Jack Hsu
* RELEASE DATE : 2020/02/12 (YYYY/MM/DD)

HISTORY:

1. [Issue] Expander update function sometimes will fail.
[Fixed] Modify update method.
2. [Issue] Expander edge-3 shows wrong status.
[Fixed] Fixed expander edge-3 status.

NOTE:

1. Please use WEB GUI to update BMC firmware.
2. Correct release note "Engineer" and "RELEASE DATE" fields data.

* Firmware REV : 4U78JBC016030 / 4U108BC016030
* Platform : 4U78/4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : David Su
* Approved By : Jack Hsu
* RELEASE DATE : 2019/12/26 (YYYY/MM/DD)

HISTORY:

1. [Issue] Web HDD status cannot report fail status.
[Fixed] Modify HDD status detect function.
2. [Feature] Add HDD present and HDD fail status.
3. [Remove] Remove web set sensor threshold function.

NOTE:

1. Please use WEB GUI to update BMC firmware.

* Firmware REV : 4U78JBC015021 / 4U108BC015021
* Platform : 4U78/4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : David Su
* Approved By : Jack Hsu
* RELEASE DATE : 2019/07/11 (YYYY/MM/DD)

HISTORY:

1. [Issue] When system restore AC cord, BMC will record fan fail event.
[Fixed] Modify fan sensor power on delay.
2. [Issue] HDD control function cannot see the first 30 HDD.
[Fixed] Modify HDD control page.
3. [Issue] 12V value abnormal.
[Fixed] Modify 12V sensor calculated formula.
4. [Issue] HDD control function unstable.
[Fixed] Modify read HDD delay time.
5. [Issue] Expander update function sometimes will fail.
[Fixed] Modify update method.

NOTE:

1. Please use WEB GUI to update BMC firmware.

* Firmware REV : 4U78JBC014020 / 4U108BC014020
* Platform : 4U78/4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : David Su
* Approved By : Always Chen
* RELEASE DATE : 2018/10/01 (YYYY/MM/DD)

HISTORY:

1. [Feature] Add Zone count function.

NOTE:

1. Please use WEB GUI to update BMC firmware.

* Firmware REV : 4U78JBC013010 / 4U108BC013010
* Platform : 4U78/4U108
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : David Su
* Approved By : Jack Hsu
* RELEASE DATE : 2018/01/12 (YYYY/MM/DD)

HISTORY:

1. [Feature] Add full fan, temperature sensor.
2. [Feature] Add HDD power control function.
3. [Feature] Support 4U78/4U108 platform.
4. [Feature] Add PSU sensor.
5. [Feature] Add scdedule power on/off function.

NOTE:

1. Please use WEB GUI to update BMC firmware.

* Firmware REV : 4U78JBC011002
* Platform : 4U78
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : David Su
* Approved By : Jack Hsu
* RELEASE DATE : 2017/09/21 (YYYY/MM/DD)

HISTORY:

1. [Feature] Change image size to 32m.
2. [Feature] Add default IP: 192.168.11.11 .

NOTE:

1. Please use WEB GUI to update BMC firmware.

* Firmware REV : 4U78JBC010001
* Platform : 4U78
* SDK REV : RR6-Plus_112304
* BMC CHIP : AST1250
* NIC CHIP : REALTEK RTL8201EL
* IPMI VER : IPMI 2.0
* Engineer : David Su
* Approved By : Jack Hsu
* RELEASE DATE : 2017/07/11 (YYYY/MM/DD)

HISTORY:

1. [Feature] First release for 4U78.
2. [Feature] Support remote power on/off, fan and temperature sensor.

NOTE:

1. Please use WEB GUI to update BMC firmware.