

BIOS Release Notes

TITLE

SUBJECT: MZ31-AR0 BIOS Release Notes version [R40](#)
System: [G221-001-AM](#), [G221-Z30-00](#), [G221-Z30-ES-Waseda-001](#), [MZ31-AR0-00](#),
[R151-001-00](#), [R151-Z30-00](#), [R151-Z31-00](#), [R151-Z32-00](#),
[R270-Z30-ES-AMD-001](#), [R271-Z31-00](#), [R271-Z31-ES-AMD-001](#), [S451-Z30-00](#)

About This Release

Build Date: [2024/10/11](#)
BIOS Checksum: [0xCCFFE51C](#) (16M)
Release Owner: Terry.Chuang

BIOS Components/Contents

Processor stepping(s) supported: AMD Rome processors
System hardware configurations supported: MZ31-AR0

IPMI support:

AGESA PI version: [RomePI 1.0.0.K](#)

OPROM version :

| OPROM | Version |
|-------------|---------|
| AST2500 VGA | 1.10 |

Installation Notes

IMPORTANT NOTES:

1. Please extract the zip file to a bootable diskette that use FAT/FAT32 format

BIOS UPDATE INSTRUCTIONS FOR EFI Shell:

1. Insert USB flash drive to system for BIOS upgrade.
2. Power on system and boot to Build-In Shell.
3. Enter your USB filesystem, like "fs0:" or "fsX:", "X" is your USB filesystem number
4. Execute F.nsh for bios update
5. After bios flash finish, system must Power-Off to have the changes take effect.

BIOS UPDATE INSTRUCTIONS FOR Windows:

1. Insert bios update USB flash drive.
2. Use Command Shell.
3. Enter \Tool\Win32 and execute f.bat for Windows 32bit.
Or
Enter \Tool\Win64 and execute f.bat for Windows 64bit.
4. After bios flash finish, system must Power-Off to have the changes take effect.

BIOS UPDATE FOR Easy BIOS Refresh:

1. The system supports remotely update BIOS if BMC existent.
2. Please download the Easy BIOS Refresh User Guide from Gigabyte website, target system support page.

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BIOS Version CHECK INSTRUCTIONS:

1. Power on system and press during POST
2. The bios version shows on the first main page

BIOS UPDATE INSTRUCTIONS FOR Web UI:

1. Connect BMC_IP by Internet browser.
2. Click Web-UI sub-page button "Update".
3. Select Firmware Type to ROM.
4. Use Command Shell.
5. cd to /RBU.
6. Select File Path to image.RBU.
7. Click Upload.

BIOS UPDATE INSTRUCTIONS FOR GbtUtility:

1. Please copy the BIOS_ZIP file to GbtUtility folder.
2. Use Command Shell.
3. cd to GbtUtility folder.
4. Execute "java -jar GbtUtility.jar -H BMC_IP update bios BIOS_ZIP 1".

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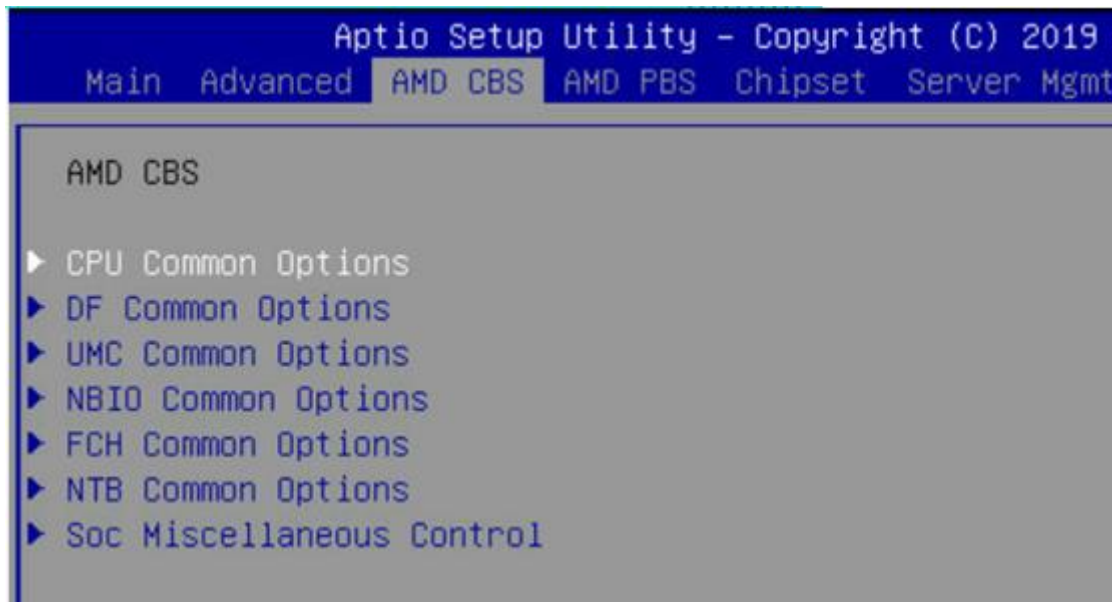
Known Issues/Workarounds

1. Windows 2016 need install KB4022723 first, then enable BIOS setup item "IOMMU"
Nvidia VGA CUDA not support IOMMU on Linux.
2. Windows OS does not support 256 or more logical. (Need apply below update)
2-1 . Windows 2019 can update KB4512534 to support 256 core SMT mode.
2-2 . Set BIOS setup item "SMT Mode" to "Auto"
3. If your side use 64 core CPU x2.
3-1. Linux kernel need 4.19 or later version and apply AMD X2APIC patch.
(AMD X2APIC patch Implement OS version by OS vendor define)
3-2. Windows 2019 need install KB4512534 for Support SMT.

PS.

BIOS setup item "SMT Mode" meant (Simultaneous Multi-Threading) Technology.

BIOS setup item "SMT Mode" Location as below :



AMD CBS (on BIOS Setup page bar)

- ▶ CPU Common Options
 - ▶ Performance
 - ▶ CCD/Core/Thread Enablement
 - ▶ Accept
- SMT Control: Disable (Default) / Auto

- 3 . HDD LED are not light.
- 4 . COM port loop back failed.

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Issues fixed in this version

R40 (2024/10/11)

1. [Feature] Update AGESA 1.0.0.K
2. [Feature] SMM Lock Bypass CVE-2023-31315.
3. [Bug Fix] Fix PKfail issue.
4. [Bug Fix] Fix SMBIOS Type39 PSU detected issue.

R38 (2022/07/12)

1. Update AGESA version to 1.0.0.C
2. Add check old BMC 12.44.06

R36

(2021/11/04)

1. Hide XGMI item for prevent user adjust incorrect speed

R35

(2021/10/28)

1. Fix AFU can not upgrade Milan 32MB non-boot Rome BIOS (mantis 47677)

R34

(2021/07/06)

1. Update Redfish Inventory.
2. Synchronize BIOS settings to BMC while doing remote setup on Power Policy Quick Settings.
3. Add support virtual USB when USB boot option disable in Legacy mode
4. Add MCX-354A-FCBT MAC detection.
5. Add support Qlogic QL45611HLCU MAC address issue in Legacy mode.
6. Hide Setup unsupported xGMI speed option. (17G to 25G)
7. Update some characters on remote setup.
8. Adjust front panel NMI Button event.

R32

(2021/01/08)

1. Add SRIOV device Virtual bus support
2. Support Mellanox Connect-X6 to obtain LAN MAC in Legacy mode
3. Support Setup flash

R31

(2020/12/02)

1. When PERR/SERR error is triggered, POST will show PERR/SERR error.(mantis 43326)
2. Fix the problem that Micron 2200 NVMe cannot read and write.
3. Fixed multiple boot options after installing CentOS 7.8.
4. Support Redfish Inventory.
5. Support dump/restore Setup data from file.

R30

(2020/10/16)

1. Update AGESA version to 1.0.0.9.
2. Support Mellanox ConnexX5 MCX512A to obtain MAC address in Legacy mode.

R28

(2020/09/24)

1. Fix AC back after new LAN card make incorrect boot order issue before BMC 12.45.01.

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2. Update CVE-2020-10713 secure boot key

R27 (2020/08/20)

1. Update flash support.
2. Fix the R25/R26 BIOS sometimes meet PMBUS data issue.

R26 (2020/08/14)

1. Update secure boot to resolve security issues (CVE-2020-10713).
2. Fix 1P project R25 BIOS full DIMM issue.
3. Adjust redfish boot order behavior.
4. Adjust order of BIOS setup page of BMC Web
5. Disable Core Performance Boost if some of power-supply are unplugged when the system is power-on.

R25 (2020/07/20)

1. Update AGESA version to 1.0.0.8
2. Add SMBIOS Type39
3. Remote BIOS support on BMC Web (need BMC 12.44.04 or later)
4. Fix Setup CSM can not modify problem

R23 (2020/06/18)

1. Fix the issue that AMD Radeon Instinct MI50 false detection to 4x4.
2. Add message frame for Real-time get bmc ip button.
3. Update SMBIOS Type130 Max speed / Real width.
4. Support Redfish remote setup secure boot.
5. Fix sometimes OS boot takes long time.
6. Fine tune remote setup function. (can adjust boot order via remote setup)
7. Add Intel Omni-path patch
8. Add more UUID detection way
9. Add "CSM Configuration" setup page

R22 (2020/05/08)

1. Update AGESA version to 1.0.0.7
2. Adjust Format of BMC version.
3. Adjust default settings of Setup item "IOMMU" , "SMT Mode"
4. Adjust default settings of Setup item "MCA error thresh enable" , "MCA error thresh count"

R21 (2020/04/28)

1. Fix the issue that BIOS flash tool cannot update the none boot area.
2. By default, the PXE boot option of the external NIC is started first.
3. Added UEFI logo output device option and set onboard VGA output by default
4. Fix wrong slot name strings PCIE_1_B, PCIE_1_D

R20 (2020/03/20)

1. Update Redfish remote setup protocol.

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2. Adjusted boot option maximum.
3. Fixed the problem that the setup item " PCIE 6 Lanes Configuration" changed to a value other than Auto has no effect.

R19 (2020/03/04)

1. Increase the ECC Correctable Error Threshold Default
2. Update TPM assurance AQ

R18 (2020/02/14)

1. Update AGESA version to 1.0.0.6
2. Adjust the behavior of IPMI boot device setting Legacy or UEFI
3. Adjust POST memory PMU error message
4. Add BIOS setup item "ERP mode"
(Need BMC support , Please check BMC version form Web-site)

R16 (2019/12/24)

1. Update AGESA version to 1.0.0.5

R15 (2019/12/06)

1. Fix "Trigger memory single or multi bit error, BMC log have some problem." (mantis 39870, 38650, 38448, 38449)
2. Add boot options for "Citrix Xenserver (Hypervisor)" and "VMware ESXi"
3. Open BMC Virtual USB device list for BIOS setup (mantis 39856)
4. Adjust SMBIOS type 10/41 information

R14 (2019/11/29)

1. Adjust Redhat 7 BIOS setup boot option (mantis 39000)
2. Hide BMC Virtual USB LAN setup options (mantis 39856)
3. Update VBIOS version to v110

R13 (2019/11/22)

1. Fix RTC default Year not same as BIOS build when clear CMOS (mantis 39641)
2. Add NVIDIA GTX1080 Windows driver boot support

R12 (2019/11/12)

1. Fix POST VGA resolution less than 1024x768 (mantis 40477)
2. Hidden AMD PBS page item "SPI Lock"
3. Ubuntu/Rhel/windows show different information (Mantis 39000 / 39144)
4. Fix the non-synchronization issue of items related to Console Redirection between BIOS Setup & Remote Setup.
5. Display BMC version information on the POST log (SOL / COM port)
6. Adjust USB device tree.(mantis 40421)

R11 (2019/10/25)

1. Update AGESA RomePI version to 1.0.0.4
2. Fix press F9 load default will show message in POST (Mantis 39780)

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3. Fix BMC Virtual CDROM abnormal boot option name (mantis 39493)
4. Fix BMC detected PCIe SERR error log when install NVIDIA Tesla T4 (Mantis 39622)
5. Fix above 4G decode caused legacy LAN option rom exception (mantis 39287)
6. Fix BMC will detect PCIe SERR error log when system reboot with NVIDIA Tesla V100.

R10

(2019/10/09)

1. Update AGESA version to 1.0.0.3
2. Hidden un-use item (CBS USB / HD Audio / NBIO FAN)
3. Fix Apacer DDR4 in BIOS setup show unkoown
4. Auto detect BMC vendor for hidden BMC LAN mode.

R09

1. Fix "Upgrade BIOS does not show loading default message" (mantis 39780)
2. When OS Clear TPM through BIOS, the related message will be displayed. (mantis 39942 / 38711 / 35798)
3. Hide SPI TPM support options. (mantis 39944)
4. Fix ""PCIE AER" enable, then XGMI speed will go to 16 gbps". (mantis 40195)
5. Fix "Found wrong sentence format in text mode" (mantis 39637)
6. Fix the issue that item "Power Policy Quick Settings" can't be adjusted by Remote Setup.
7. Fix the Load Default Function on the item "Power Policy Quick Settings".

R08

1. Fix NVMe Setup page display error for some systems
2. Fix some external LAN devices causing system errors
3. Fix ECC DIMM location error

R07

1. Update behavior for Power Policy Quick Settings "Standard".
2. Adjust AC loss behavior. (BIOS load default will be synchronized to BMC)

R06

1. Fixed anomalies caused by conflict between Riser FRU and DRAM SPD
2. Adjust the behavior of the "Determinism Slider".
3. Fix the problem that the BIOS version of SMBIOS type 0 can be modified.

R05

1. Add Setup "AMD CBS" > "SMU Common options" > "Determinism Control": Enable > "Determinism Slider" power and performance related settings
2. Disable Audio device for Server HLK
3. Fixed an issue where using the "Remote Setup" setting option failed
4. Adjusted SEL sensor number.

R04

1. Update AGESA version to 1.0.0.2
2. Adjust DRAM ECC SEL Log
3. Disable this feature if the BMC does not support Redfish

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4. Fixed can not boot Windows when enable “Enable AER Cap” item issue
 5. Fixed an error in the onboard LAN MAC when the network stack was disabled
 6. Set SMT to be enabled by default
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R03

1. Support for future BMC versions of Redfish and Remote Setup.
 2. Fix Windows HLK TPM 2.0 preboot interface test failed.
 3. Adjust low temperature setting
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R02

1. Console redirection disable by default.
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T11

1. Update AGESA RomePI version to 1.0.0.1
 2. Update VR(IR) version to A02(8144)
 3. PXE Boot item add LAN MAC
 4. Adjust BIOS password clear behavior
 5. Adjust Memory ECC behavior
 6. Modify recovery rom file name.
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T10

1. Fix CBS variable modification failed.
 2. Support SMBIOS 2.0.
 3. Fix AMI BMC update SKU Hang issue.
 4. Fix BMC IPv6 address cannot show on setup.
 5. Default XGMI 10.6G for PCB 1.x. (mantis 38620)
 6. Adjust PPL.
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T09

1. Fix SATA redriver I2C error issue. (mantis 38531)
 2. Fix M.2 NVMe can't find option rom issue. (mantis 38559)
 3. POST screen will show CPU spec information. (mantis 38409)
 4. SR-IOV is enabled by default.
 5. Setup show “PSP firmware version”, hidden “CSM configuration”
 6. POST will check that BMC is ready
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R01

1. Add BIOS setup switch for PCI slot and onboard LAN. (mantis 38426, 38427, 38428)
 2. Fix Setup option SMT can't enable issue (mantis 38503)
 3. Support S5 RTC Wake settings (mantis 38438)
 4. Fix PCI SVID don't match spec issue (mantis 38445)
 5. Support “PCI AER Enable” setup option (mantis 38454)
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T08

1. Update AGESA RomePI version to 0.0.9.0
2. BIOS setup menu show “CSM configuration” page

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3. Support Intel i350 PXE driver
4. Increase I2C hold time.
5. Add CPU information on BIOS setup main page.
6. Fix POST will output log when disable “COM 1 / Serial Over LAM” redirection.
7. Enable SATA SGPIO.
8. Support BMC Web UI PCI information show link speed and link width.
9. Update CPU SATA controller setting.
10. Fix system always keep load default after reboot. (mantis 38242)
11. Fix part of PCIe device can't show Web UI.

T07

1. Fix BMC web some Sensor no data (Like VR)

T06

1. Update VR(IR) rom version(20190411)

T05

1. Support PCIe riser setting

T04

1. First release.