

BIOS Release Notes

TITLE

SUBJECT: MZ91-FS0 BIOS Release Notes version [R40](#)
System: [MZ91-FS0-00](#), [R181-004-AE](#), [R181-007-E2](#), [R181-Z90-00](#), [R181-Z91-00](#),
[R181-Z92-00](#), [R181-Z93-FK](#), [R281-001-00](#), [R281-002-00](#), [R281-Z90-00](#), [R281-Z91-00](#), [R281-Z92-00](#), [R281-Z93-ES-Cray-001](#), [R281-Z94-00](#), [R281-Z94-SW-SM-001](#)

About This Release

Build Date: [2024/10/11](#)
BIOS Checksum: [0xCBD5A4A1](#) (16M)
Release Owner: Terry.Chuang

BIOS Components/Contents

Processor stepping(s) supported: AMD Rome processors
System hardware configurations supported: MZ91-FS0
Microcode updates versions:

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

OPROM	Version
AST2500 VGA	1.10

Installation Notes

IMPORTANT NOTES:

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

BIOS UPDATE INSTRUCTIONS FOR EFI Shell:

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

BIOS UPDATE INSTRUCTIONS FOR Windows:

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

BIOS UPDATE FOR Easy BIOS Refresh:

- The system supports remotely update BIOS if BMC existent.

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2. Please download the Easy BIOS Refresh User Guide from Gigabyte website, target system support page.

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".

Known Issues/Workarounds

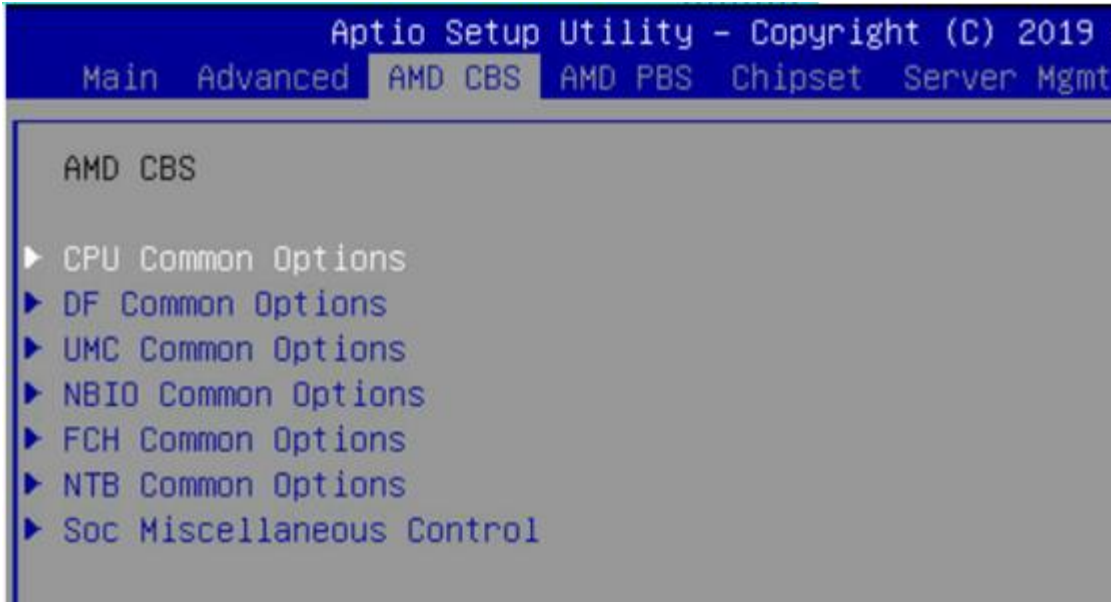
1. Windows 2016 need install KB4022723 first, then enable BIOS setup item "IOMMU"
Nvidia VGA CUDA not support IOMMU on Linux.
2. Windows OS does not support 256 or more logical. (Need apply below update)
2-1 . Windows 2019 can update KB4512534 to support 256 core SMT mode.
2-2 . Set BIOS setup item "SMT 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 :

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AMD CBS (on BIOS Setup page bar)

▶ CPU Common Options

▶ Performance

▶ CCD/Core/Thread Enablement

▶ Accept

SMT Control: **Disable (Default)** / Auto

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.

R39 (2023/08/24)

- 1.Update Microcode 0830107A for CVE-2023-20593 issue

R38

(2021/11/26)

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

R37

(2021/11/04)

1. Hide XGMI item for prevent user adjust incorrect speed

R36

(2021/11/01)

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

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- R35 (2021/07/16)
- 1.Add R181-007-E2 for customer.
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- R34 (2021/04/23)
- 1.Synchronize BIOS settings to BMC while doing remote setup on Power Policy Quick Settings.
 - 2.Add support virtual USB when USB boot option disable in Legacy mode.
 - 3.Add MCX-354A-FCBT MAC detection.
 - 4.Add support Qlogic QL45611HLCU MAC address issue in Legacy mode.
 - 5.Hide Setup unsupported xGMI speed option. (17G to 25G)
 - 6.Update some characters on remote setup.
 - 7.Adjust OCP slot for CLNO222 card . (mantis 47793)
 - 8.Add R281-Z91 U.2 (NVMe_#4 & NVMe_#5) hot plug function (Mantis 47797 / 47739)
 - 9.Add 1P only CPU show Onboard LAN MAC.
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- R33 (2021/01/25)
- 1.Boot option combine NVME and SD to HDD group
 - 2.Add MZ91-FS0 support auto porting Asmedia USB Recovery device by CPU installed count (mantis 38689)
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- R32 (2021/01/07)
- 1.Fix MZ91-FS0 Rear Asmedia USB port can not detect BIOS flash rom
 - 2.Add SRIOV device Virtual bus support
 - 3.Support Mellanox Connect-X6 to obtain LAN MAC in Legacy mode
 - 4.Support Setup flash
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- R31 (2020/12/04)
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 Refish Inventory.
 5. Support dump/restore Setup data from file.
 6. Adjust FixedBootOrder
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- 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.
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- R28 (2020/09/24)
- 1 . Fix AC back after new LAN card make incorrect boot order issue before BMC 12.45.01
 - 2 . Update CVE-2020-10713 secure boot key
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- R27 (2020/08/21)
1. Fix the R25/R26 BIOS sometimes meet PMBUS data.
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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
5. AGESA 1008 fix CVE-2020-10255

R24 (2020/07/01)

1. Fix R23 BIOS with R281-Z92 SKU make POST error.
2. Add more UUID detection way.

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 pag

R23c (2020/05/26)

1. Add SLSAS_2/3/4/5 to SATA

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 can't update the non-boot area.
2. By default, the PXE boot option of the external NIC is started first.
3. Add UEFI logo output device option and set onboard VGA output by default.

R20 (2020/03/20)

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1. Update Redfish remote setup protocol.
2. Adjust boot option maximum.

R19 (2020/03/03)

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 (2019/12/25)

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. Fix "OS will not blue screen when trigger memory multi bit error under Windows 2019" (mantis 38649)
3. Add boot options for "Citrix Xenserver (Hypervisor)" and "VMware ESXi"
4. Open BMC Virtual USB device list for BIOS setup (mantis 39856)
5. Adjust SMBIOS type 10/41 information
6. Update VBIOS version to v110.

R14 (2019/11/29)

1. Fixed the issue that CLNO222 could not be detected.
2. Adjust Redhat 7 BIOS setup boot option (mantis 39000).
3. Hide BMC Virtual USB LAN setup options (mantis 39856).

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. Fix ubuntu/rhel/windows show different information (mantis 39000)
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)

R11 (2019/10/25)

- 1 . Update AGESA RomePI version to 1.0.0.4

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- 2 . Fix press F9 load default will show message in POST (Mantis 39780)
- 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.
- 7 . Fix PCIe slot option ROM have some wrong under BIOS PCI page. (mantis 38631)

R10 (2019/10/09)

1. Hidden un-use item. (CBS USB / HD Audio / NBIO FAN)
2. Update NVMe sequence form 00 start.
3. Fix Apacer DDR4 in BIOS setup show unknow.
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. Fixed "BIOS Serial port console redirection some wrong." (Issue ID : 38646)
2. Fixed "NVMe sequence have problem." (Issue ID : 38815 / 38698)
(System R181-Z91 / R181-Z92 / R281-Z91 / R281-Z92 / R281-Z94)
3. Update behavior for Power Policy Quick Settings "Standard".
4. Adjust AC loss behavior. (BIOS load default will be synchronized to BMC)

R06

1. Fixed "Use Amideefix64.efi to modify BIOS version, it will be change." (Issue ID : 39791)
2. Adjust the behavior of the "Determinism Slider".
3. Adjust USB device tree.
4. Add Power Policy Quick Settings item which controls CPU performance items Interlocking.
5. BIOS setup item XGMI default string show Auto.

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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 CPU1 get wrong ECC location.
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
4. Fixed can not boot Windows when enable “Enable AER Cap” item issue.

R03

1. Fixed Windows HLK TPM 2.0 preboot interface test failed
2. Fixed "SVID check fail." (Issue ID : 38601)

R02

1. Support for future BMC versions of Redfish and Remote Setup.

R01

1. Fix "Sometimes can't detect USB via KVM" (Issue ID : 38841)
2. Fix "BIOS>Chipset>North Bridge show Memory size have problem in 1024GB" (Issue ID : 38753)
3. Fix "BMC IPv6 have some wrong in BIOS." (Issue ID : 38658)
4. Fix "BIOS display item not match BIOS setup menu SPEC." (Issue ID : 38597)
5. Fix "BMC vlan can't be set up in BIOS." (Issue ID : 38655)

T06

1. Show Nvme SN at Setup Menu Nvme page
2. Add Wait BMC Ready Setup item.
3. Fixed "Can't identify which PXE for LAN1 or LAN2." (Issue ID : 38610)
4. Fixed "BIOS_PWD behavior is wrong." (Issue ID : 38644)
5. Fixed "SUT only have one boot OS, but BIOS display two boot item." (Issue ID : 38694)
6. Fixed "SATA Configuration lost some string under BIOS." (Issue ID : 38642)

T05

1. Adjust PPL.
2. Hidden "Offboard SATA Controller Configuration" Setup item to sync BIOS setup menu spec.
3. Modify "PXE boot wait time" item default value to sync BIOS setup menu spec.
4. Default XGMI 10.6G for PCB 1.x. (Issue ID : 38620)
5. Fix BMC IPv6 address cannot show on setup
6. Fixed "R281-Z92 install 24 Nvme but WebUI only shows 21 Nvme" issue.

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7. Fixed “Onboard LAN I/O ROM only display one item under BIOS PCI page, but the MB have two LAN.” issue. (Issue ID : 38598)

8. Fixed “Press F12 under BIOS LOGO, couldn't saw LAN1 PXE boot option ROM.” Issue. (Issue ID : 38599)

9. Fixed “BIOS didn't display "PSP Firmware Versions" item under Advanced page.” Issue. (Issue ID : 38596)

T04

1. Update AGESA version to 1.0.0.0
2. Update USB fine tune.
3. Update VR(IR) version to A02 (8100).

T03

1. Improve the stability of Rome's I2C.
2. Update TPM TCG module.
3. Support I350 PXE driver.
4. BIOS setup add “CSM Configuration” page.
5. Support V-Color dimm.
6. Fix 32dimm hang issue.
7. BMC Web UI PCI information show link speed and link width.
8. Fix PCIe root bridge MMIO32 require size too small then reboot issue.
9. Update re-drvier and SATA setting.
10. Fix PCI Subsystem Vendor ID don't match spec issue.
11. Fix Setup option SMT can't enable issue.
12. Fix NVMe order issue.
13. Fixed WebUI PCIE and Storage Page don't display Nvme information issue.

T02

1. Update AGESA version to 0.0.9.0
2. Setup Menu Main Page add Processor Information

T01

1. First release.