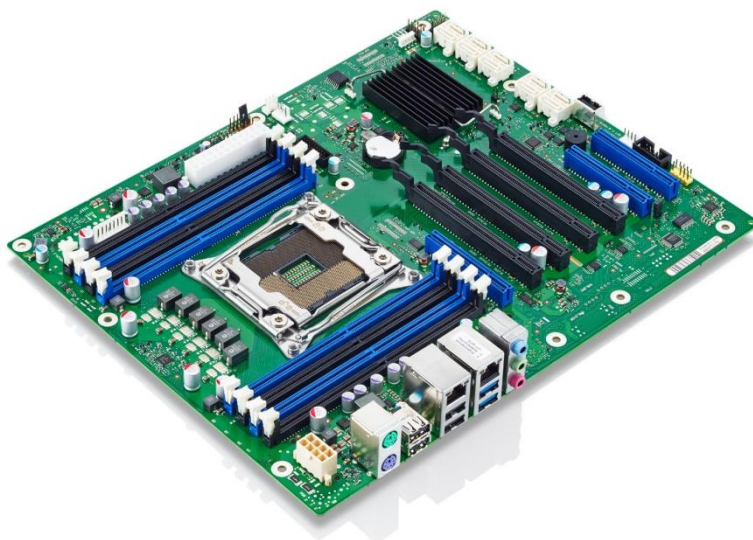


Fujitsu Mainboard

D3348-B1

BIOS Release Document



BIOS D3348-B1



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Revision History:

Date	BIOS Version	Notes
30.08.2019	R1.15.0	New BIOS version (R1.15.0) added, updated Hyperlinks
27.03.2019	R1.14.0	New BIOS version (R1.14.0) added
24.04.2018	R1.13.0	New BIOS version (R1.13.0) added
08.02.2017	R1.12.0	New BIOS version (R1.12.0) added
20.04.2016	R1.11.0	Added change for R1.11.0
22.01.2016	R1.11.0	New BIOS version (R1.11.0) added
29.04.2015	R1.8.0	New BIOS version (R1.8.0) added, Added new limitation for R1.7.0
23.02.2015	R1.7.0	Added new known issue for BIOS version R1.7.0
02.02.2015	R1.7.0	New BIOS version (R1.7.0) added
27.11.2014	R1.5.0	New BIOS version (R1.5.0) added; BIOS R1.2.0 removed from FTP
30.10.2014	R1.2.0	Initial mass production release

1 General Notes

AMI Aptio V5.0.0.9 R1.x.x

1.1 Released OS Versions

- MS Windows 7 (64bit)
- MS Windows 8.1 (64bit)
- MS Windows Server 2012-R2 (64bit)

1.2 BIOS Update Options [updated]

DOS Flash Update

Use ZIP-files for DOS-based BIOS Update

→ Copy related files (folder "DOS") to a DOS-bootable device and run <DosFlash.BAT>

Please see the BIOS-Flash-Tools documentation for more information:

<http://ftp.ts.fujitsu.com/pub/Mainboard-OEM-Sales/Services/Software&Tools/BIOS-Flash-Tools/>

Windows Flash Update

Use *Dxxx-xyz.DFI.\$xe* for Windows-based BIOS update

→ Rename file to *.exe after download and run exe-file from MS Windows

Auto BIOS Update

With Auto BIOS Update it is possible to check a Fujitsu server automatically to see if there is a new BIOS version for the system. For the update, no operating system or external storage medium is required. This feature must be enabled in BIOS Setup first.

For details on the Auto BIOS Update function, see BIOS manual

BIOS Recovery

Copy the *.ROM file (included in the ZIP file) to the root directory of a FAT32 formatted bootable USB stick.

Power off mainboard, insert the USB stick, set the jumper in the front panel connector to the *BIOS Recovery* position (marked orange), then turn on the mainboard.

You will hear short beeps while the BIOS is recovered. Wait until you hear a series of "long-long-short-short" beeps. Then turn off the mainboard and move the jumper back to the standard position (marked orange and pink).

The BIOS Recovery process can take a few minutes.

1.3 Modify BIOS Setup Settings (Tool EditCMOS) [updated]

The file *EditCMOS_SetupItemID_Dxxx-yz.txt* provides an overview about the supported BIOS Setup items of this specific BIOS version for the tool EditCMOS (Modify BIOS Setup Settings). See EditCMOS tool for further details:

ftp://ftp.ts.fujitsu.com/pub/Mainboard-OEM-Sales/Services/Software&Tools/Common-Mainboard-Tools/EditCMOS_UEFI/

For Windows the tool BIOSSET can be used instead, it is part of this package:

<ftp://ftp.ts.fujitsu.com/pub/Mainboard-OEM-Sales/Services/Software&Tools/Common-Mainboard-Tools/BiosSet/>

1.4 How to create a DOS bootable USB stick?

You can use the Fujitsu tool *FTS_Basic-BootStick.EXE* to easily create a Free-DOS bootable Stick:

<ftp://ftp.ts.fujitsu.com/pub/Mainboard-OEM-Sales/Services/Software&Tools/Common-Mainboard-Tools/USB-FreeDOS-Bootstick/>

Rename file from *.*\$*xe to *.exe and run tool in Windows.

1.5 FTP BIOS Folder D3348-B

The released BIOS versions for D3348-B are available here:

ftp://ftp.ts.fujitsu.com/pub/Mainboard-OEM-Sales/Products/Mainboards/Industrial&ExtendedLifetime/D3348-B/BIOS_D3348-B/

1.6 Note: Customer Service Release BIOS

Besides the released BIOS versions there may be additional BIOS versions (Customer Service Release BIOS = CSR BIOS) that solve specific customer problems.

Please note: These versions are available via OEM FTP only and they are not pre-installed ex factory.

2 BIOS R1.2.0

First released mass production BIOS

Known Issues and Limitations:

- Watchdog Timeout error occurs with LSI SAS RAID controller (Fujitsu D2607-B)
- BIOS Event Log implementation not final
- Video OpRom can be disabled by customer
- BSoD trouble (Recovery Win8.1-64 / WindowsPE5) with Secure Boot and SATA-Raid
- If Secure Boot is enabled, "primary Display" setting has no function. ~~Option will be removed in next BIOS.~~
- SATA mode=RAID: Systems stops during POST while pressing "Ctrl + I" to enter RAID Option ROM. Workaround: Set "Quiet Boot=Disabled" in BIOS setup to enter RAID Option ROM
- If SecureBoot=Enabled, "Primary Display" setting doesn't work in BIOS POST
- Power LED is starting to blink before entering ACPI S3 system state
- iAMT: KVM feature not supported. Limitation of Intel C612 platform
- LAN i210 only: WoL is possible, although LAN2 is disabled in system BIOS
- LAN i210 only: WoL from Hybrid Shutdown not possible

Note: BIOS R1.2.0 removed from FTP – customer should not downgrade to BIOS version < R1.5.0.

3 BIOS R1.5.0

First released version for customer upgrade.

Note: Customer should not downgrade to BIOS version < R1.5.0!

BIOS Changes vs. R1.2.0:

- Bug-fix: Watchdog Timeout error occurred with LSI SAS RAID controller (Fujitsu D2607-B)
- BIOS event logging finalized
- Bug-fix: Video OpRom could be disabled by customer
- Bug-fix: BSoD trouble (Recovery Win8.1-64 / WindowsPE5) with Secure Boot and SATA-Raid
- Bug-fix: SATA mode=RAID: Systems stopped during POST while pressing "Ctrl + I" to enter RAID Option ROM.
- Bug-fix: If SecureBoot=Enabled, "Primary Display" setting didn't work in BIOS POST
- Bug-fix: LAN i210 only: WoL was possible, although LAN2 was disabled in system BIOS

Known Issues and Limitations:

- Windows installation via Recovery-DVD may fail sporadically with error.
- For BIOS Recovery flash, the flash procedure must be started two (or more) times until it starts.
- Power LED blinking (for indicating ACPI S3 state) starting before system enters ACPI S3 state (Limitation).
- [Clarified] Passing POST with the BIOS Recovery jumper set does not reset BIOS Setup to "default values". Loading defaults in BIOS Setup, using EditCMOS or by doing a BIOS Recovery flash works OK.
- BIOS Setup item "Power Failure Recovery: Disabled" not working as expected with "Low Power Soft Off: Enabled".
- When clearing passwords (Administrator/User Password), passwords are not cleared when afterwards "Optimized Defaults" were loaded.
- HDD password(s) not frozen after resume from ACPI S3 (with no HDD password(s) set).
- Running VirtualXP crashes during resume from ACPI S3 or ACPI S4.
- Some automatic system Power Cycles may occur after BIOS update.
- iAMT: KVM feature not supported. Limitation of Intel C612 platform
- LAN i210 only: WoL from Hybrid Shutdown not possible (Limitation)

4 BIOS R1.7.0

BIOS Changes vs. R1.5.0:

- Added support for M2. carrier board D3352-A (supports PCIe x4 V3.0 based M.2 modules). Boot support for AHCI included; NVME boot support not yet available.
- PCI Express Link Speed for NVIDIA graphic adapters is always set to 2.5GT/s even if they support 8.0GT/s (e.g. Quadro K5200).
- Fixed: PCIe sound card ASUS "Xonar" only works after S3.
- Corrected names of DIMM-1D and DIMM-2D in SMBIOS event log.
- Fixed: Even if LAN2 (Intel I210) Controller is disabled, system can wake up from S5 by LAN2.
- Watchdog will not reset the system when "S.M.A.R.T. Status Bad" is shown.
- Sensor/fan/voltage names will be shown at SMBIOS event log.
- Fixed: Screen stays dark on S3 power button wakeup.
- Fixed: Boot Priority Order changes after disconnecting keyboard and mouse in PCH-RAID Configuration (RAID 0).
- Enable Teradici support.
- Fixed SMBIOS Type24: Hardware security is not set correctly for power on password.
- Fixed: If quiet boot is active and a password prompt is shown, the BIOS switched to diagnostic screen and wrote the password prompt over the diagnostic messages.
- Removed undesired BIOS Setup option: "Disable USB Controller".
- Fixed: System hangs on S3 resume, when HDDs with passwords are connected to SATA and sSATA ports.
- Fixed: No boot from Windows Recovery DVD possible with certain configurations.
- Fixed: Password was required after wake on LAN, even if BIOS Setup setting "Skip Password on WOL" was set to "Enabled".
- Fixed: Hybrid-S5 and S4 not possible after Pre-installation of Microsoft Windows 8.1, if a BIOS flash update occurred right after the installation.

BIOS R1.7.0 (continued)

Known Issues and Limitations:

- Please use the EFIFlash version that is included in the Admin Pack (V1.16.1) to flash this BIOS version 1.7.0. With other EFIFlash versions the update will be successful, but the expected automatic reset after the update will not work. Instead, the system will be halted with the message "System halted."
- When setting "*Launch CSM OpROM Policy*" to "*Do not launch*" or "*UEFI only*", the watchdog will not be disabled correctly at the end of the POST. This will result in a hard reset occurring 2 minutes after boot.
This issue is fixed in BIOS R1.8.0.
Other workarounds:
 - 1) Keep this option at the default "*Legacy Only*"
 - 2) Set "*Launch CSM*" to "*Disabled*"
 - 3) Downgrade to BIOS R1.5.0.
- PCIe SSD M2 riser card is not working reliably on slot #7 (PCIe slot closest to processor). Will be solved with future BIOS version.
- 2nd NVIDIA Grid K1 not working.
- BIOS event logging still under construction.
- HDD password(s) not frozen after resume from ACPI S3 (with no HDD password(s) set).
- Running VirtualXP crashes during resume from ACPI S3 or ACPI S4.
- Power LED blinking (for indicating ACPI S3 state) starting before system enters ACPI S3 state.
- [Clarified] Passing POST with the BIOS Recovery jumper set does not reset BIOS Setup to "default values". Loading defaults in BIOS Setup, using EditCMOS or by doing a BIOS Recovery flash works OK.
- BIOS Setup item "Power Failure Recovery: Disabled" not working as expected with "Low Power Soft Off: Enabled".
- When clearing passwords (Administrator/User Password), passwords are not cleared when afterwards "Optimized Defaults" were loaded.
- Some automatic system power cycles may occur after BIOS update.

5 BIOS R1.8.0

BIOS Changes vs. R1.7.0:

- External SATA support implemented.
- Bug Fix: Size of HDDs with native sector size 4KB (4Kn) incorrectly displayed in BIOS Setup. Note: 4Kn HDDs can only be used in AHCI mode. Intel RAID does not support 4Kn HDDs.
- Bug Fix: BSOD when preparing removal of NVMe SSD using Windows.
- Bug Fix: PCIe M.2 SSD modules sporadically not detected in Slot 7.
- ODD boot support improved.
- Bug Fix: Unpredicted watchdog event with BIOS Setup setting "*Launch PXE OpROM policy: Do not launch*" or "*Launch PXE OpROM policy: UEFI only*" (at "Advanced- CSM Configuration" submenu). This issue was introduced in BIOS 1.7.0.
- BIOS Setup default value for item "*Above 4G Decoding*" (at "Advanced- PCI Subsystem Settings" submenu) changed from "*Disabled*" to "*Enabled*".
- BIOS Setup default date after Date/Time error changed to 2015/01/01.
- Bug Fix: nVidia Tesla K80 computing adapter not working.
- Support for nVidia GRID K40 controller as GPGPU (General Purpose Computation on Graphics Processing Unit) implemented.
- Bug Fix: solved PCI errors in SEL and WHEA warnings during high load if two nVidia GRID K1 controllers are installed.
- Bug Fix: PCIe Hotplug attention indicator always on, although no actual error occurred.
- EraseDisk functionality updated.
- Detection of legacy boot options improved.
- Slot status in SMBIOS Type9 (System Slots) corrected.
- BIOS boot menu "*Diagnostic Program*" updated.
- Display format of "*Firmware Version*" (at "Advanced- System Management" submenu) modified.

Known Issues and Limitations:

- HDD password(s) not frozen after resume from ACPI S3 (with no HDD password(s) set).
- Running VirtualXP crashes during resume from ACPI S3 or ACPI S4.
- Power LED blinking (for indicating ACPI S3 state) starting before system enters ACPI S3 state.
- Passing POST with the BIOS Recovery jumper set does not reset BIOS Setup to "default values". Loading defaults in BIOS Setup, using EditCMOS or by doing a BIOS Recovery flash works OK.
- BIOS Setup item "*Power Failure Recovery: Disabled*" not working as expected with "*Low Power Soft Off: Enabled*".
- When clearing passwords (Administrator/User Password), passwords are not cleared when afterwards "*Optimized Defaults*" were loaded.
- Some automatic system PowerCycles may occur after BIOS update.

6 BIOS R1.11.0

BIOS Changes vs. R1.8.0:

- Solved: Possible Watchdog reset when software like Baramundi accesses the SMBus using multiple byte read
- Solved: Onboard LAN WOL was not working reliably for all USB xHCI settings.
- Updated CPU Microcode Patch to version 00000036h
- New feature: nVidia Grid M60 is supported as a GPGPU (General-Purpose computation on Graphics Processing Unit) only, i.e. this adapter card will not be used for video output in the boot process.
- Solved: POST hang at code 0x96 if multiple PCIe SSD M.2 riser cards are populated to PCIe slots.
- Fixed: If not all fan connectors have a fan connected, a fan missing error could be shown.
- Updated fan control firmware. This change is only active after a power cycle.
- Solved: POST hang occurs with Matrox Extio cards.
- Solved: Vector CANboardXL PCIe card (with PLX PEX8311 chip) does not work.
- New Feature: User can choose maximum PCIe Link Speed Gen 1/2/3 in Setup.
- Solved: sSATA controller could become disabled when no device is connected.
- Deactivated Sensor "BMC" due to inaccuracy of the absolute temperature.

Known Issues and Limitations:

- HDD password(s) not frozen after resume from ACPI S3 (with no HDD password(s) set).
- Running VirtualXP crashes during resume from ACPI S3 or ACPI S4.
- Power LED blinking (for indicating ACPI S3 state) starting before system enters ACPI S3 state.
- Passing POST with the BIOS Recovery jumper set does not reset BIOS Setup to "default values". Loading defaults in BIOS Setup, using EditCMOS or by doing a BIOS Recovery flash works OK.
- BIOS Setup item "Power Failure Recovery: Disabled" not working as expected with "Low Power Soft Off: Enabled".
- When clearing passwords (Administrator/User Password), passwords are not cleared when afterwards "Optimized Defaults" were loaded.
- Some automatic system PowerCycles may occur after BIOS update.

7 BIOS R1.12.0

BIOS Changes vs. R1.11.0:

- Solved: Added missing "AMT Configuration" menu in Advanced menu of BIOS Setup.
- Solved: Setup option "AutoEnglish" will be shown as "Auto".
- Solved: In BIOS Setup system does not switch off correctly if a USB3 PCIe-controller is plugged.
- Feature: Added several SetupItemIDs

Known Issues and Limitations:

- HDD password(s) not frozen after resume from ACPI S3 (with no HDD password(s) set).
- Running VirtualXP crashes during resume from ACPI S3 or ACPI S4.
- Power LED blinking (for indicating ACPI S3 state) starting before system enters ACPI S3 state.
- Passing POST with the BIOS Recovery jumper set does not reset BIOS Setup to "default values". Loading defaults in BIOS Setup, using EditCMOS or by doing a BIOS Recovery flash works OK.
- BIOS Setup item "Power Failure Recovery: Disabled" not working as expected with "Low Power Soft Off: Enabled".
- When clearing passwords (Administrator/User Password), passwords are not cleared when afterwards "Optimized Defaults" were loaded.
- Some automatic system PowerCycles may occur after BIOS update.

8 BIOS R1.13.0

BIOS Changes vs. R1.12.0:

- Updated: CPU Microcode Patches (INTEL-SA-00088, CVE2017-5715)
 - Haswell EP B0 = 80000014h
 - Haswell EP C0/C1/M1 = 0000003Ch
- Updated to Management Engine Firmware version 9.1.42.3002 (INTEL-SA-00086).
 - **Please note:** Intel ME will not be updated during BIOS flash due to missing Intel update support. Only possible in factory. Customers have to use the Local-Firmware-Update tool which is available on our FTP server or on the support page:
 - ftp://ftp.ts.fujitsu.com/pub/Mainboard-OEM-Sales/Services/Software&Tools/Miscellaneous/INTEL_SA-00086_ME-Update/
 - <http://support.ts.fujitsu.com/index.asp> > Peripheral Devices > Mainboards > Select a new Product > Product Search "D3348-B1" > Downloads > Driver > AMT
- Solved: UEFI IPv6 PXE boot not working properly.

Known Issues and Limitations:

- HDD password(s) not frozen after resume from ACPI S3 (with no HDD password(s) set).
- Running VirtualXP crashes during resume from ACPI S3 or ACPI S4.
- Power LED blinking (for indicating ACPI S3 state) starting before system enters ACPI S3 state.
- Passing POST with the BIOS Recovery jumper set does not reset BIOS Setup to "default values". Loading defaults in BIOS Setup, using EditCMOS or by doing a BIOS Recovery flash works OK.
- BIOS Setup item "Power Failure Recovery: Disabled" not working as expected with "Low Power Soft Off: Enabled".
- When clearing passwords (Administrator/User Password), passwords are not cleared when afterwards "Optimized Defaults" were loaded.
- Some automatic system PowerCycles may occur after BIOS update.

9 BIOS R1.14.0

BIOS Changes vs. R1.13.0:

- Integrated fixes for CVE-2018-3615, CVE-2018-3620, CVE-2018-3646, CVE-2018-3628, CVE-2018-3629, CVE-2018-3632, CVE-2018-3657, CVE-2018-3658, CVE-2018-3659, CVE-2018-3655, CVE-2018-3616
- Updated: CPU Microcode Patches
 - Haswell EP B0 = 80000014h
 - Haswell EP C0/C1/M1 = 0000003Dh
- Updated to Management Engine Firmware version 9.1.45.3000
 - **Please note:** Intel ME will not be updated during BIOS flash due to missing Intel update support. Only possible in factory. Customers have to use the Local-Firmware-Update tool which is available on our FTP server or on the support page:
 - ftp://ftp.ts.fujitsu.com/pub/Mainboard-OEM-Sales/Products/Mainboards/Industrial&ExtendedLifetime/D3348-B/BIOS_D3348-B/BIOS_D3348-B1/
 - <http://support.ts.fujitsu.com/index.asp> > Peripheral Devices > Mainboards > Select a new Product > Product Search "D3348-B1" > Downloads > Driver > AMT

Known Issues and Limitations:

- HDD password(s) not frozen after resume from ACPI S3 (with no HDD password(s) set).
- Running VirtualXP crashes during resume from ACPI S3 or ACPI S4.
- Power LED blinking (for indicating ACPI S3 state) starting before system enters ACPI S3 state.
- Passing POST with the BIOS Recovery jumper set does not reset BIOS Setup to "default values". Loading defaults in BIOS Setup, using EditCMOS or by doing a BIOS Recovery flash works OK.
- BIOS Setup item "Power Failure Recovery: Disabled" not working as expected with "Low Power Soft Off: Enabled".
- When clearing passwords (Administrator/User Password), passwords are not cleared when afterwards "Optimized Defaults" were loaded.
- Some automatic system PowerCycles may occur after BIOS update.

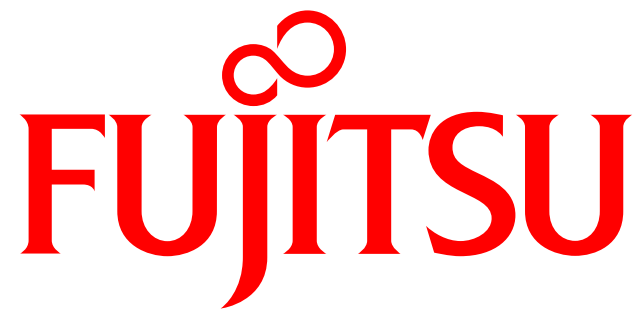
10 BIOS R1.15.0 [new]

BIOS Changes vs. R1.14.0:

- Updated: CPU Microcode Patches
 - Haswell EP C0/C1/M1 = 00000043h

Known Issues and Limitations:

- HDD password(s) not frozen after resume from ACPI S3 (with no HDD password(s) set).
- Running VirtualXP crashes during resume from ACPI S3 or ACPI S4.
- Power LED blinking (for indicating ACPI S3 state) starting before system enters ACPI S3 state.
- Passing POST with the BIOS Recovery jumper set does not reset BIOS Setup to "default values". Loading defaults in BIOS Setup, using EditCMOS or by doing a BIOS Recovery flash works OK.
- BIOS Setup item "Power Failure Recovery: Disabled" not working as expected with "Low Power Soft Off: Enabled".
- When clearing passwords (Administrator/User Password), passwords are not cleared when afterwards "Optimized Defaults" were loaded.
- Some automatic system PowerCycles may occur after BIOS update.



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