Fujitsu *Gemini Lake* Mini-ITX Mainboard

D3543-S

BIOS Release Document

BIOS *Gemini Lake Ind.* D3543-S

FUJITSU

Content:

Revision History:

Date	BIOS Version	Notes
21.08.2018	R1.5.0	Added new BIOS version (R1.5.0)
11.06.2018	R1.2.0	Updated Known Issues
01.06.2018	R1.2.0	Added new BIOS version (R1.2.0)
27.04.2018	R1.1.0	Added new BIOS version (R1.1.0)
19.04.2018	R1.0.0	Initial mass production release

BIOS *Gemini Lake Ind.* D3543-S

1   General Notes

This BIOS is based on the AMI Aptio V5.0.0.13 R1.x.x
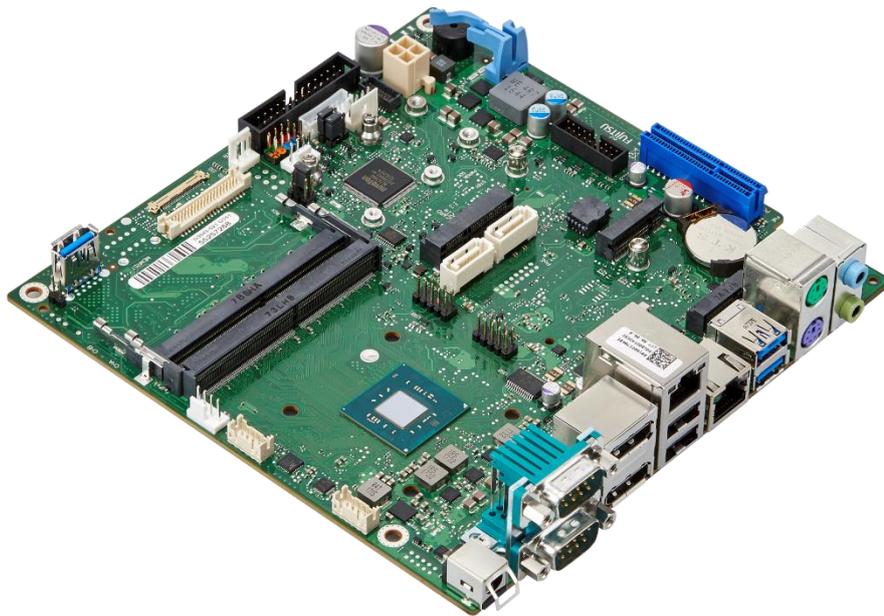
1.1 Released OS Versions

- MS Windows 10 (64bit)

1.2 BIOS Update Options

EFI Flash Update

Use ZIP-files for EFI-based BIOS Update

- Copy content of the BIOS ZIP to any FAT32 formatted USB drive/stick. The files should be visible in following directories:
    o   EfiFlash.efi -> /EFI/FUJITSU
    o   Flash update files (e.g. .UPD) in root directory of USB stick.
    o   Boot the system and choose "FUJITSU Update Utility" in F12 boot menu.

Please see the BIOS-Flash-Tools documentation for more information:
ftp://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 please see the BIOS manual.

BIOS Recovery

Please see the BIOS-Flash-Tools documentation for more information:
ftp://ftp.ts.fujitsu.com/pub/Mainboard-OEM-Sales/Services/Software&Tools/BIOS-Flash-Tools/

Additional information

If you have any problems after a BIOS flash please try if "Load Optimized Default Values" (F3) in BIOS setup solves the problem.

1.3 Modify BIOS Setup Settings and Defaults (Tool BIOSSET)

BIOS settings can be modified by the Windows and Linux tool BIOSSET (Modify BIOS Setup Settings and Defaults). See BIOSSET tool help (parameter –h) for further details.

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

1.4 What's about DOS support and where are the DOS tools?

Due to Intel's and Microsoft's decision, there is no "Legacy" OS support (CSM mode) implemented anymore. So only usage of UEFI operating systems is possible. We will provide the necessary tools and documentation(*) for Windows and Linux.

Editcmos (DOS) -> Biosset (Windows and Linux)
EfiFlash.exe (DOS) -> Efiflash.efi (EFI environment) or Dskflash/Deskflash (Windows/Linux)
SMCO, LVDS tool, OEMIdent are also available for Windows and Linux.

(*) not all documentation and tools are available yet. They will be uploaded on our FTP server as soon as possible.

1.5 FTP BIOS Folder D3543-S

The released BIOS versions are available here:
ftp://ftp.ts.fujitsu.com/pub/Mainboard-OEM-Sales/Products/Mainboards/Industrial&ExtendedLifetime/D3543-S_Mini-ITX/BIOS_D3543-S/

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 R1.0.0

First released mass production BIOS

Known Issues and Limitations:

- No legacy OS support (UEFI only due to Intel restrictions)!
- BIOS Recovery flash not working as expected: BIOS Recovery flash process is running in endless loop until Recovery jumper is removed.
- Boot logo cannot be flashed
- LVDS Display remains dark with setting LVDS Brightness Control: OS controlled
- WOL from ACPI S3 is working although disabled in LAN driver.
- Flashing of an archive bios file does not work.
- Internal COM Ports COM3 (RS232) and COM4 (RS232/RS422/RS485) not yet supported.
- Clicking with the mouse while transitioning to S3 causes system freeze.

3 BIOS R1.1.0

BIOS Changes vs. R1.0.0:

- Feature: Remote changeability for BIOS setup item "Active Processor Cores" (at "Advanced – CPU Configuration" submenu) implemented

- Feature: "USB Port Security" mechanism updated.

- Fixed: Power consumption in power off mode reduced.

- Fixed: WOL from ACPI S3 was working although disabled in LAN driver.

- Fixed: eDP Brightness control in BIOS Setup did not work.

- Fixed: HDD unlock via HDD master password not working.

- Fixed: Clicking with the mouse while transitioning to S3 will freeze the system.

- Fixed: Wake on USB Keyboard from S5 working, although disabled in BIOS.

- Fixed: FTS Subsystem Vendor ID was not programmed to Intel graphic device.

- Fixed: Boot logo exchange via capsule update not working.

- Fixed: Corrected setup strings for "Package C State limit"

- Fixed: BIOS setup settings "External Power Button Control: Power On only" and "External Power Button Control: Enabled" (at "Power" submenu) not working

Known Issues and Limitations:

- No legacy OS support (UEFI only due to Intel restrictions)!

- BIOS Recovery flash not working as expected: BIOS Recovery flash process is running in endless loop until Recovery jumper is removed.

- LVDS Display remains dark with setting LVDS Brightness Control: OS controlled. LVDS Brightness tool is needed. OS slider only works for eDP.

- Internal COM Ports COM3 (RS232) and COM4 (RS232/RS422/RS485) not yet supported.

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4 BIOS R1.2.0

BIOS Changes vs. R1.1.0:

- Fixed: FTS Subsystem Vendor ID was not programmed to Intel graphic device.
- Fixed: It was not possible to unlock a HDD via master password.
- Fixed: Clicking with the mouse while transitioning to S3 caused freeze of the system.
- Fixed: Wake on USB Keyboard from S5 was working, although disabled in BIOS.
- Fixed: System could be powered off by pressing power button during BIOS flash update.
- Fixed: Customized Setup default settings (Biosset.exe) were lost after a BIOS flash update.
- Fixed: USB security settings could lead to user lockout.
- Feature: Show LVDS dual channel configuration item in BIOS setup.
- Feature: Erase Disk is now enabled by default.
- Updated System monitoring characteristics.

Known Issues and Limitations:

- No legacy OS support (UEFI only due to Intel restrictions)!
- BIOS Recovery flash not working as expected: BIOS Recovery flash process is running in endless loop until Recovery jumper is removed.
- LVDS Display remains dark with setting LVDS Brightness Control: OS controlled. LVDS Brightness tool is needed. OS slider only works for eDP.
- Internal COM Ports COM3 (RS232) and COM4 (RS232/RS422/RS485) not yet supported.
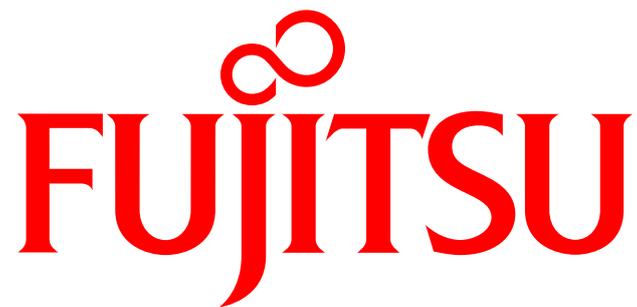- Mini-PCIe slot is currently not working.

5 BIOS R1.5.0 [<mark>new</mark>]

BIOS Changes vs. R1.2.0:

- Updated: Intel Trusted Execution Engine

- Fixed: Mini-PCIe slot not working. (Only possible via flash update in Fujitsu factory)

- Fixed: M.2 Module not shown in drive configuration

- Fixed: USB security settings could lead to user lockout.

- Fixed: Howling fans after system startup.

- Fixed: PXE boot option does not appear in the boot menu.

- Fixed: Under some circumstances, the boot order settings were transferred, although it is not instructed by flash tool (Deskflash).

- Feature: AutoEnable internal graphic if external graphic is absent.

- Feature: Improved USB signal quality for internal USB port.

- Feature: VT-d is now configurable via BiosSet.exe

- Feature: Enhanced serial port mode selection support (RS232, RS485, RS422). Now configurable via BiosSet.exe

- Feature: "Erase Disk" functionality enabled by default

- Feature: Add support for D3450 serial port configuration

Known Issues and Limitations:

- No legacy OS support (UEFI only due to Intel restrictions)!

- BIOS Recovery flash not working as expected: BIOS Recovery flash process is running in endless loop until Recovery jumper is removed.
    - Best practice: If you hear a "double beep" at the beginning of the Recovery process, remove the jumper immediately. After the process is done, the mainboard will boot in normal mode.

- BIOS Recovery flash not supported by all USB ports: Prefer USB 3.0 ports for BIOS Recovery flash.

- LVDS Display remains dark with setting LVDS Brightness Control: OS controlled. LVDS Brightness tool is needed. OS slider only works for eDP.

- Internal COM Ports COM3 (RS232) and COM4 (RS232/RS422/RS485) not yet supported.

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