Kabylake Desktop

BIOS Release Document

▼

Designed by
Fujitsu

▶ D3400-B2
▶ D3401-B2
▶ D3402-B2
▶ D3410-B2
▶ D3417-B2

Content

Revision History:

Date	BIOS Version	Notes
23.09.2020	R1.28.0	Added new BIOS version; Removed D3400-U1 motherboard. New BIOS versions are only created for D34xx-**B**2 motherboards
15.06.2020	R1.27.0	Added new BIOS version
24.03.2020	R1.26.0	Added known issue (Raid not working)
03.03.2020	R1.26.0	Added new BIOS version Changed whole document to Kontron design Reordered some chapters
25.07.2019	R1.22.0	Added new BIOS version (R1.22.0)
19.09.2018	R1.19.0	Added new BIOS version (R1.19.0)
12.07.2018	R1.18.0	Added new BIOS version (R1.18.0)
27.04.2018	R1.17.0	Added new BIOS version (R1.17.0)
17.04.2018	R1.14.0	Updated CVE number for Reference Code
16.11.2017	R1.14.0	Added new BIOS version (R1.14.0)
26.06.2017	R1.8.0	Updated CPU Microcode Patch version number
19.05.2017	R1.8.0	Added new BIOS version (R1.8.0)
26.04.2017	R1.7.0	Added new BIOS version (R1.7.0)
05.04.2017	R1.5.0	Additional Information added and BIOS Info R1.5.0 updated
16.03.2017	R1.3.0 / R1.5.0	Updated Known Issues and Limitations
10.03.2017	R1.5.0	Added new BIOS version (R1.5.0)
23.02.2017	R1.3.0	Updated Known Issues and Limitations
15.02.2017	R1.3.0	Updated Known Issues and Limitations to BIOS 1.3.0
07.02.2017	R1.3.0	Initial mass production release

1. General Notes

▶ AMI Aptio V5.0.0.12

1.1 Released OS Versions

▶ MS Windows 7 (32/64bit) [1)]
▶ MS Windows 8.1 (64bit) [1)]
▶ MS Windows 10 (64bit)

1) Requires Skylake (= 6th gen.) processor!

1.2 BIOS Update Options

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:
ftp://ftp.kontron.com/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.kontron.com/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   FTP BIOS Folder

The released BIOS version is available here:

D3402-B2:
ftp://ftp.kontron.com/Products/Motherboards/ExtendedLifeCycle/D3402-B_D3417-B/BIOS/BIOS_D3402-B2/

D3417-B2:
ftp://ftp.kontron.com/Products/Motherboards/ExtendedLifeCycle/D3402-B_D3417-B/BIOS/BIOS_D3417-B2/

D3400-B2:
ftp://ftp.kontron.com/Products/Motherboards/EoL_Motherboards/EoL_ClassicDesktop/D34xx/D3400_D3410/
BIOS_D3400/BIOS_D3400-B2/

D3401-B2:
ftp://ftp.kontron.com/Products/Motherboards/EoL_Motherboards/EoL_ClassicDesktop/D34xx/D3401_D3402-
A_D3417-A/BIOS_D3401_D3402-A_D3417-A/BIOS_D3401-B2/

D3410-B2:
ftp://ftp.kontron.com/Products/Motherboards/EoL_Motherboards/EoL_ClassicDesktop/D34xx/D3400_D3410/
BIOS_D3410/BIOS_D3410-B2/

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.kontron.com/Services/Software_Tools/Common-Mainboard-Tools/USB-FreeDOS-Bootstick/
Rename file from *.$xe to *.exe and run tool in Windows.

1.5   Modify BIOS Setup Settings and Defaults (Tool EditCMOS / BIOSSET)

The file D34**-***.R1.x.0.SetupItemId.txt provides the list of BIOS Setup items that this BIOS version
allows to be modified by the DOS tool EditCMOS (Modify BIOS Setup Settings and Defaults).

See EditCMOS tool for further details:
ftp://ftp.kontron.com/Services/Software_Tools/Common-Mainboard-Tools/EditCMOS_UEFI/

For Windows/Linux the Tool BIOSSET can be used instead, it is part of this package:
ftp://ftp.kontron.com/Services/Software_Tools/Common-Mainboard-Tools/BiosSet/

Both tools are also described in our Manufacturing-Tools HowTo document:
ftp://ftp.kontron.com/Services/Software_Tools/Common-Mainboard-Tools/

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 R1.3.0

First released mass production BIOS (except D3417-B2)

Known Issues and Limitations:

▶ Only D3401-B2x: BIOS support for "Chassis Intrusion" feature is currently missing. Updated BIOS is expected in second half of March 2017

▶ Black screen or CATERR after RTC resume from ACPI S4. Issue only seen with Intel graphics driver v21.20.16.4551 or newer. Issue will be fixed with graphics driver update. Meanwhile graphics driver v21.20.16.4550 should be used.

▶ Wake on LAN via I219LM onboard LAN controller from ACPI S3/S4 is possible even when the I219LM is disabled in device manager.

▶ Wake up from RTC after Power Button Overwrite does not work..

▶ D3400-B2 only: COM port is not working

3. BIOS R1.5.0

Changes vs. previous released BIOS

▶ Updated to Management Engine Firmware version 11.6.20.1221.

▶ Updated to System Management Controller (Teutates) Firmware 47.

▶ Updated Intel Reference Code to support Celeron (2+2) and Xeon.

▶ Updated System monitoring (Teutates) firmware. Improved accuracy of voltage and temperature measurement.

▶ Feature: Mainboard serial number is now shown in BIOS setup page "System Information".

▶ Feature: Support NVMe Module within "Advanced" -> "Drive Configuration".

▶ Fixed: (D3401-B2 only): Add support for intrusion switch.

▶ Fixed: DIMM Channel information was wrong in "System Information".

▶ Fixed: EraseDisk erasing process was interrupted by a system reset after 5 minutes.

▶ Fixed: BIOS Setup item "Turbo Mode" was visible although not supported by used processor types.

▶ Fixed: Properly initialize Acoustic Management Configuration in BIOS Setup.

▶ Fixed: Confirmation of intrusion event was not possible with Password on every/first boot.

▶ Fixed: Easy PC Protect was not working properly.

▶ Fixed: USB keyboard errors occured while entering the BitLocker Recovery Key.

Known Issues and Limitations:

▶ Black screen or CATERR after RTC resume from ACPI S4. Issue only seen with Intel graphics driver v21.20.16.4551 or newer. Issue will be fixed with graphics driver update. Meanwhile graphics driver v21.20.16.4550 should be used.

▶ Wake on LAN via I219LM onboard LAN controller from ACPI S3/S4 is possible even when the I219LM is disabled in device manager.

▶ Wake up from RTC after Power Button Overwrite does not work.

▶ Some characters at BIOS Setup are not working correct with BIOS Setup setting different to "Keyboard Layout: English"

▶ D3400-B2 only: COM port is not working

4. BIOS R1.7.0

Changes vs. previous released BIOS

▶ Updated to Management Engine Firmware version 11.6.25.1229.

▶ Updated Intel CPU Microcode Patch 0xB2 for SKL R-0/S-0 Processor, 0x34 for KBL A-0 and 0x48 for KBL B-0.

▶ Updated to System Management Controller (Teutates) Firmware 48.

▶ Updated fan characteristic to SMCS version 03 (D3402/17-B2 only)

▶ Updated Intel VideoBIOS to 9.0.1050 and UEFI GOP driver to 9.0.1063.

▶ Updated RAID/RST OpROM

▶ Feature: (D3400/10-B2 only) Removed "Serial Port Console Redirection" support.

▶ Feature: (D3417-B2 only) New BIOS setup Item "Above 4G decoding" visible.

▶ Fixed: (D3410-B2 only) ME was not updated during an UPD BIOS update.

▶ Fixed: Manual step necessary during WHCK test of TPM1.2 (Even if execute PPI#18(SetNoPPI Clear_True) command to system, the BIOS shows the confirmation screen when execute PPI#14(Clear+Enable+Activate) or PPI#22(Clear+Enable+Activate) command).

▶ Fixed: BiosSet.exe /wakeonrtc did not return status "ON".

▶ Fixed: (D3400-B2 only) COM port not working. Changed from COM2 to COM1.

▶ Fixed: Only 2.1 GB usable memory been available when using Win7 x86.
   o Note: To activate this fix, you need to load BIOS default settings after BIOS flash!

▶ Fixed: M.2 NVMe modul not shown in BIOS (Advanced -> Drive configuration)

▶ Fixed: IPv6 UEFI PXE Boot Option not available with external PCIe Broadcom LAN Controller

Known Issues and Limitations:

▶ Black screen or CATERR after RTC resume from ACPI S4. Issue only seen with Intel graphics driver v21.20.16.4551 or newer. Issue will be fixed with graphics driver update. Meanwhile graphics driver v21.20.16.4550 should be used.

▶ Wake on LAN via I219LM onboard LAN controller from ACPI S3/S4 is possible even when the I219LM is disabled in device manager.

▶ Wake up from RTC after Power Button Overwrite does not work.

▶ Some characters at BIOS Setup are not working correct with BIOS Setup setting different to "Keyboard Layout: English"

5. BIOS R1.8.0

Changes vs. previous released BIOS

▶ Updated to Management Engine Firmware version 11.6.29.3287.

▶ Fix for INTEL-SA-00075 / CVE-2017-5689

▶ Updated Intel CPU Microcode for Kabylake (0x5E) & Skylake CPU (0xBA) [Desktop + Xeon]

Known Issues and Limitations:

▶ Black screen or CATERR after RTC resume from ACPI S4. Issue only seen with Intel graphics driver v21.20.16.4551 or newer. Issue will be fixed with graphics driver update. Meanwhile graphics driver v21.20.16.4550 should be used.

▶ Wake on LAN via I219LM onboard LAN controller from ACPI S3/S4 is possible even when the I219LM is disabled in device manager.

▶ Wake up from RTC after Power Button Overwrite does not work.

▶ Some characters at BIOS Setup are not working correct with BIOS Setup setting different to "Keyboard Layout: English"

6. BIOS R1.14.0

Changes vs. previous released BIOS

- ▶ Updated to Management Engine Firmware version 11.8.50.3399.
- ▶ Updated System Management Controller Firmware
  - ○ Teutates: Version 50
  - ○ Amphion: Version 5
- ▶ Updated Intel Reference Code (CVE-2017-5703)
- ▶ Updated GOP/VBT and legacy VBIOS
- ▶ Updated to new Intel RST driver (Oprom).
  - ○ (D3417-B2 only) Intel Optane support.
- ▶ Updated to new PXE driver (Oprom) for Realtek LAN.
- ▶ Feature: (D3417-B2 only) Added support to accelerate platform via Intel SetupOptaneMemory application.
- ▶ Feature: Improve 3rd party Option ROM launch.
- ▶ Fixed: PXE boot failures with IPv6 occurred.
- ▶ Fixed: Same boot device appeared two times in Boot Option Priority.
- ▶ Fixed: With Easy PC enabled, it was possible to enter Setup without password.
- ▶ Fixed: In some circumstances UEFI IPv4 PXE boot did not work properly.
- ▶ Fixed: Some ECC RAM modules did not work properly.
- ▶ Fixed: PCIe card support improved.
- ▶ Fixed: (D3417-B2 only) Runtime Error Logging entry was missing in Setup

Known Issues and Limitations:

- ▶ Black screen or CATERR after RTC resume from ACPI S4. Issue only seen with Intel graphics driver v21.20.16.4551 or newer. Issue will be fixed with graphics driver update. Meanwhile graphics driver v21.20.16.4550 should be used.
- ▶ Wake on LAN via I219LM onboard LAN controller from ACPI S3/S4 is possible even when the I219LM is disabled in device manager.
- ▶ Wake up from RTC after Power Button Overwrite does not work.
- ▶ Some characters at BIOS Setup are not working correct with BIOS Setup setting different to "Keyboard Layout: English

7. BIOS R1.17.0

Changes vs. previous released BIOS

▶ Updated CPU Microcode. Fix for Intel-SA-00088 (CVE2017-5715)

    o 0xC2 for Skylake R0/S0 and Skylake Xeon E3

    o 0x84 for Kaby Lake H/S/X/G and Kaby Lake Xeon E3

▶ Updated to Management Engine Firmware version 11.8.50.3460.

▶ Fixed: It was not possible to activate iTCO watchdog event within Linux.

▶ Fixed: WOL was working even when disabled in Setup and USB keyboard wakeup set to enabled.

Known Issues and Limitations:

▶ Black screen or CATERR after RTC resume from ACPI S4. Issue is fixed with graphics driver v21.20.16.4665 or newer.

▶ Wake on LAN via I219LM onboard LAN controller from ACPI S3/S4 is possible even when the I219LM is disabled in device manager.

▶ Wake up from RTC after Power Button Overwrite does not work.

▶ Some characters at BIOS Setup are not working correct with BIOS Setup setting different to "Keyboard Layout: English"

8. BIOS R1.18.0

Changes vs. previous released BIOS

▶ Updated CPU Microcode. Fix for Intel-SA-00115 (CVE2018-3639, CVE2018-3640)

    ○ 0xC6 for Skylake R0/S0 and Skylake Xeon E3

    ○ 0x8E for Kaby Lake H/S/X/G and Kaby Lake Xeon E3

▶ Feature: Adjusted available memory for Windows 7 x86. Now 3.1 GB free for use.

Known Issues and Limitations:

▶ Black screen or CATERR after RTC resume from ACPI S4. Issue is fixed with graphics driver v21.20.16.4665 or newer.

▶ Wake on LAN via I219LM onboard LAN controller from ACPI S3/S4 is possible even when the I219LM is disabled in device manager.

▶ Wake up from RTC after Power Button Overwrite does not work.

▶ Some characters at BIOS Setup are not working correct with BIOS Setup setting different to "Keyboard Layout: English"

9. BIOS R1.19.0

Changes vs. previous released BIOS

▶ Updated to Management Engine Firmware version 11.8.55.3510.

▶ Fix for CVE-2018-3616, CVE-2018-3643, CVE-2018-3644, CVE-2018-3655, CVE-2018-3657, CVE-2018-3658, CVE-2018-3659

▶ Fixed: Windows 10 System Firmware Update – Progress bar is missing

▶ Fixed: Trusted Module BIOS entry was still visible if TPM license flag disabled with OEMIdent.

▶ Fixed: PCIe error handling modified to prevent sporadic POST hangs with some PCIe cards.

▶ Feature: Enhance Setup Password Severity Options (Standard, Strong, Stringent)

▶ Feature: Show "Launch Storage OpROM policy" in [BIOS > Advanced > CSM Configuration]

▶ Feature: Added SetupItemID for "SATA Controller Speed": 0x01BA

Known Issues and Limitations:

▶ Black screen or CATERR after RTC resume from ACPI S4. Issue is fixed with graphics driver v21.20.16.4665 or newer.

▶ Wake on LAN via I219LM onboard LAN controller from ACPI S3/S4 is possible even when the I219LM is disabled in device manager.

▶ Wake up from RTC after Power Button Overwrite does not work.

▶ Some characters at BIOS Setup are not working correct with BIOS Setup setting different to "Keyboard Layout: English"

10. BIOS R1.22.0

Changes vs. previous released BIOS

▶ Integrated Fixes for

  o PSIRT-TA-201810-007, PSIRT-TA-201810-004 (INTEL-SA-00185), PSIRT-TA-201901-002,

  o CVE-2018-12126, CVE-2018-12127, CVE-2018-12130, CVE-2018-12178, CVE-2018-12179, CVE-2018-12180, CVE-2018-12181, CVE-2018-12182, CVE-2018-12185, CVE-2018-12187, CVE-2018-12188, CVE-2018-12189, CVE-2018-12190, CVE-2018-12191, CVE-2018-12192, CVE-2018-12196, CVE-2018-12199, CVE-2018-12198, CVE-2018-12200, CVE-2018-12201, CVE-2018-12202, CVE-2018-12203, CVE-2018-12204, CVE-2018-12205

  o CVE-2019-0089, CVE-2019-0090, CVE-2019-0086, CVE-2019-0091, CVE-2019-0092, CVE-2019-0093, CVE-2019-0094, CVE-2019-0096, CVE-2019-0097, CVE-2019-0098, CVE-2019-0099

▶ Updated CPU Microcode (0xCC) for Skylake-S0/R0 and (0xB4) for Kabylake-B-0

▶ Updated to Management Engine Firmware version 11.8.65.3590

▶ Fixed: Wake from S3 was not possible with 'Above 4G Decoding' being enabled in SETUP.

▶ Fixed: HDD Password input box was black after set HDD password.

▶ Fixed: Windows Boot Manager was missing under some circumstances.

▶ Fixed: Drive size of disks with native 4k sectors was not shown correctly in BIOS setup.

Known Issues and Limitations:

▶ Black screen or CATERR after RTC resume from ACPI S4. Issue is fixed with graphics driver v21.20.16.4665 or newer.

▶ Wake on LAN via I219LM onboard LAN controller from ACPI S3/S4 is possible even when the I219LM is disabled in device manager.

▶ Wake up from RTC after Power Button Overwrite does not work.

▶ Some characters at BIOS Setup are not working correct with BIOS Setup setting different to "Keyboard Layout: English"

11. BIOS R1.26.0

Changes vs. previous released BIOS

▶ Intel IPU 2019 Q2 Security Update - Integrated Fixes for CVE-2019-0117, CVE-2019-0123, CVE-2019-0124, CVE-2019-0131, CVE-2019-0151, CVE-2019-0165, CVE-2019-0166, CVE-2019-0168, CVE-2019-0169, CVE-2019-0184, CVE-2019-11086, CVE-2019-11087, CVE-2019-11088, CVE-2019-11090, CVE-2019-11097, CVE-2019-11100, CVE-2019-11101, CVE-2019-11102, CVE-2019-11103, CVE-2019-11104, CVE-2019-11105, CVE-2019-11106, CVE-2019-11107, CVE-2019-11108, CVE-2019-11110, CVE-2019-11131, CVE-2019-11132, CVE-2019-11147, CVE-2019-11157, CVE-2019-11157

▶ Updated CPU Microcode for Skylake-S0/R0 (0xD6) and Kabylake-B-0 (0xCA)

▶ Updated to Management Engine Firmware version 11.8.70.3626

▶ Updated Intel Raid & RST UEFI driver – Fixes boot issues in RAID1, if one drive was removed.

▶ Fixed: HDD Password error displayed without any key input

▶ Fixed: Boot from removable media was possible although disabled in BIOS setup.

▶ Feature: "Erase Disk" license enabled by default. This only takes effect for newly produced mainboards. Not possible to activate "Erase Disk" license via BIOS update flash.

Known Issues and Limitations:

▶ Black screen or CATERR after RTC resume from ACPI S4. Issue is fixed with graphics driver v21.20.16.4665 or newer.

▶ Wake on LAN via I219LM onboard LAN controller from ACPI S3/S4 is possible even when the I219LM is disabled in device manager.

▶ Wake up from RTC after Power Button Overwrite does not work.

▶ Some characters at BIOS Setup are not working correct with BIOS Setup setting different to "Keyboard Layout: English"

▶ [new] Intel RST-RAID is not usable on some motherboard types with R1.26.0

12. BIOS R1.27.0

Changes vs. previous released BIOS

▶ Fixed: Intel RST-RAID was not usable on some motherboard types with R1.26.0. Downgraded to previous integrated RST UEFI driver / OPROM version 15.7.0.3054.

▶ Info: Replaced Fujitsu logos with Kontron logos.

   o Diagnostic screen logo (Quiet Boot = Disabled) removal takes immediate effect after BIOS update.

   o Silent boot logo will not be replaced during BIOS updates in field (logo preserve function). It just takes effect on newly produced or RMA processed motherboards. To activate the logo on "old" motherboards, you can use the Logo file from:

   ftp://ftp.kontron.com/Services/Software_Tools/Miscellaneous/

   • Kontron_QuietBootBIOSLogo.zip

Known Issues and Limitations:

▶ Black screen or CATERR after RTC resume from ACPI S4. Issue is fixed with graphics driver v21.20.16.4665 or newer.

▶ Wake on LAN via I219LM onboard LAN controller from ACPI S3/S4 is possible even when the I219LM is disabled in device manager.

▶ Wake up from RTC after Power Button Overwrite does not work.

▶ Some characters at BIOS Setup are not working correct with BIOS Setup setting different to "Keyboard Layout: English"

13. BIOS R1.28.0 [new]

Changes vs. previous released BIOS [only released for D34xx-B2 motherboards]

- ▶ Intel Platform Update (IPU) 2020.1 - Integrated fixes for:
    - o Intel SA-00295 (Ripple 20)
    - o Intel SA-00320
    - o Intel SA-00322
    - o Intel SA-00329
    - o Intel SA-00404
- ▶ Updated CPU Microcode for Skylake R0/S0 (0xE0) and Kabylake-B-0 (0xD6)
- ▶ Updated to Management Engine Firmware version 11.8.79.3722
- ▶ Fixed: Background of new Kontron silent boot logo (POST, Windows) is not "pure" black. QuiteBootLogo.zip, mentioned in BIOS R1.27.0, is updated with the new Logo bitmap.

Known Issues and Limitations:

- ▶ Black screen or CATERR after RTC resume from ACPI S4. Issue is fixed with graphics driver v21.20.16.4665 or newer.
- ▶ Wake on LAN via I219LM onboard LAN controller from ACPI S3/S4 is possible even when the I219LM is disabled in device manager.
- ▶ Wake up from RTC after Power Button Overwrite does not work.
- ▶ Some characters at BIOS Setup are not working correct with BIOS Setup setting different to "Keyboard Layout: English"

Global Headquarters