

Kabylake ThinMini ITX

BIOS Release Document



► D3474-B

Content

1. GENERAL NOTES	3
1.1 RELEASED OS VERSIONS	3
1.2 BIOS UPDATE OPTIONS	3
1.3 FTP BIOS FOLDER	4
1.4 HOW TO CREATE A DOS BOOTABLE USB STICK?	4
1.5 MODIFY BIOS SETUP SETTINGS AND DEFAULTS (TOOL EDITCMOS / BIOSSET) [UPDATED]	4
1.6 NOTE: CUSTOMER SERVICE RELEASE BIOS	4
2. BIOS R1.0.0	5
3. BIOS R1.1.0	6
4. BIOS R1.3.0	7
5. BIOS R1.4.0	8
6. BIOS R1.7.0	9
7. BIOS R1.8.0	10
8. BIOS R1.9.0	11
9. BIOS R1.12.0	12
10. BIOS R1.14.0 [NEW]	13

Revision History:

Date	BIOS Version	Notes
26.02.2020	R1.14.0	Added new BIOS version Changed whole document to Kontron design Reordered some chapters
07.08.2019	R1.12.0	Added new BIOS version, updated hyperlinks
10.09.2018	R1.9.0	Added new BIOS version
13.07.2018	R1.8.0	Added new BIOS version
15.05.2018	R1.7.0	Added new BIOS version (R1.7.0)
17.04.2018	R1.4.0	Update CVE number to Reference Code
10.11.2017	R1.4.0	Added new BIOS version (R1.4.0)
31.08.2017	R1.3.0	Added new BIOS version (R1.3.0)
03.07.2017	R1.1.0	Removed unsupported Feature
28.06.2017	R1.1.0	Added new BIOS version (R1.1.0)
16.05.2017	R1.0.0	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:

D3474-B:

ftp://ftp.kontron.com/Products/Motherboards/ExtendedLifeCycle/D3474-B_ThinMini-ITX/BIOS_D3474-B/

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 *.\$.exe to *.exe and run tool in Windows.

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

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 R1.0.0

First released mass production BIOS

Known Issues and Limitations:

- ▶ System may fail to show BIOS setup screen on HDMI monitor under some conditions (POST screen / BIOS Setup screen not displayed on certain HDMI Monitor during warm reboot)
- ▶ SYS fan visible in System BIOS even there is no SYS fan attached
- ▶ Very rare BSoD during 4k video playback (after 1 week runtime)
- ▶ Digital microphone available in OS, although no microphone attached
- ▶ BIOS Setup / System Management Screen - no "Voltages" visible
- ▶ Throughput performance on internal serial port may be significantly lower than selected bit rate
- ▶ C8-State not reached by System
- ▶ Wake on LAN from ACPI S3/S4 is possible although "Power on LAN" is disabled in system BIOS.
- ▶ Wake up from RTC after Power Button Overwrite does not work.

3. BIOS R1.1.0

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 (0xBA) CPU [Desktop + Xeon]
- ▶ Updated PXE driver for Realtek LAN.
- ▶ Feature: New BIOS setting "Never Off" implemented.
- ▶ Feature: LVDS spread spectrum enabled.
- ▶ Fixed: Same boot device appears two times in Boot Option Priority.
- ▶ Fixed: Digital microphone available in OS, although no microphone connected.
- ▶ Fixed: UEFI IPv6 doesn't work properly.
- ▶ Fixed: UEFI IPv4 PXE – "PXE-E16: No offer received" occurs in some environments.
- ▶ Fixed: Signaling via HDMI port improved.
- ▶ Fixed: BIOS Setup / System Management Screen - no "Voltages" visible.
- ▶ Fixed: Intel TXT does not work - continuous reboot cycles when Intel TXT is enabled in BIOS Setup.

Known Issues and Limitations:

- ▶ SYS fan visible in System BIOS even there is no SYS fan attached
- ▶ Very rare BSoD during 4k video playback (after 1 week runtime)
- ▶ Throughput performance on internal serial port may be significantly lower than selected bit rate
- ▶ C8-State not reached by System
- ▶ Wake on LAN from ACPI S3/S4 is possible although "Power on LAN" is disabled in system BIOS.
- ▶ Wake up from RTC after Power Button Overwrite does not work.

4. BIOS R1.3.0

Changes vs. previous released BIOS

- ▶ Updated firmware for RT2136R LVDS converter.
- ▶ Updated System Management Controller firmware.
- ▶ Changed memory slot names: CHA1 -> CHA2 and CHB2 -> CHB1.
- ▶ Fixed: PXE boot failure with IPv6 DHCP

Known Issues and Limitations:

- ▶ SYS fan visible in System BIOS even there is no SYS fan attached
- ▶ Very rare BSoD during 4k video playback (after 1 week runtime)
- ▶ Throughput performance on internal serial port may be significantly lower than selected bit rate
- ▶ C8-State not reached by System
- ▶ Wake on LAN from ACPI S3/S4 is possible although "Power on LAN" is disabled in system BIOS.
- ▶ Wake up from RTC after Power Button Overwrite does not work.

5. BIOS R1.4.0

Changes vs. previous released BIOS

- ▶ Updated to Management Engine Firmware version 11.8.50.3399.
- ▶ Updated Intel Reference Code (INTEL-SA-00087, CVE-2017-5703)
- ▶ Updated RAID Driver and OpROM.
- ▶ Feature: Improve 3rd party OpRom launch prior to end of DXE.
- ▶ Feature: Added SetupItemID 0x23B (CPU C-States).
- ▶ Fixed: Some BIOS settings are not set to Default value if battery has removed or was empty.
- ▶ Fixed: Even if "System Firmware Update" is set to "Restricted", System Firmware device appears in Device Manager.

Known Issues and Limitations:

- ▶ SYS fan visible in System BIOS even there is no SYS fan attached
- ▶ Very rare BSoD during 4k video playback (after 1 week runtime)
- ▶ Throughput performance on internal serial port may be significantly lower than selected bit rate
- ▶ C8-State not reached by System
- ▶ Wake on LAN from ACPI S3/S4 is possible although "Power on LAN" is disabled in system BIOS.
- ▶ Wake up from RTC after Power Button Overwrite does not work.

6. BIOS R1.7.0

Changes vs. previous released BIOS

- ▶ Updated CPU Microcode for Skylake R0/S0 (0xC2) and Kabylake B-0 (0x84).
 - INTEL-SA-00088, CVE2017-5715
- ▶ Updated to Management Engine Firmware version 11.8.50.3460 (INTEL-SA-00086).
- ▶ Fixed: WOL was working even when disabled in Setup and USB keyboard wakeup set to enabled.
- ▶ Fixed: USB Power is enabled even if BIOS setting is "Always off"

Known Issues and Limitations:

- ▶ SYS fan visible in System BIOS even there is no SYS fan attached
- ▶ Very rare BSoD during 4k video playback (after 1 week runtime)
- ▶ Throughput performance on internal serial port may be significantly lower than selected bit rate
- ▶ C8-State not reached by System
- ▶ Wake up from RTC after Power Button Overwrite does not work.

7. BIOS R1.8.0

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:

- ▶ SYS fan visible in System BIOS even there is no SYS fan attached
- ▶ Very rare BSoD during 4k video playback (after 1 week runtime)
- ▶ Throughput performance on internal serial port may be significantly lower than selected bit rate
- ▶ C8-State not reached by System
- ▶ Wake up from RTC after Power Button Overwrite does not work.

8. BIOS R1.9.0

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: Wake up on RTC weekly mode by BiosSet.exe did not wake the system. Wrong wake up settings within SETUP were set.
- ▶ Improved Auto Bios update in complex Network infrastructure.
- ▶ Feature: Enhance Setup Password Severity Options (Standard, Strong, Stringent)
- ▶ Feature: Added SetupItemID for “SATA Controller Speed”: 0x01BA

Known Issues and Limitations:

- ▶ SYS fan visible in System BIOS even there is no SYS fan attached
- ▶ Very rare BSoD during 4k video playback (after 1 week runtime)
- ▶ Throughput performance on internal serial port may be significantly lower than selected bit rate
- ▶ C8-State not reached by System
- ▶ Wake up from RTC after Power Button Overwrite does not work.

9. BIOS R1.12.0

Changes vs. previous released BIOS

- ▶ Integrated Fixes for
 - PSIRT-TA-201810-007, PSIRT-TA-201810-004 (INTEL-SA-00185), PSIRT-TA-201901-002,
 - 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
 - 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.
- ▶ 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.
- ▶ Feature: Added SetupItemID for "LVDS Backlight Control": 0x02A4

Known Issues and Limitations:

- ▶ SYS fan visible in System BIOS even there is no SYS fan attached
- ▶ Very rare BSoD during 4k video playback (after 1 week runtime)
- ▶ Throughput performance on internal serial port may be significantly lower than selected bit rate
- ▶ C8-State not reached by System
- ▶ 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 R1.14.0 [new]

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

Known Issues and Limitations:

- ▶ SYS fan visible in System BIOS even there is no SYS fan attached
- ▶ Very rare BSoD during 4k video playback (after 1 week runtime)
- ▶ Throughput performance on internal serial port may be significantly lower than selected bit rate
- ▶ C8-State not reached by System
- ▶ 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"



kontron
S&T Group

Global Headquarters

Kontron S&T AG

Lise-Meitner-Str. 3-5
86156 Augsburg, Germany
Tel.: +49 821 4086 0
Fax: +49 821 4086 111
info@kontron.com
www.kontron.com