BIOS Update Release Notes

PRODUCTS: NUC8i7BEH, NUC8i5BEH, NUC8i5BEK, NUC8i3BEH, NUC8i3BEK, NUC8i7BEHGA, NUC8i7BEKQA, NUC8i5BEHFA, NUC8i5BEKPA, NUC8i3BEHFA

BIOS Version 0089 - BECFL357.86A.0089.2021.0621.1343

About This Release:

- Date: June 21, 2021
- ROM Image Checksum: 0xEDB5
- ME Firmware: 12.0.81.1753
- EC Firmware: v3.26
- Memory Reference Code: Based on 7.0.51.41
- Integrated Graphics:
    - Option ROM: v1026
    - UEFI Driver: v9.0.1098
- SATA RAID Option ROM: 17.8.0.1065
- AHCI Code: Based on AHCI_17
- LAN Option ROM: PXE V0.1.1.3
- Visual BIOS: 2.2.23

- Supported Flash Devices:

WinBond	W25Q128JVSIQ	16MB (3.3V)
Macronix	MX25L12873FM2I-10G	16MB (3.3V)
GigaDevice	GD25B127DSIGR	16MB (3.3V)

- Microcode Updates included in .ROM & .BIO Files:
  MC0806EA_000000B4.mcb
  MC0806EA_000000EA.pdb

New Fixes/Features:

- Fixed issue with OFBD module SMI handler vulnerabilities.
- Updated CPU Microcode Firmware to 0xEA for IPU2021.1
- Removed option using "ESC" key to exit out of boot menu.
- Added protection code for unauthorized write at controllable address in SMRAM.
- Fixed issue to achieve arbitrary write in SMRAM save state region.

BIOS Version 0088 - BECFL357.86A.0088.2021.0330.1431

About This Release:

- Date: March 30, 2021
- ROM Image Checksum: 0x9479
- ME Firmware: 12.0.81.1753
- EC Firmware: v3.26
- Memory Reference Code: Based on 7.0.51.41
- Integrated Graphics:
    - Option ROM: v1026
    - UEFI Driver: v9.0.1098

- SATA RAID Option ROM: 17.8.0.1065
- AHCI Code: Based on AHCI_17
- LAN Option ROM: PXE V0.1.1.3
- Visual BIOS: 2.2.23

- Supported Flash Devices:

WinBond	W25Q128JVSIQ	16MB(3.3V)
Macronix	MX25L12873FM2I-10G	16MB(3.3V)
GigaDevice	GD25B127DSIGR	16MB(3.3V)

- Microcode Updates included in .ROM & .BIO Files:
  MC0806EA_000000B4.mcb
  MC0806EA_000000E0.pdb

New Fixes/Features:

- Updated ME Firmware version to 12.0.81.1753.
- Fixed issue when changing VR Temp to CPU Temp in performance monitor.
- Updated NTFS DXE driver when parsing NTFS file system partition.
- Update BIOS code for security fixes.

Known Errata:

- Due to the Intel® ME firmware update in BIOS version 0088, you can’t downgrade to version 0087 or earlier.

BIOS Version 0087 - BECFL357.86A.0087.2020.1209.1115

About This Release:

- Date: December 09, 2020
- ROM Image Checksum: 0x8B48
- ME Firmware: 12.0.71.1681
- EC Firmware: v3.26
- Memory Reference Code: Based on 7.0.51.41
- Integrated Graphics:
  - Option ROM: v1026
  - UEFI Driver: v9.0.1098
- SATA RAID Option ROM: 17.8.0.1065
- AHCI Code: Based on AHCI_17
- LAN Option ROM: PXE V0.1.1.3
- Visual BIOS: 2.2.23

- Supported Flash Devices:

WinBond	W25Q128JVSIQ	16MB(3.3V)
Macronix	MX25L12873FM2I-10G	16MB(3.3V)
GigaDevice	GD25B127DSIGR	16MB(3.3V)

- Microcode Updates included in .ROM & .BIO Files:

MC0806EA_000000B4.mcb
MC0806EA_000000E0.pdb

New Fixes/Features:

- Updated FITC tools.
- Updated ME Firmware to 12.0.71.1681
- Updated EC Firmware to 3.26
- Fixed issue where HDD LED kept lighting.
- Update BIOS code for security fixes.

Known Errata:

- Due to the Intel® ME firmware update in BIOS version 0087, you can't downgrade to version 0085 or earlier.

BIOS Version 0085 - BECFL357.86A.0085.2020.1007.1917

About This Release:

- Date: October 07, 2020
- ROM Image Checksum: 0x3170
- ME Firmware: 12.0.68.1606
- EC Firmware: v3.25
- Memory Reference Code: Based on 7.0.51.41
- Integrated Graphics:
  Option ROM: v1026
  UEFI Driver: v9.0.1098
- SATA RAID Option ROM: 17.8.0.1065
- AHCI Code: Based on AHCI_17
- LAN Option ROM: PXE V0.1.1.3
- Visual BIOS: 2.2.23

- Supported Flash Devices:

WinBond	W25Q128JVSIQ	16MB(3.3V)
Macronix	MX25L12873FM2I-10G	16MB(3.3V)
GigaDevice	GD25B127DSIGR	16MB(3.3V)

- Microcode Updates included in .ROM & .BIO Files:
  MC0806EA_000000B4.mcb
  MC0806EA_000000D6.pdb

New Fixes/Features:

- Fixed issue that made system fans spin over 3000 RPM regardless of workload.

BIOS Version 0083 - BECFL357.86A.0083.2020.0730.1436

About This Release:

- Date: July 30, 2020
- ROM Image Checksum: 0xE4C0
- ME Firmware: 12.0.68.1606
- EC Firmware: v3.25
- Memory Reference Code: Based on 7.0.51.41
- Integrated Graphics:
  Option ROM: v1026
  UEFI Driver: v9.0.1098
- SATA RAID Option ROM: 17.8.0.1065

- AHCI Code: Based on AHCI_17
- LAN Option ROM: PXE V0.1.1.3
- Visual BIOS: 2.2.23

- Supported Flash Devices:

WinBond	W25Q128JVSIQ	16MB(3.3V)
Macronix	MX25L12873FM2I-10G	16MB(3.3V)
GigaDevice	GD25B127DSIGR	16MB(3.3V)

- Microcode Updates included in .ROM & .BIO Files:
  MC0806EA_000000B4.mcb
  MC0806EA_000000D6.pdb

New Fixes/Features:

- Fixed issue where "Optane cannot work after BIOS recovery".
- Fixed issue with "Kernel DMA protection".
- Fixed issue where Thunderbolt boot was disabled after POST time improvement.
- Updated BIOS code for security fixes.
- Updated ME Firmware to 12.0.68.1606
- Update EC Firmware to v3.25.

Known Errata:

- Due to the Intel® ME firmware update in BIOS version 0083, you can't downgrade to version 0081 or earlier.

BIOS Version 0081 - BECFL357.86A.0081.2020.0504.1834

About This Release:

- Date: May 04, 2020
- ROM Image Checksum: 0xC513
- ME Firmware: 12.0.47.1524
- EC Firmware: v3.20
- Memory Reference Code: Based on 7.0.51.41
- Integrated Graphics:
  - Option ROM: v1026
  - UEFI Driver: v9.0.1098
- SATA RAID Option ROM: 17.8.0.1065
- AHCI Code: Based on AHCI_17
- LAN Option ROM: PXE V0.1.1.3
- Visual BIOS: 2.2.23

- Supported Flash Devices:

WinBond	W25Q128JVSIQ	16MB(3.3V)
Macronix	MX25L12873FM2I-10G	16MB(3.3V)
GigaDevice	GD25B127DSIGR	16MB(3.3V)

- Microcode Updates included in .ROM & .BIO Files:
  MC0806EA_0000009D_000000B4.pdb
  MC0806EA_000000CA.pdb

New Fixes/Features:

- Fixed issue with "clear security password" message.

BIOS Version 0079 - BECFL357.86A.0079.2020.0424.1838

About This Release:

- Date: April 24, 2020
- ROM Image Checksum: 0x2B0B
- ME Firmware: 12.0.47.1524
- EC Firmware: v3.20
- Memory Reference Code: Based on 7.0.51.41
- Integrated Graphics:
    - Option ROM: v1026
    - UEFI Driver: v9.0.1098
- SATA RAID Option ROM: 17.8.0.1065
- AHCI Code: Based on AHCI_17
- LAN Option ROM: PXE V0.1.1.3
- Visual BIOS: 2.2.23

- Supported Flash Devices:

WinBond	W25Q128JVSIQ	16MB(3.3V)
Macronix	MX25L12873FM2I-10G	16MB(3.3V)
GigaDevice	GD25B127DSIGR	16MB(3.3V)

- Microcode Updates included in .ROM & .BIO Files:
  MC0806EA_0000009D_000000B4.pdb
  MC0806EA_000000CA.pdb

New Fixes/Features:

- Fixed issue with SMM arbitrary code execution due to insufficient buffer validation.
- Fixed sleep mode issue by lock MFG mode.
- Fixed issue with USB2 port.
- Fixed issue where Crucial SSD would hang at the Intel NUC logo splash screen.
- Removed "RAM Disk Configuration" setup question.

BIOS Version 0078 - BECFL357.86A.0078.2020.0309.1538

About This Release:

- Date: March 09, 2020
- ROM Image Checksum: 0x3767
- ME Firmware: 12.0.47.1524
- EC Firmware: v3.20
- Memory Reference Code: Based on 7.0.51.41
- Integrated Graphics:
    - Option ROM: v1026
    - UEFI Driver: v9.0.1098
- SATA RAID Option ROM: 17.8.0.1065
- AHCI Code: Based on AHCI_17
- LAN Option ROM: PXE V0.1.1.3
- Visual BIOS: 2.2.23

- Supported Flash Devices:

WinBond	W25Q128JVSIQ	16MB(3.3V)
Macronix	MX25L12873FM2I-10G	16MB(3.3V)
GigaDevice	GD25B127DSIGR	16MB(3.3V)

- Microcode Updates included in .ROM & .BIO Files:
  MC0806EA_0000009D_000000B4.pdb
  MC0806EA_000000C6.pdb

New Fixes/Features:

- Updated the RAID Driver version to 17.8.0.1065
- Fixed issue with BIOS stress tests.
- Fixed issue where NUC logo freezes when connecting TBT monitor and HDMI monitor at the same time.
- Fixed issue regarding USB connector naming for BE products.
- Fixed issue regarding failure to PXE boot.
- Fixed issue regarding checking performance monitor and fan control mode.
- Updated BIOS code for security fixes.

BIOS Version 0077 - BECFL357.86A.0077.2019.1127.1452

About This Release:

- Date: Nov 27, 2019
- ROM Image Checksum: 0x6B9A
- ME Firmware: 12.0.47.1524
- EC Firmware: v3.20
- Memory Reference Code: Based on 7.0.51.41
- Integrated Graphics:
  - Option ROM: v1026
  - UEFI Driver: v9.0.1098
- SATA RAID Option ROM: 16.8.0.1000
- AHCI Code: Based on AHCI_17
- LAN Option ROM: PXE V0.1.1.3
- Visual BIOS: 2.2.23

- Supported Flash Devices:

WinBond	W25Q128JVSIQ	16MB(3.3V)
Macronix	MX25L12873FM2I-10G	16MB(3.3V)
GigaDevice	GD25B127DSIGR	16MB(3.3V)

- Microcode Updates included in .ROM & .BIO Files:
  MC0806EA_0000009D_000000B4.pdb
  MC0806EA_000000C6.pdb

New Fixes/Features:

- Updated ME to 12.0.47.1524.
- Fixed issue where "Chassis value type changed during flash by BIO" for Microsoft request
- Fixed issue with auto detect Thunderbolt device.
- Fixed issue with basic standard speed performance.
- Fixed issue where "SMBIOS Field update BIOS" for Microsoft request.
- Fixed issue with Thunderbolt controller.
- Fixed issue finding Bluetooth device.
- Fixed issue waking up Bluetooth in Legacy mode.
- Due to ME Firmware update cannot downgrade to BIOS 0075 or previous

BIOS Version 0075 - BECFL357.86A.0075.2019.1023.1448

About This Release:

- Date: Oct 23, 2019
- ROM Image Checksum: 0xB961
- ME Firmware: 12.0.32.1421
- EC Firmware: v3.20
- Memory Reference Code: Based on 7.0.44.23
- Integrated Graphics:
  - Option ROM: v1017
  - UEFI Driver: v9.0.1084
- SATA RAID Option ROM: 16.8.0.1000
- AHCI Code: Based on AHCI_17
- LAN Option ROM: PXE V0.1.1.3
- Visual BIOS: 2.2.23
- Supported Flash Devices:

WinBond	W25Q128JVSIQ	16MB(3.3V)
Macronix	MX25L12873FM2I-10G	16MB(3.3V)
GigaDevice	GD25B127DSIGR	16MB(3.3V)

- Microcode Updates included in .ROM & .BIO Files:
  MC0806EA_0000009D_000000B4.pdb
  MC0806EA_000000C6.pdb

New Fixes/Features:

- Fixed issue where changes to "Native ACPI OS PCIe Support" setting in BIOS doesn't stay.
- Implemented security fixes.
- Updated processor microcode to MC0806EA_000000C6.pdb

BIOS Version 0074 - BECFL357.86A.0074.2019.0916.1548

About This Release:

- Date: September 16, 2019
- ROM Image Checksum: 0x4B57
- ME Firmware: 12.0.32.1421
- EC Firmware: v3.20
- Memory Reference Code: Based on 7.0.44.23
- Integrated Graphics
  Option ROM: v1017
  UEFI Driver: v9.0.1084
- SATA RAID Option ROM: 16.8.0.1000
- AHCI Code: Based on AHCI_17
- LAN Option ROM: PXE V0.1.1.3
- Visual BIOS: 2.2.23
- Supported Flash Devices:

WinBond	W25Q128JVSIQ	16MB(3.3V)
Macronix	MX25L12873FM2I-10G	16MB(3.3V)
GigaDevice	GD25B127DSIGR	16MB(3.3V)

- Microcode Updates included in .ROM File:
  MC0806EA_0000009D_000000B4.pdb
- Additional Microcode Updates included only in .BIO File:

New Fixes/Features:

- Fixed issue where Watchdog feature is triggered during stress testing.
- Updated BIOS code for BIOS recovery with USB flash drive.
- Updated Chassis type default to 0x23.
- Updated BIOS code for security fixes.

BIOS Version 0073 - BECFL357.86A.0073.2019.0618.1409

About This Release:

- Date: June 18, 2019
- ROM Image Checksum: 0xF0F3
- ME Firmware: 12.0.32.1421
- EC Firmware: v3.20
- Memory Reference Code: Based on 7.0.44.23
- Integrated Graphics:
  - Option ROM: v1017
  - UEFI Driver: v9.0.1084
- SATA RAID Option ROM: 16.8.0.1000
- AHCI Code: Based on AHCI_17
- LAN Option ROM: PXE V0.1.1.3
- Visual BIOS: 2.2.23
- Supported Flash Devices:

WinBond	W25Q128JVSIQ	16MB (3.3V)
Macronix	MX25L12873FM2I-10G	16MB (3.3V)
GigaDevice	GD25B127DSIGR	16MB (3.3V)

- Microcode Updates included in .ROM & .BIO Files:
  MC0806EA_0000009D_000000B4.pdb

New Fixes/Features:

- Fixed issue: Keeping monitor off when WOL from S3.
- Fixed issue: Thunderbolt Hot-plugging doesn't work when you use Legacy in the BIOS.
- Fixed issue: Blue USB 3.0 port have 5V every time when system AC power turn on/turn off.
- Updated Microcode to version MC0806EA_0000009D_000000B4.pdb.
- Remove the option “SW Control” on “RGB LED” and “Button LED” items.

BIOS Version 0071 - BECFL357.86A.0071.2019.0510.1505

About This Release:

- Date: May 10, 2019
- ME Firmware: 12.0.32.1421
- EC Firmware: v3.20
- PMC Firmware:300.1.20.1023
- Framework Reference Code: Based on 7.0.44.23
- Memory Reference Code: Based on 7.0.44.23
- Integrated Graphics:
  - Option ROM: v1017
  - UEFI Driver: v9.0.1084
- SATA RAID Option ROM: 16.8.0.1000
- AHCI Code: Based on AHCI_17
- LAN Option ROM: PXE V0.1.1.3
- Visual BIOS: 2.2.23

New Fixes/Features:

- Fixed the issue that caused the SSD password to stop working after updating to BIOS 0064 or 0066.
- Fixed the issue where the fan settings wouldn't change when changing the "Fan Control Mode" to/from Balanced to Cool.
- Fixed the issue where wireless is disabled in the BIOS but still appears in Windows device manager.
- Changed RING LED to RGB LED in the BIOS to match the motherboard silkscreen and Technical Product Specification.
- Fixed the issue with the password prompt when BitLocker is enabled.
- Updated the BIOS code for security fixes.
- Updated Intel ME firmware to version 12.0.23.1311.
- Fixed issue when keyboard/mouse is connected to Type-C port.
- Removed option for 2048MB on IGD Aperture Size setting.
- Fixed issue where HDD password feature doesn't show in the setup menu with NVME PCIe drive.
- Updated S3 Indicator blinking behavior.
- Update Graphics Option ROM to version 1017.
- Updated Graphics UEFI driver to version 9.0.1084.
- Updated RAID Option ROM to version 16.8.0.1000.

BIOS Version 0051 - BECFL357.86A.0051.2018.1015.1513

About This Release:

- Date: October 15, 2018
- ME Firmware: 12.0.10.1128
- EC Firmware: v3.20
- PMC Firmware: 300.1.20.1019
- Framework Reference Code: Based on 7.0.37.50
- Integrated Graphics:
  - Option ROM: v1014
  - UEFI Driver: v9.0.1080
- LAN Option ROM: PXE v0.1.1.3
- Visual Bios: 2.2.23

New Fixes/Features:

- Fixed issue where the startup sound causes error in Device Manager.
- Updated Intel® ME firmware to version 1128.
- Updated PMC firmware to version 1019.
- Updated EC firmware to version 3.20 to fix LED behavior issue.
- Updated processor support.
- Fixed issue where remove storage password causes drive to disappear from boot manager.
- Updated watchdog event to be triggered by recovery.

BIOS Version 0048 - BECFL357.86A.0048.2018.0919.2013

About This Release:

- Date: September 19, 2018
- ME Firmware: 12.0.5.1117
- EC Firmware: v3.18

- PMC Firmware:v300.1.20.1015
- Framework Reference Code: Based on 7.0.37.50
- Integrated Graphics:
  - Option ROM: v1014
  - UEFI Driver: v9.0.1080
- LAN Option ROM: PXE v0.1.1.3
- Visual Bios: 2.2.23

New Fixes/Features:

- Updated EC Firmware to version 3.18.
- Updated BIOS item Wake from Sleep State via CIR.
- Fixed issue where power LED had abnormal behavior when system enters S4 states in modern standby mode.
- Fixed issue where system can't enter Modern Standby if NVME device is installed.

BIOS Version 0041 - BECFL357.86A.0041.2018.0719.1931

About This Release:

- Date: July 19, 2018
- ME Firmware: 12.0.5.1117
- EC Firmware: v3.14
- PMC Firmware:v300.1.20.1015
- Framework Reference Code: Based on 7.0.37.50
- Integrated Graphics:
  - Option ROM: v1014
  - UEFI Driver: v9.0.1080
- LAN Option ROM: PXE V0.1.1.3
- Visual Bios: 2.2.23

New Fixes/Features:

- Initial production BIOS release

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