



## BIOS Update Release Notes

**PRODUCTS: D33217GKE, D33217CK, DCP847SKE, DC3217IYE, DC3217BY, DCCP847DYE**

**BIOS Version 0068 - GKPPT10H.86A.0068.2019.0821.1324**

### About This Release:

- Date: August 21, 2019
- ROM Image Checksum: 0x2F2D
- ME Firmware: 8.1.40.1416
- Memory Reference Code: Based on 1.8.0.00
- Integrated Graphics Option ROM: Build 2158 PC 14.34
- LAN Option ROM: v1404 PXE 2.1 Build 091
- Ivy Bridge EFI driver (GOP): 3.0.1023
- Sandy Bridge EFI driver (GOP): 2.0.1024
- Visual BIOS: 1.2.15
- Supported Flash Devices:

Macronix	MX25L6406E	8MB
WinBond	W25Q64FV	8MB
EON	EN25QH64	8MB
- Microcode Updates included in .ROM File:

M12206A7_0000002E
M12306A9_00000021
- Additional Microcode Updates included only in .BIO File:

M12206A7_0000002E
M12306A9_00000021

### New Fixes/Features:

- Updated BIOS code for security fixes.

**BIOS Version 0067 - GKPPT10H.86A.0067.2019.0522.1041**

### About This Release:

- Date: May 22, 2019
- ROM Image Checksum: 0x5A41
- ME Firmware: 8.1.40.1416
- Memory Reference Code: Based on 1.8.0.00
- Integrated Graphics Option ROM: Build 2158 PC 14.34
- LAN Option ROM: v1404 PXE 2.1 Build 091
- Ivy Bridge EFI driver (GOP): 3.0.1023
- Sandy Bridge EFI driver (GOP): 2.0.1024
- Visual BIOS: 1.2.15
- Supported Flash Devices:

Macronix	MX25L6406E	8MB
WinBond	W25Q64FV	8MB
EON	EN25QH64	8MB
- Microcode Updates included in .ROM File:

\*Other names and brands may be claimed as the property of others.

M12206A7\_0000002E

M12306A9\_00000021

**New Fixes/Features:**

- Updated CPU microcode to M12306A9\_00000021.
- Modified the chassis enclosure type to 0x23.

**BIOS Version 0066 - GKPPT10H.86A.0066.2018.1120.1113**

**About This Release:**

- Date: November 20, 2018
- ME Firmware: 8.1.40.1416
- Memory Reference Code: Based on 1.8.0.00
- Integrated Graphics Option ROM: Build 2158 PC 14.34
- LAN Option ROM: v1404 PXE 2.1 Build 091
- Ivy Bridge EFI driver (GOP): 3.0.1023
- Sandy Bridge EFI driver (GOP): 2.0.1024
- Visual BIOS: 1.2.15

**New Fixes/Features:**

- Added BIOS write protection for security enhancement.

**Known Errata:**

- Due to security enhancements in BIOS version 0066, you can't downgrade to version 0065 or earlier.

**BIOS Version 0065 - GKPPT10H.86A.0065.2018.0705.1624**

**About This Release:**

- Date: July 5, 2018
- ME Firmware: 8.1.40.1416
- Memory Reference Code: Based on 1.8.0.00
- Integrated Graphics Option ROM: Build 2158 PC 14.34
- LAN Option ROM: v1404 PXE 2.1 Build 091
- Ivy Bridge EFI driver (GOP): 3.0.1023
- Sandy Bridge EFI driver (GOP): 2.0.1024
- Visual BIOS: 1.2.15

**New Fixes/Features:**

- Updated CPU Microcode (Security Advisory-00115)

**BIOS Version 0064 - GKPPT10H.86A.0064.2018.0607.1822**

**About This Release:**

- Date: June 08, 2018
- ME Firmware: 8.1.40.1416
- Memory Reference Code: Based on 1.8.0.00
- Integrated Graphics Option ROM: Build 2158 PC 14.34
- LAN Option ROM: v1404 PXE 2.1 Build 091
- Ivy Bridge EFI driver (GOP): 3.0.1023
- Sandy Bridge EFI driver (GOP): 2.0.1024
- Visual BIOS: 1.2.15

**New Fixes/Features:**

\*Other names and brands may be claimed as the property of others.

- Security enhancements.

**BIOS Version 0063 - GKPPT10H.86A.0063.2018.0313.1636**

**About This Release:**

- Date: March 13, 2018
- ME Firmware: 8.1.40.1416
- Memory Reference Code: Based on 1.8.0.00
- Integrated Graphics Option ROM: Build 2158 PC 14.34
- LAN Option ROM: v1404 PXE 2.1 Build 091
- Ivy Bridge EFI driver (GOP): 3.0.1023
- Sandy Bridge EFI driver (GOP): 2.0.1024
- Visual BIOS: 1.2.14

**New Fixes/Features:**

- Updated CPU Microcode (Security Advisory-00088)

**BIOS Version 0062 - GKPPT10H.86A.0062.2017.0202.1516**

**About This Release:**

- Date: February 02, 2017
- ME Firmware: 8.1.40.1416
- Memory Reference Code: Based on 1.8.0.00
- Integrated Graphics Option ROM: Build 2158 PC 14.34
- LAN Option ROM: v1404 PXE 2.1 Build 091
- Ivy Bridge EFI driver (GOP): 3.0.1023
- Sandy Bridge EFI driver (GOP): 2.0.1024
- Visual BIOS: 1.2.15

**New Fixes/Features:**

- Security Enhancements

**Note: The memory reference code in BIOS version 0046 was updated as a part of the changes made in the BIOS to meet Microsoft Windows 8.1 requirements. This new memory code no longer supports 1066 MHz memory modules.**

**Before considering updating to BIOS version 0046 or later, check the memory speed you currently have installed in the Intel NUC with the compatibility table below.**

Memory speed	Windows version	BIOS version	Compatible?
1066 MHz	Windows 7	0046	No
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	No
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	No
	Windows 8.1	0042 or earlier	No
1333 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes

\*Other names and brands may be claimed as the property of others.

	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No
1600 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No

If you are using 1066 MHz memory and update to BIOS version 0046 or later, the Intel® NUC will no longer boot and you'll see a memory-related 3-blink pattern on the blue LED.

To resolve this problem, you will need to install 1333 or 1600 MHz memory and recover back to 0042. Then refer to the compatibility table above to determine what memory configuration you should use for your operating system.

<b>BIOS Version 0061 - GKPPT10H.86A.0061.2016.1130.1052</b>
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**About This Release:**

- Date: November 30, 2016
- ME Firmware: 8.1.40.1416
- Memory Reference Code: Based on 1.8.0.00
- Integrated Graphics Option ROM: Build 2158 PC 14.34
- LAN Option ROM: v1404 PXE 2.1 Build 091
- Ivy Bridge EFI driver (GOP): 3.0.1023
- Sandy Bridge EFI driver (GOP): 2.0.1024
- Visual BIOS: 1.2.15

**New Fixes/Features:**

- Updated the UEFI Network Stack.

**Note:** The memory reference code in BIOS version 0046 was updated as a part of the changes made in the BIOS to meet Microsoft Windows 8.1 requirements. This new memory code no longer supports 1066 MHz memory modules.

Before considering updating to BIOS version 0046 or later, check the memory speed you currently have installed in the Intel NUC with the compatibility table below.

Memory speed	Windows version	BIOS version	Compatible?
1066 MHz	Windows 7	0046	No
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	No
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	No
	Windows 8.1	0042 or earlier	No

\*Other names and brands may be claimed as the property of others.

1333 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No
1600 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No

If you are using 1066 MHz memory and update to BIOS version 0046 or later, the Intel® NUC will no longer boot and you'll see a memory-related 3-blink pattern on the blue LED.

To resolve this problem, you will need to install 1333 or 1600 MHz memory and recover back to 0042. Then refer to the compatibility table above to determine what memory configuration you should use for your operating system.

<b>BIOS Version 0060 - GKPPT10H.86A.0060.2016.1021.1324</b>
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**About This Release:**

- Date: October 21, 2016
- ME Firmware: 8.1.40.1416
- Integrated Graphics Option ROM: Build 2158 PC 14.34
- LAN Option ROM: v1404 PXE 2.1 Build 091
- Ivy Bridge EFI driver (GOP): 3.0.1023
- Sandy Bridge EFI driver (GOP): 2.0.1024
- Visual BIOS: 1.2.15

**Note:** The memory reference code in BIOS version 0046 was updated as a part of the changes made in the BIOS to meet Microsoft Windows 8.1 requirements. This new memory code no longer supports 1066 MHz memory modules.

Before considering updating to BIOS version 0046 or later, check the memory speed you currently have installed in the Intel NUC with the compatibility table below.

Memory speed	Windows version	BIOS version	Compatible?
1066 MHz	Windows 7	0046	No
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	No
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	No
	Windows 8.1	0042 or earlier	No

\*Other names and brands may be claimed as the property of others.

1333 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No
1600 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No

If you are using 1066 MHz memory and update to BIOS version 0046 or later, the Intel® NUC will no longer boot and you'll see a memory-related 3-blink pattern on the blue LED.

To resolve this problem, you will need to install 1333 or 1600 MHz memory and recover back to 0042. Then refer to the compatibility table above to determine what memory configuration you should use for your operating system.

**New Fixes/Features:**

- Security Enhancements.
- Fixed an issue where the NUC can't wake up from S3 by pressing the power button in Linux.

**BIOS Version 0058 - GKPPT10H.86A.0058.2015.0630.1349**

**About This Release:**

- Date: June 30, 2015
- ME Firmware: 8.1.40.1416
- Integrated Graphics Option ROM: Build 2158 PC 14.34
- LAN Option ROM: v1404 PXE 2.1 Build 091
- Ivy Bridge EFI driver (GOP): 3.0.1023
- Sandy Bridge EFI driver (GOP): 2.0.1024
- Visual BIOS: 1.2.15

**Note:** The memory reference code in BIOS version 0046 was updated as a part of the changes made in the BIOS to meet Microsoft Windows 8.1 requirements. This new memory code no longer supports 1066 MHz memory modules.

Before considering updating to BIOS version 0046 or later, check the memory speed you currently have installed in the Intel NUC with the compatibility table below.

Memory speed	Windows version	BIOS version	Compatible?
1066 MHz	Windows 7	0046	No
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	No

\*Other names and brands may be claimed as the property of others.

	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	No
	Windows 8.1	0042 or earlier	No
1333 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No
1600 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No

If you are using 1066 MHz memory and update to BIOS version 0046 or later, the Intel® NUC will no longer boot and you'll see a memory-related 3-blink pattern on the blue LED.

To resolve this problem, you will need to install 1333 or 1600 MHz memory and recover back to 0042. Then refer to the compatibility table above to determine what memory configuration you should use for your operating system.

**New Fixes/Features:**

- Implemented security enhancement solution.

<b>BIOS Version 0057 - GKPPT10H.86A.0057.2015.0413.1132</b>
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**About This Release:**

- Date: April 13, 2015
- ME Firmware: 8.1.40.1416
- Integrated Graphics Option ROM: Build 2158 PC 14.34
- LAN Option ROM: v1404 PXE 2.1 Build 091
- Ivy Bridge EFI driver (GOP): 3.0.1023
- Sandy Bridge EFI driver (GOP): 2.0.1024
- Visual BIOS: 1.2.15

**Note:** The memory reference code in BIOS version 0046 was updated as a part of the changes made in the BIOS to meet Microsoft Windows 8.1 requirements. This new memory code no longer supports 1066 MHz memory modules.

Before considering updating to BIOS version 0046 or later, check the memory speed you currently have installed in the Intel NUC with the compatibility table below.

Memory speed	Windows version	BIOS version	Compatible?
1066 MHz	Windows 7	0046	No

\*Other names and brands may be claimed as the property of others.

	Windows 7	0042 or earlier	Yes
	Windows 8	0046	No
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	No
	Windows 8.1	0042 or earlier	No
1333 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
1600 MHz	Windows 8.1	0042 or earlier	No
	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
Windows 8.1	0042 or earlier	No	

If you are using 1066 MHz memory and update to BIOS version 0046 or later, the Intel® NUC will no longer boot and you'll see a memory-related 3-blink pattern on the blue LED.

To resolve this problem, you will need to install 1333 or 1600 MHz memory and recover back to 0042. Then refer to the compatibility table above to determine what memory configuration you should use for your operating system.

**New Fixes/Features:**

- Fixed issues where boot order does not work as expected.

**BIOS Version 0055 - GKPPT10H.86A.0055.2014.1205.1338**

**About This Release:**

- Date: December 5, 2014
- ME Firmware: 8.1.40.1416
- Integrated Graphics Option ROM: Build 2158 PC 14.34
- LAN Option ROM: v1404 PXE 2.1 Build 091
- Ivy Bridge EFI driver (GOP): 3.0.1023
- Sandy Bridge EFI driver (GOP): 2.0.1024
- Visual BIOS: 1.2.15

**Note:** The memory reference code in BIOS version 0046 was updated as a part of the changes made in the BIOS to meet Microsoft Windows 8.1 requirements. This new memory code no longer supports 1066 MHz memory modules.

Before considering updating to BIOS version 0046 or later, check the memory speed you currently have installed in the Intel NUC with the compatibility table below.

Memory speed	Windows version	BIOS version	Compatible?
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\*Other names and brands may be claimed as the property of others.



1066 MHz	Windows 7	0046	No
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	No
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	No
	Windows 8.1	0042 or earlier	No
1333 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No
1600 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No

If you are using 1066 MHz memory and update to BIOS version 0046 or later, the Intel® NUC will no longer boot and you'll see a memory-related 3-blink pattern on the blue LED.

To resolve this problem, you will need to install 1333 or 1600 MHz memory and recover back to 0042. Then refer to the compatibility table above to determine what memory configuration you should use for your operating system.

**New Fixes/Features:**

- Fixed issue where SKU Number cannot be set with Intel® Integrator TGoalkit.

**BIOS Version 0054 - GKPPT10H.86A.0054.2014.1003.1749**

**About This Release:**

- Date: October 3, 2014
- ME Firmware: 8.1.40.1416
- Integrated Graphics Option ROM: Build 2158 PC 14.34
- LAN Option ROM: v1404 PXE 2.1 Build 091
- Ivy Bridge EFI driver (GOP): 3.0.1023
- Sandy Bridge EFI driver (GOP): 2.0.1024
- Visual BIOS: 1.2.15

**Note:** The memory reference code in BIOS version 0046 was updated as a part of the changes made in the BIOS to meet Microsoft Windows 8.1 requirements. This new memory code no longer supports 1066 MHz memory modules.

Before considering updating to BIOS version 0046 or later, check the memory speed you currently have installed in the Intel NUC with the compatibility table below.

\*Other names and brands may be claimed as the property of others.

Memory speed	Windows version	BIOS version	Compatible?
1066 MHz	Windows 7	0046	No
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	No
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	No
	Windows 8.1	0042 or earlier	No
1333 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No
1600 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No

If you are using 1066 MHz memory and update to BIOS version 0046 or later, the Intel® NUC will no longer boot and you'll see a memory-related 3-blink pattern on the blue LED.

To resolve this problem, you will need to install 1333 or 1600 MHz memory and recover back to 0042. Then refer to the compatibility table above to determine what memory configuration you should use for your operating system.

**New Fixes/Features:**

- Implemented the new feature UEFI iSCSI support.

**BIOS Version 0053 - GKPPT10H.86A.0053.2014.0917.1431**

**About This Release:**

- Date: September 17, 2014
- ME Firmware: 8.1.40.1416
- Integrated Graphics Option ROM: Build 2158 PC 14.34
- LAN Option ROM: v1404 PXE 2.1 Build 091
- Ivy Bridge EFI driver (GOP): 3.0.1023
- Sandy Bridge EFI driver (GOP): 2.0.1024
- Visual BIOS: 1.2.15

**Note:** The memory reference code in BIOS version 0046 was updated as a part of the changes made in the BIOS to meet Microsoft Windows 8.1 requirements. This new memory code no longer supports 1066 MHz memory modules.

Before considering updating to BIOS version 0046 or later, check the memory speed you currently have installed in the Intel NUC with the compatibility table below.

\*Other names and brands may be claimed as the property of others.

Memory speed	Windows version	BIOS version	Compatible?
1066 MHz	Windows 7	0046	No
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	No
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	No
	Windows 8.1	0042 or earlier	No
1333 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No
1600 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No

If you are using 1066 MHz memory and update to BIOS version 0046 or later, the Intel® NUC will no longer boot and you'll see a memory-related 3-blink pattern on the blue LED.

To resolve this problem, you will need to install 1333 or 1600 MHz memory and recover back to 0042. Then refer to the compatibility table above to determine what memory configuration you should use for your operating system.

#### New Fixes/Features:

- Updated processor support.
- Added feature to disable Watchdog Timer after entering and incorrect password three times.
- Added feature to disable Watchdog Timer when pressing Power Button to shut down.
- Updated message when no bootable device is found.

<b>BIOS Version 0050 - GKPPT10H.86A.0050.2014.0522.1323</b>
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#### About This Release:

- Date: May 22, 2014
- ME Firmware: 8.1.40.1416
- Integrated Graphics Option ROM: Build 2158 PC 14.34
- LAN Option ROM: v1404 PXE 2.1 Build 091
- Ivy Bridge EFI driver (GOP): 3.0.1023
- Sandy Bridge EFI driver (GOP): 2.0.1024
- Visual BIOS: 1.2.15

**Note: The memory reference code in BIOS version 0046 was updated as a part of the changes made in the BIOS to meet Microsoft Windows 8.1**

\*Other names and brands may be claimed as the property of others.

requirements. This new memory code no longer supports 1066 MHz memory modules.

Before considering updating to BIOS version 0046 or later, check the memory speed you currently have installed in the Intel NUC with the compatibility table below.

Memory speed	Windows version	BIOS version	Compatible?
1066 MHz	Windows 7	0046	No
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	No
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	No
	Windows 8.1	0042 or earlier	No
1333 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No
1600 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No

If you are using 1066 MHz memory and update to BIOS version 0046 or later, the Intel® NUC will no longer boot and you'll see a memory-related 3-blink pattern on the blue LED.

To resolve this problem, you will need to install 1333 or 1600 MHz memory and recover back to 0042. Then refer to the compatibility table above to determine what memory configuration you should use for your operating system.

**New Fixes/Features:**

- Enhanced the protection of certain UEFI variables as described in Intel Security Advisory INTEL-SA-00038.
- Fixed issue where Intel wireless adapters lose connectivity.

**BIOS Version 0049 - GKPPT10H.86A.0049.2014.0224.1435**

**About This Release:**

- Date: February 24, 2014
- ME Firmware: 8.1.40.1416
- Integrated Graphics Option ROM: Build 2158 PC 14.34
- LAN Option ROM: v1404 PXE 2.1 Build 091
- Ivy Bridge EFI driver (GOP): 3.0.1023
- Sandy Bridge EFI driver (GOP): 2.0.1024
- Visual BIOS: 1.2.15

\*Other names and brands may be claimed as the property of others.

Note: The memory reference code in BIOS version 0046 was updated as a part of the changes made in the BIOS to meet Microsoft Windows 8.1 requirements. This new memory code no longer supports 1066 MHz memory modules.

Before considering updating to BIOS version 0046 or later, check the memory speed you currently have installed in the Intel NUC with the compatibility table below.

Memory speed	Windows version	BIOS version	Compatible?
1066 MHz	Windows 7	0046	No
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	No
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	No
	Windows 8.1	0042 or earlier	No
1333 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No
1600 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No

If you are using 1066 MHz memory and update to BIOS version 0046 or later, the Intel® NUC will no longer boot and you'll see a memory-related 3-blink pattern on the blue LED.

To resolve this problem, you will need to install 1333 or 1600 MHz memory and recover back to 0042. Then refer to the compatibility table above to determine what memory configuration you should use for your operating system.

**New Fixes/Features:**

- Updated message when no bootable device is found.
- Fixed Linux installation issue.

**BIOS Version 0048 - GKPPT10H.86A.0048.2014.0103.1444**

**About This Release:**

- Date: January 3, 2014
- ME Firmware: 8.1.40.1416
- Integrated Graphics Option ROM: Build 2158 PC 14.34
- LAN Option ROM: v1404 PXE 2.1 Build 091
- Ivy Bridge EFI driver (GOP): 3.0.1023
- Sandy Bridge EFI driver (GOP): 2.0.1024
- Visual BIOS: 1.2.15

\*Other names and brands may be claimed as the property of others.

Note: The memory reference code in BIOS version 0046 was updated as a part of the changes made in the BIOS to meet Microsoft Windows 8.1 requirements. This new memory code no longer supports 1066 MHz memory modules.

Before considering updating to BIOS version 0046 or later, check the memory speed you currently have installed in the Intel NUC with the compatibility table below.

Memory speed	Windows version	BIOS version	Compatible?
1066 MHz	Windows 7	0046	No
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	No
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	No
	Windows 8.1	0042 or earlier	No
1333 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No
1600 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No

If you are using 1066 MHz memory and update to BIOS version 0046 or later, the Intel® NUC will no longer boot and you'll see a memory-related 3-blink pattern on the blue LED.

To resolve this problem, you will need to install 1333 or 1600 MHz memory and recover back to 0042. Then refer to the compatibility table above to determine what memory configuration you should use for your operating system.

Note: Certain models of HDMI display monitors or HDTVs may not be able to access the Intel Visual BIOS interface. A text-only BIOS setup mode will be displayed instead.

**New Fixes/Features:**

- Fixed POST hang issue with some USB KB.

BIOS Version 0047 - GKPPT10H.86A.0047.2013.1118.1714
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**About This Release:**

- Date: November 18, 2013
- ME Firmware: 8.1.40.1416
- Integrated Graphics Option ROM: Build 2158 PC 14.34

\*Other names and brands may be claimed as the property of others.

- LAN Option ROM: v1404 PXE 2.1 Build 091
- 3rd Generation EFI driver: 3.0.1023
- 2nd Generation EFI driver: 2.0.1024
- Visual BIOS: 1.2.15

**Note:** The memory reference code in BIOS version 0046 was updated as a part of the changes made in the BIOS to meet Microsoft Windows 8.1 requirements. This new memory code no longer supports 1066 MHz memory modules.

Before considering updating to BIOS version 0046 or later, check the memory speed you currently have installed in the Intel NUC with the compatibility table below.

Memory speed	Windows version	BIOS version	Compatible?
1066 MHz	Windows 7	0046	No
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	No
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	No
	Windows 8.1	0042 or earlier	No
1333 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No
1600 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No

If you are using 1066 MHz memory and update to BIOS version 0046 or later, the Intel® NUC will no longer boot and you'll see a memory-related 3-blink pattern on the blue LED.

To resolve this problem, you will need to install 1333 or 1600 MHz memory and recover back to 0042. Then refer to the compatibility table above to determine what memory configuration you should use for your operating system.

**Note:** Certain models of HDMI display monitors or HDTVs may not be able to access the Intel Visual BIOS interface. A text-only BIOS setup mode will be displayed instead.

**New Fixes/Features:**

- Updated Visual BIOS to version 1.2.15.
- Updated processor microcode.
- Removed System Temperature in BIOS Setup Classic mode.
- Fixed issue where the Intel logo cannot be changed after flash updating from BIOS version 0042.

\*Other names and brands may be claimed as the property of others.

**About This Release:**

- Date: September 27, 2013
- ME Firmware: 8.1.40.1416
- Integrated Graphics Option ROM: Build 2158 PC 14.34
- LAN Option ROM: v1404 PXE 2.1 Build 091
- 3rd Generation EFI driver: 3.0.1023
- 2nd Generation EFI driver: 2.0.1024
- Visual BIOS: 1.2.14

**Note:** The memory reference code in BIOS version 0046 was updated as a part of the changes made in the BIOS to meet Microsoft Windows 8.1 requirements. This new memory code no longer supports 1066 MHz memory modules.

Before considering updating to BIOS version 0046 or later, check the memory speed you currently have installed in the Intel NUC with the compatibility table below.

Memory speed	Windows version	BIOS version	Compatible?
1066 MHz	Windows 7	0046	No
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	No
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	No
	Windows 8.1	0042 or earlier	No
1333 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No
1600 MHz	Windows 7	0046	Yes
	Windows 7	0042 or earlier	Yes
	Windows 8	0046	Yes
	Windows 8	0042 or earlier	Yes
	Windows 8.1	0046	Yes
	Windows 8.1	0042 or earlier	No

If you are using 1066 MHz memory and update to BIOS version 0046 or later, the Intel® NUC will no longer boot and you'll see a memory-related 3-blink pattern on the blue LED.

To resolve this problem, you will need to install 1333 or 1600 MHz memory and recover back to 0042. Then refer to the compatibility table above to determine what memory configuration you should use for your operating system.



**Note: Certain models of HDMI display monitors or HDTVs may not be able to access the Intel Visual BIOS interface. A text-only BIOS setup mode will be displayed instead.**

**New Fixes/Features:**

- Updated Intel® ME firmware to version 8.1.40.1416.
- Updated Intel logo.
- Updated Secure Boot module.
- Changed DVMT default to 32M.

**BIOS Version 0042 - GKPPT10H.86A.0042.2013.0422.1439**

**About This Release:**

- Date: April 22, 2013
- ME Firmware: 8.1.2.1318
- Integrated Graphics Option ROM: Build 2158 PC 14.34
- LAN Option ROM: v1404 PXE 2.1 Build 091
- 3rd Generation EFI driver: 3.0.1023
- 2nd Generation EFI driver: 2.0.1024
- Visual BIOS: 1.2.14

**Note: Certain models of HDMI display monitors or HDTVs may not be able to access the Intel Visual BIOS interface. A text-only BIOS setup mode will be displayed instead.**

**New Fixes/Features:**

- Changed boot logos.
- Updated Intel Visual BIOS to version 1.2.14.
- Updated BIOS to display five USB ports for all SKUs.
- Fixed issue where fan duty cycle does not load default value after BIOS update.
- Fixed ACPI C Status issue.
- Fixed issue with loading defaults in Maintenance mode.
- Removed startup sound option.

**BIOS Version 0040 - GKPPT10H.86A.0040.2013.0325.1514**

**About This Release:**

- Date: March 25, 2013
- ME Firmware: 8.1.2.1318
- Integrated Graphics Option ROM: Build 2158 PC 14.34
- LAN Option ROM: v1404 PXE 2.1 Build 091
- 3rd Generation EFI driver: 3.0.1023
- 2nd Generation EFI driver: 2.0.1024
- Visual BIOS: 1.2.7

**Note: Certain models of HDMI display monitors or HDTVs may not be able to access the Intel Visual BIOS interface. A text-only BIOS setup mode will be displayed instead.**

**New Fixes/Features:**

- Fixed global PK key issue.
- Fixed issue where POST error occurs when both Intel® Rapid Start Technology and Fast Boot are enabled.
- Fixed issue with Intel® Smart Connect Technology.

\*Other names and brands may be claimed as the property of others.

- Fixed poor LAN performance issue.

**BIOS Version 0039 - GKPPT10H.86A.0039.2013.0304.1142**

**About This Release:**

- Date: March 4, 2013
- ME Firmware: 8.1.2.1318
- Integrated Graphics Option ROM: Build 2158 PC 14.34
- LAN Option ROM: v1404 PXE 2.1 Build 091
- 3rd Generation EFI driver: 3.0.1023
- 2nd Generation EFI driver: 2.0.1024
- Visual BIOS: 1.2.7

**Note: Certain models of HDMI display monitors or HDTVs may not be able to access the Intel Visual BIOS interface. A text-only BIOS setup mode will be displayed instead.**

**New Fixes/Features:**

- Updated VBIOS to version 2158.
- Updated EFI drivers to version 3.0.1023 and 2.0.1024.
- Updated Intel Visual BIOS to version 1.2.7.
- Modified the TV feature of VBIOS.
- Fixed issue with IGD DVMT item in BIOS.
- Fixed issue with Power Button menu.
- Fixed 32-bit operating system memory issue.
- Changed default fan duty to 40%.

**BIOS Version 0036 - GKPPT10H.86A.0036.2012.1213.1503**

**About This Release:**

- Date: December 13, 2012
- ME Firmware: 8.1.2.1318
- Integrated Graphics Option ROM: Build 2143 PC 14.34
- LAN Option ROM: v1404 PXE 2.1 Build 091
- 3rd Generation EFI driver: 3.0.1018
- 2nd Generation EFI driver: 2.0.1020
- Visual BIOS: 1.2.1

**New Fixes/Features:**

- Fixed issue with LAN packet drop.
- Changed default Fan duty to 30%.
- Updated FITC setting (Boot Block size) from 64kb to 256kb.
- Fixed issue where system will halt or black out when booted without HDMI monitor.
- Fixed issue where system cannot wake from S3 with onboard LAN when Deep S4/S5 is enabled.

**BIOS Version 0032 - GKPPT10H.86A.0032.2012.1127.1710**

**About This Release:**

- Date: November 27, 2012
- ME Firmware: 8.1.2.1318
- Integrated Graphics Option ROM: Build 2143 PC 14.34

\*Other names and brands may be claimed as the property of others.

- LAN Option ROM: v1404 PXE 2.1 Build 091
- 3rd Generation EFI driver: 3.0.1018
- 2nd Generation EFI driver: 2.0.1020
- Visual BIOS: 1.2.1

**New Fixes/Features:**

- Fixed issue where hard disk drive (HDD) password causes S3 sleep problem.
- Changed GOP setting for dual display issue.
- Fixed issue with 1066 MHz memory.
- Updated Intel® ME 8 firmware to version 8.1.2.1318.
- Updated VBIOS to version 2143.
- Updated PXE LAN to version 1.4.04.
- Updated to allow user to install/clean HDD password when system resets.
- Updated EFI drivers to versions 3.0.1018 and 2.0.1020.
- Updated system fan options to Auto and Manual.
- Fixed default memory voltage issue.
- Removed LAN option from D33217CK.
- Fixed issue where operating system cannot be installed.

<b>BIOS Version 0028 - GKPPT10H.86A.0028.2012.1102.1739</b>
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**About This Release:**

- Date: November 2, 2012
- ME Firmware: 8.1.0.1248
- Integrated Graphics Option ROM: Build 2137 PC 14.34
- LAN Option ROM: v1381 PXE 2.1 Build 091
- 3rd Generation EFI driver: 3.0.15.1016
- 2nd Generation EFI driver: 2.0.36.1019
- Visual BIOS: 1.2.1

**New Fixes/Features:**

- Fixed IGD DVMT Memory issues.
- Added SIO GP87 to drop Anti-Theft support.
- Fixed Thunderbolt\* issues:
  - Changed Setup item "TBWakeUpSupport" default value from Enable to Disable.
  - Added "Keep GPE event status" code for Thunderbolt device.
  - Removed Thunderbolt IO resource support.
  - Changed Thunderbolt SMI delay default value from 1ms to 10ms.
- Updated simple fan control code.
- Fixed issue where pressing Pause key during POST will show AMI\* logo at once.

<b>BIOS Version 0025 - GKPPT10H.86A.0024.2012.1011.1534</b>
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**About This Release:**

- Date: October 9, 2012
- ME Firmware: 8.1.0.1248
- Integrated Graphics Option ROM: Build 2137 PC 14.34
- LAN Option ROM: v1381 PXE 2.1 Build 091
- 3rd Generation EFI driver: 3.0.14.1015

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- 2nd Generation EFI driver: 2.0.32.1014
- Visual BIOS: 1.2.1

**New Fixes/Features:**

- Updated Visual BIOS to version 1.2.1.
- Removed Brightness Control option.
- Added "Display F12 for Network boot" option.
- Updated processor support.
- Fixed issue where system does not Wake-on-LAN when "Wake on LAN from S4/S5" is set to "Power On - PXE Boot".
- Improved Thunderbolt function.
- Fixed issue where two IGD secondary video ports appear.
- Fixed issue where Intel Integrator Toolkit 5.0 cannot modify SMBIOS data.
- Fixed issue where BIOS setup does not show "Chipset SATA mode" item.
- Fixed issue where system halts during POST if BIOS Setup Auto-Entry is enabled.

**BIOS Version 0020 - GKPPT10H.86A.0020.2012.0919.2135**

**About This Release:**

- Date: September 19, 2012
- ME Firmware: 8.1.0.1248
- Integrated Graphics Option ROM: Build 2137 PC 14.34
- LAN Option ROM: v1381 PXE 2.1 Build 091
- Visual BIOS: 1.2.0

**Note:**

When using GK0020.BIO with the Intel® Integrator Toolkit (ITK) version 5.0.0, these errors may occur:

- **Error: Unsupported Logo.**
- **The opened BIOS does not have this support.**

This problem was fixed in ITK version 5.0.1 and later.

**New Fixes/Features:**

- Initial production BIOS release

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