



# PRODUCTS: NUC6i7KYK

# BIOS Version 0064 - KYSKLi70.86A. 0064.2019.0924.1032

#### About This Release:

- Date: September 24, 2019
- ROM Image Checksum: 0x292F
- ME Firmware: 11.8.65.3590
- Memory Reference Code: Based on 1.9.0
- MEBx Revision: NA
- Integrated Graphics
  - Option ROM: Build 1040 PC 14.34
  - UEFI Driver: 9.0.1047
- SATA RAID Option ROM: 14.8.0.2377
- AHCI Code: Based on AHCI 10
- LAN Option ROM: v0104.PXE 2.1 Build 092
- Visual BIOS: 2.2.23
- Supported Flash Devices:

MACRONIX MX25L6473FM2I-10G 8MB(3.3V) WINBOND W25Q64FVSSIQ 8MB(3.3V)

- Microcode Updates included in .ROM File: M36506E3 000000CC.mcb
- Additional Microcode Updates included only in .BIO File: M36506E3 000000CC.mcb

#### New Fixes/Features:

- Updated BIOS code for security fixes.
- Updated BIOS code for BIOS recovery with USB flash drive.

# BIOS Version 0063 - KYSKLi70.86A.0063.2019.0614.2301

# About This Release:

- Date: June 14, 2019
- ROM Image Checksum: 0x17F4
- ME Firmware: 11.8.65.3590
- Memory Reference Code: Based on 1.9.0
- Integrated Graphics:
  - Option ROM: Build 1040 PC 14.34
  - UEFI Driver: 9.0.1047
- SATA RAID Option ROM: 14.8.0.2377
- AHCI Code: Based on AHCI 10
- LAN Option ROM: v0104.PXE 2.1 Build 092
- Visual BIOS: 2.2.23
- Supported Flash Devices:

MACRONIX MX25L6473FM2I-10G 8MB(3.3V) WINBOND W25Q64FVSSIQ 8MB(3.3V)

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

<sup>\*</sup>Other names and brands may be claimed as the property of others.

• Updated CPU microcode for security fix.

# BIOS Version 0062 - KYSKLi70.86A.0062.2019.0507.1702

#### About This Release:

- Date: May 7, 2019
- ME Firmware: 11.8.65.3590
- Memory Reference Code: Based on 1.9.0
- Integrated Graphics
  - Option ROM: Build 1040 PC 14.34
  - UEFI Driver: 9.0.1047
- SATA RAID Option ROM: 14.8.0.2377
- AHCI Code: Based on AHCI 10
- LAN Option ROM: v0104.PXE 2.1 Build 092
- Visual BIOS: 2.2.23

# New Fixes/Features:

- Updated Intel ME firmware to version 11.8.65.3590.
- Modified BIOS code for security fixes.

#### Known Errata:

 Due to the Intel® ME firmware update in BIOS version 0062, you can't downgrade to version 0061 or earlier.

# BIOS Version 0061 - KYSKLi70.86A.0061.2019.0222.1748

# About This Release:

- Date: February 22, 2019
- ME Firmware: 11.8.50.3434
- Memory Reference Code: Based on 1.9.0
- Integrated Graphics
  - Option ROM: Build 1040 PC 14.34
  - UEFI Driver: 9.0.1047
- SATA RAID Option ROM: 14.8.0.2377
- AHCI Code: Based on AHCI 10
- LAN Option ROM: v0104.PXE 2.1 Build 092
- Visual BIOS: 2.2.23

#### New Fixes/Features:

• Updated BIOS code for security fixes.

# BIOS Version 0060 KYSKLi70.86A.0060.2019.0122.1440

- Date: January 22, 2019
- ME Firmware: 11.8.50.3434
- Memory Reference Code: Based on 1.9.0
- Integrated Graphics
  - Option ROM: Build 1040 PC 14.34
  - UEFI Driver: 9.0.1047
- SATA RAID Option ROM: 14.8.0.2377

<sup>\*</sup>Other names and brands may be claimed as the property of others.

- AHCI Code: Based on AHCI 10
- LAN Option ROM: v0104.PXE 2.1 Build 092
- Visual BIOS: 2.2.23

• Fixed issue where disk encryption on Samsung eDrive doesn't work.

#### BIOS Version 0059 - KYSKLi70.86A.0059.2018.1122.1431

#### About This Release:

- Date: November 22, 2018
- ME Firmware: 11.8.50.3434
- Memory Reference Code: Based on 1.9.0
- Integrated Graphics
  - Option ROM: Build 1040 PC 14.34
  - UEFI Driver: 9.0.1047
- SATA RAID Option ROM: 14.8.0.2377
- AHCI Code: Based on AHCI 10
- LAN Option ROM: v0104.PXE 2.1 Build 092
- Visual BIOS: 2.2.23

# New Fixes/Features:

• Fixed issue where Thunderbolt secure level setting in BIOS setup is not reflected to the setting under the operating system.

# BIOS Version 0058 - KYSKLi70.86A.0058.2018.0911.1509

#### About This Release:

- Date: September 12, 2018
- ME Firmware: 11.8.50.3434
- Memory Reference Code: Based on 1.9.0
- Integrated Graphics
  - o Option ROM: Build 1040 PC 14.34
  - o UEFI Driver: 9.0.1047
- SATA RAID Option ROM: 14.8.0.2377
- AHCI Code: AHCI 10
- LAN Option ROM: v0104.PXE 2.1 Build 092
- Visual BIOS: 2.2.23

# **New Fixes/Features:**

• BIOS functionality enhancements.

# BIOS Version 0057 - KYSKLi70.86A.0057.2018.0903.1535

- Date: September 3, 2018
- ME Firmware: 11.8.50.3434
- Memory Reference Code: Based on 1.9.0
- Integrated Graphics
  - o Option ROM: Build 1040 PC 14.34
  - o UEFI Driver: 9.0.1047
- SATA RAID Option ROM: 14.8.0.2377

<sup>\*</sup>Other names and brands may be claimed as the property of others.

- AHCI Code: AHCI 10
- LAN Option ROM: v0104.PXE 2.1 Build 092
- Visual BIOS: 2.2.23

- Fixed jumper recovery failure.
- Updated CPU Microcode (Security Advisory-00115).
- Removed Intel® Ready Mode Technology items for Intel security fix.

# BIOS Version 0055 - KYSKLi70.86A.0055.2018.0516.1629

#### About This Release:

- Date: May 16, 2018
- ME Firmware: 11.8.50.3434
- Memory Reference Code: Based on 1.9.0
- Integrated Graphics:
  - o Option ROM: Build 1040 PC 14.34
  - o UEFI Driver: 9.0.1047
- SATA RAID Option ROM: 14.8.0.2377
- AHCI Code: AHCI 10
- LAN Option ROM: v0104.PXE 2.1 Build 092
- Visual BIOS: 2.2.23

#### New Fixes/Features:

• Security enhancements

### BIOS Version 0054 - KYSKLi70.86A.0054.2018.0427.1338

### About This Release:

- Date: April 27, 2018
- ME Firmware: 11.8.50.3434
- Memory Reference Code: Based on 1.9.0
- Integrated Graphics
  - o Option ROM: Build 1040 PC 14.34
  - o UEFI Driver: 9.0.1047
- SATA RAID Option ROM: 14.8.0.2377
- AHCI Code: AHCI 10
- LAN Option ROM: v0104.PXE 2.1 Build 092
- Visual BIOS: 2.2.23

#### New Fixes/Features:

BIOS functionality enhancements.

# BIOS Update 0053 - KYSKLi70.86A.0053.2018.0312.1143

- Date: March 12, 2018
- ME Firmware: 11.8.50.3434
- Memory Reference Code: Based on 1.9.0
- Integrated Graphics
  - o Option ROM: Build 1040 PC 14.34

<sup>\*</sup>Other names and brands may be claimed as the property of others.

- o UEFI Driver: 9.0.1047
- SATA RAID Option ROM: 14.8.0.2377
- AHCI Code: AHCI 10
- LAN Option ROM: v0104.PXE 2.1 Build 092
- Visual BIOS: 2.2.23

- Updated Management Engine Firmware to version: 11.8.50.3434 (Security Advisory-00086).
- Due to a security enhancement, the BIOS cannot be downgraded to any version older than version 0053.

# BIOS Version 0051 - KYSKLi70.86A.0051.2018.0110.1800

#### About This Release:

- Date: January 10, 2018
- ME Firmware: 11.0.11.1005
- Memory Reference Code: Based on 1.9.0
- Integrated Graphics
  - o Option ROM: Build 1040 PC 14.34
  - o UEFI Driver: 9.0.1047
- SATA RAID Option ROM: 14.8.0.2377
- AHCI Code: AHCI 10
- LAN Option ROM: v0104.PXE 2.1 Build 092
- Visual BIOS: 2.2.23

#### New Fixes/Features:

• Updated CPU Microcode (Security Advisory-00088).

# BIOS Version 0050 - KYSKLi70.86A.0050.2017.0831.1924

#### About This Release:

- Date: August 31, 2017
- ME Firmware: 11.0.11.1005
- Memory Reference Code: Based on 1.9.0
- Integrated Graphics
  - o Option ROM: Build 1040 PC 14.34
  - o UEFI Driver: 9.0.1047
- SATA RAID Option ROM: 14.8.0.2377
- AHCI Code: AHCI 10
- LAN Option ROM: v0104.PXE 2.1 Build 092
- Visual Bios: 2.2.23

# New Fixes/Features:

- Security enhancements.
- Added setup option "Allow UEFI 3rd Party Driver loaded".
- The BIOS cannot be downgraded to version 0049 or earlier due to security enhancements.

#### BIOS Version 0049 - KYSKLi70.86A.0049.2017.0703.1652

- Date: July 3, 2017
- ME Firmware: 11.0.11.1005

<sup>\*</sup>Other names and brands may be claimed as the property of others.

- Memory Reference Code: Based on 1.9.0
- Integrated Graphics
- Option ROM: Build 1040 PC 14.34
- UEFI Driver: 9.0.1047
- SATA RAID Option ROM: 14.8.0.2377
- AHCI Code: AHCI 10
- LAN Option ROM: v0104.PXE 2.1 Build 092
- Visual Bios: 2.2.23

- Fixed incorrect help text for:
  - o Thunderbolt USB Boot
  - o Thunderbolt Boot
- Fixed issue where that caused the Intel® NUC Kit NUC6i7KYK not to work with the, "Intel® Board ID tool for Intel® NUC and Intel® Compute Stick".

#### BIOS Version 0048 - KYSKLi70.86A.0048.2017.0524.1741

#### About This Release:

- Date: May 24, 2017
- ME Firmware: 11.0.11.1005
- Memory Reference Code: Based on 1.9.0.0
- Integrated Graphics
  - Option ROM: Build 1040 PC 14.34
  - UEFI Driver: 9.0.1047
- LAN Option ROM: v0104.PXE 2.1 Build 092
- Visual BIOS: 2.2.23

# New Fixes/Features:

- Micro Code update to fix Hyper-Threading issue.
- Downgraded Intel Visual BIOS from "2.2.25" to "2.2.23" due to graphical errors with the on-screen Keyboard.
- Removed "4096 MB" option in Setup page (Devices\video\IGD Aperture size)
- Fixed the Recovery function where the ME couldn't be flashed.

# BIOS Version 0046 - KYSKLi70.86A.0046.2017.0407.1426

#### About This Release:

- Date: April 7, 2017
- ME Firmware: 11.0.10.1005
- Framework BIOS Reference Code: Based on 1.9.0
- Integrated Graphics
  - o Option ROM: Build 1040 PC 14.34
  - o UEFI Driver: 9.0.1047
- LAN Option ROM: v0104.PXE 2.1 Build 092
- Visual Bios: 2.2.20

#### New Fixes/Features:

- Fixed issue where No boot when using 2 PCIe m.2 drives.
- Changed the IGD Minimum Memory to 512 MB.
- Fixed issue where PXE boot wouldn't work with IGD Minimum Memory set to 1 GB and IGD Aperture Size set to 1024 MB.

<sup>\*</sup>Other names and brands may be claimed as the property of others.

• Update dbx module.

# BIOS Version 0045 - KYSKLi70.86A.0045.2017.0314.1601

#### About This Release:

- Date: March 14, 2017
- ME Firmware: 11.0.10.1005
- Framework BIOS Reference Code: Based on 1.9.0
- Integrated Graphics
  - o Option ROM: Build 1040 PC 14.34
  - o UEFI Driver: 9.0.1047
- LAN
  - o Option ROM: v0104.PXE 2.1 Build 092
- Visual Bios: 2.2.20

#### New Fixes/Features:

- Modified BIOS for DCI solution.
- Fixed PTT failure.
- Updated USB RT#2 solution.
- ullet Added support for Thunderbolt graphic device POST display.
- Fixed update descriptor in BIOS recovery.
- Added 2048MB in IGD minimal memory option (Thunderbolt  $^{\text{m}}$  must be disabled to see 1024 MB or 2048MB option).

# BIOS Version 0042 - KYSKLi70.86A.0042.2016.0929.1933

#### About This Release:

- Date: September 29, 2016
- ME Firmware: 11.0.10.1005
- Framework BIOS Reference Code: Based on 1.9.0
- Integrated Graphics
  - o Option ROM: Build 1040 PC 14.34
  - o UEFI Driver: 9.0.1047
- LAN
  - o Option ROM: v0104.PXE 2.1 Build 092
- Visual Bios: 2.2.20

# New Fixes/Features:

- Updated processor support.
- Force DevSleep (Device Sleep) to disable
- Security Enhancements

# BIOS Version 0041 - KYSKLi70.86A.0041.2016.0817.1130

- Date: August 17, 2016
- ME Firmware: 11.0.10.1005
- Framework BIOS Reference Code: Based on 1.9.0
- Integrated Graphics
  - o Option ROM: Build 1040 PC 14.34
  - o UEFI Driver: 9.0.1047
- LAN
  - o Option ROM: v0104.PXE 2.1 Build 092
- Visual Bios: 2.2.20

<sup>\*</sup>Other names and brands may be claimed as the property of others.

- Fixed the issue where PL1/PL2 would cause an issue resuming from sleep (S3).
- Fixed the issue where the system would hang if Wireless and Bluetooth were disabled and fast boot was enabled.
- Fixed Security issues.
- Fixed Intel® Integrator tool kit (ITK) security issues.
- Fixed the HLK validation issue, USB Type-C ACPI.
- Updated the BootScriptHide2 module for ACPI Security.
- Modified the SA voltage.
- Fixed the issue where Enabling Intel® Turbo Boost Technology would not enable Enhanced Intel SpeedStep® Technology.
- Updated CRB to CRB033.
- Fixed the issue where the keyboard and mouse wouldn't work in visual BIOS, when Fast Boot is enabled using the Operating System UEFI Firmware Setting.
- Fixed the issue that a reboot would show a warning message when Secure boot and Fast Boot were enabled at the same time.
- Removed the Core Max OC ratio Setup item.
- Set NFC default to disabled in MFG mode and hid the NFC Setup.
- Fixed the issue where booting to Thunderbolt  $\mbox{\em M}$  Storage on Linux would fail.
- Updated BootScriptHide2 module for ACPI Security.

# BIOS Version 0037 - KYSKLi70.86A.0037.2016.0603.1032

# About This Release:

- Date: June 03, 2016
- ME Firmware: 11.0.10.1005
- Framework BIOS Reference Code: Based on 1.9.0.0
- Integrated Graphics
  - o Option ROM: Build 1040 PC 14.34
  - o UEFI Driver: 9.0.1047
- LAN
  - o Option ROM: v0104.PXE 2.1 Build 092
- Visual Bios: 2.2.20

# **New Fixes/Features:**

- Disabled USB compliance mode.
- Modified the setup items; Power Limit 1 & Power Limit 2
  Power Limit 1= 35w Max = 50w
  Power Limit 2= 40w Max = 60w
- Fixed an issue where Thunderbolt™ wouldn't see all the connected devices, when daisy chained.
- Fixed a Thunderbolt boot issue where enabling an external graphics card would cause a yellow bang.

# BIOS Version 0035 - KYSKLi70.86A.0035.2016.0520.0932

- Date: May 20, 2016
- ME Firmware: 11.0.10.1005
- Framework BIOS Reference Code: Based on 1.9.0.0

<sup>\*</sup>Other names and brands may be claimed as the property of others.

- Integrated Graphics
  - o Option ROM: Build 1040 PC 14.34
  - o UEFI Driver: 9.0.1047
- LAN
  - o Option ROM: v0104.PXE 2.1 Build 092
- Visual Bios: 2.2.20

- Updated ME to 11.0.11.1005.
- Updated GOP to 1047 and VBIOS to 1040.
- Fixed an issue where the second device in a Thunderbolt™ daisy chain wouldn't be recognized.
- $\bullet$  Set Thunderbolt  $^{\text{\tiny TM}}$  USB boot and Thunderbolt Boot defaults to disable.
- Fixed an S3/ S4 issue that would cause FurMark\* to stop running.
- Fixed an issue where the Razer Core's I/O port lost function after waking from S3/S4.
- Removed the change that when "RST PCIe Storage Remapping" was selected, the BIOS would turn off "legacy boot" and enable "UEFI boot".
- Modified the behavior of legacy boot, so that when legacy boot is enabled the "RST PCIe Storage Remapping" is enabled to support installing Windows 7 via UEFI.
  - o When "RST PCIe Storage Remapping" is enabled, it will load UEFI RAID.
  - o When "RST PCIe Storage Remapping" is disabled, it will load legacy RAID.

# BIOS Version 0034 - KYSKLi70.86A.0034.2016.0503.1334

#### About This Release:

- Date: May 3, 2016
- ME Firmware: 11.0.10.1002
- Framework BIOS Reference Code: Based on 1.9.0.0
- Integrated Graphics
  - o Option ROM: Build 1037 PC 14.34
  - o UEFI Driver: 9.0.1045
- T.AN
  - o Option ROM: v0104.PXE 2.1 Build 092
- Visual Bios: 2.2.20

# New Fixes/Features:

- Updated CPU Microcode.
- Modified Windows Capsule Update platform GUID.
- Fixed watch dog timer issue on first power on.
- Added a fan curve for CPU cool mode.
- Added post-processing for "Max Performance Enable" Setup item.
- When the "Max Performance Enable" power mode is turned on, the FAN controller mode will automatically switch to cool mode.
- Removed the "Fanless" option.
- Modified RST PCIe Storage Remapping Setup behavior.
- When one of the "RST PCIe Storage Remapping" buttons is checked, it will automatically turn off "legacy boot" and enable "UEFI boot".

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- Changed voltage adjustment bars:
  - o Limited GT slice/unsliced OC ratio range to 28.
  - o Limited the maximum Core voltage override/Core extra Turbo and Ring voltage Override/Extra Turbo to  $1.5 \mathrm{v}$ .
  - o Limited the maximum slice Domain/Extra Turbo and Unslice domain/Extra Turbo to 1.5v.
- Fixed Visual BIOS not show the information about the SAMSUNG V950 SSD.
- Modified memory data system slot, and onboard device for SMBIOS.
- Fixed an issue where the system didn't show the model of the SSD and SD Card in the F7 boot menu.
- Fixed an issue where some cooling options didn't show in Integrator Toolkit.
- Fixed an issue where the option "IGD Primary Video Port" and "IGD Secondary Video Port" are incorrect.
- Fixed an issue where "Thunderbolt" was still shown under "IGD Primary Video Port" and "IGD Secondary Video Port" when the Thunderbolt controller was disabled.
- Fixed an issue where the SD card could read, but not write after resuming from S3.

# BIOS Version 0033 - KYSKLi70.86A.0033.2016.0408.1727

### About This Release:

- Date: April 8, 2016
- ME Firmware: 11.0.10.1002
- Framework BIOS Reference Code: Based on 1.9.0.0
- Integrated Graphics
  - o Option ROM: Build 1037 PC 14.34
  - o UEFI Driver: 9.0.1045
- LAN
  - o Option ROM: v0104.PXE 2.1 Build 092
- Visual Bios: 2.2.20

# New Fixes/Features:

• Initial production BIOS release

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