



## BIOS Update Release Notes

**PRODUCTS: NUC10i7FN, NUC10i5FN, NUC10i3FN**

**BIOS Version 0061 - FNCML357.0061.2023.0710.1812**

### About This Release:

- Date: July 14, 2023
- ROM Image Checksum: 0xAAC4A06B
- EC Firmware: 03.12.00
- ME Firmware: 14.1.67.2046
- PMC Firmware: 140.1.1.1010
- I219 NVM: 0.8
- CRB Label: 1AWDV011
- Boot Guard ACM: V4532
- BIOS Guard: BiosGuard\_009
- Silicon Initialization: 9.0.14.30
- Memory Reference Code: Based on 00.00.00.031
- Integrated Graphics:
  - Option ROM: 1021
  - UEFI Driver: 9.0.1107
- Intel RST Pre-OS
  - UEFI Driver: 18.30.0.4502
- SATA RAID Option ROM: 17.8.0.4352
- AHCI Code: Based on AHCI\_20
- LAN Option ROM: 0.0.24
- Visual BIOS: Intel AptioV
- Supported Flash Devices:

MACRONIX	MX25L25673GM2I-08G	32MB
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- Microcode Updates included in .BIN & .CAP Files:

m80a0660_000000F0
m94806ec_000000F4

### Feature Changes/Updates/Fixes:

- Added Add new L10 SKU number in SMBIOS data area.

**BIOS Version 0060 - FNCML357.0060.2023.0208.1148**

### About This Release:

- Date: Feb 08, 2023
- ROM Image Checksum: 0xAAD3DFCE
- EC Firmware: 03.12.00
- ME Firmware: 14.1.67.2046
- PMC Firmware: 140.1.1.1010
- I219 NVM: 0.8
- CRB Label: 1AWDV011
- Boot Guard ACM: V4532

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

- Bios Guard: BiosGuard\_009
- Silicon Initialization: 9.0.14.30
- Memory Reference Code: Based on 00.00.00.031
- Integrated Graphics:
  - Option ROM: 1021
  - UEFI Driver: 9.0.1107
- Intel RST Pre-OS
  - UEFI Driver: 18.30.0.4502
- SATA RAID Option ROM: 17.8.0.4352
- AHCI Code: Based on AHCI\_20
- LAN Option ROM: 0.0.24
- Visual BIOS: Intel AptioV
- Supported Flash Devices:
 

MACRONIX	MX25L25673GM2I-08G	32MB
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- Microcode Updates included in .BIN & .CAP Files:
 

M80A0660_000000F0
M94806EC_000000F0

#### **Feature Changes/Updates/Fixes:**

- Fixed issue where GRUB Bootloader Vulnerability.
- Updated 2022 IPU update: 2022.1/2022.3.
- Fixed issue where Intel NUC information disclosure vulnerability.
- Fixed issue OS Kernel-level malware may cause information disclosure vulnerability.
- Fixed issue where iSetupCfg tool was not able to change default value of PLx/Fan cover parameters due to stdDefault override mechanism.
- Added Add StdDefaults into ProtectedNvVariableForRuntime ELink.
- Fixed issue where Building Process optimize\_avoid UQI duplicated.

**BIOS Version 0059 - FNCML357.0059.2022.1019.1055**

#### **About This Release:**

- Date: Oct 21, 2022
- ROM Image Checksum: 80CF
- EC Firmware: 03.12.00
- ME Firmware: 14.1.67.2046
- PMC Firmware: 140.1.1.1010
- I219 NVM: 0.8
- CRB Label: 1AWDV011
- Boot Guard ACM: V4532
- Bios Guard: BiosGuard\_009
- Silicon Initialization: 9.0.14.30
- Memory Reference Code: Based on 00.00.00.031
- Integrated Graphics:
  - Option ROM: 1021

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

- UEFI Driver: 9.0.1107
- Intel RST Pre-OS:
  - UEFI Driver: 18.30.0.4502
- SATA RAID Option ROM: 17.8.0.4352
- AHCI Code: Based on AHCI\_20
- LAN Option ROM: 0.0.24
- Visual BIOS: Intel AptioV
- Supported Flash Devices:
 

MACRONIX	MX25L25673GM2I-08G	32MB
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- Microcode Updates included in .BIN & .CAP Files:
 

M80A0660_000000F0
M94806EC_000000F0

#### **New Fixes/Features:**

- Updated ME FW to 14.1.67.2046
- Fixed issue where Stack overflow vulnerability in SMI handler.
- Fixed issue where SMM memory corruption vulnerability in SMM driver on Intel platforms.
- Fixed issue where The arbitrary code execution in DXE driver.
- Fixed issue where Privilege escalation vulnerability from kernel to SMM in multiple devices.
- Fixed issue where TianoCore Security Issues.
- Fixed issue where Intel NUC 9 vulnerability.
- Fixed issue where SIO\_DEV\_STATUS\_VAR\_NAME Information Leakage.
- Fixed issue where Potential hack of EBU DLL.
- Fixed issue where Grub Bootloader Vulnerability.
- Fixed issue where vulnerability/info leak vulnerability.
- Updated CPU Microcode to M94806EC\_000000F4 and M80A0660\_000000F4.

<b>BIOS Version 0058 - FNCML357.0058.2022.0720.1011</b>
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#### **About This Release:**

- Date: Jul 22, 2022
- ROM Image Checksum: DB2E
- ME Firmware: 14.1.65.1969
- EC Firmware: 03.12.00
- PMC Firmware: 140.1.01.1010
- Memory Reference Code: Based on RC9.0.14.30\_011
- Integrated Graphics:
  - Option ROM: 1021
  - UEFI Driver: 9.0.1107
- SATA RAID Option ROM: 17.8.0.4352
- AHCI Code: Based on AHCI\_20
- LAN Option ROM: 0.0.24
- Visual BIOS: Intel AptioV
- Supported Flash Devices:
 

MACRONIX	MX25L25673GM2I-08G	32MB
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- Microcode Updates included in .BIN & .CAP Files:
 

M80A0660_000000F0
M94806EC_000000F0

#### **New Fixes/Features:**

- Updated "Press F6 to exist Manufacturing Mode" feature string update.

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

- Fixed issue where Buffer Overflow in UEFI Firmware BIOS core.
- Fixed issue where Information disclosure vulnerability.
- Fixed issue where System always reset loop after RTC power loss.
- Fixed issue where Arbitrary write vulnerability in PEI module leads to arbitrary code execution in PEI phase.
- Fixed issue where PEI memory corruption on server boards and on majority of NUCs.
- Added Patch for a message warning when a system upgrade means a downgrade is no possible.
- Added "BootPerformanceTable\_pointer".
- Fixed issue where POST Hotkey message does not display with Secure Boot enabled.
- Updated EC FW to 03.12.00.
- Updated Unified "OemCommonLib.h" reference file.

<b>BIOS Version 0057 - FNCML357.0057.2022.0520.1803</b>
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**About This Release:**

- Date: May 20, 2022
- ROM Image Checksum: 0774
- ME Firmware: 14.1.65.1969
- EC Firmware: 03.11.00
- PMC Firmware: 140.1.01.1010
- Memory Reference Code: Based on RC9.0.14.30\_011
- Integrated Graphics:
  - Option ROM: 1021
  - UEFI Driver: 9.0.1107
- SATA RAID Option ROM: 17.8.0.4352
- AHCI Code: Based on AHCI\_20
- LAN Option ROM: 0.0.24
- Visual BIOS: Intel AptioV
- Supported Flash Devices:
 

MACRONIX	MX25L25673GM2I-08G	32MB
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- Microcode Updates included in .BIN & .CAP Files:
 

M80A0660_000000F0
M94806EC_000000F0

**New Fixes/Features:**

- Updated ME Firmware to 14.1.65.1969.
- Updated to CPU Microcode updated to M80A0660\_000000F0 and M94806EC\_000000F0
- Updated EC Firmware to 03.11.00
- Fixed issue where system can't boot up after changing settings.
- Fixed issue where Timer does not restart NUC under Ubuntu Linux 20.04 (LTS).
- Implemented Config Mode load safe settings.
- Added Event Log code check for feature "Press F6 from BIOS setup to exit MFG mode".
- Added OpenSSL version check if been updated to CryptoPkg\_37.
- Fixed patch for BIOS Warning message during BIOS update from Windows Update (Follow Master RD3.10).

<b>BIOS Version 0056 - FNCML357.0056.2022.0223.1614</b>
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**About This Release:**

- Date: Feb 23, 2022
- ROM Image Checksum: 4704

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

- ME Firmware: 14.0.47.1558
- EC Firmware: 03.09.00
- PMC Firmware: 140.1.01.1010
- Memory Reference Code: Based on RC9.0.14.30\_011
- Integrated Graphics:
  - Option ROM: 1021
  - UEFI Driver: 9.0.1107
- SATA RAID Option ROM: 17.8.0.4352
- AHCI Code: Based on AHCI\_20
- LAN Option ROM: 0.0.24
- Visual BIOS: Intel AptioV
- Supported Flash Devices:
 

MACRONIX	MX25L25673GM2I-08G	32MB
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- Microcode Updates included in .BIN & .CAP Files:
 

m80a0660_000000ea
m94806ec_000000ec

#### **New Fixes/Features:**

- Fixed issue where NUC failed (no boot) after several reboot attempts.
- Added functionality when pressing "F6" from BIOS Setup will exit MFG mode.
- Updated CPU Microcode (0xEC/0xEA) for IPU 2021.2
- Updated 2021.2 IPU BIOS change.
- Updated Self-Help feature.

<b>BIOS Version 0055 - FNCML357.0055.2021.1202.1748</b>
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#### **About This Release:**

- Date: Dec 02, 2021
- ROM Image Checksum: AA86370E
- ME Firmware: 14.0.47.1558
- EC Firmware: 03.09.00
- PMC Firmware: 140.1.01.1010
- Memory Reference Code: Based on RC9.0.14.30\_011
- Integrated Graphics:
  - Option ROM: 1021
  - UEFI Driver: 9.0.1107
- SATA RAID Option ROM: 17.8.0.4352
- AHCI Code: Based on AHCI\_20
- LAN Option ROM: 0.0.24
- Visual BIOS: Intel AptioV
- Supported Flash Devices:
 

MACRONIX	MX25L25673GM2I-08G	32MB
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- Microcode Updates included in .BIN & .CAP Files:
 

m80a0660_000000e8
m94806ec_000000ea

#### **New Fixes/Features:**

- Added Pop-Up warning message to User when transition BIOS is necessary.
- Fixed issue with FX System Verification Test.
- Fixed issue where system wakes on USB even with wake on USB S5 disabled.
- Fixed issued where unauthorized modification of UEFI variables could disable the protect mechanism of SMM.
- Fixed issue where BIOS could not update version FN0052 to FN0053 in headless mode.

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

## BIOS Version 0053 - FNCML357.0053.2021.0707.1420

### About This Release:

- Date: Jul 7, 2021
- ROM Image Checksum: dd32d385
- ME Firmware: 14.0.47.1558
- EC Firmware: 03.09.00
- PMC Firmware: 140.1.01.1010
- Memory Reference Code: Based on RC9.0.14.30\_011
- Integrated Graphics:
  - Option ROM: 1021
  - UEFI Driver: 9.0.1093
- SATA RAID Option ROM: 17.8.0.4352
- AHCI Code: Based on AHCI\_20
- LAN Option ROM: 0.0.24
- Visual BIOS: Intel AptioV
- Supported Flash Devices:
  - MACRONIX MX25L25673GM2I-08G 32MB
- Microcode Updates included in .BIN & CAP Files:
  - m80a0660\_000000e8
  - m94806ec\_000000ea

### New Fixes/Features:

- **Fixed:** Cannot enable/disable "Fast Boot".
- **Fixed:** Issue where the Intel NUC won't boot if you set IGD Aperture size to 2048 and disable UEFI boot.
- **Updated:** Updated CPU Microcode to m80a0660\_000000e8 and m94806ec\_000000ea.
- **Updated:** BNBOS security.

## BIOS Version 0052 - FNCML357.0052.2021.0409.1144

### About This Release:

- Date: April 09, 2021
- ROM Image Checksum: 0xB99D
- ME Firmware: 14.0.47.1558
- EC Firmware: 03.09.00
- PMC Firmware: 140.1.01.1010
- Memory Reference Code: Based on RC9.0.14.30\_011
- Integrated Graphics:
  - Option ROM: 1021
  - UEFI Driver: 9.0.1093
- SATA RAID Option ROM: 17.8.0.4352
- AHCI Code: Based on AHCI\_20
- LAN Option ROM: 0.0.24
- Visual BIOS: Intel AptioV
- Supported Flash Devices:
  - MACRONIX MX25L25673GM2I-08G 32MB
- Microcode Updates included in .BIN & .CAP Files:
  - M94806EC\_000000DE.pdb
  - M80A0660\_000000E0.pdb

### New Fixes/Features:

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

- Enabled Thunderbolt boot support after a "F7" BIOS update.
- Fixed issue regarding no display during POST when only using a Thunderbolt / Type-C to HDMI adapter.

<b>BIOS Version 0051 - FNCML357.0051.2021.0324.1859</b>
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**About This Release:**

- Date: Mar 24, 2021
- ROM Image Checksum: 0x05BF
- ME Firmware: 14.0.47.1558
- EC Firmware: 03.09.00
- PMC Firmware: 140.1.01.1010
- Memory Reference Code: Based on RC9.0.14.30\_011
- Integrated Graphics:
  - Option ROM: 1021
  - UEFI Driver: 9.0.1093
- SATA RAID Option ROM: 17.8.0.4352
- AHCI Code: Based on AHCI\_20
- LAN Option ROM: 0.0.24
- Visual BIOS: Intel AptioV
- Supported Flash Devices:
 

MACRONIX	MX25L25673GM2I-08G	32MB
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- Microcode Updates included in .BIN & .CAP Files:
 

M94806EC_000000DE.pdb
M80A0660_000000E0.pdb

**New Fixes/Features:**

- Fixed issue recognizing a USB device on a Thunderbolt dock after rebooting.
- Fixed issue with audio codec default setup.
- Updated NTFS DXE driver when parsing NTFS file system partition.

<b>BIOS Version 0050 - FNCML357.0050.2021.0303.2146</b>
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**About This Release:**

- Date: Mar 03, 2021
- ROM Image Checksum: 0x2E14
- ME Firmware: 14.0.47.1558
- EC Firmware: 03.09.00
- PMC Firmware: 140.1.01.1010
- Memory Reference Code: Based on RC9.0.14.30\_011
- Integrated Graphics:
  - Option ROM: 1021
  - UEFI Driver: 9.0.1093
- SATA RAID Option ROM: 17.8.0.4352
- AHCI Code: Based on AHCI\_20
- LAN Option ROM: 0.0.24
- Visual BIOS: Intel AptioV
- Supported Flash Devices:
 

MACRONIX	MX25L25673GM2I-08G	32MB
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- Microcode Updates included in .BIN & .CAP Files:  
M94806EC\_000000DE.pdb  
M80A0660\_000000E0.pdb

#### **New Fixes/Features:**

- Updated Audio Codec software.
- Updated GBE (Gigabit Ethernet) to 0.8 and fixed incorrect SSID issue.
- Updated ME firmware to 14.0.47.1558

#### **Known Errata:**

- Due to the Intel® ME firmware update in BIOS version 0050, you can't downgrade to version 0047 or earlier.

### **BIOS Version 0047 - FNCML357.0047.2020.1118.1629**

#### **About This Release:**

- Date: Nov 18, 2020
- ROM Image Checksum: 0xC7CC
- ME Firmware: 14.0.45.1389
- EC Firmware: 03.09.00
- PMC Firmware: 140.1.01.1010
- Memory Reference Code: Based on RC9.0.14.30\_011
- Integrated Graphics:
  - Option ROM: 1021
  - UEFI Driver: 9.0.1093
- SATA RAID Option ROM: 17.8.0.4352
- AHCI Code: Based on AHCI\_20
- LAN Option ROM: 0.0.24
- Visual BIOS: Intel AptioV
- Supported Flash Devices:  
MACRONIX MX25L25673GM2I-08G 32MB
- Microcode Updates included in .BIN & .CAP Files:  
M94806EC\_000000DE.pdb  
M80A0660\_000000E0.pdb

#### **New Fixes/Features:**

- Updated the ME firmware to 14.0.45.1389
- Updated the EC firmware to 03.09.00
- Added Self-healing BIOS code.
- Fixed the issue where "New SOC I5 load line Fail".
- Fixed issue to control "RING LED" and "HDD LED" via WMI method.
- Updated BIOS code for security fixes.

### **BIOS Version 0046 - FNCML357.0046.2020.0928.1457**

#### **About This Release:**

- Date: Sept 28, 2020
- ROM Image Checksum: 0xF2F8
- ME Firmware: 14.0.39.1339
- EC Firmware: 03.07.00
- PMC Firmware: 140.1.01.1010



- Memory Reference Code: Based on RC9.0.14.30\_011
- Integrated Graphics:
  - Option ROM: 1021
  - UEFI Driver: 9.0.1093
- SATA RAID Option ROM: 17.8.0.4352
- AHCI Code: Based on AHCI\_20
- LAN Option ROM: 0.0.24
- Visual BIOS: Intel AptioV
- Supported Flash Devices:
  - MACRONIX MX25L25673GM2I-08G 32MB
- Microcode Updates included in .BIN & .CAP Files:
  - M94806EC\_000000D6.pdb
  - M80A0660\_000000CA.pdb

#### **New Fixes/Features:**

- Fixed issue updating BIOS using "F7" update method.

<b>BIOS Version 0045 - FNCML357.0045.2020.0817.1709</b>
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#### **About This Release:**

- Date: Aug 17, 2020
- ROM Image Checksum: 0x2F4D
- ME Firmware: 14.0.39.1339
- EC Firmware: 03.07.00
- PMC Firmware: 140.1.01.1010
- Memory Reference Code: Based on RC9.0.14.30\_011
- Integrated Graphics:
  - Option ROM: 1021
  - UEFI Driver: 9.0.1093
- SATA RAID Option ROM: 17.8.0.4352
- AHCI Code: Based on AHCI\_20
- LAN Option ROM: 0.0.24
- Visual BIOS: Intel AptioV
- Supported Flash Devices:
  - MACRONIX MX25L25673GM2I-08G 32MB
- Microcode Updates included in .BIN & .CAP Files:
  - M94806EC\_000000D6.pdb
  - M80A0660\_000000CA.pdb

#### **New Fixes/Features:**

- Updated ME Firmware to 14.0.39.1339
- Fixed issue with "iSetupCfg" log file.
- Fixed issue where failure to image by SCCM.
- Fixed issue with watchdog not clearing counter.
- Fixed issue where BIOS Self Recovery must be disabled if Failsafe Watchdog is disabled.

#### **Known Errata:**

- Due to the Intel® ME firmware update in BIOS version 0045, you can't downgrade to version 0044 or earlier.

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

**About This Release:**

- Date: July 15, 2020
- ROM Image Checksum: 0x704E
- ME Firmware: 14.0.34.1139
- EC Firmware: 03.07.00
- PMC Firmware: 140.1.01.1010
- Memory Reference Code: Based on RC9.0.14.30\_011
- Integrated Graphics:
  - Option ROM: 1021
  - UEFI Driver: 9.0.1093
- SATA RAID Option ROM: 17.8.0.4352
- AHCI Code: Based on AHCI\_20
- LAN Option ROM: 0.0.24
- Visual BIOS: Intel AptioV
- Supported Flash Devices:

MACRONIX	MX25L25673GM2I-08G	32MB
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- Microcode Updates included in .BIN & .CAP Files:

M94806EC_000000CA.pdb
M80A0660_000000CA.pdb

**New Fixes/Features:**

- Fixed issue with Thunderbolt boot default need to change from Enable to Disable to speed up BIOS POST time.
- Fixed issue with incorrect BIOS Setup Temperature display.
- Fixed issue affecting BIOS Optane settings not allowing for OS boot.
- Updated BIOS code for security fixes and improvements.
- Fixed issue PXE boot error display message.
- Fixed issue to disable TPM/PTT at BIOS level.
- Fixed issue to install Windows 10 SCCM.
- Updated ME Firmware version to 14.0.34.1139
- Updated TBT boot default from enable to disable.
- Fixed "iSetupCfg" map string error.
- Updated BIOS and EC Firmware to improve RTC\_Reset functionality.
- Fixed "iSetupcfg" token dump issue, setup items and password check item issue.
- Fixed issue when BIOS detected no memory and prompt a warning message, BIOS will disable WDT to prevent from reset.
- Fixed Energy Star Logo issue for "BXNUC10i5FNHCA" SKU.
- Removed RAM Disk from BIOS setup.
- Fixed "Strings of Tau" value to meet SPEC requirement.
- Fixed CMOS Time overflow issue when switching SSD between different systems.
- Updated BIOS setup to provide URL address and QR code availability leading to NUC support webpage.
- Updated BIOS Screen and Power Button Menu.

**Known Errata:**

- Due to the Intel® ME firmware update in BIOS version 0044, you can't downgrade to version 0039 or earlier.

<b>BIOS Version 0039 - FNCML357.0039.2020.0312.1734</b>
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**About This Release:**

- Date: March 12, 2020
- ROM Image Checksum: 0xB98F
- ME Firmware: 14.0.31.1120
- EC Firmware: 03.04.00
- PMC Firmware: 140.1.01.1008
- Memory Reference Code: Based on RC9.0.14.30\_011
- Integrated Graphics:
  - Option ROM: 1021
  - UEFI Driver: 9.0.1093
- SATA RAID Option ROM: 17.8.0.4352
- AHCI Code: Based on AHCI\_20
- LAN Option ROM: 0.0.24
- Visual BIOS: Intel AptioV
- Supported Flash Devices:

MACRONIX	MX25L25673GM2I-08G	32MB
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- Microcode Updates included in .BIN & .CAP Files:

M94806EC_000000C6.mcb
M80A0660_000000C6.mcb

**New Fixes/Features:**

- ME Firmware updated to 14.0.31.1120.
- Fixed issue regarding SCE tool setup.

<b>BIOS Version 0038 - FNCML357.0038.2020.0131.1422</b>
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**About This Release:**

- Date: January 31, 2020
- ROM Image Checksum: 0x43D7
- ME Firmware: 14.0.0.1061
- EC Firmware: 03.04.00
- PMC Firmware: 140.1.01.1004
- Memory Reference Code: Based on RC9.0.14.30\_011
- Integrated Graphics:
  - Option ROM: 1021
  - UEFI Driver: 9.0.1093
- SATA RAID Option ROM: 17.8.0.4352
- AHCI Code: Based on AHCI\_20
- LAN Option ROM: 0.0.24
- Visual BIOS: Intel AptioV
- Supported Flash Devices:

MACRONIX	MX25L25673GM2I-08G	32MB
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- Microcode Updates included in .BIN & .CAP Files:

M94806EC_000000C6.mcb
M80A0660_000000C6.mcb

**New Fixes/Features:**

- Fixed issue with BIOS fault tolerance failing after BIOS is re-signed.

<b>BIOS Version 0037 - FNCML357.0037.2019.1226.1738</b>
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**About This Release:**

- Date: December 26, 2019
- ROM Image Checksum: 0x7035
- ME Firmware: 14.0.0.1061
- EC Firmware: 03.04.00
- PMC Firmware: 140.1.01.1004
- Memory Reference Code: Based on RC9.0.14.30\_011
- Integrated Graphics:
  - Option ROM: 1021
  - UEFI Driver: 9.0.1093
- SATA RAID Option ROM: 17.8.0.4352
- AHCI Code: Based on AHCI\_20
- LAN Option ROM: 0.0.24
- Visual BIOS: Intel AptioV
- Supported Flash Devices:

MACRONIX	MX25L25673GM2I-08G	32MB
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- Microcode Updates included in .BIN & .CAP Files:

M94806EC_000000C6.mcb
M80A0660_000000C6.mcb

**New Fixes/Features:**

- Updated BIOS code for security fixes.
- Fixed HDD LED functionality issue.

<b>BIOS Version 0036 - FNCML357.0036.2019.1207.1504</b>
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**About This Release:**

- Date: December 07, 2019
- ROM Image Checksum: 0x27C0
- ME Firmware: 14.0.0.1061
- EC Firmware: 03.04.00
- PMC Firmware: 140.1.01.1004
- Memory Reference Code: Based on RC9.0.14.30\_011
- Integrated Graphics:
  - Option ROM: 1021
  - UEFI Driver: 9.0.1093
- SATA RAID Option ROM: 17.8.0.4352
- AHCI Code: Based on AHCI\_20
- LAN Option ROM: 0.0.24
- Visual BIOS: Intel AptioV
- Supported Flash Devices:

MACRONIX	MX25L25673GM2I-08G	32MB
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- Microcode Updates included in .BIN & .CAP Files:  
M94806EC\_000000C6.mcb  
M80A0660\_000000C6.mcb

#### **New Fixes/Features:**

- Fixed issue with setup of SATA M.2 device.
- Updated BIOS code for security fixes.
- Added "2.7 Notification of LED App".
- Added multiple features to enhance LED capabilities.
- Added "SetupNvLock" for Frost Canyon.
- Fixed issue with ESA/F7.
- Fixed issue with PXE.
- Fixed NVMe recovery issue if TBT enabled.
- Fixed BIOS recovery issue.
- Updated BIOS code for SGX function.
- Fixed Cortana can't wake from Modern Standby issue.

<b>BIOS Version 0032 - FNCML357.0032.2019.1021.1624</b>
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#### **About This Release:**

- Date: October 21, 2019
- ROM Image Checksum: 0x1DE9
- ME Firmware: 14.0.0.1061
- EC Firmware: 03.04.00
- PMC Firmware: 140.1.01.1004
- Memory Reference Code: Based on RC9.0.14.30\_011
- Integrated Graphics:
  - Option ROM: 1021
  - UEFI Driver: 9.0.1093
- SATA RAID Option ROM: 17.8.0.4352
- AHCI Code: Based on AHCI\_20
- LAN Option ROM: 0.0.24
- Visual BIOS: Intel AptioV
- Supported Flash Devices:
 

MACRONIX	MX25L25673GM2I-08G	32MB
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- Microcode Updates included in .BIN & .CAP Files:  
M94806EC\_000000C6.mcb  
M80A0660\_000000C6.mcb

#### **New Fixes/Features:**

- Initial production BIOS release

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#### **LEGAL INFORMATION**

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