



**PRODUCTS: CD1C32GK, CD1C64GK, CD1P64GK**

**BIOS Version 0056 - GKAPLCPX.86A.0056.2021.0520.1146**

**About This Release:**

- Date: May 19, 2021
- ROM Image Checksum: 0xCBC9
- TXE Firmware: 3.1.86.2538
- EC Firmware: 16.38.00
- Memory Reference Code: Based on 1.2.3
- Integrated Graphics:
  - Option ROM: 14.34 04/15/2016 08:07:50
  - UEFI Driver: 10.0.1036
- AHCI Code: Based on AHCI\_12
- LAN Option ROM: 7.6.09
- Visual Bios: Intel Text Setup
  
- Supported Flash Devices:

GigaDevice	GD25LQ128C	16MB
Macronix	MX25U12873F	16MB
Winbond	W25Q128FW	16MB
  
- Microcode Updates included in .ROM & .BIO Files:  
M03506C9\_00000044.PDB

**New Fixes/Features:**

- Updated TXE Firmware to 3.1.86.2538
- Updated CPU Microcode updated to M03506C9\_00000044.PDB

**Known Errata:**

- Due to the Intel® TXE firmware update in BIOS version 0056, you can't downgrade to version 0055 or earlier.

**BIOS Version 0055 - GKAPLCPX.86A.0055.2020.0707.1734**

**About This Release:**

- Date: July 07, 2020
- ROM Image Checksum: 0x615E
- TXE Firmware: 3.1.70.2334
- EC Firmware: 16.38.00
- Memory Reference Code: Based on 1.2.3
- Integrated Graphics:
  - Option ROM: 14.34 04/15/2016 08:07:50
  - UEFI Driver: 10.0.1036
- AHCI Code: Based on AHCI\_12
- LAN Option ROM: 7.6.09
- Visual Bios: Text Based AMI

- Supported Flash Devices:
 

GigaDevice	GD25LQ128C	16MB
Macronix	MX25U12873F	16MB
Winbond	W25Q128FW	16MB
- Microcode Updates included in .ROM & .BIO Files:
 

M03506C9_00000040.PDB
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**New Fixes/Features:**

- Fixed issue where "Arbitrary code execution in SMM due to insufficient buffer validation."
- Fixed issue where "Lock Manufacturing mode abnormal behavior."

<b>BIOS Version 0054 - GKAPLCPX.86A.0054.2020.0408.1434</b>
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**About This Release:**

- Date: April 08, 2020
- ROM Image Checksum: 0x79B9
- TXE Firmware: 3.1.70.2334
- EC Firmware: 16.38.00
- Memory Reference Code: Based on 1.2.3
- Integrated Graphics:
  - Option ROM: 14.34 04/15/2016 08:07:50
  - UEFI Driver: 10.0.1036
- AHCI Code: Based on AHCI\_12
- LAN Option ROM: 7.6.09
- Visual Bios: Text Based AMI
- Supported Flash Devices:
 

GigaDevice	GD25LQ128C	16MB
Macronix	MX25U12873F	16MB
Winbond	W25Q128FW	16MB
- Microcode Updates included in .ROM & .BIO Files:
 

M03506C9_00000038.PDB
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**New Fixes/Features:**

- ME FW updated to 3.1.70.2334.
- Updated BIOS code for security fixes.
- Fixed issue where "Chassisvalue type changed flash by BIO".
- Fixed issue that sets default string value of "Family Name" to "GK".
- Fixed issue that changed resolution when PXE boot.

**Known Errata:**

- Due to the Intel® TXE firmware update in BIOS version 0054, you can't downgrade to version 0053 or earlier.

<b>BIOS Version 0053 - GKAPLCPX.86A.0053.2019.0814.1148</b>
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**About This Release:**

- Date: August 14, 2019
- ROM Image Checksum: 0xB2F5
- TXE Firmware: 3.1.65.2288
- EC Firmware: 16.38.00

- Memory Reference Code: Based on 1.2.3
- Integrated Graphics
  - Option ROM: 14.34 04/15/2016 08:07:50
  - UEFI Driver: 10.0.1036
- AHCI Code: Based on AHCI\_12
- LAN Option ROM: 7.6.09
- Supported Flash Devices:
 

GigaDevice	GD25LQ128C	16MB
Macronix	MX25U12873F	16MB
Winbond	W25Q128FW	16MB
- Microcode Updates included in .ROM File:
 

M03506C9_00000038.PDB
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- Additional Microcode Updates included only in .BIO File:
 

M03506C9_00000038.PDB
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**New Fixes/Features:**

- Added Realtek PXE option ROM.
- Updated BIOS code for BIOS recovery with USB flash drive.

<b>BIOS Version 0052 - GKAPLCPX.86A.0052.2019.0718.1628</b>
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**About This Release:**

- Date: July 18, 2019
- ROM Image Checksum: 0x2553
- TXE Firmware: 3.1.65.2288
- EC Firmware: 16.38.00
- Memory Reference Code: Based on 1.2.3
- Integrated Graphics
  - Option ROM: 14.34 04/15/2016 08:07:50
  - UEFI Driver: 10.0.1036
- AHCI Code: Based on AHCI\_12
- LAN Option ROM: 7.6.09
- Supported Flash Devices:
 

GigaDevice	GD25LQ128C	16MB
Macronix	MX25U12873F	16MB
Winbond	W25Q128FW	16MB
- Microcode Updates included in .ROM File:
 

M03506C9_00000038.PDB
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- Additional Microcode Updates included only in .BIO File:
 

M03506C9_00000038.PDB
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**New Fixes/Features:**

- Modified BIOS code for security fix.
- Fixed issue where PXE device can't be set in boot priority.

<b>BIOS Version 0051 - GKAPLCPX.86A.0051.2019.0611.1331</b>
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**About This Release:**

- Date: June 11, 2019
- ROM Image Checksum: 0x4279
- TXE Firmware: 3.1.65.2288
- EC Firmware: 16.38.00
- Memory Reference Code: Based on 1.2.3

- Integrated Graphics
  - Option ROM: 14.34 04/15/2016 08:07:50
  - UEFI Driver: 10.0.1036
- AHCI Code: Based on AHCI\_12
- LAN Option ROM: 7.6.09
- Supported Flash Devices:
  - GigaDevice GD25LQ128C 16MB
  - Macronix MX25U12873F 16MB
  - Winbond W25Q128FW 16MB
- Microcode Updates included in .ROM File:
  - M03506C9\_00000038.PDB
- Additional Microcode Updates included only in .BIO File:
  - M03506C9\_00000038.PDB

**New Fixes/Features:**

- Updated TXE firmware to version 3.1.65.2288 for security advisory Intel-SA-00185.
- Updated CPU microcode for security fix.

**Known Errata:**

- Due to the Intel® TXE firmware update in BIOS version 0051, you can't downgrade to version 0050 or earlier.

**BIOS Version 0050 - GKAPLCPX.86A.0050.2019.0223.1819**

**About This Release:**

- Date: February 23, 2019
- TXE Firmware: 3.1.50.2244
- EC Firmware: 16.38.00
- Memory Reference Code: Based on 1.2.3
- Integrated Graphics
  - Option ROM: 14.34 04/15/2016 08:07:50
  - UEFI Driver: 10.0.1036
- AHCI Code: Based on AHCI\_12
- LAN Option ROM: 7.6.09

**New Fixes/Features:**

- Updated BIOS code for security fixes.

**BIOS Version 0049 - GKAPLCPX.86A.0049.2018.1001.1532**

**About This Release:**

- Date: October 01, 2018
- TXE Firmware: 3.1.50.2244
- EC Firmware: 16.38.00
- Memory Reference Code: Based on 1.2.3
- Integrated Graphics
  - Option ROM: 14.34 04/15/2016 08:07:50
  - UEFI Driver: 10.0.1036
- AHCI Code: Based on AHCI\_12
- LAN Option ROM: 7.6.09

**New Fixes/Features:**

- Added support that allows USB 3.0 boot devices to be detected in the boot menu.

**BIOS Version 0048 - GKAPLCPX.86A.0048.2018.0828.1135**

**About This Release:**

- Date: August 28, 2018
- TXE Firmware: 3.1.50.2244
- EC Firmware: 16.38.00
- Memory Reference Code: Based on 1.2.3
- Integrated Graphics:
  - Option ROM: 14.34 04/15/2016 08:07:50
  - UEFI Driver: 10.0.1036
- AHCI Code: Based on AHCI\_12
- LAN Option ROM: 7.6.09

**New Fixes/Features:**

- BIOS code improvements for Intel® Integrator Toolkit.

**BIOS Version 0047 - GKAPLCPX.86A.0047.2018.0801.1633**

**About This Release:**

- Date: August 1, 2018
- ROM Image Checksum: 0x3C06
- TXE Firmware: 3.1.55.2244
- EC Firmware: 16.38.00
- Memory Reference Code: Based on 1.2.3
- Integrated Graphics:
  - Option ROM: 14.34 04/15/2016 08:07:50
  - UEFI Driver: 10.0.1036
- AHCI Code: Based on AHCI\_12
- LAN Option ROM: 7.6.09

**New Fixes/Features:**

- Removed/disabled Intel Ready Mode Technology code/items in BIOS for Intel security fix.

**BIOS Version 0046 - GKAPLCPX.86A.0046.2018.0725.1043**

**About This Release:**

- Date: July 25, 2018
- TXE Firmware: 3.1.55.2244
- EC Firmware: 16.37.00
- Memory Reference Code: Based on 1.2.3
- Integrated Graphics:
  - Option ROM: 14.34 04/15/2016 08:07:50
  - UEFI Driver: 10.0.1036
- AHCI Code: Based on AHCI\_12
- LAN Option ROM: 7.6.09

**New Fixes/Features:**

- Updated CPU Microcode (Security Advisory-00115).
- Updated TXE firmware to version 3.1.55.2244.

- Added "Boot USB Devices First" item in BIOS setup.
- Fixed issue where system can't boot automatically after updating BIOS when Power State is set to "Always Off".
- Fixed issue where system can't wake on WLAN after it has been in the S3 power state 1.5 minutes.
- Updated EC firmware to version 1637.
- Fixed issue where Storage information is displayed wrong in BIOS Setup.

**Known Errata:**

Can't downgrade BIOS to version 0043 or earlier due to security updates.

**BIOS Version 0043 - GKAPLCPX.86A.0043.2018.0516.1624**

**About This Release:**

- Date: May 16, 2018
- TXE Firmware: 3.1.50.2222
- EC Firmware: 16.36.00
- Memory Reference Code: Based on 1.2.3
- Integrated Graphics:
  - Option ROM: 14.34 04/15/2016 08:07:50
  - UEFI Driver: 10.0.1036
- AHCI Code: Based on AHCI\_12
- LAN Option ROM: 7.6.09

**New Fixes/Features:**

- Fixed the issue where LAN would disappear after resuming from S3 when using the Compute Card Dock.
- Fixed the issue where the system would boot to the operating system without the HDD user password prompt.
- Security enhancements.

**BIOS Version 0042 - GKAPLCPX.86A.0042.2018.0305.1116**

**About This Release:**

- Date: March 05, 2018
- TXE Firmware: 3.1.50.2222
- EC Firmware: 16.36.00
- Memory Reference Code: Based on 1.2.3
- Integrated Graphics
  - Option ROM: 14.34 04/15/2016 08:07:50
  - UEFI Driver: 10.0.1036
- AHCI Code: Based on AHCI\_12
- LAN Option ROM: 7.6.09

**New Fixes/Features:**

- Fixed issue where setup only shows information for one SATA interface.
- Implemented hard disk password functionality.
- Updated the EC code.

**BIOS Version 0041 - GKAPLCPX.86A.0041.2018.0108.1330**

**About This Release:**

- Date: January 08, 2018
- TXE Firmware: 3.1.50.2222
- EC Firmware: 16.35.00
- Memory Reference Code: Based on 1.2.3
- Integrated Graphics
  - Option ROM: 14.34 04/15/2016 08:07:50
  - UEFI Driver: 10.0.1036
- AHCI Code: Based on AHCI\_12
- LAN Option ROM: 7.6.09

**New Fixes/Features:**

- Updated CPU Microcode (Security Advisory-00088)
- Fixed issue where the USB 3.0 ports would run at USB 2.0 speeds.
- Fixed issue where the HSIO port information showed incorrectly in the BIOS setup.

**BIOS Version 0039 - GKAPLCPX.86A.0039.2017.1211.1631**

**About This Release:**

- Date: December 11, 2017
- TXE Firmware: 3.1.50.2222
- EC Firmware: 16.35.00
- Integrated Graphics
  - Option ROM: 14.34 04/15/2016 08:07:50
  - UEFI Driver: 10.0.1036
- LAN Option ROM: 7.6.09

**New Fixes/Features:**

- Updated TXE firmware to version 3.1.50.2222 for Security Advisory-00086.
- Updated EC firmware to version A16.35.00.
- Fixed issue with HDMI no display in AGL OS.
- Implemented security updates.
- Added "(Y/N)" confirmation to the warning for clearing HDD password.

**Known Errata:**

Due to a security enhancement, the BIOS version cannot be downgraded to a version earlier than BIOS 0039.

**BIOS Version 0033 - GKAPLCPX.86A.0033.2017.0830.1010**

**About This Release:**

- Date: August 30, 2017
- TXE Firmware: 3.0.13.1144
- EC Firmware: 16.31.00
- Integrated Graphics:
  - Option ROM: 14.34 04/15/2016 08:07:50
  - UEFI Driver: 10.0.1036
- LAN Option ROM: 7.6.09

**New Fixes/Features:**

- Initial production BIOS release.

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