| **Product Model:** CL66 | | **BIOS Kernel:** 5.13\_VEB\_1AUAJ032 | **Date:** 2022/06/17 |
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| **System BIOS:** CN650F09  **EC BIOS:** 006 | | **Intel GOP Driver:** 13.0.1018  **TXE FW Version:** 4.0.10.1288  **Microcode:** M01706A1\_00000028.PDB  **PMC FW Version:** 6.05 | **Reference code:** v2.0.8.0 |
| **Released By:** Jack Bai | | | **Approved By:** Vito Tsai |
| **Item.** | Root cause and change description | | |
| 1 | fix When system force shutdown with HD audio disabled in BIOS setup menu issue | | |
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| **EC Firmware Release Note** | | | |
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| **Product Model:** CL66 | | **BIOS Kernel:** 5.13\_VEB\_1AUAJ032 | **Date:** 2022/04/29 |
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| **System BIOS:** CN650F08  **EC BIOS:** 006 | | **Intel GOP Driver:** 13.0.1018  **TXE FW Version:** 4.0.10.1288  **Microcode:** M01706A1\_00000028.PDB  **PMC FW Version:** 6.05 | **Reference code:** v2.0.8.0 |
| **Released By:** Jack Bai | | | **Approved By:** Vito Tsai |
| **Item.** | Root cause and change description | | |
| 1 | update EC to EC REV 006(CL66) | | |
| 2 | add feature function for saving and restoring RTC time after power reset | | |
| 3 | modify boot option names into next line for boot option name out of boundary | | |
| 4 | add warning message for creating new ssd password | | |
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| **EC Firmware Release Note** | | | |
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| **Product Model:** CL66 | | **BIOS Kernel:** 5.13\_VEB\_1AUAJ032 | **Date:** 2021/6/23 |
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| **System BIOS:** CN650F07  **EC BIOS:** 005 | | **Intel GOP Driver:** 13.0.1018  **TXE FW Version:** 4.0.10.1288  **Microcode:** M01706A1\_00000028.PDB  **PMC FW Version:** 6.05 | **Reference code:** v2.0.8.0 |
| **Released By:** Jack Bai | | | **Approved By:** Vito Tsai |
| **Item.** | Root cause and change description | | |
| 1 | Update ALC256 verb table HDACfg-0256-18540345-AIO-20210621.txt for Voice recording issue | | |
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| **EC Firmware Release Note** | | | |
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| **Product Model:** CL66 | | **BIOS Kernel:** 5.13\_VEB\_1AUAJ032 | **Date:** 2021/1/11 |
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| **System BIOS:** CN650F06  **EC BIOS:** 005 | | **Intel GOP Driver:** 13.0.1018  **TXE FW Version:** 4.0.10.1288  **Microcode:** M01706A1\_00000028.PDB  **PMC FW Version:** 6.05 | **Reference code:** v2.0.8.0 |
| **Released By:** Jack Bai | | | **Approved By:** Vito Tsai |
| **Item.** | Root cause and change description | | |
| 1 | Follow HDACfg-0235-18540345-CL66-AIO\_AddDMIC\_Hp\_JD dont mute internal speaker\_enable\_NID19\_Headset\_remove\_NID21\_20210107 to fix WebCam MIC issue | | |
| 2 | Fixed Splash Logo item in Setup Menu will be restored to enable after updated BIOS. | | |
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| **EC Firmware Release Note** | | | |
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| **Product Model:** CL66 | | **BIOS Kernel:** 5.13\_VEB\_1AUAJ032 | **Date:** 2020/12/01 |
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| **System BIOS:** CN650F05  **EC BIOS:** 005 | | **Intel GOP Driver:** 13.0.1018  **TXE FW Version:** 4.0.10.1288  **Microcode:** M01706A1\_00000028.PDB  **PMC FW Version:** 6.05 | **Reference code:** v2.0.8.0 |
| **Released By:** Jack Bai | | | **Approved By:** Vito Tsai |
| **Item.** | Root cause and change description | | |
| 1 | fix BIOS infinite booting  if hold press power buttun more than 20 seconds under the setup menu issue | | |
| 2 | fix QTC bug infinite booting after removing SSD 5 times issue | | |
| 3 | add function for BIOS recovery retry，BIOS would try to boot formaly after BIOS recovery binary retry fail  3 times | | |
| 4 | Fix USB lock issue | | |
| 5 | fix install ubuntu fail by customer’s method issue | | |
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| **EC Firmware Release Note** | | | |
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| **Product Model:** CL66 | | **BIOS Kernel:** 5.13\_VEB\_1AUAJ032 | **Date:** 2020/10/27 |
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| **System BIOS:** CN650F04  **EC BIOS:** 005 | | **Intel GOP Driver:** 13.0.1018  **TXE FW Version:** 4.0.10.1288  **Microcode:** M01706A1\_00000028.PDB  **PMC FW Version:** 6.05 | **Reference code:** v2.0.8.0 |
| **Released By:** Jack Bai | | | **Approved By:** Vito Tsai |
| **Item.** | Root cause and change description | | |
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| **EC Firmware Release Note** | | | |
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| **Product Model:** CL66 | | **BIOS Kernel:** 5.13\_VEB\_1AUAJ032 | **Date:** 2020/09/01 |
| --- | --- | --- | --- |
| **System BIOS:** CN650F03  **EC BIOS:** 005 | | **Intel GOP Driver:** 13.0.1018  **TXE FW Version:** 4.0.10.1288  **Microcode:** M01706A1\_00000028.PDB  **PMC FW Version:** 6.05 | **Reference code:** v2.0.8.0 |
| **Released By:** Jack Bai | | | **Approved By:** Vito\_Tsai |
| **Item.** | Root cause and change description | | |
| 1 | Remove password HW reset backdoor function | | |
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| **EC Firmware Release Note** | | | |
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| **Product Model:** CL66 | | **BIOS Kernel:** 5.13\_VEB\_1AUAJ032 | **Date:** 2020/08/04 |
| --- | --- | --- | --- |
| **System BIOS:** CN650F02  **EC BIOS:** 005 | | **Intel GOP Driver:** 13.0.1018  **TXE FW Version:** 4.0.10.1288  **Microcode:** M01706A1\_00000028.PDB  **PMC FW Version:** 6.05 | **Reference code:** v2.0.8.0 |
| **Released By:** Jack Bai | | | **Approved By:** Vito\_Tsai |
| **Item.** | Root cause and change description | | |
| 1 | Add password HW reset backdoor | | |
| 2 | Fix WinToGo boot device loss in boot page issue | | |
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| **EC Firmware Release Note** | | | |
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| **Product Model:** CL66 | | **BIOS Kernel:** 5.13\_VEB\_1AUAJ032 | **Date:** 2020/05/19 |
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| **System BIOS:** CN650F01  **EC BIOS:** 005 | | **Intel GOP Driver:** 13.0.1018  **TXE FW Version:** 4.0.10.1288  **Microcode:** M01706A1\_00000028.PDB  **PMC FW Version:** 6.05 | **Reference code:** v2.0.8.0 |
| **Released By:** Archie Zhou | | | **Approved By:** Vito\_Tsai |
| **Item.** | Root cause and change description | | |
| 1 | Implement Boot Priority Adjustment function flag in NVRAM | | |
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| **EC Firmware Release Note** | | | |
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| |  |  |  |  | | --- | --- | --- | --- | | Checksum: | | | | | File | Version | (ALL) Checksum | (Skip DMI & ESCD) Checksum | | CN650F01.bin | F01 | C620 | B743 | | For Factory | F01 | N/A | 10CA |   Note: | | | |

| **Product Model:** CL66 | | **BIOS Kernel:** 5.13\_VEB\_1AUAJ032 | **Date:** 2019/10/23 |
| --- | --- | --- | --- |
| **System BIOS:** CN650F00  **EC BIOS:** 005 | | **Intel GOP Driver:** 13.0.1018  **TXE FW Version:** 4.0.10.1288  **Microcode:** M01706A1\_00000028.PDB  **PMC FW Version:** 6.05 | **Reference code:** v2.0.8.0 |
| **Released By:** Archie Zhou | | | **Approved By:** Vito\_Tsai |
| **Item.** | Root cause and change description | | |
| 1 | Type1 and Type2 Product Name are changed to CN650 | | |
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| **EC Firmware Release Note** | | | |
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| |  |  |  |  | | --- | --- | --- | --- | | Checksum: | | | | | File | Version | (ALL) Checksum | (Skip DMI & ESCD) Checksum | | CN650F00.bin | F00 | F100 | 6453 | |  |  |  |  |   Note: | | | |

| | **Product Model:** CL66 | **BIOS Kernel:** 5.13\_VEB\_1AUAJ032 | **Date:** 2019/09/30 | | --- | --- | --- | | | | **BIOS Kernel:** 5.13\_VEB\_1AUAJ032 | **Date:** 2019/09/30 | | --- | --- | | **Date:** 2019/09/30 |
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| **System BIOS:** CN650B02  **EC BIOS:** 005 | | **Intel GOP Driver:** 13.0.1018  **TXE FW Version:** 4.0.10.1288  **Microcode:** M01706A1\_00000028.PDB  **PMC FW Version:** 6.05 | **Reference code:** v2.0.8.0 |
| **Released By:** Jack Bai | | | **Approved By:** Vito\_Tsai |
| **Item.** | Root cause and change description | | |
| 1 | Use ECMOS [0xF4] to adjust boot options. | | |
| 2 | Store debug information into cmos for hang 0x99 | | |
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| **EC Firmware Release Note** | | | |
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| |  |  |  |  | | --- | --- | --- | --- | | Checksum: | | | | | File | Version | (ALL) Checksum | (Skip DMI & ESCD) Checksum | | CN650B02.bin | B02 | 789C | EC30 | |  |  |  |  |   Note: | | | |

| **Product Model:** CL66 | | **BIOS Kernel:** 5.13\_VEB\_1AUAJ032 | **Date:** 2019/08/23 |
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| **System BIOS:** CN650B01  **EC BIOS:** 005 | | **Intel GOP Driver:** 13.0.1018  **TXE FW Version:** 4.0.10.1288  **Microcode:** M01706A1\_00000028.PDB  **PMC FW Version:** 6.05 | **Reference code:** v2.0.8.0 |
| **Released By:** Lu\_Zhang | | | **Approved By:** Vito\_Tsai |
| **Item.** | Root cause and change description | | |
| 1 | Customer need to support power last state | | |
| 2 | Modify EMMC speed as post time HS200 and windows with HS400 | | |
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| **EC Firmware Release Note** | | | |
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| **Product Model:** CL66 | | **BIOS Kernel:** 5.13\_VEB\_1AUAJ032 | **Date:** 2019/10/23 |
| --- | --- | --- | --- |
| **System BIOS:** CN650F00  **EC BIOS:** 005 | | **Intel GOP Driver:** 13.0.1018  **TXE FW Version:** 4.0.10.1288  **Microcode:** M01706A1\_00000028.PDB  **PMC FW Version:** 6.05 | **Reference code:** v2.0.8.0 |
| **Released By:** Archie Zhou | | | **Approved By:** Vito\_Tsai |
| **Item.** | Root cause and change description | | |
| 1 | Type1 and Type2 Product Name are changed to CN650 | | |
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| **EC Firmware Release Note** | | | |
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| |  |  |  |  | | --- | --- | --- | --- | | Checksum: | | | | | File | Version | (ALL) Checksum | (Skip DMI & ESCD) Checksum | | CN650F00.bin | F00 | F100 | 6453 | |  |  |  |  |   Note: | | | |