

IPMI Firmware / BIOS Release Notes Form

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Product Name	X11DPX-T
Release Version	4.0
Release Date	10/05/2023
Build Date	06/20/2023
Previous Version	3.8a
Update Category	Recommended
Dependencies	None
Important Notes	None
Enhancements	<p>1.[Enhancements] Update AMI label 5.14_PurleyCrb_0ACLA058 for RC0626.P01 IPU 2023.1 (1). For INTEL-SA-00717 Security Advisory to address CVE-2022-32231 (7.5, High) / CVE-2022-26343 (8.2, High) security issues.</p> <p>2.[Enhancements] Update token RC_VERSION_VALUE setting to 626.P01.</p> <p>3.[Enhancements] Updated Cascade Lake-SP CPU PV microcode for IPU 2023.1.</p> <p>4.[Enhancements] Update AMI label 5.14_PurleyCrb_0ACLA059 for RC0627.P11 IPU 2023.2 (1). For INTEL-SA-00807 Security Advisory to address CVE-2022-38087(4.1, Medium) and CVE-2022-33894(7.5, High) security issues.</p> <p>5.[Enhancements] Update token RC_VERSION_VALUE setting to 627.P11. Update token PRICESSO_0_UCODE_VERSION setting to</p>

	<p>02006F05. Update token PRICESSO_1_UCODE_VERSION setting to 03000012. Update token PRICESSO_2_UCODE_VERSION setting to 04003501. Update token PRICESSO_3_UCODE_VERSION setting to 05003501.</p> <p>6.[Enhancements] Updated Cascade Lake-SP CPU PV microcode for IPU 2023.2.</p> <p>7.[Enhancements] Change BIOS revision to 4.0.</p> <p>8.[Enhancements] Update AMI label 5.14_PurleyCrb_0ACLA060 for RC0628.P50 IPU 2023.3 (1). For INTEL-SA-00813 Security Advisory to address CVE-2022-37343(7.2, High), CVE-2022-44611(6.9, Medium), CVE-2022-38083(6.1, Medium), CVE-2022-27879(5.3, Medium) and CVE-2022-43505(4.1, Medium) security issues. (2). For INTEL-SA-00828 Security Advisory to address CVE-2022-40982(6.5, Medium) security issue.</p> <p>9.[Enhancements] Update token RC_VERSION_VALUE setting to 628.P50. Update token PRICESSO_0_UCODE_VERSION setting to 02007006. Update token PRICESSO_2_UCODE_VERSION setting to 04003604. Update token PRICESSO_3_UCODE_VERSION setting to 05003604. Update token FW_SPS_VERSION setting to 4.1.5.2.</p> <p>10.[Enhancements] Updated Cascade Lake-SP CPU PV microcode for IPU 2023.3.</p> <p>11.[Enhancements] Updated Intel Server Platform Services for Purley Refresh Server Platforms IPU2023.3 4.1.5.2</p> <p>12.[Enhancements] Update DBX file for AMI-SA50182 SecureBoot DBX Update</p>
New features	N/A
Fixes	N/A

Release Notes from Previous Release(s)

3.8a(10/28/2022)

- 1.[Enhancements] Update AMI label 5.14_PurleyCrb_OACLA056 for RC0622.D07 2022.2 IPU. (1). For INTEL-SA-00601 Security Advisory to address CVE-2021-0154(8.2, High), CVE-2021-0153(8.2, High), CVE-2021-33123(8.2, High), CVE-2021-0190(8.2, High), CVE-2021-33122(7.9, High), CVE-2021-33060(7.8, High), CVE-2021-0189(7.5, High), CVE-2021-33124(7.5, High), CVE-2021-33103(7.5, High), CVE-2021-0159(7.4, High), CVE-2021-0188(5.3, Medium) and CVE-2021-0155(4.4, Medium) security issues. (2). For INTEL-SA-00615 Security Advisory to address CVE-2022-21123(6.1, Medium), CVE-2022-21127(5.6, Medium), CVE-2022-21125(5.5, Medium) and CVE-2022-21166(5.5, Medium) security issues. (3). For INTEL-SA-00616 Security Advisory to address CVE-2021-21131(3.3, Low) and CVE-2021-21136(2.7, Low) security issues.
- 2.[Enhancements] Updated Skylake-SP/Cascade Lake-SP CPU PC microcode for IPU 2022.2. (1). For INTEL-SA-00601 Security Advisory to address CVE-2021-0154(8.2, High), CVE-2021-0153(8.2, High), CVE-2021-33123(8.2, High), CVE-2021-0190(8.2, High), CVE-2021-33122(7.9, High), CVE-2021-33060(7.8, High), CVE-2021-0189(7.5, High), CVE-2021-33124(7.5, High), CVE-2021-33103(7.5, High), CVE-2021-0159(7.4, High), CVE-2021-0188(5.3, Medium) and CVE-2021-0155(4.4, Medium) security issues. (2). For INTEL-SA-00615 Security Advisory to address CVE-2022-21123(6.1, Medium), CVE-2022-21127(5.6, Medium), CVE-2022-21125(5.5, Medium) and CVE-2022-21166(5.5, Medium) security issues. (3). For INTEL-SA-00616 Security Advisory to address CVE-2021-21131(3.3, Low) and CVE-2021-21136(2.7, Low) security issues.
- 3.[Enhancements] Update token RC_VERSION_VALUE setting to 622.D07. Update token PRICESSO_0_UCODE_VERSION setting to 02006E05. Update token FW_SPS_VERSION setting to 4.1.4.804.
- 4.[Enhancements] Fix show wrong DIMM location in event log page.
- 5.[Enhancements] Modify String naming from SMCI to Supermicro.
- 6.[Enhancements] Remove "Vendor Keys" in security page.
- 7.[Enhancements] [SMIHandlerSecurityFix] 1.Refine SMM buffer validation in SmmSmbiosELogInitFuncs.c 2.Allocate runtime buffer to trigger ELog SMI in DxeSmmRedirFuncs.
- 8.[Enhancements] Update AEP uEFI driver to 01.00.00.3534 for IPU2022.2.
- 9.[Enhancements] Update BIOS ACM 1.7.54, SINIT ACM 1.7.55 PW for IPU2022.1 to address Intel-TA-00161: CVE-2021-0159 (7.8 High) CVE-2021-33123 (8.2 High) and CVE-2021-33124 (7.5 High)
- 10.[Enhancements] Update VROC SATA/sSATA legacy driver to VROC PreOS v6.3.5.1003 Hot Fix to fix 10TB or higher volume drive issue.
- 11.[Enhancements] Update VROC SATA/sSATA EFI driver to VROC PreOS v7.8.0.1012 to address 1. Data Loss Exposure Due to RAID 5 TRIM Support. Document #737276. 2. INTEL-TA-00692. CVE-2022-29919(7.8 High), CVE-2022-30338(6.7 Medium), CVE-2022-29508(6.3 Medium), CVE-2022-25976(5.5 Medium)
- 12.[Fixes] Enabled IScsi_SUPPORT on Purley generation.
- 13.[Enhancements] Modify the allocated buffer from EfiBootServicesData to EfiRuntimeServicesData.
- 14.[Enhancements] Disable MROM1 device since product doesn't use Intel IE function.
- 15.[Enhancements] Update DBX file to fix Secure Boot Bypass issue.
- 16.[Enhancements] Update AMI label 5.14_PurleyCrb_OACLA057 for RC0623.D09 2022.3 IPU. (1) For INTEL-TA-00610 Security Advisory to address CVE-2022-26845 (8.7 High), CVE-2022-27497(8.6 High), CVE-2022-29893 (8.1 High), CVE-2021-33159 (7.4 High), CVE-2022-29466(7.3 High), CVE-2022-29515(6.0 Medium) security issues. (2) For INTEL-TA-00688 Security Advisory to address CVE-2022-26006 (8.2 High), CVE-2022-21198(7.9 High) security issues.
- 17.[Enhancements] Update token RC_VERSION_VALUE setting to 623.D09. Update token PRICESSO_0_UCODE_VERSION setting to 02006E05. Update token FW_SPS_VERSION setting to 4.1.4.804.
- 18.[Enhancements] Update Intel DCPM UEFI driver to 1.0.0.3536.

19.[Fixes] Fix OA2 key injection issue.

3.6(01/22/2022)

- 1.[Enhancements] Change BIOS revision to 3.6.
- 2.[Enhancements] Update SATA/sSATA EFI driver to VROC PreOS v7.7.0.1054.
- 3.[Enhancements] Update AEP uEFI driver to 1.0.0.3531 for IPU2021.2.
- 4.[Enhancements] Update AMI label 5.14_PurleyCrb_OACLA054 for RC0616.D08 2021.2 IPU. For INTEL-SA-00527 Security Advisory to address CVE-2021-0103(8.2, High), CVE-2021-0114(7.9, High), CVE-2021-0115(7.9, High), CVE-2021-0116(7.9, High), CVE-2021-0117(7.9, High), CVE-2021-0118(7.9, High), CVE-2021-0099(7.8, High), CVE-2021-0156(7.5, High), CVE-2021-0111(7.2, High), CVE-2021-0107(7.2, High), CVE-2021-0125(6.7, Medium), CVE-2021-0124(6.3, Medium), CVE-2021-0119(5.8, Medium), CVE-2021-0092(4.7, Medium), CVE-2021-0091(3.2, Low) and CVE-2021-0093(2.4, Low) security issues.
- 5.[Enhancements] Updated Intel Server Platform Services for Purley Refresh Server Platforms IPU2021.2 HF1 4.1.4.654.
- 6.[Enhancements] Update BIOS ACM 1.7.51, SINIT ACM 1.7.51 PW. For INTEL-SA-00527 Security Advisory to address CVE-2021-0103(8.2, High), CVE-2021-0114(7.9, High), CVE-2021-0115(7.9, High), CVE-2021-0116(7.9, High), CVE-2021-0117(7.9, High), CVE-2021-0118(7.9, High), CVE-2021-0099(7.8, High), CVE-2021-0156(7.5, High), CVE-2021-0111(7.2, High), CVE-2021-0107(7.2, High), CVE-2021-0125(6.7, Medium), CVE-2021-0124(6.3, Medium), CVE-2021-0119(5.8, Medium), CVE-2021-0092(4.7, Medium), CVE-2021-0091(3.2, Low) and CVE-2021-0093(2.4, Low) security issues.
- 7.[Enhancements] Updated Skylake-SP/Cascade Lake-SP CPU PV microcode. Updated Skylake-SP H0/M0/U0 stepping CPU PV microcode MB750654_02006C0A. Update Cascade Lake-SP B0 stepping CPU PV microcode MBF50656_0400320A. Update Cascade Lake-SP B1 stepping CPU PV microcode MBF50657_0500320A. For INTEL-SA-00532 Security Advisory to address CVE-2021-0127(5.6, Medium) security issue. For INTEL-SA-00365 Security Advisory to address CVE-2020-8673(4.7, Medium) security issue.

3.5(5/19/21)

- 1.[Enhancements] Update RC 612.D02 for INTEL-SA-00463 Security Advisory to address CVE-2020-12357(7.5, High), CVE-2020-8670(7.5, High), CVE-2020-8700(7.5, High), CVE-2020-12359(7.1, High), CVE-2020-12358(6.7, Medium), CVE-2020-12360(5.6, Medium), CVE-2020-24486(5.5, Medium) and CVE-2020-0589(3.8, Low) security issues.
- 2.[Enhancements] Update BIOS ACM 1.7.43, SINIT ACM 1.7.4A PW for INTEL-SA-00463 Security Advisory to address CVE-2020-12357(7.5, High), CVE-2020-8670(7.5, High), CVE-2020-8700(7.5, High), CVE-2020-12359(7.1, High), CVE-2020-12358(6.7, Medium), CVE-2020-12360(5.6, Medium), CVE-2020-24486(5.5, Medium) and CVE-2020-0589(3.8, Low) security issues.
- 3.[Enhancements] Updated Skylake-SP/Cascade Lake-SP CPU PV microcode for INTEL-SA-00464 Security Advisory to address CVE-2020-24511(5.6, Medium) and CVE-2020-24512(2.8, Low) security issues.
- 4.[Enhancements] Updated Intel Server Platform Services for Purley Refresh Server Platforms 4.1.4.505.
- 5.[Enhancements] Support IPMI UEFI PXE boot to all LAN port feature.
- 6.[Enhancements] Update SATA/sSATA EFI driver to VROC PreOS v7.5.0.1152.
- 7.[Enhancements] This system cannot boot into PXE with DVD installed.
- 8.[Enhancements] Support IPv6 HTTP Boot function.
- 9.[Enhancements] Correct typo in "PCIe PLL SSC" setup item help string.
- 10.[Enhancements] Remove intel lan memory 4G limit if boot mode is not legacy.

- 11.[Enhancements] Update AEP FW to FW_1.2.0.5446, uEFI driver to 3515 for IPU2021.1.
- 12.[Enhancements] Sync IPv6 status detection rule with BMC to make sure IPv6 status is the same in BIOS and BMC web.
- 13.[Fixes] Fix "Configuration Address Source" always show "DHCP" in IPMI IPv6 page.
- 14.[Fixes] Fixed UEFI OS boot option name shows incorrectly in BIOS setup.

3.4(11/02/20)

- 1.[Enhancements] Update 5.14_PurleyCrb_OACLA052 for RC update and 2020.2 IPU PV to addresses Intel-TA-00358: CVE-2020-0587 (6.7 Medium), CVE-2020-0591 (6.7 Medium), CVE-2020-0592 (3 Low), and Intel-TA-00390: CVE-2020-0593 (4.7 Medium), CVE-2020-8738 (7.5 High), CVE-2020-8739 (4.6 Medium), CVE-2020-8740 (6.7 Medium), CVE-2020-8764 (8.7 High)
- 2.[Enhancements] Updated BIOS ACM 1.7.41, SINIT ACM 1.7.49 PW to addresses Intel-TA-00358: CVE-2020-0588 (3.8 Low) and CVE-2020-0590. (7.7 High)
- 3.[Enhancements] Updated SPS 4.1.4.423 to address Intel-TA-00391: CVE-2020-8755 (4.6 Medium) CVE-2020-8705 (7.1 High)
- 4.[Enhancements] Updated Skylake-SP/Cascade Lake-SP CPU PV microcode from 20200918_NDA Release to address Intel-TA-00381: CVE-2020-8696 (2.5 Low) and MD_Clear Errata, MOB Speedpath and IRR Restore with RS Throttle (ITR #2).
- 5.[Enhancements] Updated SATA/sSATA RAID OPRM/EFI driver to VROC PreOS v6.3.0.1005 PV.
- 6.[Enhancements] Enhanced SMC HDD Security feature.
- 7.[Enhancements] Added force next boot to UEFI Shell via IPMI support.
- 8.[Enhancements] Added function to move all LANs to the top of boot priority when IPMI force PXE.
- 9.[Enhancements] Add inband flash status event log to IPMI MEL.
- 10.[Enhancements] Correct "Station MAC Address" display order when "Configuration Address Source" set to "Static".
- 11.[Enhancements] Support AOC-SHG3-4M2P card sensor reporting in VMD mode.
- 12.[Fixes] Update AMI EIP563137 to fix some BIOS items (like boot mode item) load default failure issue with some configurations (like with Micron M.2 or HGST SATA M.2)
- 13.[Fixes] Fixed UEFI SCT test found the "UEFI Compliant - Boot from iSCSI peripheral" fail.
- 14.[Fixes] Fixed system hang during flashing BIOS if enabled Watch Dog Function.
- 15.[Fixes] Fixed 6240R and some refresh 4 serial CPU freq. can't reach the highest when enabling mwait.
- 16.[Fixes] Fixed BMC firmware revision may not correct in BIOS Setup.
- 17.[Fixes] Fixed System hang 0xB2 problem with some NVME device.
- 18.[Fixes] Fixed system will hang at POST code 0xA0 or 0xA2 when using non-support security NVME device and install Hyper-V with Windows 2019.

3.3(02/21/20)

1. [Enhancements] Patch system hang at 94 with NVIDIA new RTX 6000/8000
2. [Enhancements] To save memory ce location into PPR variable at runtime even if memory correctable error reporting is disabled.
3. [Enhancements] Adding sighting CLX28 workaround, downgrade patrol scrub UC to CE.
4. [Enhancements] Adding setup item "HDD word prompt" to enable/disable HDD word prompt window during POST.
5. [Enhancements] Updated Skylake-SP/Cascade Lake-SP CPU microcode from Intel-Restricted-2020-1-IPU limit beta.
6. [Enhancements] Add SMC HDD Security feature. FAIL 105672
7. [Enhancements] Update BIOS ACM 1.7.40, SINIT ACM 1.7.48 PW
8. [Enhancements] Change BIOS version to 3.3.
9. [Enhancements] Update AMI label 5.14_PurleyCrb_OACLA050 beta for IPU2020.1 PV.
10. [Enhancements] Updated SPS_E5_04.01.04.381 from IPU 2020.1 PV

11. [Fixes] Fixed Secure Boot Mode value mismatch.

3.2(10/18/2019)

1 [Enhancements] Update AMI label 5.14_PurleyCrb_0ACLA049_BETA for BKC WW36 IPU 2019.2 and AMI security update

SA50072.

2 [Enhancements] Update SINIT/BIOS ACM from BKC WW36 IPU 2019.2 address CVE-2019-0151 and CVE-2019-0152.

3 [Enhancements] Updated SPS_E5_04.01.04.339.0 from BKC WW36 IPU 2019.2 address PSIRT-TA-201905-011.

4 [Enhancements] Updated Cascade Lake-SP CPU microcode and Skylake-SP microcode

5 [Enhancements] Expose Setup item "ARI Support".

6 [Enhancements] Update 16Gb based Single Die Package DIMM tRFC optimization to control by setup.

7 [Enhancements] Disable ADDDC/SDDC and set PPR as hPPR by Intel's suggestion for memory error.

8 [Features] Add Enhanced PPR function, default is set to disable

9 [Fixes] Remove PXE option for "OnBoard LanX Option ROM" when "Boot mode select" is UEFI.

10 [Fixes] Fix the IPMI AUX revision show incorrectly issue. (Issue ID 101430)

3.1(5/21/2019)

1 [Enhancements] Updated Skylake-SP/Cascade Lake-SP CPU microcode.

2 [Enhancements] Updated Intel BKCWW16 2019 PV PLR1.

3 [Enhancements] Updated SPS_E5_04.01.04.296.0 from BKC WW16 2019.

4 [Enhancements] Update EIP467272 for AMI SA50069, SA50070.

5 [Enhancements] Disable SDDC Plus One or SDDC by default.

6 [Enhancements] Update SATA/sSATA RAID OPRM/EFI driver to VROC PreOS v6.1.0.1017.

7 [Enhancements] Set Leakey bucket that can decrease one Memory correctable error count in 2.15 min and threshold 512.

8 [Enhancements] Enable ADDDC by default.

9 [Fixes] Fixed system halt/reboot at POST code 0xB2/0x92 when total GPT partition number is more than 256 and RSD enabled.

10 [Fixes] Fixed sometimes IPv6 address or IPv6 Router1 IP Address cannot be change problem.

3.0c (3/27/2019)

1. Added support for Purley Refresh platform.

2. Enhanced BIOS setup menu to auto-switch the Option ROM's value and hide the unexpected value when boot mode changes.

3. Updated to SPS 4.0.04.381 or above for INTEL-SA-00213 Security Advisory.

4. Temporarily fixed error for SKX (CLX) 4114 CPU memory training with Micron (18ASF2G72PDZ-2G6E1) RDIMM.

5. Fixed failure to boot into VMware OS when set to Maximum Performance even if Monitor/MWAIT is enabled.

3.0b (3/4/2019)

1. Changed BIOS version to 3.0b.

2. Added support for Purley Refresh platform.

3. Updated CPU microcode MB750654_0200005A for Skylake-SP H0/M0/U0 CPUs.

4. Updated SATA RAID OPRM/EFI driver to RSTe PreOS v6.0.0.1024.

5. Added support for Monitor Mwait feature.

6. Added support for RFC4122 UUID format feature to set RFC4122 encoding from build time produced by IPMICFG 1.29 tool or newer.

7. Set PCIe correctable and uncorrectable (non-fatal) error report to disabled by default.
8. Disabled unused SPS ME "CUPS IIO" and "Volumetric Airflow" sensor.
9. Added support for Linux built-in utility efibootmgr.
10. Updated valid range of IPMI setup item VLAN ID to 1-4094.
11. Set NVDIMM ADR timeout to 600us.
12. Enhanced the solution for the error/warning message from dmidecode after a modification by AMIDE.
13. Updated to SPS 4.1.02.174 or above for INTEL-SA-00185 Security Advisory and RC 549.D13 or above for INTEL-SA-00192 Security Advisory.
14. Fixed malfunction of CPU PBF (Prioritized Base Frequency).
15. Fixed incorrect PBF high frequency core number when Hyper-Threading is disabled.
16. Modified UEFI network description to IPv4/IPv6 to follow Industry Standard.
17. Patched problem of system hanging at 0x94 when plugging in Nvidia Tesla T4 card.

2.1 (7/31/2018)

1. Updated CPU microcode to address 'Spectre' derivatives (CVE-2018-3639 & CVE-2018-3640) security issue.
2. Changed BIOS revision to 2.1.
3. Added new setup items "SLOT1 x8 & SLOT2 x8" and "SLOT5 x8 & SLOT6 x8" in IOU0.
4. Updated Purley RC 154.R13, SPS 4.0.04.340 and ACM 1.3.7, SINIT ACM 1.3.4.
5. Updated SATA RAID OPRM/EFI driver to RSTe PreOS v5.4.0.1039.
6. Added support for UEFI mode PXE boot of F12 hot key Net boot.
7. Added BIOS/ME downgrade check for SPS 4.0.4.340 and later versions.
8. Added one event log to record that the event log is full.
9. Corrected help message for TPH BIOS setup items.
10. Displayed PPR setup item.
11. Fixed problem of SUM GetSataInfo showing incorrect "Configuration Type" when setting "Configure sSATA as" to "AHCI" or "RAID" on sSATA controller.
12. Fixed problem of Ctrl + Alt + Del causing system to hang after flashing BIOS.
13. Fixed problem of system hanging when installing Linux OS after COM1 & COM2 IO/IRQ exchange.
14. Fixed failure of WDT function.
15. Added workaround for low GPU P2P bandwidth.
16. Changed Slot Data Bus Width for slot 2 and slot 6.

2.0c (3/13/2018)

1. Updated CPU microcode SRV_P_229 for Skylake-SP H0/M0/U0 stepping CPUs to address 'Spectre' variant 2 (CVE 2017-5715) security issue.
2. Changed BIOS revision to 2.0c.
3. Displayed setup item "ACS Control" to Enable/Disable PCIe Access Control Services Extended Capability, with Enabled as default.
4. Added support for VMD settings to be preserved after flashing, with disabled as default.
5. Changed maximum speed in SMBIOS type 4 to 4500Mhz.
6. Changed RC default setting to upgrade POST Memory correctable error to uncorrectable error and map out the channel.
7. Fixed problem of DMI being cleared when running SUM LoadDefaultBiosCfg.
8. Disabled CPU2 IIO PCIe root port ACPI hot plug function.
9. Fixed issue with IPMI force boot.
10. Fixed inability to set memory policy.

11. Fixed inability to reset the system under DOS by pressing "Ctrl-Alt-Del" on USB keyboard when "Port 60/64 Emulation" is disabled.
12. Fixed problem of SMC skipping first boot option in UEFI mode when retrying boot.
13. Fixed inability of some CPUs to display correct microcode revision under BIOS setup menu.
14. Patched a workaround for some motherboards' on board LAN having correctable error or GEN speed drop.

2.0b (1/31/2018)

1. Updated BIOS version to 2.0b and changed BIOS size to 32MB.
2. Rolled back CPU microcode to MB750654_02000035 for Skylake-EP H0/M0/U0 stepping CPUs.
3. Fixed failure of BIOS ECO ATT test case 306.
4. Fixed problem of PCIe slot 7 strings name in BIOS setup not matching motherboard's silkscreen.
5. Fixed failure to check IOBP settings.