BIOS Release Notes Form

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Product Name	X11SPH-NCT(P)F
Release Version	3.4a
Release Date	2/4/2021
Build Date	2/4/2021
Previous Version	3.4
Update Category	Critical
Dependencies	None
Important Notes	None
Enhancements	1. Changed BIOS version to 3.4a.
	2. Updated Skylake-SP/Cascade Lake-SP CPU PV microcode from
	Intel-Generic-Microcode-20210125_NDA.
	3. Updated Intel Server Platform Services for Purley Refresh Server
	Platforms HF 4 PLR 4.1.4.450.
	4. Updated SATA/sSATA EFI driver to VROC PreOS v7.5.0.1150.
New features	N/A
Fixes	1. Fixed malfunction of the temperature sensor when AOC-STGF-I2S is installed on PCIe slot5.

3.4 (11/3/2020)

- 1. Changed BIOS version to 3.4.
- 2. Updated Skylake-SP/Cascade Lake-SP CPU PV microcode from 20200918_NDA Release to address Intel-TA-00381: CVE-2020-8696 (2.5, Low) security issue, MD_Clear Errata, MOB Speedpath, and IRR Restore with RS Throttle (ITR #2).
- 3. Updated 5.14_PurleyCrb_0ACLA052 for RC update and 2020.2 IPU PV to address Intel-TA-00358: CVE-2020-0587 (6.7, Medium), CVE-2020-0591 (6.7, Medium), and CVE-2020-0592 (3, Low) security issues, 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), and CVE-2020-8764 (8.7, High) security issues.
- 4. Updated SPS 4.1.4.423 to address Intel-TA-00391: CVE-2020-8755 (4.6, Medium) and CVE-2020-8705 (7.1, High) security issues.
- 5. Updated BIOS ACM 1.7.41 and SINIT ACM 1.7.49 PW for IPU2020.2 to address Intel-TA-00358: CVE-2020-0588 (3.8, Low) and CVE-2020-0590. (7.7, High) security issues.
- 6. Updated SATA/sSATA RAID OPROM/EFI driver to VROC PreOS v6.3.0.1005 PV.
- 7. Updated AEP firmware to FW_1.2.0.5444 to match IPU2020.2.
- 8. Added force next boot to UEFI Shell via IPMI support.
- 9. Added function to move all LANs to the top of boot priority when IPMI forces PXE.
- 10. Added inband flash status event log to IPMI MEL.
- 11. Fixed inability of 6240R and some refresh 4 serial CPU frequencies to reach maximum when enabling Mwait.
- 12. Fixed failure of Secure Erase Password and problem of BIOS returning "EFI_Device_Error" with SED: Seagate ST1000NX0353.
- 13. Corrected BMC firmware revision in BIOS Setup.
- 14. Fixed problem of system hanging at 0xB2 with some NVMe devices.
- 15. Fixed inconsistency of X-AMI ID of Setup Item "Refresh Watermarks".

3.3 (2/21/2020)

- 1. Changed BIOS version to 3.3.
- 2. Updated Skylake-SP/Cascade Lake-SP CPU microcode for Intel-SA-00329 (CVE2020-0548 2.8 Low and CVE2020-0549 6.5 Medium), Intel-SA-00288 (CVE2019-11157 5.3 Medium), and Intel-SA-00317 (CVE2019-14607 7.9 High).
- 3. Updated AMI label 5.14_PurleyCrb_0ACLA050 beta for IPU2020.1 PV.
- 4. Updated SPS E5 04.01.04.381 from IPU 2020.1 PV.
- 5. Updated BIOS ACM 1.7.40 and SINIT ACM 1.7.48 PW.
- 6. Patched problem of system hanging at 94 with new NVidia RTX 6000/8000.
- 7. Enabled saving memory CE location into PPR variable at runtime even if memory correctable error reporting is disabled.
- 8. Added setup item "HDD password prompt Control" to control "Hard-Drive Password Check" for enabling/disabling HDD password prompt window during POST.
- 9. Added SMC HDD Security feature.
- 10. Added support for SMCI USB Remote Network Driver Interface and SMCI USB Universal Network Device Interface, and for Redfish module to get Processor, Memory, and PCIe information.
- 11. Fixed issue of system resetting under ATTO Fiber network card user menu during BIOS POST.
- 12. Fixed mismatch of Secure Boot Mode value.
- 13. Removed requirement to use Admin password for erasing TCG device.
- 14. Fixed problem of two CentOS boot items occurring in boot order if CentOS is installed in RAID 1 system.

3.2 (12/2/2019)

- 1. Changed BIOS version to 3.2.
- 2. Updated AMI label 5.14_PurleyCrb_OACLA049_BETA for BKC WW36 IPU 2019.2 and AMI security update SA50072.
- 3. Updated SINIT/BIOS ACM from BKC WW36 IPU 2019.2 to address CVE-2019-0151 and CVE-2019-0152.
- 4. Updated SPS E5 04.01.04.339.0 from BKC WW36 IPU 2019.2 to address PSIRT-TA-201905-011.
- 5. Updated Cascade Lake-SP CPU microcode and Skylake-SP microcode.
- 6. Updated Cascade Lake-SP A0 stepping CPU microcode.
- 7. Updated SATA/sSATA RAID OPROM/EFI driver to VROC PreOS v6.2.0.1034 PC.
- 8. Displayed Setup item "ARI Support".
- 9. Added setup item to control 16Gb based Single Die Package DIMM tRFC optimization.
- 10. Updated Secure Boot Key to fix the error message of PK key.
- 11. Added back erase NVDIMM routine.
- 12. Updated VBIOS and VGA EFI Driver to 1.10.
- 13. Enhanced F12 hot key PXE boot feature.
- 14. Updated the behavior for the feature that updates SMBIOS Type 1 and 3 with FRUO.
- 15. Added a mechanism to show warning message and shut down system if a CPU TDP over specifications is installed.
- 16. Added Redfish/SUM Secure Boot feature to update OOB for secure boot and reserve Key.
- 17. Disabled ADDDC/SDDC and set PPR as hPPR.
- 18. Added sighting CLX28 workaround and downgraded patrol scrub UC to CE.
- 19. Added Enhanced PPR function and set disabled as default.
- 20. Removed PXE option for "OnBoard LanX Option ROM" when "Boot mode select" is UEFI.
- 21. Corrected display of the IPMI AUX revision.
- 22. Changed OOB download and Upload Bios Configuration sequence.
- 23. Fixed problem of two OS (Redhat & Ubuntu) boot devices appearing in boot order.
- 24. Fixed failure of OPROM control item if CSM is disabled.
- 25. Fixed problem of key details showing "Security Violation" after loading Factory secure boot keys.

3.1 (5/21/2019)

- 1. Changed BIOS version to 3.1.
- 2. Updated Skylake-SP/Cascade Lake-SP CPU microcode.
- 3. Updated Intel BKCWW16 2019 PV PLR1.
- 4. Updated SPS_E5_04.01.04.296.0 from BKC WW16 2019.
- 5. Updated SATA/sSATA RAID OPROM/EFI driver to VROC PreOS v6.1.0.1017.
- 6. Update EIP467272 for AMI SA50069, SA50070.
- 7. Set SDDC Plus One or SDDC to disabled by default.
- 8. Set Leaky Bucket that can decrease one memory correctable error count within 2.15 minutes with threshold 512.
- 9. Enhanced BIOS setup menu to auto-switch the Option ROM's value and hide the unexpected value when boot mode changes.
- 10. Updated to SPS 4.0.04.381 or above for INTEL-SA-00213 Security Advisory.
- 11. Set ADDDC Sparing to enable by default.
- 12. Fixed inability to change IPv6 address or IPv6 Router1 IP address.
- 13. Temporarily fixed error for SKX (CLX) 4114 CPU memory training with Micron (18ASF2G72PDZ-2G6E1) RDIMM.

14. Fixed failure to boot into VMare OS when set to Maximum Performance, even if Monitor/MWAIT is enabled.

3.0b (3/04/2019)

- 1. Changed BIOS version to 3.0b.
- 2. Added support for Purley Refresh platform.
- 3. 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.
- 4. Updated CPU microcode MB750654 0200005A for Skylake-SP H0/M0/U0 stepping CPUs.
- 5. Updated SATA RAID OPROM/EFI driver to RSTe PreOS v6.0.0.1024.
- 6. Added support for Monitor Mwait feature.
- 7. Fixed inability of VMD status to load default if loading default by AFU.
- 8. Added support for SMC HttpBoot.
- 9. Added support for RFC4122 UUID format feature to set RFC4122 encoding from build time produced by IPMICFG 1.29 tool or newer.
- 10. Set PCIe correctable and uncorrectable (non-fatal) error report to disabled by default.
- 11. Disabled unused SPS ME "CUPS IIO" and "Volumetric Airflow" sensor.
- 12. Set NVDIMM ADR timeout to 600us.
- 13. Enhanced the solution for the error/warning message from dmidecode after a modification by AMIDE.
- 14. Prevented inability to update BIOS when CMOS 51 value is 0x0a or 0x1a.
- 15. Fixed problem of BIOS always retrying boot when Re-Try Boot is Disabled.
- 16. Fixed malfunction of support for LEGACY to EFI.
- 17. Fixed failure of Always Turbo in Linux kernel 7.x.
- 18. Fixed malfunction of CPU PBF (Prioritized Base Frequency).
- 19. Fixed incorrect PBF high frequency core number when Hyper-Threading is disabled.
- 20. Modified UEFI network description to IPv4/IPv6 to follow Industry Standard.

2.1 (8/29/2018)

- 1. Updated CPU microcode to address 'Spectre' derivatives (CVE-2018-3639 & CVE-2018-3640) security issue.
- 2. Changed BIOS version to 2.1.
- 3. Updated 5.12_PurleyCrb_0ACFD088 for Purley Skylake platform PLR7, BKC 2018 WW20.
- 4. Updated BIOS ACM 1.3.7 and SINIT ACM 1.3.4.
- 5. Added one event log to record that the event log is full.
- 6. Added support for VMD settings to be preserved after flashing.
- 7. Updated SATA RAID OPROM/EFI driver to RSTe PreOS v5.4.0.1039.
- 8. Corrected BIOS/ME downgrade check for SPS 4.0.4.340.
- 9. Added support for UEFI mode PXE boot of F12 hot key Net boot.
- 10. Added setup item "SmcBusMasterEn" for enabling Parent bridge of the devices in the qSmcPciForceEnableBusMasterList.
- 11. Added support for SATA FLR with enabled as default.
- 12. Fixed problem of DMI being cleared when running SUM UpdateBios.
- 13. Fixed problem of Ctrl + Alt + Del causing system to hang after flashing BIOS.
- 14. Rolled back SVN_3413 to fix failure of WDT function.
- 15. Fixed problem of BIOS reporting incorrect SMBIOS Type 40 when device is installed on Slot 5 and no device is installed on Slot 6.

16. Fixed issue with IPMI firmware capability.

2.0b (2/26/2018)

- 1. Updated CPU microcode to address 'Spectre' variant 2 (CVE 2017-5715) security issue.
- 2. Changed BIOS revision to 2.0b.
- 3. Displayed setup item "ACS Control" to Enable/Disable PCIe Access Control Services Extended Capability, with Enabled as default.
- 4. Updated 5.12 PurleyCrb 0ACFD085Beta for Purley Skylake platform PLR 4, BKC WW02.
- 5. Added setup item "SmcBusMasterEn" for enabling Parent bridge of the devices in the gSmcPciForceEnableBusMasterList.
- 6. Fixed failure of BIOS ECO ATT test case 306.
- 7. Fixed inability to reset the system under DOS by pressing "Ctrl-Alt-Del" on USB keyboard when "Port 60/64 Emulation" is disabled.
- 8. Fixed problem of SMC skipping first boot option in UEFI mode when retrying boot.
- 9. Disabled CPU2 IIO PCIe root port ACPI hot plug function.
- 10. Fixed issue with IPMI force boot.
- 11. Fixed inability of some CPUs to display correct microcode revision under BIOS setup menu.