BIOS Release Notes Form

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Product Name	X11SPL-F
Release Version	3.6 SPS: 4.1.04.654
Release Date	1/3/2022
Build Date	1/3/2022
Previous Version	3.5
Update Category	Recommended
Dependencies	None
Important Notes	None
Enhancements	1. Changed BIOS revision to 3.6.
	2. Updated SATA/sSATA EFI driver to VROC PreOS v7.7.0.1054.
	3. Updated AEP uEFI driver to 1.0.0.3531 for IPU2021.2.
	4. Updated AMI label 5.14_PurleyCrb_0ACLA054 for RC0616.D08
	2021.2 IPU for INTEL-SA-00527 Security Advisory to address CVE-021-
	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-
	119 (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. Updated Intel Server Platform Services for Purley Refresh Server
	Platforms IPU2021.2 HF1 4.1.4.654.

	6. Updated 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. Updated Skylake-SP/Cascade Lake-SP CPU PV microcode for INTEL-
	SA-00532 Security Advisory to address CVE-2021-0127 (5.6, Medium)
	security issue and for INTEL-SA-00365 Security Advisory to address
	CVE-2020-8673 (4.7, Medium) security issue.
New features	N/A
Fixes	N/A

3.5 (5/19/2021)

- 1. Updated 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. Updated BIOS ACM 1.7.43 and 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. 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. Updated Intel Server Platform Services for Purley Refresh Server Platforms 4.1.4.505.
- 5. Added support for IPMI UEFI PXE boot to all LAN ports feature.
- 6. Updated SATA/sSATA EFI driver to VROC PreOS v7.5.0.1152.
- 7. Enabled system to boot into PXE with DVD installed.
- 8. Added support for IPv6 HTTP Boot function.
- 9. Corrected typo in "PCIe PLL SSC" setup item help string.
- 10. Removed 4G limit of Intel LAN memory if boot mode is not legacy.
- 11. Updated AEP firmware to FW_1.2.0.5446 and UEFI driver to 3515 for IPU2021.1.
- 12. Synced IPv6 status detection rule with BMC to make sure IPv6 status is the same in BIOS and BMC web.
- 13. Fixed problem of "Configuration Address Source" always showing "DHCP" on IPMI IPv6 page.
- 14. Corrected display of UEFI OS boot option name in BIOS setup.

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), 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), 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.

3.3 (02/21/2020)

- 1. Updated AMI label 5.14_PurleyCrb_OACLA050 beta for IPU2020.1 PV.
- 2. Updated SPS_E5_04.01.04.381 from IPU 2020.1 PV.
- 3. Updated BIOS ACM to 1.7.40 and SINIT ACM to 1.7.48 PW.
- 4. Fixed system hanging with NVIDIA RTX 6000/8000 when SR-IOV is disabled.
- 5. Enabled the memory error correction address to be saved into the PPR variable even if memory correctable error reporting is disabled.
- 6. Changed patrol scrub from uncorrectable to correctable error as a CLX28 workaround.
- 7. Added BIOS item "HDD word prompt" to enable/disable HDD word prompt window during POST.
- 8. Updated Skylake-SP/Cascade Lake-SP CPU microcode for Intel-SA-00329 (CVE2020-0548 2.8 Low, CVE2020-0549 6.5 Medium), Intel-SA-00288 (CVE2019-11157 5.3 Medium), and Intel-SA-00317 (CVE2019-14607 7.9 High).
- 9. Added BIOS support for HDD password erase and reset.
- 10. Added Redfish functions support.
- 11. Fixed system automatically rebooting during BIOS POST when ATTO Fiber network card is installed.
- 12. Fixed the Secure Boot Mode's selected and default option to show "Audit" when the system is in Audit Mode.
- 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. Updated AMI label 5.14_PurleyCrb_OACLA049_BETA for BKC WW36 IPU 2019.2 and AMI security update SA50072.
- 2.Updated SINIT/BIOS ACM from BKC WW36 IPU 2019.2 to address CVE-2019-0151 and CVE-2019-0152.
- 3. Updated SPS E5 04.01.04.339.0 from BKC WW36 IPU 2019.2 to address PSIRT-TA-201905-011.
- 4. Updated Cascade Lake-SP CPU microcode and Skylake-SP microcode.
- 5. Displayed Setup item "ARI Support".
- 6. Added setup item to control 16Gb based Single Die Package DIMM tRFC optimization.
- 7. Updated Secure Boot Key to fix the error message of PK key.
- 8. Added back erase NVDIMM routine.
- 9. Updated VBIOS and VGA EFI Driver to 1.10.
- 10. Enhanced F12 hot key PXE boot feature.
- 11. Updated the behavior for the feature that updates SMBIOS Type 1 and 3 with FRUO.
- 12. Added sighting CLX28 workaround and downgraded patrol scrub UC to CE.
- 13. Added Enhanced PPR function and set disabled as default.
- 14. Removed PXE option for "OnBoard LanX Option ROM" when "Boot mode select" is UEFI.
- 15. Corrected display of the IPMI AUX revision.
- 16. Changed OOB download and Upload Bios Configuration sequence.
- 17. Fixed problem of two OS (Redhat & Ubuntu) boot devices appearing in boot order.
- 18. Fixed failure of OPROM control item if CSM is disabled.
- 19. Fixed problem of Call Trace occurring during Cent6.10 installation while Mwait is set to Disabled and ENERGY_PERF_BISA_CFG mode is set to Maximum Performance in BIOS menu.

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. Update EIP467272 for AMI SA50069, SA50070.
- 6. Set SDDC Plus One or SDDC to disabled by default.
- 7. Updated SATA/sSATA RAID OPROM/EFI driver to VROC PreOS v6.1.0.1017.
- 8. Set ADDDC Sparing to enable by default.
- 9. Set Leaky Bucket to decrease one memory correctable error count within 2.15 minutes and threshold 512.
- 10. Fixed problem of system halting or rebooting at POST code 0xB2 or 0x92 when total GPT partition number is more than 256 and RSD is enabled.
- 11. Fixed inability to change IPv6 address or IPv6 Router1 IP address.

3.0b (3/4/2018)

- 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 OPROM/EFI driver to RSTe PreOS v6.0.0.1024.
- 5. Added support for Monitor Mwait feature.
- 6. Fixed inability of VMD status to load default if loading default by AFU.
- 7. Added support for SMC HttpBoot.
- 8. Set RFC4122 encoding to only be enabled for build time produced by IPMI 1.29 or newer.
- 9. Set PCIe correctable and uncorrectable (non-fatal) error report to disabled by default.
- 10. Disabled unused SPS ME "CUPS IIO" and "Volumetric Airflow" sensor.
- 11. Set NVDIMM ADR timeout to 600us.
- 12. Enhanced the solution for the error/warning message from dmidecode after a modification by AMIDE.
- 13. Added support for Linux built-in utility efibootmgr.
- 14. 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.
- 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 new 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 tofollow Industry Standard.

2.1 (6/14/2018)

- 1. Updated CPU microcode to address 'Spectre' derivatives (CVE-2018-3639 & CVE-2018-3640) security issue.
- 2. Changed BIOS revision to 2.1.
- 3. 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. Added 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 gSmcPciForceEnableBusMasterList.
- 11. Corrected BIOS/ME downgrade check for SPS 4.0.4.340.
- 12. Added support for SATA FLR with enabled as default.
- 13. Fixed problem of DMI being cleared when running SUM UpdateBios.
- 14. Fixed problem of Ctrl + Alt + Del causing system to hang after flashing BIOS.
- 15. Fixed missing SMBIOS Type40 information if LAN 2 is on board.

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. Updated 5.12 PurleyCrb 0ACFD085Beta for Purley Skylake platform PLR 4, BKC WW02.
- 4. Fixed inability to reset the system under DOS by pressing "Ctrl-Alt-Del" on USB keyboard when "Port 60/64 Emulation" is disabled.
- 5. Fixed problem of SMC skipping first boot option in UEFI mode when retrying boot.
- 6. Displayed setup item "ACS Control" to Enable/Disable PCIe Access Control Services Extended Capability, with Enabled as default.
- 7. Disabled CPU2 IIO PCIe root port ACPI hot plug function.
- 8. Fixed issue with IPMI force boot.
- 9. Fixed malfunction of "SMBIOS Preservation" Disabled.
- 10. Fixed inability of some CPUs to display correct microcode revision under BIOS setup menu.

2.0a (12/5/2017)

- 1. Changed BIOS revision to 2.0a.
- 2. Updated 5.12 PurleyCrb OACFD084 BETA for Purley Skylake platform PLR 3.1.
- 3. Updated CPU microcode SRV_P_217 for Skylake-EP H0/M0/U0 stepping CPUs.
- 4. Updated SPS XML setting for SPS 4.0.4.294.
- 5. Displayed "PCIe PLL SSC" setup item for clock spectrum function.
- 6. Enabled display of EarlyVideo message by onboard video when VGA Priority is set to Offboard.
- 7. Removed the "System Firmware Error (POST ERROR)" error log from BMC and "EFI 01030006" in BIOS event log.
- 8. Updated BMC LAN configuration for saving settings of BIOS setup menu.
- 9. Updated help string for tCCD relax setup option.
- 10. Corrected help string of setup item "Enforce POR".
- 11. Updated new MRC error log definition.
- 12. Allowed runtime memory UCE mapout message to be displayed one time during BIOS POST.
- 13. Masked off PCIe correctable and non-fatal errors.
- 14. Moved Run Sure item to Memory RAS Configuration setup page.
- 15. Updated SATA RAID OPROM/EFI driver to RSTe PreOS v5.3.0.1052.
- 16. Added support for AOC-SLG3-2M2 card.
- 17. Hid memory frequency 2200 and 2600.
- 18. Removed support for Ctrl+home triggering recovery.
- 19. Set display of setup option for always turbo mode function as default.
- 20. Added the "PEI--IPMI Initialization" Post-Help message.
- 21. Added Run Sure setup item.

- 22. Set message "BIOS cannot support downgrade to previous version or ROMID mismatch" to show when trying to downgrade BIOS or flash other model of BIOS.
- 23. Fixed failure of Password Preservation Test due to password not being preserved.
- 24. Fixed problem of "Correctable, Non-Fatal and Fatal" error reporting flags being disabled on "Infiniband controller: Mellanox Technologies MT27700 Family [ConnectX-4]" when "PCI PERR/SERR Support" is enabled.
- 25. Fixed failure of setup item "Install Windows 7 USB support".
- 26. Fixed problem of the string of "Error DIMM information" on screen being corrupted when equipping failed DIMM.
- 27. Fixed problem of system sometimes hanging at post code B2 when running Cburn ONOFF.
- 28. Fixed inability to enter setup menu when pressing "DEL" key if there is no boot device.
- 29. Fixed problem of SUM GetDmiInfo command error "Invalid DMI information from BIOS" occurring.
- 30. Fixed failure of SMBIOS Type 20 to fill Interleave Position and Interleaved Data Depth correctly.
- 31. Corrected Hynix DIMM info as "SK Hynix".
- 32. Fixed SUM Test Case #216.
- 33. Fixed problem of IPMI SEL logging "Memory training failure." and "No memory DIMM detected, install memory DIMMs." twice per reboot.
- 34. Fixed problem of TPM 1.2 PS index not being Write-Protected so that the content of TPM 1.2 PS index still can be modified after TPM 1.2 is nvLocked.
- 35. Corrected the "Save Changes" setup option string in "Save & Exit" menu.
- 36. Fixed problem of system generating abnormal strings under DOS after triggering SERR or PERR error event in PCH slot.
- 37. Fixed problem of system hanging when using AFUWIN/AFULNX to flash BIOS under OS.
- 38. Fixed problem of DMI clearing when running SUM LoadDefaultBiosCfg.