

BIOS Release Notes Form

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Product Name	X11SPW-(C)TF
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/sATA 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.

	<p>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.</p> <p>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.</p>
New features	N/A
Fixes	N/A

3.5 (5/18/2021)

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. Updated AEP firmware to FW_1.2.0.5446 and UEFI driver to 3515 for IPU2021.1.
6. Synced IPv6 status detection rule with BMC to make sure IPv6 status is the same in BIOS and BMC web.

3.4a (3/9/2021)

1. Added support for IPMI UEFI PXE boot to all LAN port feature.
2. Updated SATA/ssATA EFI driver to VROC PreOS v7.5.0.1152.
3. Fixed inability of the system to boot into PXE with DVD installed.
4. Updated Skylake-SP/Cascade Lake-SP CPU PV microcode from Intel-Generic-Microcode-20210125_NDA.
5. Updated Intel Server Platform Services for Purley Refresh Server Platforms HF 4 PLR 4.1.4.450.
6. Added support for IPv6 HTTP Boot function.
7. Corrected typo in "PCIe PLL SSC" setup item help string.
8. Removed 4G limit of Intel LAN memory if boot mode is not legacy.
9. Fixed SERR/PERR problems from ASC-29320LPE on PCH slot.
10. Fixed "Configuration Address Source" always show "DHCP" in IPMI IPv6 page.
11. Fixed failure to use SUM to change DCPMM setup item settings.
12. Fixed inability of BIOS to detect riser card when installing AOC-S100G-b2C after rebooting system.
13. Corrected display of UEFI OS boot option name in BIOS setup.

3.4 (10/30/2020)

1. Updated 5.14_PurleyCrb_OACLA052 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.
2. 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.
3. 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.
4. 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).
5. Updated SATA/ssATA RAID OPROM/EFI driver to VROC PreOS v6.3.0.1005 PV.
6. Enhanced SMCI HDD Security feature.
7. Added force next boot to UEFI Shell via IPMI support.

8. Added function to move all LANs to the top of boot priority when IPMI forces PXE.
9. Added inband flash status event log to IPMI MEL.
10. Corrected "Station MAC Address" display order when "Configuration Address Source" is set to "Static".
11. Updated AMI EIP563137 to fix failure of some BIOS items (like boot mode item) to load default with some configurations (like with Micron M.2 or HGST SATA M.2).
12. Fixed failure of "UEFI Compliant - Boot from iSCSI peripheral" on UEFI SCT test.
13. Fixed problem of system hanging during BIOS flash if Watch Dog function is enabled.
14. Fixed inability of 6240R and some refresh 4 serial CPU frequencies to reach maximum when enabling Mwait.
15. Corrected BMC firmware revision in BIOS Setup.
16. Fixed problem of system hanging at 0xB2 with some NVMe devices.
17. Fixed problem of system hanging at POST code 0xA0 or 0xA2 when using unsupported security NVMe device and installing Hyper-V with Windows 2019.

3.3 (2/21/2020)

1. Updated AMI label 5.14_PurleyCrb_0ACLA050 beta for IPU2020.1 PV.
2. Updated SPS_E5_04.01.04.381 from IPU 2020.1 PV.
3. Updated BIOS ACM 1.7.40 and SINIT ACM 1.7.48 PW.
4. Patched problem of system hanging at 94 with new NVidia RTX 6000/8000.
5. Enabled saving memory CE location into PPR variable at runtime even if memory correctable error reporting is disabled.
6. Added sighting CLX28 workaround and downgraded patrol scrub UC to CE.
7. Added setup item "HDD password prompt Control" to control "Hard-Drive Password Check" for enabling/disabling HDD password prompt window during POST.
8. 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).
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. Fixed problem of system sometimes hanging in PCIe device's OPROM at POST code B2.
14. Removed requirement to use Admin password for erasing TCG device.
15. Fixed problem of two CentOS boot items occurring in boot order if CentOS is installed in RAID 1 system.

3.2 (10/17/2019)

1. Updated Skylake-SP/Cascade Lake-SP CPU microcode for INTEL-SA-00271 Security Advisory to address CVE-2019-11139 security issue, and for INTEL-SA-00270 Security Advisory to address CVE-2019-11135 security issue.
2. Updated SPS_E5_04.01.04.339.0 from BKC WW36 IPU 2019.2 to address PSIRT-TA-201905-011 for INTEL-SA-00241 Security Advisory to address CVE-2019-11090, CVE-2019-11088, CVE-2019-0165, CVE-2019-0166, CVE-2019-0168, CVE-2019-0169, CVE-2019-11086, CVE-2019-11087, CVE-2019-11101, CVE-2019-11100, CVE-2019-11102, CVE-2019-11103, CVE-2019-11104, CVE-2019-11105, CVE-2019-11106, CVE-2019-11107, CVE-2019-11108, CVE-2019-11110, CVE-2019-11097, CVE-2019-0131, CVE-2019-11109, CVE-2019-11131, CVE-2019-11132, and CVE-2019-11147 security issues.

3. Updated AMI label 5.14_PurleyCrb_0ACLA049_BETA for BKC WW36 IPU 2019.2 and AMI security update SA50072 for INTEL-SA-00280 Security Advisory to address CVE-2019-11136 and CVE-2019-11137 security issues.
4. Updated BIOS ACM 1.7.3 and SINIT ACM 1.7.45 PW from BKC WW36 IPU 2019.2 for INTEL-SA-00240 Security Advisory to address CVE-2019-0151 and CVE-2019-0152.
5. Updated SATA/sSATA RAID OPRM/EFI driver to VROC PreOS v6.2.0.1034.
6. Added support for firmware version information.
7. Disabled ADDDC/SDDC and set PPR as hPPR.
8. Removed PXE option for "OnBoard LanX Option ROM" when "Boot mode select" is UEFI.
9. Fixed ability to see memory correctable error event during MRC when use a single bit bad DIMM.

3.0b (5/22/2019)

1. Updated Skylake-SP/Cascade Lake-SP CPU microcode.
2. Updated Intel BKCWW16 2019 PV PLR1.
3. Updated SPS_E5_04.01.04.296.0 from BKC WW16 2019.
4. Updated EIP467272 for AMI SA50069, SA50070.
5. Set SDDC Plus One or SDDC to disabled by default.
6. Updated SATA/sSATA RAID OPRM/EFI driver to VROC PreOS v6.1.0.1017.
7. Set Leaky Bucket that can decrease one memory correctable error count within 2.15 minutes with threshold 512.
8. 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.
9. Fixed problem of "[1;31;40m" showing on POST screen when EFI driver is "Unhealthy".
10. Fixed inability to change IPv6 address or IPv6 Router1 IP address.
11. Fixed malfunction of workaround for GPU P2P low bandwidth.

3.0b (3/4/2019)

1. Added support for Purley Refresh platform.
2. Updated CPU microcodes from SRV_P_270.
3. Updated SINIT ACM 1.7.2 PW from BKC WW06 2019.
4. Updated SPS_E5_04.01.04.256.0 from Intel BKCWW08.
5. Updated SATA RAID OPRM/EFI driver to RSTe PreOS v6.0.0.1024.
6. Set PCIe correctable and uncorrectable (non-fatal) error report to disabled by default.
7. Added support for RFC4122 UUID format feature to set RFC4122 encoding from build time produced by IPMICFG 1.29 tool or newer.
8. Disabled unused SPS ME "CUPS IIO" and "Volumetric Airflow" sensor.
9. Added support for Linux built-in utility efibootmgr.
10. Updated IPv6 router-related setup item string.
11. Reduced redundant reboot for offboard VGA switching.
12. Set NVDIMM ADR timeout to 600us.
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 problem of setup item "Quiet Boot" staying enabled after flashing BIOS with "Quiet Boot" disabled.
15. Modified UEFI network description to IPv4/IPv6 to follow Industry Standard.
16. Patched problem of system hanging at 0x94 when plugging in Nvidia Tesla T4 card.
17. Fixed inability of "Network Stack"-related items to get/change via SUM OOB method.

2.1a (9/17/2018)

1. Added support for SATA FLR.
2. Added a patch to prevent reboot hang when installing AVAL APX-3224 card.
3. Added support for IPV6 address multiline feature on IPMI page.
4. Added support for Monitor Mwait feature.
5. Updated SPS 4.0.4.381 for INTEL-SA-00131 Security Advisory to address CVE-2018-3643 and CVE-2018-3644 security issues.
6. Updated CPU microcode SRV_P_253 for Skylake-SP H0/M0/U0 stepping CPUs.
7. Fixed problem of system resetting while flashing BIOS under OS if Watch Dog function is enabled.
8. Fixed malfunction of BIOS/ME downgrade check when running flash package (SWJPME2) a second time.
9. Fixed problem of BIOS always retrying boot when Re-Try Boot is Disabled.
10. Fixed malfunction of support for LEGACY to EFI.
11. Fixed issue with IPMI firmware capability.
12. Patched missing PSU information if common header is empty.
13. Fixed failure of turbo in new Linux kernel.

2.1 (6/14/2018)

1. Updated CPU microcode to address 'Spectre' derivatives (CVE-2018-3639 & CVE-2018-3640) security issue.
2. Updated Purley RC 154.R13, SPS 4.0.04.340 and ACM 1.3.7, SINIT ACM 1.3.4.
3. Updated SATA RAID OPROM/EFI driver to RSTe PreOS v5.4.0.1039.
4. Added support for UEFI mode PXE boot of F12 hot key Net boot.
5. Added BIOS/ME downgrade check for SPS 4.0.4.340.
6. Added one event log to record that the event log is full.
7. Displayed PPR setup item.
8. Fixed problem of SUM GetSataInfo showing incorrect "Configuration Type" when setting "Configure sSATA as" to "AHCI" or "RAID" on sSATA controller.
9. Fixed problem of Ctrl + Alt + Del causing system to hang after flashing BIOS.
10. Fixed problem of system hanging when installing Linux OS after COM1 & COM2 IO/IRQ exchange.
11. Fixed failure of WDT function.

2.0b (2/26/2018)

1. Updated CPU microcode to address 'Spectre' variant 2 (CVE 2017-5715) security issue.
2. Updated 5.12_PurleyCrb_OACFD085Beta for Purley Skylake platform PLR 4, BKC WW02.
3. Enabled IERR crash dump function.
4. Added setup item "SmcBusMasterEn" for enabling Parent bridge of the devices in the gSmcPciForceEnableBusMasterList.
5. Displayed setup item "ACS Control" to Enable/Disable PCIe Access Control Services Extended Capability, with Enabled as default.
6. Changed BIOS revision to 2.0b.
7. Implemented SMC OOB TPM Provisioning via IPMI Feature for customized provisioning table.
8. Changed RC default setting to upgrade POST Memory correctable error to uncorrectable error and map out the channel.
9. Changed the disabling of CPU Core by core number.
10. Corrected the "Save Changes" setup option string in "Save & Exit" menu.
11. Disabled SNC once NVDIMM is present in system.

12. Fixed problem of system hanging during BIOS flashing if Watch Dog function is enabled.
13. Fixed problem of TPM 2.0 PS NV Index not being write-protected even if customized provisioning table indicates that it must be write-protected when using "SMC OOB TPM Provisioning via IPMI feature".
14. Fixed problem of DMI being cleared when SUM LoadDefaultBiosCfg is run.
15. Fixed inability of BIOS to boot into OS with Intel P3608 PCIe NVMe drive installed.
16. Fixed issue with IPMI force boot.
17. Fixed issue of all commands requesting to be persistent.
18. Fixed malfunction of "SMBIOS Preservation" Disabled.
19. Fixed problem of SMC skipping first boot option in UEFI mode when retrying boot.
20. Fixed problem of the endpoint PCIe device having error bits in PCI Status or Device Status register.
21. Fixed inability to set memory policy.
22. Fixed inability to reset the system under DOS by pressing "Ctrl-Alt-Del" on USB keyboard when "Port 60/64 Emulation" is disabled.
23. Fixed failure of BIOS ECO ATT test case 306.
24. Fixed inability of some CPUs to display correct microcode revision under BIOS setup menu.