BIOS Release Notes Form

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Product Name	X11SSW-(4)TF
Release Version	3.1
Release Date	12/18/2023
Build Date	12/18/2023
Previous Version	3.0
Update Category	Recommended
Dependencies	None
Important Notes	None
Enhancements	 Changed BIOS revision to 3.1. Updated SA50216_Supplement (LogoFAIL Vulnerability).
New features	N/A
Fixes	N/A

3.0 (06/06/2023)

- 1. Changed BIOS revision to 3.0.
- 2. Updated Kabylake-S B0 stepping (906E9) microcode to 0xF4 for IPU 2023.3 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; and for INTEL-SA-00828 Security Advisory to address CVE-2022-40982 (6.5, Medium) security issue.

2.9 (03/16/2023)

- 1. Synced build version to "SA PCIe Code Version" and "Intel PCH RC Version."
- 2. Updated SPS 4.01.04.835 for IPU 2023.1.
- 3. Changed BIOS revision to 2.9.
- 4. Updated Kabylake-S BO stepping (906E9) microcode to 0xF2 for IPU 2023.2.
- **5.** Corrected DevFuncNumber for SMBIOS type 9.

2.8 (9/15/2022)

- 1. Changed BIOS revision to 2.8.
- 2. Updated the DBX file to fix the Secure Boot Bypass issue.
- 3. Updated EIP#696788, 694328 for IPU IPU2022.3 PV Sample Code 006.98 to address Intel-SA00688: CVE-2022-26837 (7.5 High).
- 4. Updated SPS 4.01.04.700 for IPU 2022.3 to address Intel-TA00610: CVE-2022-29466 (7.3 High) and INTEL-SA-00669 Security Advisory to address CVE-2022-26074 (6.0, Medium) security issue.

2.7 (12/8/2021)

- 1. Changed BIOS revision to 2.7.
- 2. Updated SPS 4.01.04.400 PC for 2021.2 IPU.
- 3. Updated Skylake-S RO/S0 stepping CPU beta microcode M36506E3_000000EC. Updated Kabylake-S B0 stepping CPU beta microcode M2A906E9_00000EC. For INTEL-SA-00532 Security Advisory to address CVE-2021-0127(5.6, Medium) security issue.
- 4. Updated MRC Version 4.1.1.6. For INTEL-SA-00562 Security Advisory to address CVE-2021-0157(8.2, High) and CVE-2021-0158(8.2, High) security issues. 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-2021-0118(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.
- Updated SINIT ACM to v1.9.1. For INTEL-SA-00562 Security Advisory to address CVE-2021-0157(8.2, High) and CVE-2021-0158(8.2, High) security issues. 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-2021-0118(7.9, High), CVE-2021-0199(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.

2.6 (06/15/2021)

- 1. Changed BIOS revision to 2.6.
- 2. Updated Skylake-S RO/S0 stepping CPU beta microcode M36506E3_000000EA and Kabylake-S B0 stepping CPU beta microcode M2A906E9_000000EA for INTEL-SA-00464 Security Advisory to address CVE-2020-24511 (5.6, Medium) and CVE-2020-24512 (2.8, Low) security issues.
- 3. Updated SPS 4.01.04.306 PC for 2021.1 IPU.

2.5 (11/26/2020)

- 1. Changed BIOS revision to 2.5.
- Updated SPS 4.01.04.204 for IPU 2020.2 for INTEL-SA-00391 Security Advisory to address CVE-2020-8752 (9.4, Critical), CVE-2020-8753 (8.2, High), CVE-2020-12297 (8.2, High), CVE-2020-12304 (8.2, High), CVE-2020-8745 (7.3, High), CVE-2020-8744 (7.2, High), CVE-2020-8705 (7.1, High), CVE-2020-8750 (7.0, High), CVE-2020-12303 (7.0, High), CVE-2020-12354 (6.7, Medium), CVE-2020-8757 (6.3, Medium), CVE-2020-8756 (6.3, Medium), CVE-2020-8760 (6.0, Medium), CVE-2020-12355 (5.3, Medium), CVE-2020-8751 (5.3, Medium), CVE-2020-8754 (5.3, Medium), CVE-2020-8761 (4.9, Medium), CVE-2020-8747 (4.8, Medium), CVE-2020-8749 (4.2, Medium) security issues.
- 3. Updated MRC Version 4.1.1.5 for IPU 2020.2.
- 4. Updated Skylake-S RO/S0 stepping CPU microcode M36506E3_000000E2 and Kabylake-S B0 stepping CPU microcode M2A906E9_000000DE for IPU 2020.2 for INTEL-SA-00389 Security Advisory to address CVE-2020-8694 (5.6, Medium) and CVE-2020-8695 (5.3, Medium) security issues.

2.4 (6/2/2020)

- 1. Changed BIOS revision to 2.4.
- Updated Skylake-S RO/S0 stepping CPU beta microcode M36506E3_000000DC and Kabylake-S B0 stepping CPU beta microcode M2A906E9_000000D6 for IPU2020.1 and INTEL-SA-00295 Security Advisory to address CVE-2020-0542 (7.8, High), CVE-2020-0532 (7.1, High), CVE-2020-0538 (7.5, High), CVE-2020-0534 (7.5, High), CVE-2020-0541 (6.7, Medium), CVE-2020-0533 (7.5, High), CVE-2020-0537 (4.9, Medium), CVE-2020-0531 (6.5, Medium), CVE-2020-0535 (5.3, Medium), CVE-2020-0536 (5.5, Medium), CVE-2020-0545 (4.4, Medium), CVE-2020-0540 (5.3, Medium), CVE-2020-0566 (7.3, High), CVE-2020-0539 (3.3, Low), CVE-2020-0586 (7.3, High), CVE-2020-0594 (9.8, Critical), CVE-2020-0595 (9.8, Critical), CVE-2020-0596 (7.5, High), CVE-2020-8674 (4.3, Medium), and CVE-2020-0597 (6.5, Medium) security issues.
- 3. Updated MRC Version 4.1.1.4.
- 4. Updated SPS 4.01.04.109 PLR version for IPU 2020.1.
- 5. Fixed problem of system hanging at 0x92 when installing Avago 9460-16i with EFI mode.

2.3 (11/26/2019)

- 1. Changed BIOS revision to 2.3.
- Updated SPS 4.01.04.088 PLR version for INTEL-SA-00241 Security Advisory to address CVE-2019-11090 (6.8, Medium), CVE-2019-11088 (7.5, High), CVE-2019-0165 (4.4, Medium), CVE-2019-0166 (5.9, Medium), CVE-2019-0168 (4.6, Medium), CVE-2019-0169 (9.6, Critical), CVE-2019-11086 (3.5, Low), CVE-2019-11087 (6.4, Medium), CVE-2019-11101 (4.4, Medium), CVE-2019-11100 (6.1,

Medium), CVE-2019-11102 (4.1, Medium), CVE-2019-11103 (7.3, High), CVE-2019-11104 (7.3, High), CVE-2019-11105 (7.9, High), CVE-2019-11106 (4.4, Medium), CVE-2019-11107 (5.3, Medium), CVE-2019-11108 (2.3, Low), CVE-2019-11110 (4.1, Medium), CVE-2019-11097 (7.3, High), CVE-2019-0131 (7.1, High), CVE-2019-11109 (4.4, Medium), CVE-2019-11131 (7.5, High), CVE-2019-11132 (8.4, High), and CVE-2019-11147 (8.2, High) security issues.

- 3. Updated SI 4.1.1.3 for INTEL-SA-00260 Security Advisory to address CVE-2019-0154 (6.5, Medium) security issue.
- 4. Updated Skylake-S RO/SO stepping CPU microcode M36506E3_000000D6 and Kabylake-S BO stepping CPU microcode M2A906E9_000000CA for INTEL-SA-00219 Security Advisory to address CVE-2019-0117 (6.0, Medium) security issue, INTEL-SA-00289 Security Advisory to address CVE-2019-11157 (7.9, High) security issue, and INTEL-SA-00242 Security Advisory to address CVE-2019-11112 (8.8, High), CVE-2019-0155 (8.8, High), CVE-2019-11111 (7.3, High), CVE-2019-14574 (6.5, Medium), CVE-2019-14590 (6.5, Medium), CVE-2019-14591 (6.5, Medium), CVE-2019-11089 (5.9, Medium), and CVE-2019-11113 (4.0, Medium) security issues.
- 5. Updated Kaby Lake BIOS ACM 1.6.0 and SINIT ACM 1.7.4 for INTEL-SA-00220 Security Advisory to address CVE-2019-0123 (8.2, High) and CVE-2019-0124 (8.2, High) security issues and INTEL-SA-00240 Security Advisory to address CVE-2019-0151 (7.5, High) and CVE-2019-0152 (8.2, High) security issues.
- 6. Updated Secure Boot Key.
- 7. Implemented security update for INTEL-SA-00254 Security Advisory to address CVE-2019-0185 (6.0, Medium) security issue.
- 8. Fixed missing OEM string of SMBIOS type 11.

2.2a (5/24/2019)

- 1. Updated Intel CPU microcode from DT_P_183 for INTEL-SA00233 Security Advisory to address CVE-2018-12126, CVE-2018-12127, CVE-2018-12130, and CVE-2019-11091 security issues.
- 2. Updated EIP419363 to ensure DCI Policy is "Disabled" for INTEL-SA-00127, EIP412144 for [SA50044] USRT Mantis vulnerabilities, EIP387724 for Ofbd Meud Security vulnerabilities, and EIP422042 for CPU microcode downgrade attack vulnerability.
- 3. Updated Greenlow Refresh Initialization Code PV PLR5 Hotfix1 version 4.1.1.1 for INTEL-SA-00223 Security Advisory to address CVE-2019-0119, CVE-2019-0120, and CVE-2019-0126 security issues.
- Contained SPS 4.01.04.054 PLR version for security vulnerability INTEL-SA-00213 to address CVE-2019-0089, CVE-2019-0090, CVE-2019-0086, CVE-2019-0091, CVE-2019-0092, CVE-2019-0093, CVE-2019-0094, CVE-2019-0096, CVE-2019-0097, CVE-2019-0098, and CVE-2019-0099 security issues.
- 5. Changed BIOS revision to 2.2a.
- 6. Updated Kaby Lake BIOS ACM 1.5.0 and SINIT ACM 1.6.0.
- 7. Updated EIP393007 & EIP411789 for TPM vulnerability when resuming S3.
- 8. Updated SATA RAID OPROM/EFI driver to RSTe PreOS v4.7.0.1017.
- 9. Updated VBIOS and VGA EFI Driver to 1.09 to fix ASpeed CVE-2019-6260 security issue.
- 10. Updated valid range of IPMI setup item VLAN ID to 1-4094.
- 11. Added support for RFC4122 UUID format feature to set RFC4122 encoding from build time produced by IPMICFG 1.29 tool or newer.
- 12. Fixed problem of BIOS always retrying boot when Re-Try Boot is Disabled.
- 13. Fixed inability to disable SMBIOS preservation for recovery.
- 14. Fixed inability to log CECC events in IPMI event log when METW = 0.

2.2 (5/24/2018)

- 1. Changed BIOS revision to 2.2.
- 2. Updated CPU microcode to address CVE-2018-3639 and CVE-2018-3640.
- 3. Updated Kaby Lake BIOS ACM 1.4.0 and SINIT ACM 1.3.0.
- 4. Enhanced ability to enter setup menu without password when system only has Administrator password.
- 5. Fixed problem of Afu /O command clearing SMC SMBIOS region (\$SMC).
- 6. Implemented workaround for problem of IP displaying 0.0.0.0 information the first time AC powers on BMC.
- 7. Fixed problem of the system hanging when trying to create virtual driver on LSI3108 storage card under BIOS setup.
- 8. Fixed missing reminding string "iKVM doesn't support add-on VGA device..." when VGA is plugged in & "Primary Display"=="PEG".

2.1a (3/2/2018)

- 1. Updated DT_B_128 for Kaby Lake-S B0 stepping CPU microcode M2A906E9_00000084 to address 'Spectre' variant 2 (CVE 2017-5715) security issue.
- 2. Changed BIOS revision to 2.1a.
- 3. Added Ramaxel JEDEC Manufacturer ID to support Ramaxel memory.
- 4. Added support to speed the memory up to 2667Mhz.
- 5. Added support for UEFI mode PXE boot via F12 hot key Net boot.
- 6. Added support for SUM to display SGX-related items.
- 7. Updated SATA RAID OPROM/EFI driver to RSTe PreOS v4.7.0.1014 (RSTe SATA 4.7.0.1069 and NVMe 4.7.0.2063).
- 8. Updated SUM BIOS setup change before setup/logo.
- 9. Fixed inability to load Broadcom SAS3008 configuration utility.
- 10. Fixed issue with IPMI force boot.
- 11. Fixed problem of system not showing correct manufacturer name or product name when IPMI without FRU1 is programmed.
- 12. Fixed failure of ATT BIOS ECO test case 237.
- 13. Fixed problem of SGX resetting to default value if using SUM to change SGX items after BIOS update.
- 14. Changed SGX EpochUpdate and EpochToFactory items' behavior of resetting to 0 if using SUM to set two items.
- 15. Changed "primary display" = "PCIe" to follow setup template.

2.1 (12/11/2017)

- 1. Changed BIOS revision to 2.1.
- 2. Updated Kaby Lake-S BO stepping MCU M2A906E9 0000007C.