BIOS Release Notes Form

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Product Name	X11SCL-LN4F
Release Version	1.8
Release Date	08/01/2022
Build Date	08/01/2022
Previous Version	1.6
Update Category	Recommended
Dependencies	None
Important Notes	None
Enhancements	 Enabled token "IPMI_FORCE_BOOT_UEFI_SHELL" to support shell by IPMI, changed boot order command. Supports IPMI UEFI PXE boot to all LAN port feature. Updated Microcode M22906EA_000000F0(U-0 Stepping) and M22906ED_000000F0(R-0 Stepping) for INTEL-TA-00615 to address CVE-2022-21166(5.5 High), CVE-2022-21123(6.1 High), CVE-2022-21127(5.6 High), for INTEL-TA-00617 to address CVE-2022-21151(5.3 High), for INTEL-TA-00614 to address CVE-2022-0005(4.9 High)

	 Updated Intel SINIT ACM to 1.10.1. For INTEL-TA-00601 to address CVE-2021-33123 (8.2 High), CVE-2021-33124 (7.5 High) security issues.
	5. Updated SPS FW to SPS_E3_05.01.04.600.0 for IPU 2022.2.6. Changed BIOS version to 1.8.
	7. Updated UEFINetworkStack to label 28 and added patch for AMI SA-50110 security issue.
New features	N/A
Fixes	 SUM cannot get the item "Software Guard Extensions (SGX)" from the BIOS configuration via sum -c getcurrentbioscfg command. Fixed automation test case "Check Https Boot" fail.

1.6 (8/6/2021)

- 1. Changed the BIOS version to 1.6.
- 2. Updated Microcode M22906EA_000000EA (U-0 Stepping) for INTEL-SA-00464 Security Advisory to address CVE-2020-24512 (2.8, Low) security issue.
- 3. Updated SPS FW to SPS_E3_05.01.04.303 for INTEL-TA-00459 Security Advisory to address CVE-2020-24509 (6.7, Medium) IPU 2021.1.
- 4. Updated Intel BIOS ACM and SINIT ACM to 1.8.0 for INTEL-TA-00463 to address CVE-2020-12357 (7.5, High), CVE-2020-8670 (7.5, High) and CVE-2020-12360 (5.6, Medium) security issues.
- 5. Copied the BIOS binary and renamed it to meet the unique name format. N/A
- 6. Fixed SUM test 220 fail due to "PCI AER Support" and "Memory Corrected Error Enabling" setting not preserved after flashing BIOS.

1.5 (10/05/2020)

- 1. Changed the BIOS version to 1.5.
- 2. Updated microcodes M22906EA_000000DE (U-0 Stepping), M02906EB_000000DD_000000DE (B-0 Stepping), M22906EC_000000DE (P-0 Stepping), and M22906ED_000000DE (R-0 Stepping) for Intel IPU 2020.2.
- 3. Updated SPS firmware to SPS_E3_05.01.04.208.0 for INTEL-TA-00391 Security Advisory to address CVE-2020-8744 (7.2, High) and CVE-2020-8755 (4.6, Medium) security issues.
- 4. Updated Intel IPU 2020.2 RC 7.0.58.47 for Mehlow Refresh Server Platform Service Version.
- 5. Removed the FWSTS SMBIOS table.
- 6. Reduced Rowhammer susceptibility for AMI-SA50084 DDR4 Rowhammer vulnerability to address CVE-2020-10255 (9.0, high) security issue.
- 7. Patched inability of system to boot via onboard LAN2 after IPMI forces PXE boot when there is an OS behind LSI-3108 RAID card.
- 8. Added inband flash status event log to IPMI MEL.
- 9. Added Hotkey Message Enable/Disable function.
- 10. Enhanced SMCI HDD Security feature.
- 11. Changed SPI TPM Clock Frequency to 17MHz for TPM detection.
- 12. Fixed problem of BIOS setup menu showing "Unknown" when plugging in the InnoDisk memory and boot up into BIOS setup menu.

1.4 (5/28/2020)

- 1. Changed the BIOS version to 1.4.
- 2. Implemented IPU 2020.1 update to SPS firmware to SPS E3 05.01.04.113.0.
- 3. Enhanced the OEM FID feature to support UUID.
- 4. Updated Intel RSTe RAID Option ROM/UEFI Driver to 6.3.0.1005.
- 5. Added SMCI HDD Security feature.
- 6. Updated microcodes M22906EA_000000D6 (U-0 Stepping), M02906EB_000000D6 (B-0 Stepping), M22906EC 000000D6 (P-0 Stepping), and M22906ED 000000D6 (R-0 Stepping) for INTEL-SA-00320

Security Advisory to address CVE-2020-0543 (6.5, High) security issue, and microcodes M22906EA_000000D6 (U-0 Stepping), M02906EB_000000D6 (B-0 Stepping), M22906EC_000000D6 (P-0 Stepping), and M22906ED_000000D6 (R-0 Stepping) for INTEL-SA-00329 Security Advisory to address CVE-2020-0548 (2.8, Low) and CVE-2020-0549 (6.5, Medium) security issues.

- 7. Set the OverclockingLock flag to enabled by default for SGX test.
- 8. Added support for InnoDisk memory.
- 9. Fixed inability to change the serial port IO resource.
- 10. Fixed failure of Secure Erase password and problem of BIOS returning "EFI_Device_Error" with SED: Seagate ST1000NX0353.

1.3 (2/21/2020)

- 1. Added solution for problem of systems with LPDDR3 2133 MT/s DRAMs failing during boot.
- 2. Corrected the "DeepSx Power Policies" item string.
- 3. Updated RC to Mehlow Refresh PV version 7.0.58.44.
- 4. Displayed the "SGX Launch Control Policy" items in the BIOS setup menu.
- 5. Added SMC HDD Security feature.
- 6. Updated Microcodes M22906EA_000000D2 (U-0 Stepping), M02906EB_000000D2 (B-0 Stepping), M22906EC_000000D2 (P-0 Stepping), and M22906ED_000000D2 (R-0 Stepping) for INTEL-SA-00320 Security Advisory to address CVE-2020-0543 (6.5, High) security issue and for INTEL-SA-00329 Security Advisory to address CVE-2020-0548 (2.8, Low) and CVE-2020-0549 (6.5, Medium) security issue.
- 7. Updated flag for skipping password prompt window.
- 8. Updated BiosAcm to 1.7.1 (20191213) and SinitAcm to 1.7.8 (20191220) for INTEL-SA-00240 to address CVE-2019-0151 (7.5, High) and CVE-2019-0152 (8.2, High), for INTEL-SA-00220 to address CVE-2018-0123 (8.2, High) and CVE-2019-0124 (8.2, High), and INTEL-SA-00164 to address CVE-2019-0184 (6.0, Medium).
- 9. Fixed inability of ME to enter recovery mode.
- 10. Fixed inability of BIOS to load default when plugging in M.2.
- 11. Added support for erasing NVMe Opal device (like Samsung 970 EVO model MZ-V7E250) without setting admin password.

1.2 (11/22/2019)

- 1. Changed BIOS version to 1.2.
- 2. Disabled the MCTP for buggy BMC workground.
- 3. Updated Microcode M22906EA_000000CA (U-0 Stepping), M02906EB_000000CA (B-0 Stepping), and M22906EC_000000CA (P-0 Stepping) for INTEL-SA-00219 Security Advisory to address CVE-2019-0117 (6.0, Medium) security issue and for INTEL-SA-00220 Security Advisory to address CVE-2019-0123 (8.2, High) security issue.
- 4. Updated Microcode M22906ED_000000CA (R-0 Stepping) for INTEL-SA-00219 Security Advisory to address CVE-2019-0117 (6.0, Medium) security issue, Microcode M22906ED_000000CA (R-0 Stepping) for INTEL-SA-00220 Security Advisory to address CVE-2019-0123 (8.2, High) security issue, and Microcode M22906ED_000000CA (R-0 Stepping) for INTEL-SA-00270 Security Advisory to address CVE-2019-11135 (6.5, Medium) security issue.
- 5. Updated SPS firmware to SPS_E3_05.01.03.094.0.
- 6. Updated the Intel PMC firmware to 300.2.11.1022.
- 7. Updated the AMI TSE to 2.20.1276.

- 8. Updated RC to Mehlow Refresh PV version 7.0.58.43 for INTEL-SA-00260 Security Advisory to address CVE-2019-0154 (6.5, Medium) security issue.
- 9. Updated SINIT ACM to 1.7.4 for INTEL-SA-00240 to address CVE-2019-0151 (7.5 High) and CVE-2019-0152 (8.2 High), INTEL-SA-00220 to address CVE-2018-0123 (8.2, High) and CVE-2019-0124 (8.2, High), and INTEL-SA-00164 to address CVE-2019-0184 (6.0, Medium).
- 10. Updated NVRAM NVMe HddSecurity SmmConfidentialMemModule and TcgStorageSecurity to INTEL-SA-00254 request version for INTEL-SA-00254 Security Advisory to address CVE-2019-0185 (6.0, Medium) security issue.
- 11. Fixed problem of CECC being recorded in event log when METW is "60".

1.1 (8/28/2019)

- 1. Changed the BIOS version to 1.1.
- 2. Set memory uncorrectable error to always be recorded, regardless of METW and MECI.
- 3. Updated SPS firmware to SPS_E3_05.01.03.078.0.
- 4. Added "SATA Frozen" function.
- 5. Updated SMC OOB module to 1.01.08, added Redfish/SUM Secure Boot feature, and updated OOB for secure boot and reserve Key.
- 6. Updated RC to Mehlow Refresh PV version 7.0.58.42.
- 7. Implemented dynamic change for Secure Boot Mode default value.
- 8. Fixed inability of BIOS to get SMBIOS type 39 power supply FRU data.
- 9. Updated Coffee Lake-S R-0 stepping CPU microcode M22906ED_000000BE and Coffee Lake-S P-0 stepping CPU microcode M22906EC_000000BE.
- 10. Displayed setup item "BME DMA Mitigation" on the Advanced -> PCIe/PCI/PnP Configuration page.
- 11. Fixed problem of SATA Configuration page showing 1TB for 8TB 4KN HDDs.
- 12. Fixed problem of key details showing "Security Violation" after loading Factory secure boot keys.
- 13. Fixed problem of two boot devices occurring in the boot order when installing UEFI CentOS.
- 14. Fixed failure of OPROM control item if CSM is disabled.
- 15. Fixed inability of system to find any network adapters and problem of the installation with vSphere aborting.
- 16. Fixed inability to enable TPM in the BIOS setup menu when plugging in TPM device and then disabling it.
- 17. Fixed problem of some items being adjusted when user adjusts dual boot order in BIOS setup.
- 18. Fixed inability to identify duplicated NVMe boot option with more than one of the same NVMe drives on an add-on card.

1.0b (5/17/2019)

- 1. Updated BIOS version to 1.0b.
- 2. Updated RC to version 7.0.58.41.
- 3. Updated Coffee Lake-S R-0 stepping CPU microcode M22906ED_000000B0.
- 4. Updated MCU 906EA-U0 + 906EB-B0 + 906EC-P0) for INTEL-SA-00233 Security Advisory to address CVE-2018-12126, CVE-2018-12127, and CVE-2018-12130.
- 5. Update SPS 5.1.03.62 for INTEL-SA-00213 Security Advisory 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.

- 6. Update SPS 5.1.03.62 for INTEL-SA-00213 Security Advisory 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.
- 7. Updated Intel RSTe RAID Option ROM/UEFI Driver to 6.1.0.1017.
- 8. Updated USB and Fastboot module.
- 9. Enhanced the solution for the error/warning message from dmidecode after a modification by AMIDE.
- 10. Exposed the CPU's PL1 and PL2 items of Advanced -> CPU Configuration page in the BIOS setup menu.
- 11. Renamed "AC Loss Policy Depend on" back to "Restore on AC Power Loss".
- 12. Updated to avoid inability to flash OA License Key randomly.
- 13. Added Driver Health setup item.
- 14. Added driver health warning message.
- 15. Added OEM strings to 50 bytes in Type 11.
- 16. Updated IPv4 and IPv6 setup items string.
- 17. Updated BIOS Setup Menu for the item "Always Turbo Mode" in Advanced/CPU Configuration page.
- 18. Added code for Consistent Device Name support.
- 19. Added support for Linux built-in utility efibootmgr.
- 20. Set default setting Power Limit 2 to 150W when 8 Core CPU is used in the system.
- 21. Set OptionRom and boot mode select to EFI while CSM is disabled.
- 22. Changed UEFI Lan Boot option name format for SUM requirement.
- 23. Added RFC3021 solution for the network stack (/32 subnet mask support).
- 24. Exposed the setup item "BME DMA Mitigation" in the Advanced -> PCIe/PCI/PnP Configuration page.
- 25. Fixed issue of DIMM location to show "¡§No DIMM infoj" in Event Logs when ECC error occurs.
- 26. Fixed issue of DIMM location to always show "DIMMA1" in BIOS Event log when ECC error occurs.
- 27. Fixed issue of ""?[1;31;40m" being shown on POST screen when EFI driver is "unhealthy".
- 28. Fixed issue of BMC VGA status showing Enabled in SMBIOS Type 41 when JPG1 is disabled (In 2-3).
- 29. Fixed issue of onboard video having an output when JPG1 is disabled.
- 30. Fixed problem of hot-plug being registered when the PCH root port bridge is without a PCI-E device.
- 31. Updated "Restore Optimized Defaults" string for Mehlow Server template.
- 32. Modified UEFI network description as IPv4/IPv6 to follow Industry Standard.
- 33. Added workaround for BIOS flash failure with 156 bytes PubKey (Error: "Secure Flash Rom Verify Fail").
- 34. Fixed problem of the system hanging in CP: 0xF4 when the system recovery occurs in BIOS with TPM module.
- 35. Fixed problem of the value of Power Limit 2 displaying as 0 in setup menu when setup menu is set to 0 (AUTO).
- 36. Fixed issue of system may or may not hanging up when LAN1 is disabled.
- 37. Fixed DIMM location of ECC error to show "NO DIMM INFO" in Event log when Multi-Bit ECC error occurs.

1.0a (2/26/2019)

- 1. Updated BIOS revision to 1.0a.
- 2. Updated Intel Reference Code to version 7.0.51.40.
- 3. Updated CPU MCU (906EA, U0 + 906EB, B0 + 906EC, P0).
- 4. Hid LAN OPROM Control items when LAN#1 OPROM is set to iSCSI.

- 5. Added Early Video messages when BIOS is in recovery mode.
- 6. Added "ACPI T-States" setup item.
- 7. Displayed "AERON" and "MCEON" strings during POST when "PCI AER Support" or "Memory Corrected Error" is enabled.
- 8. Hide "ECC Support" item.
- 9. Set the default of "Memory Corrected Error Enabling" to disabled.
- 10. Updated the Intel BIOS ACM version to 1.5.0 and SINIT ACM to 1.6.0.
- 11. Added "SMC SMBIOS Measurement" feature for PCR#1 measurement and enabled "Measure Smbios Tables".
- 12. Updated RAID option ROM and UEFI driver to 5.5.1028.
- 13. Added "MCEON" and "AERON" POST strings for SOL console when items are enabled.
- 14. Enhanced JPG1 function for running SUM with JPG1 2-3.
- 15. Added support for RFC4122 UUID format feature so that RFC4122 encoding from build time is produced by IPMICFG 1.29 tool or newer version.
- 16. Added "SATA Frozen" function.
- 17. Added support for Linux built-in utility efibootmgr.
- 18. Hid "Always Turbo Mode" when "Turbo Mode" setting is set to Disable in Advanced/CPU Configuration page.
- 19. Updated IPv4 and IPv5 setup item strings.
- 20. Added OEM strings to 50 bytes in Type 11.
- 21. Added Disabled option for "Onboard Video Option ROM" setup item.
- 22. Added "Driver Health" setup item.
- 23. Added Driver Health warning message.
- 24. Renamed "AC Loss Policy Depend on" to "Restore on AC Power Loss".
- 25. Enhanced the solution for the error/warning message from dmidecode after AMIDE modification.
- 26. Updated SMBIOS Type 9 for AOC Sensor Reading.
- 27. Fixed inability to Boot Option of UEFI Application Boot Priorities to load default via Afu tool with command "/N".
- 28. Changed the "SATA Interrupt Selection" default value to MSI.
- 29. Fixed problem of Chassis Intrusion status in BMC clearing every time system boots.
- 30. Fixed issue of serial port UID order to follow COM port order after BIOS update.
- 31. Fixed issue of PCR#1 value to be changed during Legacy boot with TPM 2.0 when Measure_Smbios_tables is disabled.
- 32. Fixed problem of the system having an exception while entering BIOS Setup with NVMe M2*1 + SATA M2*1.
- 33. Fixed problem of InBand receiving incorrect OEM FID size.
- 34. Fixed problem of system hanging in CP during system recovery BIOS with TPM module.
- 35. Updated "Restore Optimized Defaults" string for Mehlow Server template.
- 36. Modified UEFI network description to IPv4/IPv6 to follow Industry Standard.
- 37. Removed processor version "Type" string for Mehlow Server template.
- 38. Fixed issue of onboard video output displaying screen on DXE stage when JPG1 is disabled.
- 39. Updated "Redirection After BIOS POST" string for Mehlow Server template.
- 40. Fixed problem of BMC VGA status being enabled in SMBIOS Type 41 when JPG1 is disabled (In 2-3).
- 41. Fixed lack of onboard VGA information in Type 40.