iLLD-TC3-v1.20.0

Release Notes

Product name: iLLD
Release number and version: iLLD-TC3-v1.20.0
Type of release: Alpha*
Release method: Release Manager, IDC
Processor platform: TC39xB, TC38xA, TC37xA, TC37xED, TC36xA, TC35xA, TC33xA, TC33xED, TC3E
Date: 2025-05-29
Previous release number and version: 1.19.2

About this document

Scope and purpose

This document details the release contents, all known issues in the release, and the changes from the last release, together with information on tools and support changes.

New issues identified since the last release of this document are detailed first, followed by all issues identified in previous versions of this release.

*Note: * This release is not intended for production use.*

Note: All source files contained in this release package are subject to Boost Software License - Version 1.0 - August 17th, 2003 - as mentioned in the Disclaimer Header of each file

Attention: Refer to the Limitations and deviations chapter before using the software for integration.

Intended audience

This document is intended for anyone using the iLLD software.

Table of contents

1 Release contents

1.1 Release overview

This release is of Alpha quality.

1.2 Released items

This release contains the `iLLD-TC3-v1.20.0_Drivers_And_Demos.zip` file.

Table 1 Release zip contents

Package content	Description
`iLLD-TC3-v1.20.0.exe`	Installer for A2G Source, documentation and Demos
`iLLD-TC3-v1.20.0-Releasenotes.pdf`	Aurix 2G iLLD Release Notes
`BaseProjects_TC3xx_V1_20_0.exe`	TC3xx Base Project Installer
`BaseProjects_TC3xx_V1_20_0_ReleaseNotes.pdf`	Base Project Installer Release Notes

The installer exe "`iLLD-TC3-v1.20.0.exe`" contains the following folders mentioned in Table 2

Table 2 Installer content

Package content	Description
`TC3-v1.20.0`	Superset Source and documentation files
`iLLD-TC3-v1.20.0-Releasenotes.pdf`	Aurix 2G iLLD Release Notes
`Demos-v1.20.0`	Demo files
`Compiler-Warnings-v1.20.0`	List of known compiler warnings

Note:

1. *User manual for TC3 devices will be available at location TC3-<version>\Doc\TC3xx*
2. *List of known warnings for compilers is provided in Compiler-Warnings-v1.20.0*
3. *The License text for iLLD has been updated*

1.3 Compatibility

1.3.1 SFR Versions

This release is tested with the following SFR versions:

- TC39XB_UM_V2.0.0.R0
- TC38XA_UM_V2.0.0.R0
- TC3EX_UM_V2.0.0.R0
- TC37xED_UM_V2.0.0.R0
- TC37xPD_UM_V2.0.0.R0
- TC36XA_UM_V2.0.0.R0
- TC35XA_UM_V2.0.0.R0
- TC33X32X_UM_V2.0.0.R0
- TC33XED_UM_V2.0.0.R0

1.3.2 Modifications in DMA

The DMA *IfxDma_isChannelReset* API has been updated. It shall now return TRUE if channel is RESET and FALSE if channel is not RESET. User shall adapt the API usage appropriately.

1.3.3 Modifications in CAN

Following functions are deprecated (version iLLD_1_0_1_9_0 onwards) and new replacement functions are added.

Table 3 CAN deprecated function list

Deprecated Function	Replacement Function
uint32 IfxCan_Node_getDataLengthFromCode(Ifx_CAN_N *node, IfxCan_DataLengthCode dataLengthCode);	uint32 IfxCan_Node_getDataLength (IfxCan_DataLengthCode dataLengthCode)
void IfxCan_Node_setDataLengthCode(Ifx_CAN_N *node, Ifx_CAN_TXMSG *txBufferElement, IfxCan_DataLengthCode dataLengthCode);	void IfxCan_Node_setDataLength (Ifx_CAN_TXMSG *txBufferElement, IfxCan_DataLengthCode dataLengthCode);
void IfxCan_Node_setErrorStateIndicator(Ifx_CAN_N *node, Ifx_CAN_TXMSG *txBufferElement, boolean enable)	void IfxCan_Node_setErrStateIndicator (Ifx_CAN_TXMSG *txBufferElement, boolean enable);
void IfxCan_Node_setFrameModeRequest(Ifx_CAN_N *node, Ifx_CAN_TXMSG *txBufferElement, IfxCan_FrameMode frameMode)	void IfxCan_Node_setFrameModeReq (Ifx_CAN_TXMSG *txBufferElement, IfxCan_FrameMode frameMode)
void IfxCan_Node_setMesssageId(Ifx_CAN_N *node, Ifx_CAN_TXMSG *txBufferElement, uint32 messageId, IfxCan_MessageIdLength messageIdLength);	void IfxCan_Node_setMsgId (Ifx_CAN_TXMSG *txBufferElement, uint32 messageId, IfxCan_MessageIdLength messageIdLength);
void IfxCan_Node_setRemoteTransmitRequest(Ifx_CAN_N *node, Ifx_CAN_TXMSG *txBufferElement, boolean enable);	void IfxCan_Node_setRemoteTransmitReq (Ifx_CAN_TXMSG *txBufferElement, boolean enable);
void IfxCan_Node_setTxEventFifoControl(Ifx_CAN_N *node, Ifx_CAN_TXMSG *txBufferElement, boolean enable);	void IfxCan_Node_setTxEventFifoCtrl (Ifx_CAN_TXMSG *txBufferElement, boolean enable);
void IfxCan_Node_writeData(Ifx_CAN_N *node, Ifx_CAN_TXMSG *txBufferElement, IfxCan_DataLengthCode dataLengthCode, uint32 *data);	void IfxCan_Node_writeTxBufData (Ifx_CAN_TXMSG *txBufferElement, IfxCan_DataLengthCode dataLengthCode, uint32 *data);

In the following functions, (Ifx_CAN_N *node) parameter is removed. (Since it is not used in the function.)

- IfxCan_Node_getBRSFromTxEventFifo
- IfxCan_Node_getDLCFromTxEventFifo
- IfxCan_Node_getDataLengthCode
- IfxCan_Node_getESIFromTxEventFifo
- IfxCan_Node_getExtendedFilterElementAddress
- IfxCan_Node_getFDFFromTxEventFifo
- IfxCan_Node_getFrameMode
- IfxCan_Node_getFrameModeFromTxEventFifo
- IfxCan_Node_getMMFromTxEventFifo

- IfxCan_Node_getMesssageId
- IfxCan_Node_getMesssageIdFromTxEventFifo
- IfxCan_Node_getRTRFromTxEventFifo
- IfxCan_Node_getStandardFilterElementAddress
- IfxCan_Node_getTXTSFromTxEventFifo
- IfxCan_Node_getTxEventFifoElementAddress
- IfxCan_Node_initTxPin
- IfxCan_Node_readData
- IfxCan_Node_setExtendedFilterConfiguration
- IfxCan_Node_setExtendedFilterId1
- IfxCan_Node_setExtendedFilterId2
- IfxCan_Node_setExtendedFilterRxBufferOffset
- IfxCan_Node_setExtendedFilterType
- IfxCan_Node_setMessageMarker
- IfxCan_Node_setStandardFilterConfiguration
- IfxCan_Node_setStandardFilterId1
- IfxCan_Node_setStandardFilterId2
- IfxCan_Node_setStandardFilterRxBufferOffset
- IfxCan_Node_setStandardFilterType
- IfxCan_getModuleFrequency

2 Tool information

The tool information is provided in the following table.

Table 4 Tool details

Tool description	Version details
Compiler*	Tasking v6.3r1 Gnu v4.9.3.0 Windriver v5.9.8.4 Greenhills v2018.5.5 GCC 11.3.1 20221230 Hightec LLVM v9.1.2
Processor platform	TC39xB, TC38xA, TC37xA, TC37xED, TC36xA, TC35xA, TC33xA, TC33xED, TC3E
Evaluation hardware	TC39B: Target hardware (Triboard) TC38A: Target hardware (Triboard) TC37A: Target hardware (Triboard) TC37ED: Target hardware (Triboard) TC36A: Target hardware (Triboard) TC35A: Target hardware (Triboard) TC33A: Target hardware (Emulation) TC33ED: Target hardware (Emulation) TC3E: Target hardware (Emulation)

*Note: *iLLD and Demo files have been compiled using the compiler versions mentioned in Table 2*

3 Summary of changes

This chapter describes the fixes for issues from previous version(s).

3.1 Issues fixed in release V1.20.0

Issue Type	Summary	Description
Enhancement	Click licenses for publishing A1G/A2G iLLDs in GitHub	[2396] Click license updated for A1G/A2G installer
Enhancement	PWM Driver: Need APIs to start and stop the PWMs	[2566] New APIs added to Enable and Disable only PWM signals
Enhancement	[TC3xx] : Documentation enhancement for iLLD	[2785] Documentation updated for TC3x IP using GEN AI
Bug	Usage of uninitialized stack pointer when compiler optimizations are off	[2591] Startup software update to fix the stack pointer initialization issue
Bug	[IFX-241024-1491305] Bug in GTM TOM PWM iLLD	[2595] Initialization sequence modified for Atom_Pwm and Tom_Pwm
Bug	A2G CAN: wrong include in IfxCan_cfg.c	[2643] Updated the IfxCan_cfg.c file to include the correct header
Bug	IfxCcu6_connectTrigger raises trap	[2647] Updated the code as per correction proposal
Bug	iLLD v1.19.1 IfxQspi_SpiMaster.h documentation outdated	[2677] IfxQspi_SpiMaster.h documentation is updated by removing the base structure member
Bug	iLLD IfxStm_Timer not working when enabling Optimizations with GCC (TC397)	[2705] Added volatile keyword to the argument IfxStm_Timer * driver so that compiler will not optimize this driver variable and loads from the memory so that the interrupt will be correctly configured and triggered.
Bug	[A2G]:The trap-table section names are with wrong attributes	[2766] Highetc and GCC compiler attributes are updated from awx to ax
Bug	New iLLD outputs warnings on its build	[2771] Compiler warnings fixed
Enhancement	Maximum PLLx frequencies as default frequencies for a device	[2590] Comments provided on how to select the PLL, PLL1 & PLL2 frequency definitions from Ifx_Cfg.h if user wants to change the default frequency defined in IfxScu_cfg.h.
Enhancement	Review whether call to API IfxSdmmc_Sd_validateInterfaceCondition(sd); (CMD8) is required for SDIO during Sdmmc module initialization	[2733] Macro IFXSDMMC_VALIDATE_INTERFACE_CONDITION added to bypass the API call IfxSdmmc_Sd_validateInterfaceCondition() whe n needed. The macro will be enabled by default and can be disabled by the user when required.
Enhancement	Compiler Migration: Hightec llvm 9.1.2	[2762] Hightec llvm compiler is migrated to version 9.1.2
Enhancement	Adding missing overlay memory selectors in IfxCpu_OverlayMemorySelect structure in file IfcCpu.h	[2568] Added missing overlay memory selectors in 'IfxCpu_OverlayMemorySelect' enum
Enhancement	[TC3xx] [QSPI]: IfxQspi_SpiMaster_initChannel() disables external output for SLSO pin if internal loopback mode is enabled	[2583] New configuration item for user configuration of channel Id introduced. When, neither pin nor loopback mode is configured, the channel Id from user configuration is to be picked

		by the driver.
Enhancement	EDSADC: API is not working properly for negative unsigned data	[2610] Updated the comment section of API IfxEdsadc_getMainResult and IfxEdsadc_getSubsequentResult in IfxEdsadc.h file
Enhancement	[IFX-241106-1503380] Step-down regulator (EVRC) register settings - wait time	[2612] Moved the IfxPmsEvr_wait() function after the PMS_EVRSDCTRL0.B.UP = 1. This will ensure 20 µs waiting time before checking the status of PMS_EVRSDCTRL0.B.UP bit
Enhancement	New API/Enhancement request for GTM DTM	[2617] Implemented an API IfxGtm_Dtm_setTSel0Input() to configure CDTMi_DTMj_CH_CTRL3.TSEL0_x.
Enhancement	New API request for ATOM	[2687] Added APIs to configure bit fileds in ATOM[i]_CH[x]_CTRL Added API IfxGtm_Atom_Agc_enableChannelTrigger() to support configuration of INT_TRIGx of the specific channel.
Enhancement	Missing APIs in iLLD to configure TIMCFG register for I2C Module	[2727] Added the IfxI2c_configureTiming API to configure the TIMCFG register for the I2C module.
Enhancement	APIs required for concatenated timer mode of GPT12.	[2728] Added APIs - IfxGpt12_T3_getOverflowToggleLatch(), IfxGpt12_T6_getOverflowToggleLatch(), IfxGpt12_T3_setOverflowToggleLatch(), IfxGpt12_T6_setOverflowToggleLatch() and IfxGpt12_T6_enableOutput()
Enhancement	Remove warnings when -Wdouble-promotion it is used	[2734] Removed warnings when -Wdouble-promotion it is used
Enhancement	Bitfields currently not supported in iLLD for EDSADC	[2569] Added API to configure signDelay and signPeriod elements Added support for OFFSET in IfxEdsadc_Edsadc_FirFilterConfig and updated IfxEdsadc_Edsadc_initChannelConfig API for the same
Enhancement	New API/Enhancement request for GTM TIM	[2563] Added TBU0_SEL bit field in IfxGtm_Tim_ChannelControl channel control structure. Included TBU0_SEL bit field in IfxGtm_Tim_Ch_setControl API. Added an API to configure CCM[i]_TIM_AUX_IN_SRC.SRC_CHz and CCM[i]_TIM_AUX_IN_SRC.SEL_OUT_N_CHz bit fields of Register CCM[i]_TIM_AUX_IN_SRCr

3.2 Issues fixed in release V1.19.2

Issue Type	Summary	Description
Bug	ASSW is not starting the multicore CPUs	[2641] ASSW was not starting the multicore CPUs as the macro IFXCPU_NUM_MODULES is not defined for the compilation, hence replaced IFXCPU_NUM_MODULES macro with device specific macro (eg.

		DEVICE_TC39XB,DEVICE_TC37X)

3.3 Issues fixed in release V1.19.1

Issue Type	Summary	Description
Enhancement	This is the patch release for A2G with the IfxLldVersion.h file update.	1. The IfxLldVersion.h file is updated as per the new release version format i.e. v1.19.1. 2. The release package is provided as installer file with full/custom installation options, please refer to the section 6 for installation and usage.

3.4 Issues fixed in release V1.19.0

Issue Type	Summary	Description
Enhancement	TC3xx ASSW: Add temporary label to support different compiler optimization in Ifx_Ssw_infiniteLoop	[2418] Temporary label is required to support different compiler optimization levels not to generate multiple definitions of the same standard label.
Enhancement	[ACS Support] GPT12 : API Required to get/read value from CAPREL register.	[2551] IfxGpt12_getCaptureReload API added to get captured reload value
Bug	TC3xx ASSW: Undefined reference to Ifx_Ssw_C_Init method leads to a compilation error	[2388] In case of individual C init, core 3 and above are calling Ifx_Ssw_C_Init instead of Ifx_Ssw_doCppInit.
Bug	TC3xx ASSW: IFX_CFG_SSW_ENABLE_INDIVIDUAL_C_INIT macro shall not be used to handle C Init in startup	[2405] Handling of C Init in case of individual elf should be done through linker labels instead of macros.
Bug	[IFX-240614-1358702] : iLLD TC32x 160 MHz target clock	[2417] Macros are added for configuring the PLL to 160MHZ.
Bug	ASCLIN-SPI [The data transfer is not behaving as expected when the Data Length as 16bits]	[2427] Bug in 16-bit wide data exchange in ASCLIN-SPI mode is fixed
Bug	[IFX-240730-1405121] iLLD 1.0.1.18 implicit enum type conversion warning	[2437] Fixed the compiler warnings for Hightec compiler related to implicit type conversions for GTM CMU FxClk to CMU Clk and IfxGtm_Tom to IfxGtm_Atom enum implicit conversions
Bug	[IFX-240726-1401981] Aurix BaseProjects TC3xx V1.0.1.18.0 linker script issue	[2438] __heap_start and __heap_end symbols are required for dynamic memory allocation by llvm 9.0.0 compiler.
Bug	Initialization of channel procedure steps are incorrect in EDSADC	[2443] 1. The init channel function must be changed where the functions are not called in a correct way as mentioned in UM (mandatory change required). 2. Also providing an API to the user as a get function of CAL bit status.

Bug	incorrect update enable mask for TOM channels greater than 7	[2495] In the api IfxGtm_Pwm_updateGlobalControlUnitData(), Fix is to correct the mask value by correcting the timer channel index which is passed in the mask computation
Bug	Incorrect code logic in disabling the SPE input signal for GTM	[2497] In IfxGtm_Spe_enableInput(), Fix is to correct the code logic where only selected input is disabled and other inputs are preserved
Bug	When setting multiple input patterns for GTM SPE module, previous set pattern is getting cleared.	[2498] Fix is to add an OR operator which preserves the previous pattern in other bits and append a new pattern for chosen bits
Bug	Bug in offset compensation module in EDSADC	[2500] The offsetCompensation field i.e is OCEN bit has been updated according to A2G TC3xx UM . That is OCEN = any integer between 1 and 7
Bug	TC3xx ASSW: Watchdog is resetting during execution of Ifx_Ssw_doCppInit iLLD in 1.0.1.18	[2550] Watchdog is getting reset in Ifx_Ssw_doCppInit function when huge chunks of data are to be initialized, needs to be handled correctly.
Bug	[IFX-240907-1445012] iLLD v1.18 IfxEvadc_BoundaryFlagNodePointer Defect	[2552] Updated the IfxEvadc_BoundaryFlagNodePointer_disableenum to 15. So that it will align with TC3xx UM
Bug	I2C iLLD Incorrect register setting for Slave configuration	[2554] In the I2C iLLD driver the API IfxI2c_configureAsSlave(Ifx_I2C *i2c) in file IfxI2c.c, the master not slave(MnS) bit in the address configuration register (ADDRCFG) is set as 1. However as per the user manual, this bitfield must be set as 0 for the device to be configured as a slave device
Bug	TC3x: EVADC: Data reduction mode is not configured by the init function	[2559] The EVADC channel init function was missing result handling functionality, despite being configured in the config channel function. The issue was resolved by updating the initialization of the result handling function in the EVADC channel init functions. Now, the result handling functionality is properly initialized when the application configures the data and calls the channel init function
Enhancement	Port CAN driver updates to A2G	[2337] 1. Remove unused enums from IfxCan_Status 2. Add API IfxCan_Node_getTxFifoFillLevel for reading TX.FQS.B.TFFL 3. Enhance Filtering for XIDAM feature 4. For Tx, in IfxCan_Can_sendMessage provide bypassSwTransmitRequest option to control bypassing BAR 5. Add API IfxCan_Node_getInterruptSignallingStatus for reading INTRSIG

		6. Make structure to read all the elements of TX Event FIFO 7. Make API for reading Tx Event Fifo
Enhancement	TC3xx Linker: Provide core-specific linker files required for individual elfs	[2355] Required individual linker files per core for all supported compilers for the following devices: TC38x, TC37x and TC36x
Enhancement	[ACS Support] Code Refactoring of CCU6- timer, ICU and TPWM modules	[2354] CCU6- Timer, TPWM and ICU optimization of API's 1. single line code to direct substitution in the caller function, 2. splitting of larger functions into smaller functions removing stdif dependencies
Enhancement	[ACS Support] Code refactoring of FCE module	[2359] 1. single line code to direct substitution in the caller function, 2. splitting of larger functions into smaller functions removing stdif dependencies
Enhancement	[TC39x][GETH][Analysis]: Init code refactoring of GETH	[2369] GETH driver refactored to meet requirements for ADS 2.0
Enhancement	[TC39x][GETH]: Code refactoring for GETH - Phase 2	[2399] GETH driver refactored to meet requirements for ADS 2.0
Enhancement	[TC39x][ASCLIN]: Code refactoring of ASCLIN-ASC, LIN, SPI	[2401] ASCLIN driver refactored to meet requirements for ADS 2.0
Enhancement	[TC39x][I2C]: Code refactoring of I2C	[2402] I2C driver refactored to meet requirements for ADS 2.0
Enhancement	[TC39x][QSPI]: Init code refactoring of QSPI Master	[2407] QSPI master code refactored to meet requirements for ADS 2.0
Enhancement	[TC39x][QSPI]: Init code refactoring of QSPI Slave	[2408] QSPI slave code refactored to meet requirements for ADS 2.0
Enhancement	TC3x SDMMC: Hard coded values to be removed and code to be optimized	[2422] SDMMC iLLD driver refactorized for ADS 2.0, code optimization and hardcoded values used are replaced with macro.
Enhancement	[TC3xx][QSPI] Demo Code update, TQ Optimization and new baudrate API	[2562] Value for TQ bit-field based on the maximum baud rate support is optimized. -New APIs introduced to enable application to set baud rates by setting the bit-fields directly. -Demo application code for QSPI updated to be independent of SpiIf layer.
Enhancement	Renaming the I2cDemo read and write API as per refactored code	[2588] New read2 and write2 api's are added in I2C, and older read and write apis are removed as part of refactoring, hence the demo is updated by renaming the read/write apis to read2/write2.
Enhancement	Remove the motor control SW specific types from Ifx_Types.h	[2103] Moved the application specific enum/struct defined in ifx_types.h to IP or common file.
Enhancement	TC3xx ASSW: Issue with CPUs sync-up because of not handling the C Init correctly	[2106] C Init function of Core 0 clears the variables initialized by other cores leading to sync issue, C Init should be moved to the correct startup phase.

Enhancement	[ACS Support] Code Refactoring of GTM ATOM timer, PWM-HL, PWM and DTM PWM HL modules	[2343] 1.single line code to direct substitution in the caller function, 2.splitting of larger functions into smaller functions 3. removing stdif dependencies
Enhancement	Create single source package iLLD for all the derivates of the generation	[2363] The code was maintained separately for the A2G devices in the repo, but now only the superset code is added and will be maintained for all A2G devices,
Enhancement	TC3xx MTU Nondestructive api update	[2382] The variable was declared and used in for loop which was causing build to fail in agentix. So variable initialization was moved outside the for loop.
Enhancement	ASCLIN baud rate does not change properly	[2426] ASCLIN module's baud rate algorithm updated to support lower baud rates
Enhancement	[ACS Support] New API requests for DMA for configuring registers	[2432] Following register configuration API's are implemented 1. MODEr – Resource Protection Mode Register, 2. ACCENr0 – Resource Protection Access Enable Register 0, 3. EERm.ELER – Enable DMA Linked List error
Enhancement	[ACS Support] Handling Unsigned Data in EDSADC Results	[2439] Comment update for RDM = 0/1 . Testing is done there is no code update .
Enhancement	[ACS Support] New API request for TOM	[2441] Following regstier configuration API's are implemented. 1. configuration for the following bitfields of TOM[i]_CH[x]_CTRL register SR0_TRIG ECLK_SRC TRIG_PULSE UDMODE OSM_TRIG EXT_TRIG EXTTRIGOUT SPE_TRIG FREEZE 2. support IfxGtm_Tom_Tgc_enableChannelTrigger to support configuration of INT_TRIGx of the specific channel similar to other API
Enhancement	[ACS Support] New API request for TBU	[2442] Following configurations in IfxGtm_TBU drivers are implemented API to configure the bitfields of TBU_CHx_CTRL registers API to disable the channel TBU_CHEN. ENDIS_CHx API to set the base register TBU_CHx_BASE/TBU_CH3_BASE_MARK register
Enhancement	[ACS Support] Auxiliary filter configuration paramters in iLLD for EDSADC	[2444] IfxEdsadc_Edsadc_initChannel code updated to support Auxiliary filter chain. IfxEdsadc_Edsadc_getAuxResult added to get

		auxiliary filter result.
Enhancement	[ACS Support] EDSADC API Required for controlling RFC register	[2448] For more flexibility in Edsasd : 1.Added an inline API to Flush FIFO 2.Added an API to provide current FILL level to the user 3.Added an API to clear error flags. (read and write)
Enhancement	[ACS Support] EDSADC Bitfields currently not supported in iLLD	[2449] For more flexibility in Edsadc : 1.Added support for APC bitfield and ensure the standard wakeup time is considered. 2. Added support for Overshoot compensation in Edsadc iLLD. 3. Added support for Limit checking in Edsadc iLLD 4. Added an API to provide the calibration status.
Enhancement	Grouping of input pattern bits together	[2499] Solution is to group three channel input signals x,y and z each of one bit into one 3 bit pattern which will enable the user to configure the input pattern through one variable alone.
Enhancement	[ACS Support] EDSADC : iLLD update for the GLOBCFG register	[2556] Updated the ILLD Edsdc driver code for GLOBCFG register to support for SVCH and SVSIG bits which can be used for supervising from EDSADC to EVADC
Enhancement	CAN API modularization	[2578] Initialisation APIs rewritten in a modular way
Enhancement	[TC2xx][TC3xx][ASCLIN]: The function IfxAsclin_setBitTiming() calculates incorrect clock divider settings	[2580] The algorithm to calculate clock divider is improved in function IfxAsclin_setBitTiming()

3.5 Issues fixed in release V1.0.1.18.0

Issue Type	Key	Summary
Enhancement	MCMETILLD-2283	[ISOLAR-57187]SAK_TC366DP_64F300S_AA - CCU6 iLLD discrepancy
Enhancement	MCMETILLD-2306	[ISOLAR-57914] SAK_TC397XP_256F300S_BD - LLVM intrinsics support in TC3xx iLLD
Enhancement	MCMETILLD-2238	[ISOLAR-54539] SAK_TC399XP_256F300S_BD - iLLD MTU MBIST PMEM Test Issue
Enhancement	MCMETILLD-2318	Installer for iLLD
Enhancement	MCMETILLD-2322	TC2x & TC3x PSI5: Provide bypass for GCR.CENx bit in initChannel and add api to enable channel
Enhancement	MCMETILLD-2324	CLONE - SD multi block read and write with SDMA missing change to SDMA buffer boundary
Enhancement	MCMETILLD-2330	TC2x & TC3x PSI5: Fix for unintended removal of channelTrigger config in GCR register
Enhancement	MCMETILLD-2333	TC3xx SFR migration to V2.0.0.0
Enhancement	MCMETILLD-2085	ASSW: Use of uninitialized global variable in CPU sync-event-wait mechanism, in slave cores

Enhancement	MCMETILLD-2281	FUPD bit is left enabled in the function IfxGtm_Tom_Pwm_init()
Bug	MCMETILLD-2138	TC33x : MTU gang configuration mismatch
Bug	MCMETILLD-2183	ASSW : The default value of PINDIS in BMI of boot mode headers should be disabled
Bug	MCMETILLD-2184	Different MCi_RANGE values between register and iLLD configuration
Bug	MCMETILLD-2308	EVADC: Defined synchronized groups in IfxEvadc_Adc_masterIndex are mismatching with user manual
Bug	MCMETILLD-2309	Bugs in the intrinsics - saturate functions
Bug	MCMETILLD-2314	[ISOLAR-59384] Wrong _START4 for Core 4
Bug	MCMETILLD-2315	IfxCpu_Trap_contextManagementError has rslcx instruction while the lower context is not saved.
Bug	MCMETILLD-2319	GPT12 Encoder Slow Speed related Issues
Bug	MCMETILLD-2320	[IFX-240103-1186094] iLLD function implementent error on HSPDM
Bug	MCMETILLD-2325	A2G RIF driver issues
Bug	MCMETILLD-2334	Fix gcc compiled elf flashing in ude
Bug	MCMETILLD-2335	GHS compiler: trap seen from cpp initialization
Enhancement	MCMETILLD-2055	Add compiler specific define to declare weak a function definition
Enhancement	MCMETILLD-2312	[ISOLAR-59477] Is system address calculated correctly for EMEM ETRR register in iLLD?
Enhancement	MCMETILLD-2246	Add Hightec Clang support for A2G iLLD
Enhancement	MCMETILLD-2326	Ifx__calculateCrcN is not implemented for different compilers
Enhancement	MCMETILLD-2348	Optimization needed in selecting the fixed clock Frequency for GTM CMU module

3.6 Issues fixed in release V1.0.1.17.0

Issue Type	Key	Summary
Bug	MCMETILLD-2307	Second incorrect initialization for I2C high speed mode needs to be removed
Bug	MCMETILLD-2297	iLLD Egtm PWM, IfxEgtm_Pwm_disableChannelsSyncUpdate defect
Bug	MCMETILLD-2298	iLLD Egtm PWM, startSyncedGroups function defect
Bug	MCMETILLD-2272	I2C : Repeated Start mode is not usable in iLLD
Bug	MCMETILLD-2273	EVADC result alignment issue
Bug	MCMETILLD-2277	EVADC Start-up calibration shall wait for 3us after enabling the converter
Bug	MCMETILLD-2279	EVADC: Init function sets the converter to normal even if it is turned off
Enhancement	MCMETILLD-2280	ASSW and Template Project needs to be updated to support C++ constructors and destructors

Bug	MCMETILLD-2282	IfxAsclin_Lin.c wrong initialization of variable flagsenable
Enhancement	MCMETILLD-2285	GTM PWM: Non consecutive (A)TOM channels in a PWM group
Enhancement	MCMETILLD-2286	0000061474-4474: Enhancements for SENT SPC
Bug	MCMETILLD-2292	IfxGtm_Tom_Ch_setCompareZeroShadow() stores 32-bit value into 16-bit register
Bug	MCMETILLD-2293	Fix gcc compiler warnings for I2C
Enhancement	MCMETILLD-2296	TC39x: Faulty enum typedef of LVDS pad control field in IfxRif.h
Enhancement	MCMETILLD-2299	Assw: Place the software_init_hook after C init
Bug	MCMETILLD-2304	PWM Interrupt Handler doesn't work in all the use cases
Enhancement	MCMETILLD-2310	Backport from A3G to A2G for legacy COM modules
Enhancement	MCMETILLD-1800	Improve reset identification of IfxScuRcu_evaluateReset function
Enhancement	MCMETILLD-2075	Mistakes within documentation
Enhancement	MCMETILLD-2240	[ISOLAR-55073] GCC support in iLLD
Enhancement	MCMETILLD-2229	[ISOLAR-51601] LBIST default configuration/signature are not updated for TC37x AA

3.7 Issues fixed in release V1.0.1.16.0

Issue Type	Key	Summary
Enhancement	MCMETILLD-2164	iLLD GETH demo not working with Tasking compiler
Bug	MCMETILLD-2225	[ISOLAR-50124] iLLD IfxFlash_loadPage2X32 Missing DSYNC
Enhancement	MCMETILLD-2233	[ISOLAR-53796] Can: Add API IfxCan_Node_setTxEventFifoAcknowledgeIndex and update API IfxCan_Can_readMessage for bufferNumber
Enhancement	MCMETILLD-2114	implicit conversion from 'float32' to 'double'
Bug	MCMETILLD-2221	TC38x: P40.0 is not selectable for EVADC PDD7MD
Enhancement	MCMETILLD-2057	Parameter documentation of IfxEdsadc_setCommonModeVoltage incomplete
Enhancement	MCMETILLD-2071	GETH_TC.002 Initialization of RGMII interface
Enhancement	MCMETILLD-2095	Remove 16MHz from IfxSCU.h
Bug	MCMETILLD-2105	SDMMC iLLD driver need longer wait time
Bug	MCMETILLD-2110	SDMMC: ADMA2 non functional
Enhancement	MCMETILLD-2111	SDMMC: Clear interrupt flags after initCard
Bug	MCMETILLD-2124	Enum IfxSdmmc_ErrorInterrupt misses one element
Enhancement	MCMETILLD-2125	Add ADMA2 transfer mode to IfxSdmmc_Emmc_readBlock()

Bug	MCMETILLD-2132	Wrong/invalid return value at some functions
Enhancement	MCMETILLD-2158	ScuCcu - Clock Driver Updates to add the program wait states for TC3xx
Enhancement	MCMETILLD-2178	[ISOLAR-44730] FlexRay - Encoding for additional CMD and POC state values
Bug	MCMETILLD-2182	[ISOLAR-44827] GTM ATOM PWM iLLD driver behaviour
Enhancement	MCMETILLD-2185	[ISOLAR-44734] Missing CAN Frame Modifiers implementation
Enhancement	MCMETILLD-2210	QSPI Delay Params, backport from TC4X
Enhancement	MCMETILLD-2211	Miss leading comment in iLLD (IfxGtm_Atom.h)
Enhancement	MCMETILLD-2215	[ISOLAR-46533] CAN Message RAM address not handled for CAN nodes other than Node0
Bug	MCMETILLD-2222	CAN - Wrong values passed to IfxCan_Node_setFastBitTimingValues and documentation update needed
Bug	MCMETILLD-2223	TC3xx, remove IFXGTM_DTM_AVAILABLE macro enable
Bug	MCMETILLD-2224	IFXGTM DTM: Wrong parameter type
Enhancement	MCMETILLD-2230	Reverse Port IfxGtm_Pwm driver from TC4x
Enhancement	MCMETILLD-2234	TC38EVOx : Compilation failure in SscuCCu
Bug	MCMETILLD-2235	EVADC: Configuration of BOUND registers not done
Bug	MCMETILLD-2237	(E)GTM PWM Update Duty/Phase Immediate would not work in corner cases
Enhancement	MCMETILLD-2094	Gtp12IncEnc is reversed by default
Enhancement	MCMETILLD-2170	[ISOLAR-41639] GTM TIM TDU Timeout - Enhancement Request
Enhancement	MCMETILLD-2242	Update read and write APIs. Read: Move IfxI2c_clearAllDtrInterruptSources after polling for the events in while loop. Write: Wait for event after FIFO write. Add while (!(i2c->RIS.U)).
Bug	MCMETILLD-2241	CAN: Incorrect register configuration for fast baud rate
Bug	MCMETILLD-1417	iLLD CCU6 driver `IfxCcu6_PwmBc_initModule()' bug report

3.8 Issues fixed in release V1.0.1.15.0

Issue Type	Key	Summary
Enhancement	MCMETILLD-2109	GETH: Give the possibility to users to configure GETH_DMA in OSF (operate in second frame) mode for better performance
Enhancement	MCMETILLD-2118	OSS compliance: Legal recommended header format missing in file AsclinShellInterface.h
Bug	MCMETILLD-2179	[ISOLAR-44727] FlexRay - Wrong default configuration for MacrotickInitialOffset value for channel B
Enhancement	MCMETILLD-2181	[ISOLAR-44736] CAN - Enhance "IfxCan_Can_readMessage" to update "messageIdLength"

Bug	MCMETILLD-2182	[ISOLAR-44827] GTM ATOM PWM iLLD driver behaviour
Bug	MCMETILLD-2187	[ISOLAR-45218] QSPI driver issues in the ILLD
Bug	MCMETILLD-2193	[ISOLAR-46313] Reserved bits of RSTSTAT in IfxScuRcu_Trigger
Bug	MCMETILLD-2196	[ISOLAR-46807] Usage of 8-bit arguments for 7-bit address ranges in IfxMtu_runNonDestructiveInversionTest
Bug	MCMETILLD-2197	[ISOLAR-46818] IfxScuWdt_initSafetyWatchdog CLRIRF Logic Inverted
Bug	MCMETILLD-2209	FCE: A wait of minimum 2 clock cycles are needed after the input is written into IR register
Enhancement	MCMETILLD-2212	[ISOLAR-48178] TC3xx iLLD CAN: Enhance IfxCan_Can_initNodeConfig API for module ram base address

3.9 Issues fixed in release V1.0.1.14.0

Issue Type	Key	Summary
Enhancement	MCMETILLD-2177	[ISOLAR-44140] CCU6: Bug in calculation of prescaller
Bug	MCMETILLD-2172	[ISOLAR-42223] GTM CMU Fixed Clock Frequency Calculation
Bug	MCMETILLD-2171	[ISOLAR-42337] GTM (A)TOM Force Update Issue
Bug	MCMETILLD-2169	[ISOLAR-41931] Bug in CRC32 tasking ILLD implementation
Bug	MCMETILLD-2166	IfxIom_getFrequency function returns double the IOM frequency
Bug	MCMETILLD-2157	Compilation Errors when Assert initialization
Enhancement	MCMETILLD-2151	Wrong implementation of "IfxEray_setNewDataInterruptDestination" in ERAY driver
Enhancement	MCMETILLD-2146	I2C : Repeated Start mode is not supported in iLLD
Enhancement	MCMETILLD-2139	GTM : ILLD does not support all the TIM modes
Bug	MCMETILLD-2093	IfxCcu6_TimerWithTrigger_updateInputFrequency() function does not take into consideration the TCTR0.B.T12PRE bit for calculating the prescaler value

3.10 Issues fixed in release V1.0.1.13.0

Issue Type	Key	Summary
Bug	MCMETILLD-2083	Wrong/invalid return value at some functions
Bug	MCMETILLD-2123	IFXFLASH_DFLASH_END is wrong
Bug	MCMETILLD-2056	Code without effect must be removed
Bug	MCMETILLD-2058	EDSADC modulator clock default frequency should be 16MHz
Bug	MCMETILLD-2131	[ISOLAR-27508] an issue on configuring CFARCTRL and CFARCFG in IfxSpu.c in iLLD
Enchancement	MCMETILLD-2150	BOOST license header is missing for IfxGeth.c and IfxGeth.h
Bug	MCMETILLD-2148	AxG: CSA: Possible dereference through NULL pointer in iLLD start-up code

Bug	MCMETILLD-2147	I2C read wrong flags are checked
Bug	MCMETILLD-2144	A2G: Wrong comment with Ssw_CompilerXXX.h
Bug	MCMETILLD-2141	BaseFramework for TC37A to be created
Enchancement	MCMETILLD-2126	AURIX as LIN slave report FE and LA error on 1st received Header
Bug	MCMETILLD-2112	Standby alarms are not cleared before starting MONBIST
Bug	MCMETILLD-2102	EMEM Demo: Endinit is not being cleared before writing into CLC registers to enable clock
Bug	MCMETILLD-2079	IOM cfg files exists for TC33xAED but the IP is not present
Bug	MCMETILLD-2063	Wrong stad in all Ifx_Cfg_SswBmhd files of iLLD demos
Bug	MCMETILLD-2155	Incorrect size of the ERAY configuration parameters

3.11 Issues fixed in release V1.0.1.12.0

Issue Type	Key	Summary
Bug	MCMETILLD-2122	DummyBuffer in QSPI not aligned for DMA?
Bug	MCMETILLD-2117	Possible Issues in iLLD EVADC Driver
Bug	MCMETILLD-2116	IfxLldVersion.h does not have header information (copyright and license)
Bug	MCMETILLD-2101	Intrinsic function getA11 does not comply with EABI manual
Bug	MCMETILLD-2098	Wrong derivative for TC3E/TC38EVO
Bug	MCMETILLD-2092	Intrinsics: Outdated implementation of CRC32-related functions
Bug	MCMETILLD-2082	License change without notice
Bug	MCMETILLD-2081	Possible error in IfxGtm_Tom_Timer_updateInputFrequency.
Enhancement	MCMETILLD-2076	Headers to be added and adjusted in terms of consistency
Enhancement	MCMETILLD-2074	Improvement in macro definition for IFX_INLINE
Bug	MCMETILLD-2073	Incomplete asm instruction name
Bug	MCMETILLD-2054	RSM1.RAMPS bitfield width not matching to configuration
Bug	MCMETILLD-2036	Infinite while loop due to cleared TXEND flag
Bug	MCMETILLD-1528	I2C must support high speed mode
Bug	MCMETILLD-2134	Wrong value for GLOBALCON.RESETS bitfield in QSPI driver
Bug	MCMETILLD-2091	Intrinsics: Incorrect implementation of POPCNT
Bug	MCMETILLD-2099	A1G: A2G: IfxStm_enableOcdsSuspend traps when the debugger is removed
Enhancement	MCMETILLD-2087	IfxI2c_I2c_write in IfxI2c_I2c.c iLLD is sending the address twice
Bug	MCMETILLD-2089	IfxGtm_Atom_Ch does not have getters for SR0SR1

New Feature	MCMETILLD-2107	GTM DTM update
Bug	MCMETILLD-2069	License issue with Platform_Types.h
New Feature	MCMETILLD-2096	GETH: Add function to write and read to GETH.MAC_VLAN_INCL for the different queues
Improvement	MCMETILLD-2068	GTM PWM frequency output wrong
Enhancement	MCMETILLD-2121	Flash Driver Example iLLD, Improvement
Enhancement	MCMETILLD-2108	Update the SFRs in iLLD with the latest SFRs
Enhancement	MCMETILLD-2100	Move SysSe folder out of the iLLD package
Task	MCMETILLD-2059	Update license text
ChangeRequest	0000049035-106	[ISOLAR-12903] ADC configuration regarding noise reduction

3.12 Issues fixed in release V1.0.1.11.0

Issue Type	Key	Summary
Bug	MCMETILLD-2037	Assignment of overlayAddressMask to wrong bitfield
Enhancement	MCMETILLD-2023	Add getCodeFromDataLength(), getDataLengthFromCode()
Bug	MCMETILLD-2022	IfxCan_Node_getDataLengthFromCode() should return result in byte not in words
Bug	MCMETILLD-2014	The wait of 5ms after configuring the Oscillator should be removed
Enhancement	MCMETILLD-1999	HighTec Tricore GCC 4.9.3 compilation warnings
Bug	MCMETILLD-1986	IfxGtm_Trig_toEdsadc generate a wrong adress
Bug	MCMETILLD-1980	[TC38x]: GTM SSH index doesn't match ITS
Enhancement	MCMETILLD-1971	Check if DMA channel 0 as a service provider is being accidentally made unaccessible.
Enhancement	MCMETILLD-1969	Wrong location for define ENDL
Enhancement	MCMETILLD-1964	Potential paranthesis issue in i2c driver
Enhancement	MCMETILLD-1963	Deviations in PinOut Compatibility TC33 - TC35
Enhancement	MCMETILLD-1962	SPI default values in half-duplex mode cause error in MMIC communication
Bug	MCMETILLD-1961	TIM getDutyPercent does not return DutyPercent
Enhancement	MCMETILLD-1957	New SPU APIs
Bug	MCMETILLD-1948	The MDIO pin is always tied to out mode
Bug	MCMETILLD-1907	IfxQspi_SpiMaster_write() may lead to TX FIFO overflow
Bug	MCMETILLD-1906	IfxQspi_SpiMaster_write(): The interrupt disable could be reduced
Enhancement	MCMETILLD-1587	MCAL Integration Issue - Presence of Platform_Types.h
Enhancement	MCMETILLD-615	ASCLIN: LIN interrups

Bug	MCMETILLD-1959	IfxRif_setChirpLength ignored on external ADC use case

3.13 Issues fixed in release V1.0.1.10.0

Issue Type	Key	Summary
Enhancement	MCMETILLD-1934	Multiblock read/write for EMMC card
Bug	MCMETILLD-1932	[GETH] Wrong pin used in MDIO configuration
Bug	MCMETILLD-1926	IfxEth_cfg.h should be removed for A2G devices
Bug	MCMETILLD-1925	QSPI: Handle does not have max Baud Rate value - leading to ASSERT
Bug	MCMETILLD-1912	SMU command APIs shall return a boolean that indicates if a command execution was successful or not
Bug	MCMETILLD-1909	IfxSmu_unlockConfigRegisters() will fail to update the KEY register if the scu is locked
Enhancement	MCMETILLD-1903	TC37xED: Port 20.2 in Pinmap should be declared as NULL PTR
Enhancement	MCMETILLD-1902	possible compiler switch inconsistency
Enhancement	MCMETILLD-1899	Not resolveable compiler warnings visible in release note sheet
Enhancement	MCMETILLD-1888	Explicit definition of SPU IfxSpu_TriggerMode Enum
Enhancement	MCMETILLD-1873	MCAL Integration Issue - Redefinition of macros
Enhancement	MCMETILLD-1871	Definition of IfxEmem_TileConfigMode_commonMemoryMode missing for TC35A
Enhancement	MCMETILLD-1868	A delay of “NOP (50)” before standby entry.
Enhancement	MCMETILLD-1863	SPU extra functions
Enhancement	MCMETILLD-1858	Rework QSPI coefficients calculation in IfxQspi_calculateExtendedConfigurationValue()
Enhancement	MCMETILLD-1855	Removal of SSH which are not exposed to the customer in IfxMtu_cfg.h
Enhancement	MCMETILLD-1827	SCU clock demo : Remove GTM reference as it's not available for TC35x
Enhancement	MCMETILLD-1826	Port cfg cleanup and Port pinmap update to include pins which have only GPIO functionality for TC35x,TC37x and TC37xED
Bug	MCMETILLD-1823	The EDSADC Group delay calculation is wrong
Bug	MCMETILLD-1821	IfxEdsadc_Dsp_In.channel and others should be of type IfxEdsadc_ChannelId
Enhancement	MCMETILLD-1819	FIFO is not handled properly
Bug	MCMETILLD-1811	IfxGtm_Tim_In_init() does not initalise IfxGtm_Tim_In correctly
Bug	MCMETILLD-1810	Unsupported SPU enums in TC39x A-step
Enhancement	MCMETILLD-1803	Inconsistency naming convention in IfxMtu_cfg.h
Enhancement	MCMETILLD-1802	HSSL: need the following STD layer APIs
Enhancement	MCMETILLD-1790	An array should be used for IfxEvadc_Adc_ArbiterConfig.requestSlotQueueEnabled instead of single

		members
Bug	MCMETILLD-1789	IfxEvadc_initializeFAdcD() does not initialize EVADC clocks
Bug	MCMETILLD-1788	Unused IfxEvadc_Adc_Config moduleFrequency member
Bug	MCMETILLD-1787	EVADC startup calibration shall not be done by the IfxEvadc_Adc_initGroup() nor IfxEvadc_Adc_initGroup()
Bug	MCMETILLD-1786	IfxEvadc_Adc_initChannelConfig is not initializing all config members
Bug	MCMETILLD-1785	IfxEvadc_Adc_initGroupConfig is not initializing all config members
Bug	MCMETILLD-1782	IfxEvadc_Adc_initModuleConfig() is not initializing all config member
Enhancement	MCMETILLD-1778	Add Replace Logic Sector command sequence to IfxFlash iLLD
Bug	MCMETILLD-1777	Ethernet driver not usable with MII
Enhancement	MCMETILLD-1776	SPU iLLD - Full CTRL support
Enhancement	MCMETILLD-1775	SPU iLLD - Change in chan5offst addressing configuration
Enhancement	MCMETILLD-1774	SPU iLLD - Full PACTR support
Enhancement	MCMETILLD-1772	Remove redundant eraseCount command from Flash iLLD driver
Enhancement	MCMETILLD-1730	wrong value of IFXSENT_CFG_CHANNEL_INTEN
Enhancement	MCMETILLD-1726	TC35x: Few Port pins definitions are not available
Bug	MCMETILLD-1703	[CAN] IfxCan_Node_getDataLengthFromCode() shall not take Ifx_CAN_N as parameter
Enhancement	MCMETILLD-1702	iLLD configuration
Enhancement	MCMETILLD-1670	TC3xx CAN: interrupt support (+ demo with interrupts)
Enhancement	MCMETILLD-1666	Demo: spi connected to an external chip
Enhancement	MCMETILLD-1663	Demo: Can filter with wakeup mechanism
Enhancement	MCMETILLD-1573	A2G: Add function for updating frequency by CCUCON0.LPDIV
Enhancement	MCMETILLD-1570	Add wait time to IfxMtu_enableMbistShell
Enhancement	MCMETILLD-1541	Add support for Ethernet MII-lite pining
Enhancement	MCMETILLD-1535	[HSSL] AP-0x20000300 iLLD_1_0_1_2_0 TC389QP-A HSCT 10MHz REFCLK support
Enhancement	MCMETILLD-1479	SENT: add apis to read RSR CST,SCN,CRC and timestamp, spc mode (pulseLength, delay)
Enhancement	MCMETILLD-1457	P20.2 not available in TC35x Port PinMap.Confirm CBS and DMU pins exposure
Bug	MCMETILLD-1393	AP-v1.6 iLLD_1_0_1_2_0 TC3xx decentralized handling of pin IO_CONFIG
Bug	MCMETILLD-1321	HW workaround for "Double initialization of PLL fail"
Enhancement	MCMETILLD-1181	pointer to MDC and MDIO pins is missing in MiiPins structure
Enhancement	MCMETILLD-966	HSSL: HSCT Slave demo and documentation

Enhancement	MCMETILLD-581	I2C: problem with Windriver 5.9.2 compiler/optimisation

3.14 Issues fixed in release V1.0.1.9.0

Issue Type	Key	Summary
Enhancement	MCMETILLD-1827	SCU clock demo : Remove GTM reference as it's not available for TC35x
Enhancement	MCMETILLD-1820	Lockstep enable config inconsistet with existing lockstep cores across derivatives
Bug	MCMETILLD-1818	[HSSL] IfxHssl_Hssl_waitAcknowledge() does not detect Connection Timeout error
Enhancement	MCMETILLD-1798	Spu statistical output structure size should be aligned to EMEM bus size
Enhancement	MCMETILLD-1797	[GETH] Providing GETH Demo
Enhancement	MCMETILLD-1796	Additional functions for SPU ILLD
Bug	MCMETILLD-1795	Issue with IfxSpu_setupCfar()
Bug	MCMETILLD-1792	Gtm Sfr: DSADCINSEL5 missing in TC38x
Enhancement	MCMETILLD-1784	TC37xED: Update the MTU gang configuration
Bug	MCMETILLD-1783	iLLD TC39xA: Incorrect Definition of CPU_SMACON address
Enhancement	MCMETILLD-1780	[IfxScuCcu] Default setting function does not fill all fields
Bug	MCMETILLD-1779	iLLD TC38xA: Wrong bitfield definition in Ifx_PFI_ECCR_Bits
Enhancement	MCMETILLD-1770	TC35x: Update the MTU gang configuration
Enhancement	MCMETILLD-1758	IfxHssl_Hssl_waitAcknowledge does not work as described
Bug	MCMETILLD-1753	incorrect use of __asm keyword in IfxCpu_IntrinsicsTasking.h
Enhancement	MCMETILLD-1752	C++ support: __asm is not supported by TASKING C++ compiler
Enhancement	MCMETILLD-1751	C++ support: Tasking g++ option for C++ is not supported
Bug	MCMETILLD-1749	Enabling the ccu6 module also affects the sleep behaviour
Enhancement	MCMETILLD-1748	Improve QSPI coefficients calculation in IfxQspi_calculateExtendedConfigurationValue()
Enhancement	MCMETILLD-1739	Missing APIs to queue packets failing unicast, multicast and VLAN filters
Bug	MCMETILLD-1732	IfxCcu6_enableAdditionalPrescaler don't enable Additional Prescaler
Bug	MCMETILLD-1731	Missing bit field in receive context descriptor
Enhancement	MCMETILLD-1719	Update iLLD registers to latest baseline UM for all devices for A2G
Enhancement	MCMETILLD-1713	Wrong Data type in IfxAsclin_Asc_isrReceive function
Bug	MCMETILLD-1710	IFXSDMMC_ARG_MMCCMD1 macro value should be 0x40FF8080U to indicate the card that the host is able to do perform sector addressing needed for cards higher than 2GB of densities
Bug	MCMETILLD-1700	[CAN] SWJ init value can't be set (SJW is overwritten in iLLD)

Bug	MCMETILLD-1687	IfxGtm_Trig_toEdsadc generate wrong register adress
Bug	MCMETILLD-1683	TC39A SFR: SPU service request INT and ERR addresses are swapped
Bug	MCMETILLD-1679	IfxGtm_Trig_toCan() applies uninitialized bitmask to register
Enhancement	MCMETILLD-1675	[GETH]Add missing API to GETH to assign VLAN priorities to queue
Enhancement	MCMETILLD-1668	CCU6: ICU iLLD resolution enhancement to 16-bit
Bug	MCMETILLD-1658	[HSSL]HSCT initialization option highspeed is not usable
Bug	MCMETILLD-1650	[HSSL]HsslStreamingDemo can be executed only one time without failure.
Bug	MCMETILLD-1649	[HSSL]IfxHssl_Hssl_prepareStream can onlybe called once
Enhancement	MCMETILLD-1637	Provide function to check if GTM_TBU_CHEN is already enabled
Bug	MCMETILLD-1635	The QSPI Error interrupt is not initialized when DMA is used
Bug	MCMETILLD-1604	IfxAsclin_Asc_write() hangs up if count > fifo size
Enhancement	MCMETILLD-1593	Add compiler memory barrier to instrinsics
Bug	MCMETILLD-1591	TC37xED: IfxGeth_Eth_*DescrList conflicting if two GETH modules are used in parallel
Enhancement	MCMETILLD-1586	MCAL Integration Issue - Redefinition of NOP()
Enhancement	MCMETILLD-1566	align __crc32(uint32 b, uint32 a) with the definition of the MCAL
Enhancement	MCMETILLD-1562	IfxAsclin_write: usage of const in front of pointer void *data.
Enhancement	MCMETILLD-1269	Make intrinsic independent from compiler vendors

3.15 Issues fixed in release V1.0.1.8.0

Issue Type	Key	Summary
Bug	MCMETILLD-1740	[GETH] The buffer length recieved in the last segment of Ethernet packet on the Rx Side is incorrect..
Bug	MCMETILLD-1745	[ASCLIN] __swap() instrinsic function call causes trap for Tasking compiler
Bug	MCMETILLD-1723	[GETH] IfxGeth_Eth_sendTransmitBuffer function does not clear the IOC, FD and LD bits in the descriptor
Enhancement	MCMETILLD-1722	Implicit declaration of function IfxScuCcu_getMscFrequency
Bug	MCMETILLD-1714	Wrong return address when using function Ifx_P *IfxPort_getAddress(IfxPort_Index port)
Bug	MCMETILLD-1706	Compilation Error releated to iLLD TC39A IfxGtm_Psm.c
Enhancement	MCMETILLD-1704	Ifx_Reg.h of TC35x and TC37ED seems outdated
Enhancement	MCMETILLD-1705	Removal of TIN from GTM pin names in GTM pinmap files
Bug	MCMETILLD-1696	Various bugs in latest IfxGeth changes
Enhancement	MCMETILLD-1697	IOcard; Timeout for setVoltage to be improved
Enhancement	MCMETILLD-1691	Dma Demo: DmaSafeLinkedListDemo Compilation errors

Bug	MCMETILLD-1686	Precautionary check added to IfxSpu_setupBinRejection() does not work
Enhancement	MCMETILLD-1685	SD Initialization : Keep 400KHz Frequency during card identification phase
Bug	MCMETILLD-1684	SDMMC clock configuration: Bug fixes for robustness
Enhancement	MCMETILLD-1681	enhance IfxCpu_Intrinsics*.h by implementing fract to sfract, and float to sfract conversion
Enhancement	MCMETILLD-1678	Compiler warning in /iLLD/TC39x/Tricore/Pms/Std/IfxPmsPm.c due to unused variable
Bug	MCMETILLD-1673	TC35x: HSPDM driver and Support files not available
Enhancement	MCMETILLD-1672	CAN: provide access layer functions to all PSR bitfields
Enhancement	MCMETILLD-1660	[HSSL]No way to send/receive USM messages on HSCT
Bug	MCMETILLD-1657	[HSSL]Functions to clear interrupt flags do not work
Enhancement	MCMETILLD-1652	LDR registers are cleared instead of reading which filling the bitfields
Enhancement	MCMETILLD-1648	[HSSL]Timeout is not set within IfxHssl_Hssl_writeStream
Bug	MCMETILLD-1646	GETH IfxGeth_Eth_sendTransmitBuffer not working if packetlength greater than bufferlength
Bug	MCMETILLD-1644	Timeout for setVoltage is not working
Bug	MCMETILLD-1642	SDMMC CMD2 is mandatory for non IO
Enhancement	MCMETILLD-1632	Dma Demo: Data alignment issue with Tasking compiler
Bug	MCMETILLD-1629	IfxSdmmc_Emmc_initCard() missing GOIDLE command
Bug	MCMETILLD-1628	IfxSdmmc_Emmc_initCard() initialization delay should be calculated according to fSDCLK
Bug	MCMETILLD-1627	IfxSdmmc_Sd_initCard() initialization delay should be calculated according to fSDCLK
Bug	MCMETILLD-1622	[GETH] Buffer size of Rx descriptor is incorrect
Enhancement	MCMETILLD-1608	SMU driver updates
Enhancement	MCMETILLD-1528	I2C must support high speed mode
Enhancement	MCMETILLD-1450	GETH : API to support Giant Frames

3.16 Issues fixed in release V1.0.1.7.0

Issue Type	Key	Summary
Enhancement	MCMETILLD-1641	CRC32 intrinsic to be added for DCC
Bug	MCMETILLD-1633	TC39xB and TC35x : Wrong Lbist configuration in SCU cfg
Enhancement	MCMETILLD-1617	iLLD_1_0_1_6_0 :: Incorect value assigned to the define-IFXMTU_NUM_MBIST_TABLE_ITEMS - in IfxMtu_cfg.h file for TC37xPD derivative
Bug	MCMETILLD-1614	Change ghs section for function _START
Bug	MCMETILLD-1611	TC37xED: SDIO block size setting issue

Enhancement	MCMETILLD-1610	cstart: reserving 2 CSAs beyond LCX
Enhancement	MCMETILLD-1600	PCSR for P33 and P34 not configurable
Enhancement	MCMETILLD-1594	Wrong Global definitions for TC35x and TC37x (IfxGlobal_cfg.h)
Enhancement	MCMETILLD-1585	Defined more as one FIFO Elememt (GTM_FIFO) for TC37x into IfxGtm_reg.h
Bug	MCMETILLD-1569	Value for IFXSCUCCU_OSCCON_PLLLV_OR_HV_TIMEOUT_COUNT in TC3XX to high
Enhancement	MCMETILLD-1567	[Pms] remove SYSPLLCON0.INSEL switching to back-up clock before standby entry
Bug	MCMETILLD-1588	Lin: issue with setDataLength api
Bug	MCMETILLD-1354	GPT12 encoder driver `IfxGpt12_IncrEnc.c' bug report
Bug	MCMETILLD-1616	wrong code in IfxCan.c (iLLD_1_0_1_3_0)
Bug	MCMETILLD-1621	Intrinsic function for __cmpAndSwap with DCC not working
Bug	MCMETILLD-1615	Problem with _ldmst intrinsic for Greenhills
Bug	MCMETILLD-1626	IfxSdmmc_configureClock() calculated divider is wrong
Bug	MCMETILLD-1623	IfxSdmmc_configureClock produces wrong freq on clock out pins
Bug	MCMETILLD-1618	Bug in iLLD 1_0_1_5_0: Funktion IfxGeth_Phy_Clause22_writeMDIORegister() und IfxGeth_Phy_Clause45_writeMDIORegister()
Bug	MCMETILLD-1630	IFXSDMMC_CARD_R6STATUS_ERROR_CHECK_MSK wrong value
Bug	MCMETILLD-1651	TC3xx: IfxCpu_getPerformanceCounter API gives compilation error
Bug	MCMETILLD-1612	cast integer to union must be avoided
Bug	MCMETILLD-1607	TC38x and TC39xB : GTM ATOM CH registers are not of Strict32 type

3.17 Issues fixed in release V1.0.1.6.0

Issue Type	Key	Summary
Bug	MCMETILLD-1602	GTM ATOM: offsetof() not declared when building using GHS compiler
Enhancement	MCMETILLD-1595	TC37xED : SDIO MULTIBLOCK with SDMA
Enhancement	MCMETILLD-1579	TC35x : Evadc doesnt contain secondary groups and the recent SFRs do not have certain SFRs, hence driver needs to be adapted accordingly
Bug	MCMETILLD-1575	Issues with IfxSpu_setupInput()
Bug	MCMETILLD-1574	Bug in IfxSpu_getConfigSlot() when (spu == &MODULE_SPU1) and (slotNr == 0)
Enhancement	MCMETILLD-1572	TC37xED Geth iLLD need update for SRC_GETH1
Enhancement	MCMETILLD-1568	PMS EVR APIs to take arguments in mV
Enhancement	MCMETILLD-1563	TC37xED Geth iLLD need update for second instance of Gethermac
Enhancement	MCMETILLD-1558	TC37x:SDIO DMA support
Enhancement	MCMETILLD-1557	Support for Green-hills compiler setup and testing

Enhancement	MCMETILLD-1556	Eray: size mismatch between register's bit field length and data type of parameter in APIs
Bug	MCMETILLD-1551	Issue with IfxGeth_Phy_Clause22_writeMDIORegister(),IfxGeth_Phy_Clause45_writeMDIORegister()
Bug	MCMETILLD-1550	TC37xED : IfxCan_Index_2 missing
Enhancement	MCMETILLD-1547	Incomplete list of TIM input pins in IfxGtm_PinMap.c
Enhancement	MCMETILLD-1546	ERAY : IfxEray_readFrame() reads a reserved bit field
Enhancement	MCMETILLD-1545	DSADC documentation mentions usage of IfxDsadc_Rdc_init() before IfxDsadc_Rdc_initConfig()
Bug	MCMETILLD-1544	MSC Issues regading BaudRate calculation APIs and ABRA status flags
Bug	MCMETILLD-1543	Compile error in IfxFlash_cfg.c
Enhancement	MCMETILLD-1538	HSPDM Pinmap compliance with convention
Enhancement	MCMETILLD-1537	Documentation update- EndInit protection for EMEM.CLC
Bug	MCMETILLD-1505	Unexpected behavior of IfxSpu_setupBinRejection
Bug	MCMETILLD-1504	switching clocksel<xyz> without following the specified sequence
Enhancement	MCMETILLD-1480	TC37x: SDMMC support for SDIO
Enhancement	MCMETILLD-1358	New ILLD functions for PMS/EVR module
Enhancement	MCMETILLD-1216	replace the IfxCpu_getCoreIndex in the demo code
Bug	MCMETILLD-1553	TC3XX: IfxScuRcu_evaluateReset cannot detect cold poweron reset
Enhancement	MCMETILLD-1592	CLONE - Update Ifx_Ssw_Monbist
Bug	MCMETILLD-1599	IfxCpu: emitEvent api need update

3.18 Issues fixed in release V1.0.1.5.0

Issue Type	Key	Summary
Enhancement	MCMETILLD-1516	OSCCON.MODE hardcoded for crystal, but should be switchable
Enhancement	MCMETILLD-1513	Add define for IFXEMEM_BUS_SIZE
Enhancement	MCMETILLD-1499	IfxScuCcu_getMcanFrequency does not return correct MCAN frequency in all cases
Enhancement	MCMETILLD-1495	IfxScuCcu_getPerPllFrequency1() function returns divide by 2 frequency
Enhancement	MCMETILLD-1492	Provide facility to configure WUT in PMS
Enhancement	MCMETILLD-1482	Clarify missing SPU iLLD fields
Enhancement	MCMETILLD-1471	Context descriptor for transmit and receive required
Enhancement	MCMETILLD-1464	TC3xx: Update the EVR default config sequence based on the latest TS
Enhancement	MCMETILLD-1461	With PMS standby ILLD, standby entry is not hapenning.
Enhancement	MCMETILLD-1449	GETH : API To support Normal Transmit / Receive descriptor write-back format

Enhancement	MCMETILLD-1448	GETH : Increase the IfxGeth_QueueSize size as per RQS and TQS definitions in ITS
Enhancement	MCMETILLD-1444	Ifx_Types.h misses 16bit complex data type
Bug	MCMETILLD-1443	SPU config slot definition (IfxSpu_ConfigSlot) should be aligned to 128x32-bit register
Enhancement	MCMETILLD-1442	Update the Ifx_Typesreg.h file with the comments regarding access possibilities for memories
Bug	MCMETILLD-1439	SPU config slot for SPU1 missing / config slot settings incomplete
Enhancement	MCMETILLD-1437	TC39xA : In IfxMtu_clearSramContinue() disable dummy read only for DSPR0
Enhancement	MCMETILLD-1425	Geth:MTL_RXQ_DMA_MAP0 is over written each time a queue is mapped to a particular DMA channel
Enhancement	MCMETILLD-1411	SDMMC: API's to support different Speed & data line selection in eMMC mode
Enhancement	MCMETILLD-1408	Spu: REGCRC calculation API of SPU iLLD TC39x B-step.
Bug	MCMETILLD-1386	IfxSpu_setupSummation needs update and new function for log2 setup is needed.
Bug	MCMETILLD-1385	IfxSpu_setupPowerChannel shouldn't clear the PWRCTRL register.
Bug	MCMETILLD-1384	IfxSpu_setupLocalMax should consider bit LJUST
Bug	MCMETILLD-1383	Unexpected line in IfxSpu_setupFftOutput
Bug	MCMETILLD-1382	IfxSpu_setupCfarGOS contains unexpected statement.
Enhancement	MCMETILLD-1381	SPU driver should be able also to configure CASH CFAR mode.
Enhancement	MCMETILLD-1380	New IfxSpu_setupCfar proposal
Enhancement	MCMETILLD-1379	IfxSpu_setupBinRejection should consider CFARSEL and LJUST bitfield
Enhancement	MCMETILLD-1376	SPU LLD: additional check for IFFT configuration
Enhancement	MCMETILLD-1375	SPU LLD: Using enumeration for histogram bins (classes)
Enhancement	MCMETILLD-1355	IfxScuCcu driver has a rounding problem
Bug	MCMETILLD-1283	All: CPU: Incorrect documentation for Trap usage
Enhancement	MCMETILLD-1274	Spu:Support selection of clkDiv individually for each configuration
Bug	MCMETILLD-1459	SDMMC: Delay in the IfxSdmmc_Sd_setVoltageWindow(..) is not sufficient enough. To be increased.
Bug	MCMETILLD-1407	Missing SCU_CCUCON5 definition in iLLD_1_0_1_2_0
Bug	MCMETILLD-1522	IfxScuLbist_evaluateResult returns inversed result
Enhancement	MCMETILLD-1207	IfxFlash: provide function which waits for any busy flag
Bug	MCMETILLD-1438	RIF Fifo reconfiguration is inconsistent
Bug	MCMETILLD-1452	IfxSbcu_reg.h contains definitions of EBCU as well which is incorrect
Bug	MCMETILLD-1490	The calibration Function should not iterate through unsed groups
Enhancement	MCMETILLD-1517	Add support for Load Jump sequence for PMS

3.19 Issues fixed in release V1.0.1.4.0

Issue Type	Key	Summary
Enhancement	MCMETILLD-1464	TC3xx: Update the EVR default config sequence based on the latest TS
Enhancement	MCMETILLD-1446	IfxGtm_Cmu_getModuleFrequency() + IfxGtm_getClusterFrequency()
Enhancement	MCMETILLD-1442	Update the Ifx_Typesreg.h file with the comments regarding access possibilities for memories
Enhancement	MCMETILLD-1437	TC39xA : In IfxMtu_clearSramContinue() disable dummy read only for DSPR0
Enhancement	MCMETILLD-1426	Move UP bit write only to CCUCON5.
Enhancement	MCMETILLD-1378	IfxSpu_loadConfigRAM should support SPU1
Enhancement	MCMETILLD-1377	IfxSpu_getConfigSlot should support SPU1.
Enhancement	MCMETILLD-1355	IfxScuCcu driver has a rounding problem
Enhancement	MCMETILLD-1274	Spu:Support selection of clkDiv individually for each configuration
Enhancement	MCMETILLD-1133	TC39xB : Documentation/Doxygen information for FCE in IfxFce_Crc.h needs to be update
Bug	MCMETILLD-1356	AURIX iLLD for module clock configuration
Bug	MCMETILLD-1463	GTM: Fix bugs found during application pattern integration

3.20 Issues fixed in release V1.0.1.3.0

Issue Type	Key	Summary
Bug	MCMETILLD-1405	TC39x A-step Port regdef file wrong PDR0 bit-field definitions
Enhancement	MCMETILLD-1404	Aurix2G Startup: For TC38x to enable LBIST execution along with LBISTREQ bit LBISTREQRD bit has to be set
Bug	MCMETILLD-1400	Asclin ASC/UART: Not able to set baudrates below 13000
Enhancement	MCMETILLD-1392	PHY configuration write, read APIs is required.
Bug	MCMETILLD-1391	In API IfxGeth_Eth_sendTransmitBuffer, the bit TDES3.R.CIC_TPL must be set to 0x3
Bug	MCMETILLD-1390	GETH GPCTL.B.ALTI0 for MDIO functionality is wrong
New Feature	MCMETILLD-1363	TC3xx: Startup address to be updated to 0xA00A0000
Bug	MCMETILLD-1347	EMEM writes not working
Bug	MCMETILLD-1346	AsclinShellInterface demo is not working in TC38x
Modification	MCMETILLD-1324	Change of member name calibmode in IfxEmem_TileConfigMode
Bug	MCMETILLD-1323	Only-internally-used register information is contained in the reg files of TC39A
New Feature	MCMETILLD-1320	DMA : New API's needed to get the SDCRC , RDCRC values, To enable SWAP Byte, To switch resource partitions and to return DMA ERR SRC pointer.
Bug	MCMETILLD-1316	issue in iLLD function IfxCan_Node_enableConfigurationChange

Bug	MCMETILLD-1315	wrong register poll in IfxI2c_I2c_read
Bug	MCMETILLD-1303	SSW cfg of democode not runable on Triboard
Bug	MCMETILLD-1302	ASCLIN oversampling factor setting confilict
Bug	MCMETILLD-1298	IfxMtu_enableModule() does not care for Cpu Endinit
Improvement	MCMETILLD-1279	EMEM: Unlock sequence
Improvement	MCMETILLD-1266	All: CPU: Replace Gnu style asm macro with windriver style for Diab compilation
Enhancement	MCMETILLD-1236	SW to poll MTU_MEMSTAT[x] or IRQ rather than MTU_MEMTEST/MTU_MEMDONE[x] for derivatives with large DSPRs
New Feature	MCMETILLD-1185	TC3xx: PMS/Smu Stdby: MONBIST APIs documentation update
Bug	MCMETILLD-1106	QSPI: Run mode requested for QSPI slave instance before configuring this instance for slave mode
Bug	MCMETILLD-1017	QSPI baudrate target 4MBaud results in 3.3MBaud instead
Bug	MCMETILLD-619	QSPI : IfxQspi_SpiMaster_initChannel configures wrong delays
Enhancement	MCMETILLD-431	QSPI: AURIX: Configuring Data Length in Bytes for QSPI transfer not supported
Enhancement	MCMETILLD-342	QSPI : IfxQspi_SpiMaster_initModule() does not efficiently use IfxDma_Dma_initChannel()
Enhancement	MCMETILLD-1309	Software managed interrupts are not supported for Aurix2G for cores CPU1 to 5

3.21 Issues fixed in release V1.0.1.2.0

Table 5 Issue summary

Issue type	Key	Summary
Enhancement	MCMETILLD-1300	Pinmaps for LFBGA516 and LFBGA292 packages for TC3xx required
Bug	MCMETILLD-1295	IfxGtm_Dtm_setClockSource should not have parameter channel (unused)
Bug	MCMETILLD-1287	IfxCpu_waitEvent timeout is wrong
Bug	MCMETILLD-1285	GTM: Correct Psm enable F2A stream and disable F2A stream functions
Enhancement	MCMETILLD-1281	TC3xx: SCU_CCU: Default clock configurations + validity
Modification	MCMETILLD-1280	Ifx_Ssw_Infra.h: Endint functions can be optimised by reading complete register instead of blocking while()
Modification	MCMETILLD-1277	Remove the DSPR0 check functions in MTU files
Bug	MCMETILLD-1276	Add #pragma optimise macros for GNU and Tasking in startup files
Bug	MCMETILLD-1275	IfxHspdm can't be compiled with non-internal sources
Improvement	MCMETILLD-1273	GTM: PSM set channel mode accepts mismatched argument type for channel mode
Modification	MCMETILLD-1271	Correct DTS formula
Bug	MCMETILLD-1268	SDMMC adma2 API needs correction on check for transfer complete
Improvement	MCMETILLD-1267	TC3xx: Ssw: Add noadjust directive to setAddressReg macro
Improvement	MCMETILLD-1265	All: PORT: IfxPort_getIndex API shall return IfxPort_Index type instead of sint32
Improvement	MCMETILLD-1264	All: InternalMux, Intrinsics, Mtu, Pms: Remove warnings from Dcc
Bug	MCMETILLD-1263	TC39xx: SSW: Intrinsics macros for DCC are wrongly modified

Bug	MCMETILLD-1262	TC3xx: MTU: Default constants used for gang configurations shall be updated
Improvement	MCMETILLD-1260	TC3xx: MTU: IfxMtu_runMbistConfigRange function shall clear the ECCD errors before test
New Feature	MCMETILLD-1259	TC3xx: Startup Sw: CPU 0 disable shall be made possible
Bug	MCMETILLD-1258	TC3xx: Startup Sw: Ifx_Ssw_Tc1.c does not start CPU3 when CPU2 is disabled
Modification	MCMETILLD-1251	Switch Clock Source to fPLL (CLKSEL=1) before SYS_PLL is locked
Support Issue	MCMETILLD-1242	incorrect definition of Spu configuration slot
Modification	MCMETILLD-1228	IFXCPU_ALLCORE_DONE macro is supporting to configure the value. So the naming convention has to be updated as IFXCPU_CFG_ALLCORE_DONE
Enhancement	MCMETILLD-1209	TC39xA iLLD does not correctly support TX Event FIFO of MCMCAN module
New Feature	MCMETILLD-1187	Add function to enable watchdog with debugger connected
Modification	MCMETILLD-547	CPU: Change return type of IfxCpu_getCoreId() from IfxCpu_ResourceCpu to IfxCpu_Id
Bug	MCMETILLD-1306	All Aurix1G: iLLD files are not compiling with GNUC when -std=c99 option is enabled
Bug	MCMETILLD-1297	All: iLLD files are not compiling with GNUC when -std=c99 option is enabled
Bug	MCMETILLD-1257	All: IfxCpu: IfxCpu_getPerformanceCounter API gives compilation error
Bug	MCMETILLD-1256	TC3xx: MTU: IfxMtu_runMbist result is negative for peripheral RAMs during Startup Software
Bug	MCMETILLD-1130	TC39xA: IfxMtu_clearSram doesn’t clear the CPU0 DSPR.
Bug	MCMETILLD-907	SFR : Wrong EVADC register definitions

3.22 Issues fixed in release V1.0.1.1.0

Table 6 Issue summary

Issue type	Key	Summary
Bug	MCMETILLD-1023	Wrong conversion time calculation in VADC
Modification	MCMETILLD-1068	CPU: Documentation of trap hooks needs enhancement
Bug	MCMETILLD-1105	wrong calculation of CAN frequency
Support Issue	MCMETILLD-1170	iLLD startup function IfxCpu_getRandomValue fails to be inlined (e.g. using O3)
Bug	MCMETILLD-1173	__crc32: conflict with Tasking intrinsic and iLLD intrinsic
New Feature	MCMETILLD-1174	__crc32 intrinsic api to be created for GnuC similar to tasking builtin intrinsic
Modification	MCMETILLD-1184	PinMap: remove _Reg/ from all pinMap.h files applicable
Bug	MCMETILLD-1186	Non-destructive inversion test will not be executed when SRAM_CLR is set.
Improvement	MCMETILLD-1188	EDSADC default initialization doesn't include GAINCALx, GAINCTRx, GAINCORR, GLOBRCregisters.
Bug	MCMETILLD-1189	iLLD: OSCVAL is not updated when PLL input deosn't equal fOSC0
Bug	MCMETILLD-1190	Data receive de-synchronization if FIFO fill level is > 1
Bug	MCMETILLD-1192	Bug in IfxIom_Driver_initLam()

Bug	MCMETILLD-1202	wrong while condition in IfxCpu_waitEvent
Bug	MCMETILLD-1215	Gtm: spb clock frequency return value is 0
Bug	MCMETILLD-1230	Wrong data type on RIF iLLD
Enhancement	MCMETILLD-1231	GTM: Clock configuration flow
New Feature	MCMETILLD-730	Disable or enable BMHD definitions from compilation
New Feature	MCMETILLD-785	Aurix 2G: Converter Control Driver
Bug	MCMETILLD-921	IfxDsadc_Dsadc_initRectifier() does not take in account NVALDIS
Bug	MCMETILLD-1014	Wrong function call in float32 IfxGtm_Cmu_getModuleFrequency
Enhancement	MCMETILLD-1040	IfxQspi: NULL_PTR not considered in pin configuration
New Feature	MCMETILLD-1116	index treatment for MODULE_SCU.PMCSR[index].B.REQSLP is wrong in Pms/Std/IfxPmsPm.c
Bug	MCMETILLD-1139	IfxCan: API for global filter configuration missing
New Feature	MCMETILLD-1210	GTM: provide iLLD standard layer for SPE submodule
Improvement	MCMETILLD-782	SCU_CCU: Add update of CCUCONx
Bug	MCMETILLD-1241	All: IfxCpu_emitEvent does not work due to race condition
New Feature	MCMETILLD-1238	TC3xx: MTU default gang configurations
Modification	MCMETILLD-1233	Update mbist ssh configuration with proper default values
Bug	MCMETILLD-1234	Add isync and dsync after Ifx_Ssw_initCSA
Bug	MCMETILLD-1245	TC3xx: PMS EVR setup at startup needs to check EVRSTAT register before configuring
New Feature	MCMETILLD-1250	Add an API in MTU to do MBIST check for all the gangs configured (e.g. IfxMtu_runMbistAll()).
Bug	MCMETILLD-1229	EVADC wrong calculation of SRC register address
Improvement	MCMETILLD-894	EVADC: provide interface & standard layer functions for fast compare
Modification	MCMETILLD-688	EVADC / EDSADC: Evadc and Edsadc needs meaningful default configuration

3.23 Issues fixed in release V1.0.1.0.0

Table 7 Issue summary

Issue type	Key	Summary
New Feature	MCMETILLD-857	MSC: MSC64 Fast Mode function needs to be created
New Feature	MCMETILLD-830	Intrinsics:Add CRC instruction to the intrinsics
New Feature	MCMETILLD-852	Add popcnt instruction to the intrinsics
New Feature	MCMETILLD-968	MSC: Add MSC64 Command extension(CX) mode
New Feature	MCMETILLD-990	__attribute__ ((aligned(64))) is used in some of the demo code instead of IFX_ALIGN()
New Feature	MCMETILLD-912	Add new intriniscs for GNUC
New Feature	MCMETILLD-892	QSPI : add error initialization
Enhancement	MCMETILLD-439	SMU: SMU low level driver (Aurix1G)
Enhancement	MCMETILLD-883	Add Suspend API of IPs that support ocds suspend
Enhancement	MCMETILLD-903	ETH: TC39xA - timestamp API's required to test the PTP mode
Improvement	MCMETILLD-1120	TC39x: IFX Interrupts documentation improvement

Improvement	MCMETILLD-904	SCU_CCU: IfxScuCcu_isOscillatorStable() should not fail for 8MHz XTAL in A2G
Improvement	MCMETILLD-950	PSI5S: how to disable channels/channel Trigger Counters in respective Inline functions
Improvement	MCMETILLD-957	PSI5S: Add apis getSuccessfullyReceivedFrameStatus(), stopAscTransactions () and disableAscRecevier()
Modification	MCMETILLD-1067	EDSADC : Define available EDSADC configuration functions public
Modification	MCMETILLD-961	SPU : 32-bit access is needed for PWRSUM register
Bug	MCMETILLD-935	ASCLIN : LIN Function IfxAsclin_Lin_waitForReceivedHeader() waits in infinite loop if header not received
Bug	MCMETILLD-971	Tasking intrinsics __subsu and __addsu does not compile
Bug	MCMETILLD-991	DMA: Typo in IfxLld_Dma_Dma example code
Bug	MCMETILLD-1003	DMA: linked list must be aligned on 32byte / 256bits boundary
Bug	MCMETILLD-1057	Wrong typedef IfxCan_ClockSource
Bug	MCMETILLD-1065	EDSADC: inconsistency in the DICFGx conf Register between ITS and LLD
Bug	MCMETILLD-1114	TC39x:SSW: Wrong const name used in the error message
Bug	MCMETILLD-773	HSSL: TIDADD is written in IfxHssl_Hssl_singleFrameRequest
Bug	MCMETILLD-901	ERAY: kernel reset API when used, goes to trap. observed that the kernel reset is being tried without clearing and setting the cpu & safety endint

3.24 Issues fixed in release V1.0.0.13.0

Table 8 Issue summary

Issue type	Key	Summary
Bug	MCMETILLD-939	Ssw: IfxCpu_CStart0 doesn't enable caches
New Feature	MCMETILLD-927	SMU : SMU Driver
New Feature	MCMETILLD-926	IOM : IOM driver
New Feature	MCMETILLD-748	DSADC: Added DSADC Resolver to Digital converter (DSADC RDC)
Improvement	MCMETILLD-628	Wrong default clock for TC29x
New Feature	MCMETILLD-911	STM : interface driver
Bug	MCMETILLD-962	GTM : Multi view register in the GTM atom channel is generating trap while accessing then via iLLD API
Bug	MCMETILLD-924	IfxQspi_SpiMaster_getChannelConfig() return wrong value for autoCS
Bug	MCMETILLD-922	IfxQspi_SpiMaster_setChannelBaudrate() baudrate parameter type should be float32 instead of float
Bug	MCMETILLD-921	IfxDsadc_Dsadc_initRectifier() does not take in account NVALDIS
Bug	MCMETILLD-918	QSPI : macros IFXQSPI_BACONSIZE, IFXQSPI_FIFO32BITSIZE, IFXQSPI_GETLONGMODEFIFOSIZE should not be defined in SpiIf.h
Bug	MCMETILLD-908	EBU : Wrong pin selection in IfxEbu_Sram_initMemory
Bug	MCMETILLD-837	SCU_CCU : Function "IfxScuCcu_initErayPll" is never returning a fail
Bug	MCMETILLD-866	SCU_CCU : wrong cpu frequency calculation in float32 IfxScuCcu_getCpuFrequency(const IfxCpu_ResourceCpu cpu

3.25 Issues fixed in release V1.0.0.12.0

Table 9 Issue summary

Issue type	Key	Summary

Bug	MCMETILLD-938	IfxSpu shouldn't use read-modify-write accesses
Bug	MCMETILLD-935	ASCLIN : LIN Function IfxAsclin_Lin_waitForReceivedHeader() waits in infinite loop if header not received
Bug	MCMETILLD-931	IfxScuCcu_setSpbFrequency function change SCU_TRAPDIS0 settings
Bug	MCMETILLD-930	HSCT: Register bit CONFIGPHY.PON needs to be set to 1 also during slave interface initialization
Bug	MCMETILLD-915	Enum values IfxCan_ClockSource_asynchronous, IfxCan_ClockSource_synchronous needs to be interchanged
Bug	MCMETILLD-913	CAN iLLD: Incorrect bit timing value calculations for some baudrates
New Feature	MCMETILLD-899	TC39xA: Startup code enhancements
Improvement	MCMETILLD-893	iLLD function in to inline function
Bug	MCMETILLD-891	Bug in Multi Bug CAN driver
Bug	MCMETILLD-876	ASCLIN:LIN function "IfxAsclin_Lin_receiveResponse" has issue
Bug	MCMETILLD-875	ASCLIN: Issue in function IfxAsclin_Lin_receiveHeader.
Enhancement	MCMETILLD-874	MSC init module function need to be updated
Enhancement	MCMETILLD-871	Ethernet functions with enhanced descriptors in ring mode is required.
Improvement	MCMETILLD-864	FCE module interrupt initialization and clearing error flags issue
Improvement	MCMETILLD-859	QSPI: Single, Continuous and Batch mode - fifo mode configurations support to be added
New Feature	MCMETILLD-858	SENT: Watch Dog Timer functionality
Bug	MCMETILLD-846	IfxCan_Can_Baudrate and IfxCan_Can_FastBaudrate contains unused data members
New Feature	MCMETILLD-814	Dma:Channel Suspend Register functions to enable, disable and acknowledge are not present
Improvement	MCMETILLD-604	CAN: Improvements in iLLD function IfxCan_Can_initNode
Bug	MCMETILLD-555	TC22x IfxMultican fails at 1 MBaud

3.26 Issues fixed in release V1.0.0.11.2

Table 10 Issue summary

Issue type	Key	Summary
Bug	MCMETILLD-854	Additional register definition for MCDS TCZ in IfxMcds_reg.h
Bug	MCMETILLD-849	SPI Reset of State Machine, Rx and TX Fifo
Bug	MCMETILLD-843	xbar register file is buggy
Enhancement	MCMETILLD-840	IfxDts: TC39xA - Dts value to Celsius should be changed
Bug	MCMETILLD-836	wrong structures for bit field GTM_ATOMx_Chy_CTRL
Bug	MCMETILLD-835	Incorrect RABR.OMEM field bit width
Bug	MCMETILLD-834	EBCU Register file has many register missing
Bug	MCMETILLD-831	base address for MCDS SESSID registers is incorrect
New Feature	MCMETILLD-828	EVADC Registers GxTRCTR missing
Enhancement	MCMETILLD-824	default value of SJW and SP in void IfxMultican_Can_Node_initConfig()
Bug	MCMETILLD-822	EVADC: Inconsistency in register bit field file
Enhancement	MCMETILLD-820	IfxCan: Aurix 2G - IfxCan_Can_readMessage should clear Rx buffer flag after data reception.
Enhancement	MCMETILLD-819	IfxCan : Aurix 2G - Add Interface function for TxBufferRequestPending

Enhancement	MCMETILLD-818	IfxCan: Aurix 2G - IfxCan_Can_sendMessage should return status if buffer isn't free
Enhancement	MCMETILLD-815	Remove _Reg/IfxCbs_*
New Feature	MCMETILLD-814	Dma:Channel Suspend Register functions to enable, disable and acknowledge are not present
Enhancement	MCMETILLD-811	Missing IfxFlash_cfg.c in file IfxFlash.xml
Bug	MCMETILLD-808	TC39xA EMEM: EMEM SFR address offset is wrong.
Bug	MCMETILLD-806	Trap handlers corrupt the lower context
Bug	MCMETILLD-801	TC39xA EMEM: EMEM SFR address definition doesn't match ITS
Enhancement	MCMETILLD-796	Missing Overlay Register OVC3_xx, OVC4_xx, OVC5_xx in iLLD - IfxOvc_reg.h
Enhancement	MCMETILLD-793	ASCLIN: LIN Slave Mode in Auto baud enabled needs upper limit and lower limit values calculation function calls
Enhancement	MCMETILLD-792	ASCLIN: iLLD configures LIN slave in autobaud enabled always
Bug	MCMETILLD-780	Trap handler should not use shared global variable
Bug	MCMETILLD-771	IfxCpu_Trap_nonMaskableInterrupt() should not call __debug()
Enhancement	MCMETILLD-770	Trap hooks should be defined explicitly for each trap vector
New Feature	MCMETILLD-762	Cpu:New Feature for CPU Synchronization
Enhancement	MCMETILLD-755	Enhanced Ifx_Shell
New Feature	MCMETILLD-753	Added pulse and shift PWM for GTM ATOM PWMHL driver
New Feature	MCMETILLD-752	Added pulse and shift PWM for GTM TOM PWMHL driver
Enhancement	MCMETILLD-751	Fix CCU6 PWMHL IfxCcu6_PwmHl_setMode() parameter check
Enhancement	MCMETILLD-750	Update GPT21 IncEnc driver
New Feature	MCMETILLD-749	Added GTM TIM input capture feature
Enhancement	MCMETILLD-725	Aurix: ACT Plugin enhancement & plugins update
Enhancement	MCMETILLD-706	Aurix 2G:Enhance IfxPort_setPinPadDriver to support TTL3V3/TTL5V selection
New Feature	MCMETILLD-648	EMEM: Overlay iLLD feature
Enhancement	MCMETILLD-630	TC39x: support for Gtm Edsadc Trig api to configure TIMxINSEL and SAUL,SBLL inputs
New Feature	MCMETILLD-274	Provide IfxSpu (ADAS ADC)

3.27 Issues fixed in release V1.0.0.11.1

Table 11 Issue summary

Issue type	Key	Summary
Enhancement	MCMETILLD-811	Missing IfxFlash_cfg.c in file IfxFlash.xml
Bug	MCMETILLD-808	TC39xA EMEM: EMEM SFR address offset is wrong.
Bug	MCMETILLD-801	TC39xA EMEM: EMEM SFR address definition doesn't match ITS
Improvement	MCMETILLD-755	Enhanced Ifx_Shell
Enhancement	MCMETILLD-751	Fix CCU6 PWMHL IfxCcu6_PwmHl_setMode() parameter check
Enhancement	MCMETILLD-750	Update GPT21 IncEnc driver
Enhancement	MCMETILLD-725	Aurix: ACT Plugin enhancement & plugins update

4 Known issues

This chapter describes the prescribed workarounds for all the open issues identified.

Key	Summary	Impact	Workaround
MCMETILLD-2702	[IFX-250214-1603954] Potential iLLD error in setting VADC_SYNCTR Register	I2C cannot be configured in slave mode, due to incorrect setting api IfxI2c_configureAsSlave	In IfxI2c_configureAsSlave api, configure the bit MnS to zero.

5 Limitations and Deviations

This chapter describes the limitations and deviations due to software/hardware design constraints.

5.1 Limitations

None

5.2 Deviations

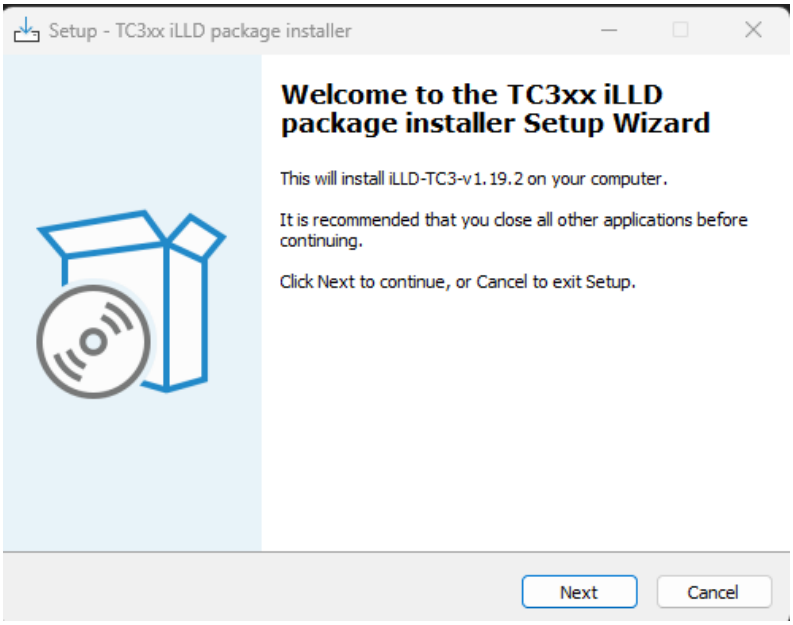
None

6 Installation

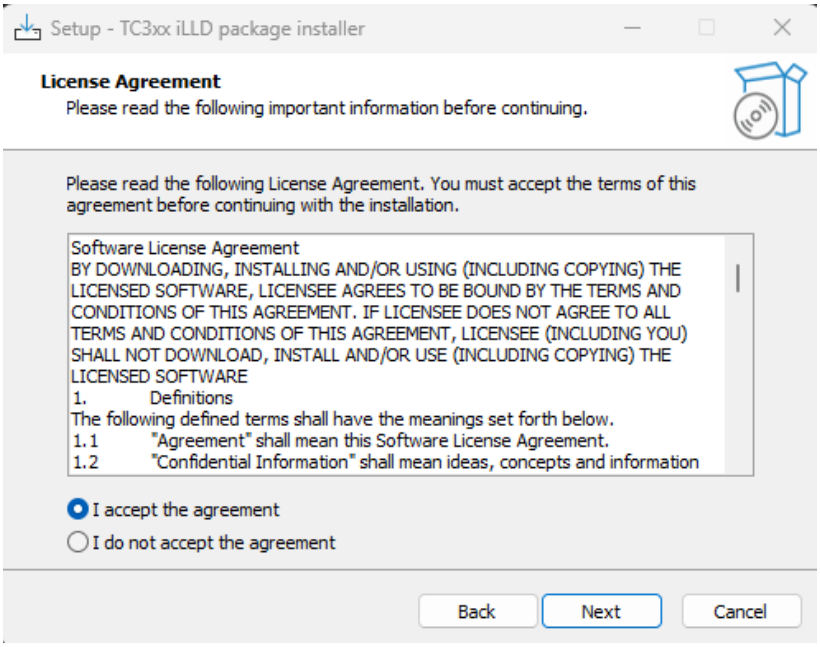
The iLLD software release package is an archive, and it may be extracted to any drive of the computer. There is no specific directory structure needed.

6.1 Package usage

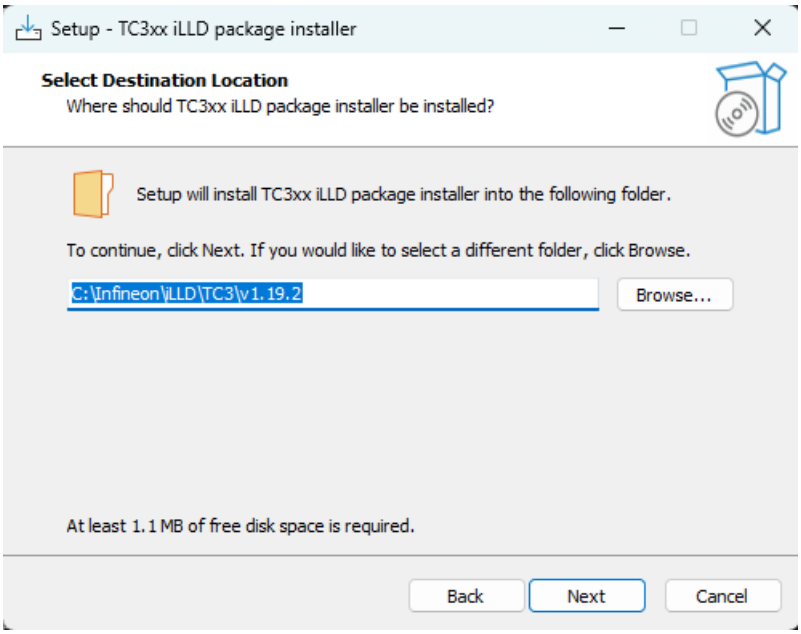
- Copy the iLLD-TC3-<version>_Drivers_And_Demos.zip file into local drive.
- Extract the zip and run the installer file iLLD-TC3-<version>.exe for package installation



- Accept the license and click on “Next”

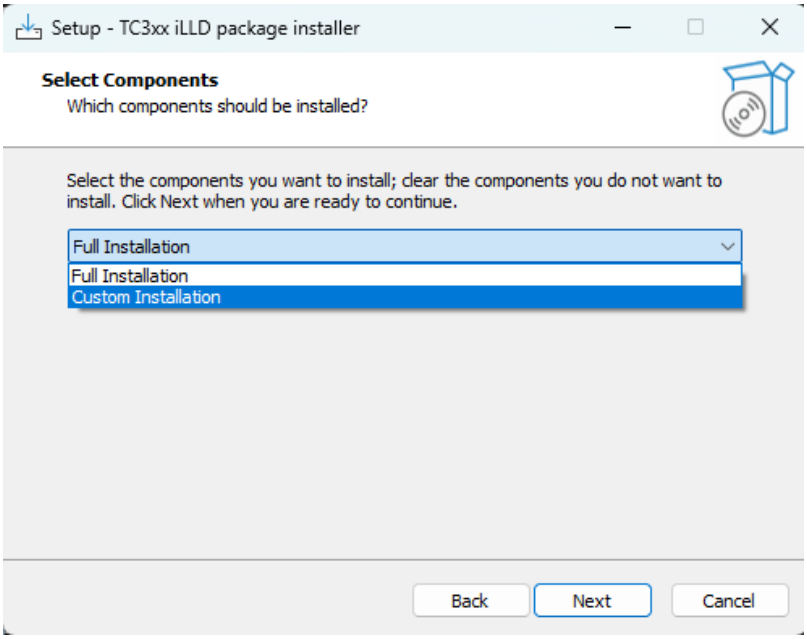


- By default, the package will be installed in *C:\Infineon\iLLD\TC3\<version>* path



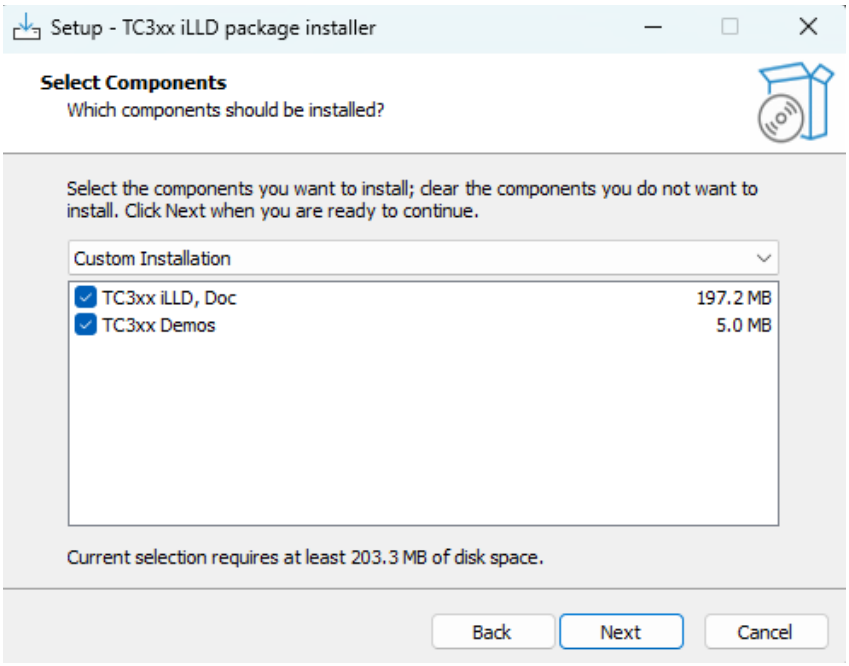
Note: If you have the destination folder already, content will be overwritten.

- Select full installation if you want to select all the components.

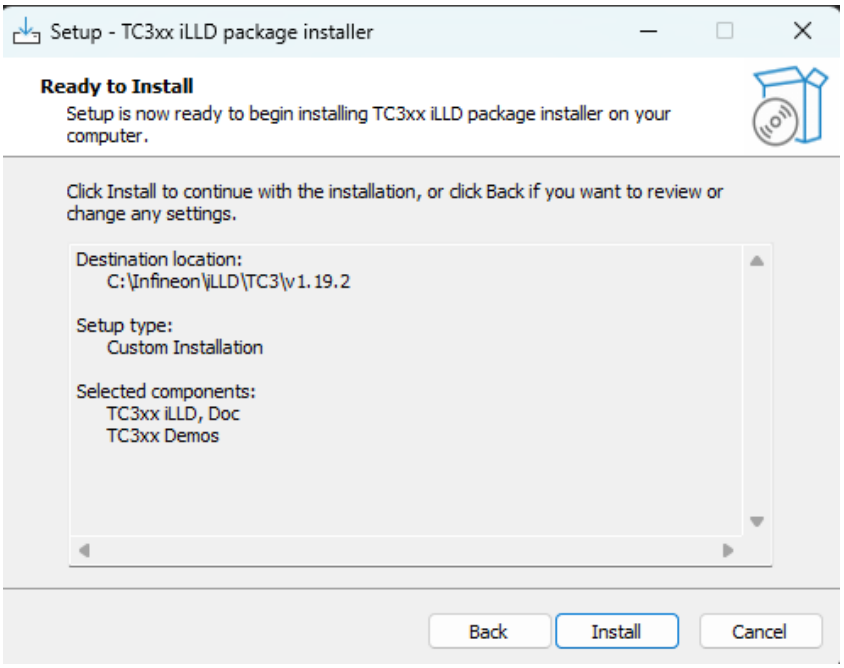


Else select only the Custom Installation to select the components you would like to install. You have selection possibility for driver or demos.

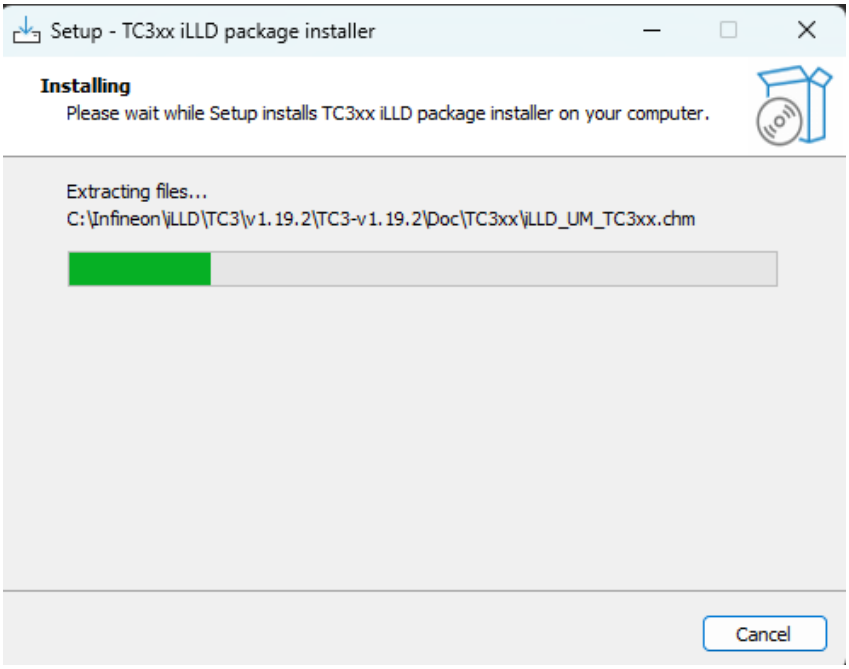
This page looks as shown below:



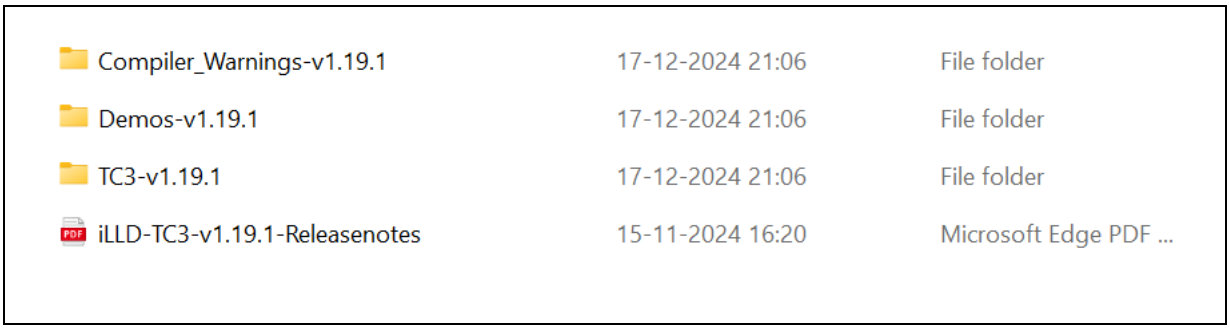
Click on **Next** button to go to **Ready to Install** page as below



Click the button "**Install**" to start copy process. This results in the following page



The package will be installed in C:\Infineon\iLLD\TC3\<version>



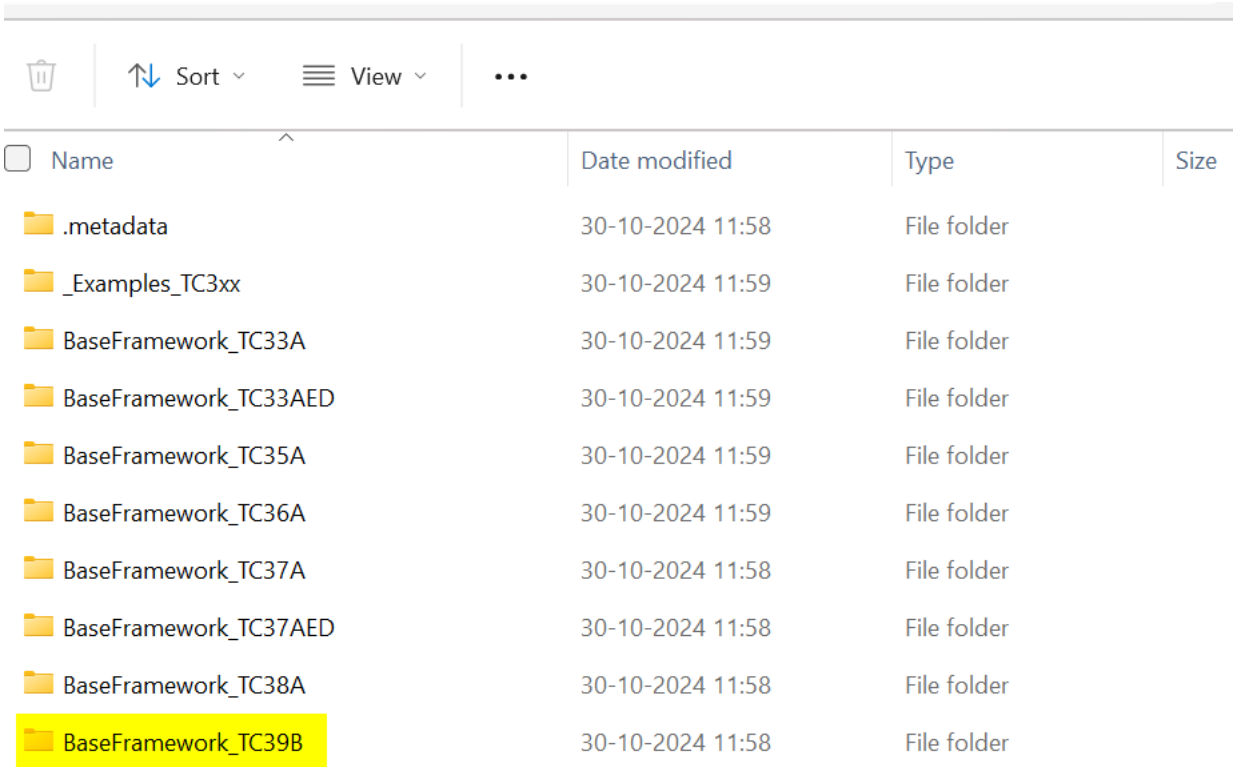
6.2 Integration

The package consists of source code for all the supported TC3xx devices

Follow the below steps to integrate the package:

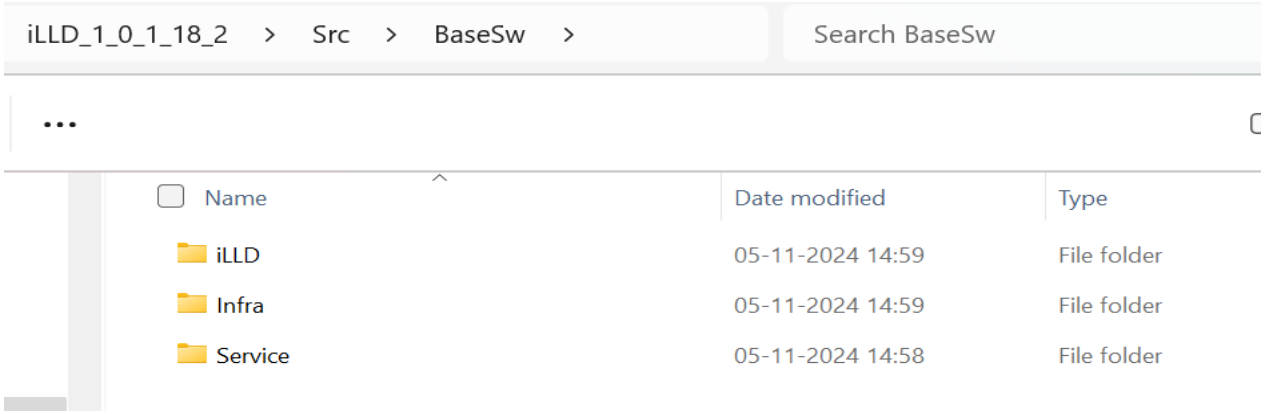
Below example uses TC39xB and LFBGA512 pin package

1. Import the Baseframework_TC39B template project

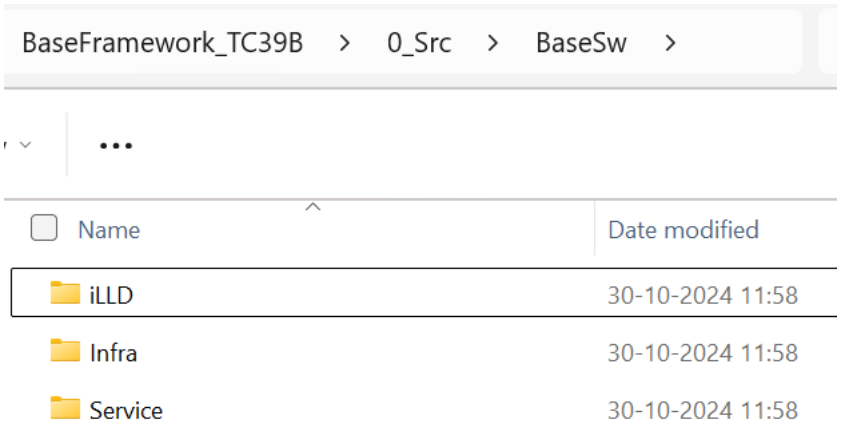


2. Copy the BaseSw content from illd package

Package:



Baseframework project:



3. Update the below macros in Ifx_cfg.h

file path: BaseFramework_TC39B\0_Src\AppSw\CpuGeneric\Config\Ifx_Cfg.h

#define DEVICE_TC39XB	1
#define IFX_PIN_PACKAGE_516	1
#define IFX_PIN_PACKAGE_LFBGA292	1
#define IFX_PIN_PACKAGE_LFBGA292_ADAS	1
#define IFX_PIN_PACKAGE_LFBGA516	1

AppSw\CpuGeneric\Config\Ifx_Cfg.h

```
//#define IFX_USE_SW_MANAGED_INT

/*
** Configuration for Trap Hook Functions' Extensions
**
//#define IFX_CFG_EXTEND_TRAP_HOOKS

//#define IFX_CFG_SSW_RETURN_FROM_MAIN

#define DEVICE_TC39XB 1

#define IFX_PIN_PACKAGE_516          1
//#define IFX_PIN_PACKAGE_LFBGA292       1
//#define IFX_PIN_PACKAGE_LFBGA292_ADAS 1
//#define IFX_PIN_PACKAGE_LFBGA516       1


/*****************************************************************

#endif /* IFX_CFG_H */
```

Note:

1. TC39xB supports multiple pin packages, uncomment only one pin package macro at once as shown in above screenshot.

2. The cfg.h file provide macros to set the default PLL frequency for the device supported, please make sure correct values are used. For example, TC33 supports maximum PLL frequency of 200MHz, avoid defining higher values like 300MHZ.

7 Support packages

The Aurix 2G demo files are given for Evaluation Purpose only.

It contains the `Demos-v1.20.0` folder.

Table 12 Release zip contents

Package content	Description
`Demos-v1.20.0`	Demo Source files for TC3xx derivative

Note: The application start-up software configuration files should be taken from the respective released Base Projects.

Trademarks
All referenced product or service names and trademarks are the property of their respective owners.

Edition 2025-05-29
Published by
Infineon Technologies AG
81726 Munich, Germany

Do you have a question about this document?
Email: erratum@infineon.com

Document reference
Z8F80145943

IMPORTANT NOTICE
The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics (“Beschaffenheitsgarantie”) .

With respect to any examples, hints or any typical values stated herein and/or any information regarding the application of the product, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation warranties of non-infringement of intellectual property rights of any third party.

In addition, any information given in this document is subject to customer’s compliance with its obligations stated in this document and any applicable legal requirements, norms and standards concerning customer’s products and any use of the product of Infineon Technologies in customer’s applications.

The data contained in this document is exclusively intended for technically trained staff. It is the responsibility of customer’s technical departments to evaluate the suitability of the product for the intended application and the completeness of the product information given in this document with respect to such application.

For further information on the product, technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies office (**www.infineon.com**).

WARNINGS
Due to technical requirements products may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by Infineon Technologies in a written document signed by authorized representatives of Infineon Technologies, Infineon Technologies’ products may not be used in any applications where a failure of the product or any consequences of the use thereof can reasonably be expected to result in personal injury.