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## Release Notes

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# Processor Expert Software Processor Expert for Kinetis Design Studio 1.1

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## A. Known problems and limitations

- "Enable Processor Expert for existing C project" Wizard doesn't work properly for SDK projects. There is neither a possibility to specify the project the wizard is opened for nor a possibility to specify what SDK should be used for the project.

Workaround:

1. In "Enable Processor Expert for Existing C Project" Wizard select Target Processor with \_4SDK suffix. Processors with this suffix are supported by the Kinetis SDK.
2. After Wizard finish an error message occurs and project is not completely generated.
3. Go to project Properties to the "Procesor Expert" -> "Kinetis SDK Specific" and fill the SDK path. Use browse button and select a path to the Kinetis SDK folder or fill the \${KSDK\_PATH} which is default system variable. This variable points to the default Kinetis SDK folder.
4. After this project still shows some errors. Remove the PinSettings component from project and add new PinSettings component from Components Library. This process adds missing fsl\_clock\_manager component to the project too.
5. Press the button "Generate Processor Expert Code" and project should be generated without errors.

- ENGR00318539 - MKE04Z128LK4] Can't set 'Baud rate' in Serial\_LDD component.

Workaround:

Use other pin for TxD than FTM0\_CH0\_output which shouldn't be in the available list.

- ENGR00316233 - The Rename function doesn't work as expected

Workaround:

This issue is reproducible only when autobuild enabled, project is changed and without saving renamed.

It causes false errors being reported.

There is simple workaround - proceed code generation again to fix it.

- ENGR00267865, ENGR00267282 - The CAU\_LDD component doesn't work correctly.

Workaround:

Use MMCAU library directly without CAU\_LDD component. For more information see the MMCAU library documentation.

- ENGR00319943 - MQXLite RTOS component – It is erroneously possible to disable LWsemaphores. They have to be always enabled, otherwise the MQXLite-based project is not possible to be built.

### DDR Validation Tool

- ENGR00309871 - Kinetis family processors are not supported in DDRv v2.0.1
- ENGR00317464 - Remote connection doesn't work properly and cannot be used for J-Link HW & XTWR-VF65GS10 board in a target connection for a DDR validation session.  
Currently only localhost accessible HW can be connected and is working as expected. Note that target connection might display a broken chain with red mark icon which means that HW is not properly connected. This may happen when trying to connect to localhost accessible J-Link HW & XTWR-VF65GS10 board that has been physically connected and powered-up later than the DDR Validation session has started. In that case close and restart the whole Eclipse environment and try to connect to target again.
- ENGR00317458 - Fixed inaccurate DDR validation tool initialization leading to fail validation process when a new DDR component added into PEx project. Then invalid result in all validation table cells within a given scenario have been reported by the tool even though HW connection was working and the tool UI displayed performing proper validation stage.
- Limitation: 64-bit OS's are not supported. DDRv within the Driver Suite requires 32-bit environment.

## CDE

- ENGR00322002 - Lost properties issue: If a property of the "Include properties" type is created before its related .item file exist and is used for the property before the component is saved then CDE behaves improperly and could forget all the properties created after this "Include properties" property.  
Workaround:  
Create the .item file before the "Include properties" property.
- ENGR00309883 - Not possible to remove the first character in a description of an inherited property.  
Workaround:
  - First character in a description of an inherited property cannot be removed standard way using neither Backspace nor Delete key.
  - Text input verifier doesn't allow empty value and therefore cancels user inputs leading to this result.
  - Select first character and type your input.
- ENGR00314469 - Inherited/shared components not offered when creating .PEupd
  - Adding inherited/shared components from system directory into the list of components when exporting to .PEupd is not supported yet (only files from workspace).
  - This functionality will be supported within solution of component repositories.
- ENGR00318257 - Content of a component could disappear from CDE views if the the component inherits other component(s) and you rename it.  
Workaround:
  - When this issue appears the customer simply needs to close and reopen the eclipse project with the component.

## B. Product Content

### Components

1. Kinetis K CPU Components
  - MK10DN512ZVLK10, MK10DN512ZVLL10, MK10DN512ZVLQ10, MK10DN512ZVMB10, MK10DN512ZVMC10, MK10DN512ZVMD10
  - MK10DX256ZVLQ10, MK10DX256ZVMD10
  - MK10DX128ZVLQ10, MK10DX128ZVMD10
  - MK20DN512ZVLK10, MK20DN512ZVLL10, MK20DN512ZVLQ10, MK20DN512ZVMB10, MK20DN512ZVMC10, MK20DN512ZVMD10
  - MK20DX128ZVMD10, MK20DX128ZVLQ10
  - MK20DX256ZVLK10, MK20DX256ZVLL10, MK20DX256ZVLQ10, MK20DX256ZVMB10, MK20DX256ZVMC10, MK20DX256ZVMD10
  - MK30DN512ZVLK10, MK30DN512ZVLL10, MK30DN512ZVLQ10, MK30DN512ZVMB10, MK30DN512ZVMC10, MK30DN512ZVMD10
  - MK30DX128ZVLQ10, MK30DX128ZVMD10
  - MK30DX256ZVLQ10, MK30DX256ZVMD10
  - MK40DN512ZVLK10, MK40DN512ZVLL10, MK40DN512ZVLQ10, MK40DN512ZVMB10, MK40DN512ZVMC10, MK40DN512ZVMD10
  - MK40DX128ZVLQ10, MK40DX128ZVMD10
  - MK40DX256ZVLQ10, MK40DX256ZVMD10
  - MK50DN512ZCLL10, MK50DN512ZCLQ10, MK50DN512ZCMC10, MK50DN512ZCMD10
  - MK50DX256ZCLK10, MK50DX256ZCLL10, MK50DX256ZCMB10, MK50DX256ZCMC10
  - MK51DN512ZCLL10, MK51DN512ZCLQ10, MK51DN512ZCMC10, MK51DN512ZCMD10

- MK51DN256ZCLQ10, MK51DN256ZCMD10
- MK51DX256ZCLK10, MK51DX256ZCLL10, MK51DX256ZCMB10, MK51DX256ZCMC10
- MK52DN512ZCLQ10, MK52DN512ZCMD10
- MK53DN512ZCLQ10, MK53DN512ZCMD10
- MK53DX256ZCLQ10, MK53DX256ZCMD10
- MK60DN256ZVLL10, MK60DN256ZVLQ10, MK60DN256ZVMC10, MK60DN256ZVMD10,
- MK60DN512ZVLL10, MK60DN512ZVLQ10, MK60DN512ZVMC10, MK60DN512ZVMD10
- MK60DX256ZVLL10, MK60DX256ZVLQ10, MK60DX256ZVMC10, MK60DX256ZVMD10
- MK10FN1M0VLQ12, MK10FX512VLQ12, MK10FN1M0VMD12, MK10FX512VMD12
- MK20FN1M0VLQ12, MK20FX512VLQ12, MK20FN1M0VMD12, MK20FX512VMD12
- MK60FN1M0VLQ12, MK60FX512VLQ12, MK60FN1M0VMD12, MK60FX512VMD12
- MK60FN1M0VLQ15, MK60FX512VLQ15, MK60FN1M0VMD15, MK60FX512VMD15
- MK70FN1M0VMJ12, MK70FX512VMJ12, MK70FN1M0VMJ15, MK70FX512VMJ15
- MK10DN128VLH5, MK10DN128VMP5, MK10DN128VFT5, MK10DN128VLF5,  
MK10DN128VFM5
- MK10DN32VLH5, MK10DN32VMP5, MK10DN32VFT5, MK10DN32VLF5, MK10DN32VFM5
- MK10DN64VLH5, MK10DN64VMP5, MK10DN64VFT5, MK10DN64VLF5, MK10DN64VFM5
- MK10DX128VLH5, MK10DX128VMP5, MK10DX128VFT5, MK10DX128VLF5,  
MK10DX128VFM5
- MK10DX32VLH5, MK10DX32VMP5, MK10DX32VFT5, MK10DX32VLF5, MK10DX32VFM5
- MK10DX64VLH5, MK10DX64VMP5, MK10DX64VFT5, MK10DX64VLF5, MK10DX64VFM5
- MK20DN128VLH5, MK20DN128VMP5, MK20DN128VFT5, MK20DN128VLF5,  
MK20DN128VFM5
- MK20DN32VLH5, MK20DN32VMP5, MK20DN32VFT5, MK20DN32VLF5, MK20DN32VFM5
- MK20DN64VLH5, MK20DN64VMP5, MK20DN64VFT5, MK20DN64VLF5, MK20DN64VFM5
- MK20DX128VLH5, MK20DX128VMP5, MK20DX128VFT5, MK20DX128VLF5,  
MK20DX128VFM5
- MK20DX32VLH5, MK20DX32VMP5, MK20DX32VFT5, MK20DX32VLF5, MK20DX32VFM5
- MK20DX64VLH5, MK20DX64VMP5, MK20DX64VFT5, MK20DX64VLF5, MK20DX64VFM5
- MK10DN512VLQ10, MK10DN512VMD10, MK10DN512VMB10, MK10DN512VMC10,  
MK10DN512VLL10, MK10DN512VLK10,
- MK10DX128VLQ10, MK10DX128VMD10,
- MK10DX256VLQ10, MK10DX256VMD10,
- MK20DN512VLQ10, MK20DN512VMD10, MK20DN512VMB10, MK20DN512VMC10,  
MK20DN512VLL10, MK20DN512VLK10,
- MK20DX128VLQ10, MK20DX128VMD10,
- MK20DX256VLQ10, MK20DX256VMD10, MK20DX256VMC10,
- MK30DN512VLQ10, MK30DN512VMD10, MK30DN512VMB10, MK30DN512VMC10,  
MK30DN512VLL10, MK30DN512VLK10,
- MK30DX128VLQ10, MK30DX128VMD10,
- MK30DX256VLQ10, MK30DX256VMD10, MK40DN512VLQ10, MK40DN512VMD10,
- MK40DN512VMB10, MK40DN512VMC10, MK40DN512VLL10, MK40DN512VLK10,
- MK40DX128VLQ10, MK40DX128VMD10,
- MK40DX256VLQ10, MK40DX256VMD10,
- MK50DN512CLQ10, MK50DN512CMD10, MK50DN512CMC10, MK50DN512CLL10,
- MK50DX256CMB10, MK50DX256CMC10, MK50DX256CLL10, MK50DX256CLK10,
- MK51DN256CLQ10, MK51DN256CMD10,
- MK51DN512CLQ10, MK51DN512CMD10, MK51DN512CMC10, MK51DN512CLL10,
- MK51DX256CMB10, MK51DX256CMC10, MK51DX256CLL10, MK51DX256CLK10,

- MK52DN512CLQ10, MK52DN512CMD10,
  - MK53DN512CLQ10, MK53DN512CMD10,
  - MK53DX256CLQ10, MK53DX256CMD10,
  - MK60DN256VLQ10, MK60DN256VMD10, MK60DN256VMC10, MK60DN256VLL10,
  - MK60DN512VLQ10, MK60DN512VMD10, MK60DN512VMC10, MK60DN512VLL10,
  - MK60DX256VLQ10, MK60DX256VMD10, MK60DX256VMC10, MK60DX256VLL10
  - MK10DX128VMB7, MK10DX128VML7, MK10DX128VLL7, MK10DX128VLK7,  
MK10DX128VLH7,
  - MK10DX256VMB7, MK10DX256VML7, MK10DX256VLL7, MK10DX256VLK7,  
MK10DX256VLH7,
  - MK10DX64VMB7, MK10DX64VLK7, MK10DX64VLH7,
  - MK20DX128VMB7, MK20DX128VML7, MK20DX128VLL7, MK20DX128VLK7,  
MK20DX128VLH7,
  - MK20DX256VMB7, MK20DX256VML7, MK20DX256VLL7, MK20DX256VLK7,  
MK20DX256VLH7,
  - MK20DX64VMB7, MK20DX64VLK7, MK20DX64VLH7, MK30DX128VMB7,
  - MK30DX128VML7, MK30DX128VLL7, MK30DX128VLK7, MK30DX128VLH7,
  - MK30DX256VMB7, MK30DX256VML7, MK30DX256VLL7, MK30DX256VLK7,  
MK30DX256VLH7,
  - MK30DX64VMB7, MK30DX64VLK7, MK30DX64VLH7,
  - MK40DX128VMB7, MK40DX128VML7, MK40DX128VLL7, MK40DX128VLK7,  
MK40DX128VLH7,
  - MK40DX256VMB7, MK40DX256VML7, MK40DX256VLL7, MK40DX256VLK7,  
MK40DX256VLH7,
  - MK40DX64VMB7, MK40DX64VLK7, MK40DX64VLH7,
  - MK50DX128CMB7, MK50DX128CLK7, MK50DX128CLH7,
  - MK50DX256CMB7, MK50DX256CML7, MK50DX256CLL7, MK50DX256CLK7,
  - MK51DX128CMB7, MK51DX128CLK7, MK51DX128CLH7,
  - MK51DX256CMB7, MK51DX256CML7, MK51DX256CLL7, MK51DX256CLK7
  - MK21FN1M0MD12, MK21FN1M0MC12, MK21FN1M0LQ12
  - MK22FN1M0MD12, MK22FN1M0MC12, MK22FN1M0LQ12, MK22FN1M0LL12,  
MK22FN1M0LK12, MK22FN1M0LH12
  - MK24FN1M0LQ12, MK24FN1M0DC12
  - MK63FN1M0MD12, MK63FN1M0LQ12
  - MK64FN1M0MD12, MK64FN1M0LQ12, MK64FN1M0LL12, MK64FN1M0DC12
2. Kinetis E CPU Components
- MKE02Z64LC2, MKE02Z64LD2, MKE02Z64QH2
  - MKE04Z8VTG4, MKE04Z8VWJ4, MKE04Z8VFK4
  - MKE04Z128xxx4, MKE04Z64xxx4
  - MKE06Z128xxx4, MKE06Z64xxx4
  - SKEAZ128xxx4, SKEAZ64xxx4
  - SKEAZN64MLH2, SKEAZN64MLD2, SKEAZN64MLC2
  - SKEAZN32MLH2, SKEAZN32MLD2, SKEAZN32MLC2
  - SKEAZN16MLD2, SKEAZN16MLC2
  - SKEAZN8MFK4, SKEAZN8MTG4
3. Kinetis L CPU Components

- MKL02Z32AF4, MKL02Z32FG4, MKL02Z32FK4, MKL02Z32FM4
- MKL04Z32VLF4, MKL04Z32VFM4, MKL04Z32VLC4, MKL04Z32VFK4
- MKL04Z8VFM4, MKL04Z8VLC4, MKL04Z8VFK4
- MKL05Z16VLF4, MKL05Z16VFM4, MKL05Z16VLC4, MKL05Z16VFK4
- MKL05Z32VLF4, MKL05Z32VFM4, MKL05Z32VLC4, MKL05Z32VFK4
- MKL05Z8VFM4, MKL05Z8VLC4, MKL05Z8VFK4, MKL14Z32VLK4
- MKL14Z32VLH4, MKL14Z32VFT4, MKL14Z32VFM4, MKL14Z64VLK4
- MKL14Z64VLH4, MKL14Z64VFT4, MKL14Z64VFM4
- MKL15Z128VLK4, MKL15Z128VLH4, MKL15Z128VFT4, MKL15Z128VFM4
- MKL15Z32VLK4, MKL15Z32VLH4, MKL15Z32VFT4, MKL15Z32VFM4
- MKL15Z64VLK4, MKL15Z64VLH4, MKL15Z64VFT4, MKL15Z64VFM4
- MKL16Z128FM4, MKL16Z128FT4, MKL16Z256LH4, MKL16Z256LK4
- MKL24Z32VLK4, MKL24Z32VLH4, MKL24Z32VFT4, MKL24Z32VFM4
- MKL24Z64VLK4, MKL24Z64VLH4, MKL24Z64VFT4, MKL24Z64VFM4
- MKL25Z128VLK4, MKL25Z128VLH4, MKL25Z128VFT4, MKL25Z128VFM4
- MKL25Z32VLK4, MKL25Z32VLH4, MKL25Z32VFT4, MKL25Z32VFM4
- MKL25Z64VLK4, MKL25Z64VLH4, MKL25Z64VFT4, MKL25Z64VFM4
- MKL26Z128FM4, MKL26Z128FT4, MKL26Z256LH4, MKL26Z256LK4, MKL26Z256LL4, MKL26Z256MC4
- MKL34Z64LH4, MKL34Z64LL4
- MKL36Z256LH4, MKL36Z256LL4, MKL36Z256MC4
- MKL46Z256LH4, MKL46Z256LL4, MKL46Z256MC4

4. Kinetis V CPU Components

- MKV10Z32LC7, MKV10Z32LF7, MKV10Z32FM7
- MKV10Z16LC7, MKV10Z16LF7, MKV10Z16FM7

5. Logical Device Driver Components

- ADC\_LDD
- AnalogComp\_LDD
- BitIO\_LDD
- BitsIO\_LDD
- CAN\_LDD
- Capture\_LDD
- CMT\_LDD
- CRC\_LDD
- DAC\_LDD
- DMA\_LDD
- DMAChannel\_LDD
- DMATransfer\_LDD
- Ethernet\_LDD
- EventCntr\_LDD
- ExtInt\_LDD
- FLASH\_LDD
- FreeCntr\_LDD
- GPIO\_LDD
- I2C\_LDD
- LCDC\_LDD
- NFC\_LDD

- PPG\_LDD
- PWM\_LDD
- RealTime\_LDD
- RNG\_LDD
- RTC\_LDD
- SDHC\_LDD
- SegLCD\_LDD
- Serial\_LDD
- Shared\_LDD
- SPIMaster\_LDD
- SPISlave\_LDD
- SSI\_LDD
- TimeDate\_LDD
- TimerInt\_LDD
- TimerOut\_LDD
- TimerUnit\_LDD
- TSI\_LDD
- USB\_LDD
- WatchDog\_LDD

6. High level components

- ADC
- AsynchroSerial
- BasicProperties
- BitIO
- BitsIO
- ByteIO
- Capture
- ConsoleIO
- DAC
- DMAController
- EventCntr16
- EventCntr32
- EventCntr8
- ExternalFile
- ExtInt
- FreeCntr
- FreeCntr16
- FreeCntr32
- FreeCntr8
- FreescaleAnalogComp
- InternalI2C
- InterruptVector
- IntFLASH
- PPG
- PWM
- StringList
- SynchroMaster

- SynchroSlave
  - TimeDate
  - TimerInt
  - TimerOut
  - TSS\_Library
  - TwoKeys
  - WatchDog
7. RTOS adapters for Logical Device Drivers
- Bareboard
  - MQX
  - MQXLite
8. Peripheral Initialization Components
- Init\_ACMP\_VAR1
  - Init\_ADC\_VAR0
  - Init\_ADC\_VAR3
  - Init\_AIPS0\_VAR0
  - Init\_AIPS1\_VAR0
  - Init\_AXBS\_VAR0
  - Init\_CAN\_VAR0
  - Init\_CAN\_VAR1
  - Init\_CMT\_VAR0
  - Init\_COP\_COLDFIREPLUS
  - Init\_COP\_KINETIS
  - Init\_CRC\_VAR0
  - Init\_DAC\_VAR0
  - Init\_DAC\_VAR4
  - Init\_DDR\_KINETIS
  - Init\_DMA\_VAR0
  - Init\_DMAMUX\_VAR0
  - Init\_eDMA\_VAR0
  - Init\_ENET\_VAR0
  - Init\_EWM\_VAR0
  - Init\_FB\_VAR0
  - Init\_FMC\_VAR0
  - Init\_FMC\_VAR1
  - Init\_FTFL\_VAR0
  - Init\_FTM\_VAR0
  - Init\_FTM\_VAR1
  - Init\_FTMR\_VAR0
  - Init\_GPIO\_VAR0
  - Init\_GPIO\_VAR1
  - Init\_HSCMP\_VAR0
  - Init\_I2C\_VAR0
  - Init\_I2S\_VAR0
  - Init\_I2S\_VAR1
  - Init\_IRQ\_VAR0

- Init\_KBI\_VAR0
- Init\_LCDC\_VAR0
- Init\_LLWU\_VAR0
- Init\_LPTMR\_VAR0
- Init\_MCM\_VAR2
- Init\_MCM\_VAR3
- Init\_MPUMVAR0
- Init\_MTIM\_VAR0
- Init\_NFC\_VAR0
- Init\_NVIC\_VAR0
- Init\_NVIC\_VAR1
- Init\_OPAMP\_VAR0
- Init\_PDB\_VAR0
- Init\_PGA\_VAR0
- Init\_PIT\_VAR0
- Init\_PMC\_VAR0
- Init\_PMC\_VAR2
- Init\_PORT\_VAR0
- Init\_PORT\_VAR1
- Init\_PWT\_VAR0
- Init\_RCM\_VAR0
- Init\_GPIO\_VAR0
- Init\_RNG\_VAR0
- Init\_RNG\_VAR1
- Init\_RTC\_VAR0
- Init\_RTC\_VAR1
- Init\_SCB\_VAR0
- Init\_SDHC\_VAR0
- Init\_SIM\_VAR2
- Init\_SIM\_VAR3
- Init\_SIM\_VAR4
- Init\_SLCD\_VAR0
- Init\_SMC\_VAR0
- Init\_SPI\_VAR0
- Init\_SPI\_VAR1
- Init\_SRTC\_VAR0
- Init\_SysTick\_VAR0
- Init TPM\_VAR0
- Init\_TRIAMP\_VAR0
- Init\_TSI\_VAR0
- Init\_TSI\_VAR2
- Init\_TSI\_VAR3
- Init\_UART\_VAR0
- Init\_USB\_OTG\_HS\_VAR0
- Init\_USB\_OTG\_VAR0
- Init\_USBDCD\_VAR0
- Init\_VREF\_VAR0
- Init\_WDOG\_VAR0

- PinSettings
9. PDD Modules
- ADC\_PDD
  - ASRC\_PDD
  - CAN\_PDD
  - CCM\_PDD
  - CMP\_PDD
  - CMT\_PDD
  - COP\_PDD
  - CRC\_PDD
  - DAC\_PDD
  - DMAMUX\_PDD
  - DMA\_PDD
  - ENET\_PDD
  - EWM\_PDD
  - FMC\_PDD
  - FTFA\_PDD
  - FTFE\_PDD
  - FTFL\_PDD
  - FTMRE\_PDD
  - FTMRH\_PDD
  - FTM\_PDD
  - GIC\_PDD
  - GPIO\_PDD
  - I2C\_PDD
  - I2S\_PDD
  - IOMUXC\_PDD
  - IRQ\_PDD
  - KBI\_PDD
  - LCDC\_PDD
  - LCD\_PDD
  - LLWU\_PDD
  - LPTMR\_PDD
  - MCG\_PDD
  - MCM\_PDD
  - MSCAN\_PDD
  - NFC\_PDD
  - NVIC\_PDD
  - OCOTP\_PDD
  - OSC\_PDD
  - PDB\_PDD
  - PDD\_Types
  - PIT\_PDD
  - PMC\_PDD
  - PORT\_PDD
  - PWT\_PDD
  - RCM\_PDD
  - RNGA\_PDD
  - RNG\_PDD
  - RTC0\_PDD

- RTC\_PDD
- SAI\_PDD
- SCB\_PDD
- SDHC\_PDD
- SIM\_PDD
- SMC\_PDD
- SPDIF\_PDD
- SPI\_PDD
- SysTick\_PDD
- TPM\_PDD
- TSI\_PDD
- UART0\_PDD
- UART\_PDD
- USBDCD\_PDD
- USBHS\_PDD
- USB\_PDD
- WDOG\_PDD

## C. Processor Expert directory overview

ProcessorExpert\:

Beans\	- Components configuration files
Config\	- Actual configuration of Processor Expert(TM)
CPUs\	- CPU components configuration files
DOCs\	- Documentation and help files
Drivers\	- Contains component drivers
Help\	- Contains user guides
Lib\	- Contains platform depended static files
Lib\mqxlite	- Contains MQX-Lite source files
Projects\	- Demo, tutorial and test projects
other Processor Expert files	

## D. Where to find information

This file contains last-minute information about Processor Expert Software – Processor Expert for Kinetis Design Studio 1.1.

### World Wide Web

<http://www.freescale.com/processorexpert>  
<http://www.freescale.com/mqx>  
<http://www.freescale.com>

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