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| Product | Device Pack |
| Release Version | V2.2.6 |
| Type Of Release* | Productive |
| Name of the Supplier | Infineon Technologies AG |
| Mode of Release | Infineon Server(http://dave.infineon.com/) |
| Date of Release | 2019-05 |
| Previous Version | V2.2.4 |

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* All types of releases -med as Alpha, Beta, Release Candidate and Patch are not intended to be used for production code.

1 Released Items

1.1 Libraries

This Device pack contains the Libraries, Examples and templates used for DAVE projects.

| Artefacts | Description |
|-------------------------|---|
| XMC Lib (Libraries) | Peripheral drivers for XMC4000 and XMC1000 family microcontrollers. |
| CMSIS Drivers & headers | CMSIS drivers and system & header files for XMC microcontrollers |
| TLE Libraries | Drivers for the TLE devices |
| Linker Script files | Linker script files for devices and variants |
| Example (Easy start) | Easy start source files |
| Device Features file | Device details for device selection and link to device specific artefacts |
| Templates | Templates for DAVE projects |

1.2 Device Pack - Test conditions

- Device pack Libraries for the XMC4800 series is verified on all supported derivatives; fully functional test is applied with XMC4800-F144x1024.
- Device pack Libraries for the XMC4500 series is verified on all supported derivatives; fully functional test is applied with XMC4500-F144x1024.
- Device pack Libraries for the XMC4400 series is verified on all supported derivatives; fully functional test is applied with XMC4400-F100x512.
- Device pack Libraries for the XMC4300 series is verified on all supported derivatives; fully functional test is applied with XMC4300-F100x256.
- Device pack Libraries for the XMC4200 series is verified on all supported derivatives; fully functional test is applied with XMC4200-Q48x256.
- Device pack Libraries for the XMC1100 series is verified on all supported derivatives; fully functional test is applied with XMC1100-T038F0064.
- Device pack Libraries for the XMC1200 series is verified on all supported derivatives; fully functional test is applied with XMC1200-T038F0200.
- Device pack Libraries for the XMC1300 series is verified on all supported derivatives; fully functional test is applied with XMC1302-T038F0200.
- Device pack Libraries for the XMC1400 series is verified on all supported derivatives; fully functional test is applied with XMC1404Q064x0128.

- Compilers used :
 - KEIL: V5.10.0.2
 - IAR: V6.50.6.4958
 - GCC compiler version ARM-GCC-49

2 Support Packages

None

3 Tool Information

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| DAVE | Device pack (XMC Libraries & CMSIS drivers) is used in DAVE to provide drivers required for the XMC target application development |
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4 Changes from Previous Version

4.1 Changes from previous version v2.2.4

| Sl.no | Description of change |
|-------|---|
| 1 | Update CMSIS files to CMSIS 5.5.1 |
| 2 | Update XMCLib to v2.1.22 Please refer the XMC Lib revision history for details. |
| 3 | DevicePack/CMSIS/Infineon/XMC1400_series/Source/system_XMC1400.c: Fix clock initialization if external XTAL is used (clock watchdog issue, see errata SCU_CM.023) Added DISABLE_WAIT_RTC_XTAL_OSC_STARTUP preprocessor guard: The RTC_XTAL can be used as clock source for RTC or as reference for DCO1 calibration In both cases if no wait is done in the startup after enabling the RTC_XTAL oscillator, the RTC_Enable() or the calibration will stall the MCU until the oscillator is stable (max. 5s according datasheet) |
| 4 | DevicePack/pack/CE_Templates/DAVEc.tmpl Fix creation of projectData.bak file Make DAVE_Init() weak, the user can reimplement the function |
| 5 | Added XMC4800 IoT Connectivity Kit board |

4.2 Changes from previous version v2.2.2

| Sl.no | Description of change |
|-------|--|
| 1 | Update: CMSIS files updated to CMSIS 5.4.o |
| 2 | 10 XMC Libs are updated Common, CAN, DMA, ETH_MAC, MATH, RTC, SDMMC, SCU, USBH, VADC Please refer the XMC Lib revision history for details. All changes are fully compatible to the previous version |
| 3 | system_XMC1400.c Fixed OSC_HP oscillator watchdog result detection in startup Added wait time for RTC_XTAL oscillator startup time ~5s |
| 4 | DAVEc.tmpl Changed Copy of the projectData.bin to projectData.bak every time solver runs. projectData.bak is intended to be used to recover corrupted project. |
| 5 | Changed BSP/XMC44_AppKit/board_pin_label.bpl adding motor control signals |
| 6 | Fixed project creation for XMC_LED_Current_Control_Explorer board Replace XMC_LED_Current_Control_Explorer board by: <ul style="list-style-type: none"> • XMC12_LED_Current_Control_Explorer • XMC13_LED_Current_Control_Explorer • XMC14_LED_Current_Control_Explorer |

4.3 Changes from previous version v2.1.22

| Sl.no | Description of change |
|-------|--|
| 1 | Update: CMSIS files updated to CMSIS 5.2.o |
| 2 | XMCLib is updated to V2.1.18: 15 XMC Libs are updated Common, CAN, CCU4, CCU8, DMA, ETH_MAC, FCE, FLASH, GPIO, I2C, MATH, UART, USIC, SCU, VADC Please refer the XMC Lib revision history for details. All changes are fully compatible to the previous version |
| 3 | The following new devices are added: XMC1302-T028x0032, XMC1302-T028x0064, XMC1302-T028x0128, XMC1302-T028x0200 |

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| 4 | Board Support added (only in combination with DAVE v4.4.2, Board Support is not working for DAVE 4.3.2 and lower) Board Support means that a board can be selected upon creation of a new project |
| 5 | Startup_xmc1400.s: Added option to select wait time before ASC BSL channel selection (WAIT_ASCBSL_ENTRY_SSW) system_xmc4xxx.c: Added code to handle the situation where the FPU is not enabled by compiler/linker settings |

4.4 Changes from previous version v2.1.18

| Sl.no | Description of change |
|-------|---|
| 1 | XMCLib is updated for multiple LLDs. Please refer XMCLib v2.1.16 release notes for details. |

4.5 Changes from previous version v2.1.16

| Sl.no | Description of change |
|-------|--|
| 1 | Update: CMSIS files updated to CMSIS 5.0.1 |
| 2 | Fix: Linker Script templates Linker was not complaining if sum of data + text sections is bigger than physical FLASH size Earlier update of templates for XMC1100x008 and XMC1100x0016 was missing |
| 3 | Fix: Activation of USBPLL when SDMMC clock is enabled in following files system_XMC4300.c system_XMC4500.c system_XMC4700.c system_XMC4800.c |

4.6 Changes from previous version v2.1.14

| Sl.no | Description of change |
|-------|---|
| 1 | XMCLib is updated for multiple LLDs. Please refer XMCLib release notes for details. |

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| 2 | <p>Device support: The following new devices are supported:</p> <ol style="list-style-type: none"> 1. XMC1201_T028x0016 2. XMC1201_T028x0032 3. XMC1202_T016x0064 4. XMC1301_T016x0032 5. XMC1302_Q040x0200 6. XMC1302_T028x0016 7. XMC1402_T038x0032 8. XMC1402_T038x0064 9. XMC1402_T038x0128 10. XMC1402_T038x0200 11. XMC1402_Q040x0200 12. XMC1402_Q048x0200 13. XMC1403_Q040x0064 14. XMC1403_Q040x0128 15. XMC1403_Q040x0200 |
| 3 | <p>Fixes and changes in CMSIS header and start-up files: Please refer to the change history in the respective files for details (change history for device header files has to be retrieved from the respective SVD file)</p> |

4.7 Changes from previous version v2.1.12

| Sl.no | Description of change |
|-------|---|
| 1 | Fixed XMC43 header file issue of wrong offset for peripheral control registers of ECAT, CCU, CAN, WDT and EXTCLK. |

4.8 Changes from previous version v2.1.8

| Sl.no | Description of change |
|-------|---|
| 1 | XMCLib is updated for multiple LLDs. Please refer XMCLib release notes for details. |
| 2 | XMC1400 Easy start project source files are updated for port control codes(6-bits) |

4.9 Changes from previous version v2.1.6

| Sl.no | Description of change |
|-------|---|
| 1 | Linker script initialization issue for the first variable belonging to BSS section if the total length of the BSS section is not a multiple of 4. |

4.10 Changes from previous version v2.1.4

| Sl.no | Description of change |
|-------|--|
| 1 | TLE drivers are updated to resolve the file reference issue. |

5 Installation Requirements

- DAVE v4.4.2 or higher version should be installed or use any other compiler tool chain supporting Infineon Technologies XMC Microcontrollers, e.g. Atollic, IAR, Keil MDK, Rowley, TASKING.

6 Known Limitations

7 Device Pack Revision History