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<b>Product</b>	Device Pack
<b>Release Version</b>	V2.2.10
<b>Type Of Release*</b>	Productive
<b>Name of the Supplier</b>	Infineon Technologies AG
<b>Mode of Release</b>	Infineon Server( <a href="http://dave.infineon.com/">http://dave.infineon.com/</a> )
<b>Date of Release</b>	2019-07
<b>Previous Version</b>	V2.2.8

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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

<b>DAVE</b>	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 v2.2.8

Sl.no	Description of change
1	XMCLib v2.2.24 CMSIS v6.5.0 Added support for XMC1404_Q040 devices

### 4.2 Changes from previous version v2.2.6

Sl.no	Description of change
1	DevicePack/CMSIS/Infineon/XMC1400_series/Source/system_XMC1400.c, sync. code of SystemCoreClockSetup() to XMC_SCU_CLOCK_Init() in xmc1_scu.c

### 4.3 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

### 4.4 Changes from previous version v2.2.2

Sl.no	Description of change
1	Update: CMSIS files updated to CMSIS 5.4.0
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"> <li>XMC12_LED_Current_Control_Explorer</li> <li>XMC13_LED_Current_Control_Explorer</li> <li>XMC14_LED_Current_Control_Explorer</li> </ul>

#### 4.5 Changes from previous version v2.1.22

Sl.no	Description of change
1	Update: CMSIS files updated to CMSIS 5.2.o
2	<p>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</p>
3	The following new devices are added: XMC1302-T028x0032, XMC1302-T028x0064, XMC1302-T028x0128, XMC1302-T028x0200
4	<p>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</p>
5	<p>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</p>

#### 4.6 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.

#### 4.7 Changes from previous version v2.1.16

Sl.no	Description of change
1	Update: CMSIS files updated to CMSIS 5.0.1
2	<p>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</p>
3	<p>Fix: Activation of USBPLL when SDMMC clock is enabled in following files  system_XMC4300.c  system_XMC4500.c  system_XMC4700.c  system_XMC4800.c</p>

#### 4.8 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.

2	<p>Device support: The following new devices are supported:</p> <ol style="list-style-type: none"> <li>1. XMC1201_T028x0016</li> <li>2. XMC1201_T028x0032</li> <li>3. XMC1202_T016x0064</li> <li>4. XMC1301_T016x0032</li> <li>5. XMC1302_Q040x0200</li> <li>6. XMC1302_T028x0016</li> <li>7. XMC1402_T038x0032</li> <li>8. XMC1402_T038x0064</li> <li>9. XMC1402_T038x0128</li> <li>10. XMC1402_T038x0200</li> <li>11. XMC1402_Q040x0200</li> <li>12. XMC1402_Q048x0200</li> <li>13. XMC1403_Q040x0064</li> <li>14. XMC1403_Q040x0128</li> <li>15. XMC1403_Q040x0200</li> </ol>
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>

#### 4.9 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.

#### 4.10 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)

#### 4.11 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.

#### 4.12 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**