



Install Keil MDK Version 5

Download and install the MDK Core from

www.keil.com/mdk5/install

Add Software Pack using the Pack Installer

• Infineon::XMC4000_DFP – Infineon XMC4000 Series Device Support

Power up the board

- Connect the board to the PC using the Debug Micro USB Connector
- Windows will recognize the USB device and install the required drivers automatically

Verify Installation using example projects provided in the Software Pack or download examples that apply to this board www.keil.com/boards2/infineon/xmc4500cpuboard_generalpurpose_cpu_45b/

• Copy an example using the Pack Installer. Compile, download to Flash, and debug the application. The provided examples are ready to run.

More Information

• Board Supplier

Related Products

- MDK Version 5
- Getting Started User's Guide
- MDK-Professional Middleware
- Learning Platform

www.infineon.com

www.keil.com/mdk5 www.keil.com/gsg www.keil.com/middleware www.keil.com/learn

Debug and Trace Configuration

Infineon XMC4500 Hexagon Board

ARM[°]KEIL[°] Microcontroller Tools

J-LINK / J-TRACE Cortex

Select the **J-LINK / J-TRACE Cortex** driver on the **Debug** tab.

🕅 Options for Target 'Blinky'	×
Device Target Output Listing User C/C++ Asm	Linker Debug Utilities
C Use Simulator with restrictions Settings	⊡se: J-LINK / J-TRACE Cortex Settings Settings
Limit Speed to Real-Time	
✓ Load Application at Startup ✓ Run to main()	✓ Load Application at Startup ✓ Run to main()

Click on **Settings** and select the **SW** Port to configure the Serial Wire Debug (SWD) port.

Cortex JLink/JTrace Target Driver Setup		×
Debug Trace Flash Download		,
J-Link / J-Trace Adapter	SW Device	
SN: serial number	IDCODE Device Name	Move
Device: J-Link Lite-XMC4200 Rev.1	SWD Ox2BA01477 ARM CoreSight SW-DP	Up
HW : V1.00 dll : V5.10		Down
FW : J-Link Lite-XMC4200 Rev.1 ci	J	
Port: Max Clock:	Automatic Detection ID CODE:	
SW 💌 5 MHz 💌	C Manual Configuration Device Name:	
Auto Cik	Add Delete Update IR len:	

Trace Settings

For trace capability, configure ITM Trace by selecting the **Trace** tab.

Check **Enable** in **Trace Settings** and set the **Core Clock** speed to correspond to the CPU Core Clock.

Set **Trace Port** to Serial Wire Output – UART/NRZ.

Ensure to set the **SWO Clock** speed to maximum *1.000000 MHz*.

Cortex JLink/JTrace Target Driver Setup			
Debug Trace Flash Download		[
🔽 Enable	Core Clock: 10.000000 MHz	Trace Cache Lines 2M 💌	
Trace Port Serial Wire Output - UART/N SWO Settings Prescaler: Core Clk / 10 Clock: 1.000000 MHz Image: Autodetect max SWO Clk	PC Sampling Prescaler: 1024*16 ▼ Prescaler: 1024*16 ▼ Periodic Period: <disabled> on Data R/W Sample ETM Trace Enable</disabled>	Timestamps Enable Prescaler: 1 Trace Events CPI: Cycles per Instruction EXC: Exception overhead SLEEP: Sleep Cycles LSU: Load Store Unit Cycles FOLD: Folded Instructions	

ULINKPro Debug and Trace Adapter

Connect the board to the PC using the **Cortex Debug+ETM Connector** and a debug adapter, for example ULINK*pro*. In µVision, select

Options for Target 'UlinkPro'	×			
Device Target Output Listing User C/C++ Asm Linker Debug Utilities				
C Use Simulator with restrictions Settings Limit Speed to Real-Time	✓ Use: ULINK Pro Cortex Debugger ▼ Settings			
✓ Load Application at Startup ✓ Run to main()	✓ Load Application at Startup ✓ Run to main()			

Project – Options for Target – Debug and choose ULINK Pro Cortex Debugger.

Click **Settings** and configure the **Debug** connection for Serial Wire Debug (SWD) by selecting the Port **SW**.



Trace Settings

For full trace capability, configure ITM Trace by selecting the **Trace** tab.

Check the **Trace Enable** box.

Set the **Core Clock** speed to correspond to the CPU Core Clock.

Set **Trace Port** to Serial Wire Output – Manchester.

Ensure to set the **SWO Clock** speed to maximum *1.000000 MHz*.

Cortex-M Target Driver Setup		—
Debug Trace Flash Download		
Core Clock: 10.000000 MHz	▼ Trace Enable □ UnlimitedTrace	🗖 ETM Trace Enable
Serial Wire Output - Manchester	Timestamps Frescaler: 1	Trace Events
SWO Clock Prescaler: 10 Autodetect	PC Sampling Prescaler: 1024*16 V	EXC: Exception overhead SLEEP: Sleep Cycles
SWO Clock: 1.000000 MHz	Periodic Period: <disabled></disabled>	FOLD: Folded Instructions

Other trace configuration settings are described in the ULINKpro User's Guide. Go to <u>www.keil.com/mdk5/ulink/ulinkpro</u>. Choose ULINKpro User's Guide in the Quick Links and continue with chapter Configure Cortex-M Devices for Tracing. Select the section that applies to the device used in the project target and continue with the topic Enable 4-Pin Trace (ETM).