Quick Start Guide

NGX LPC433x-Xplorer



Install Keil MDK Version 5

• Download and install the MDK Core from

www.keil.com/mdk5/install

Microcontroller Tools

Add Software Pack using the Pack Installer

• Keil::LPC4300_DFP - NXP LPC4300 Series Device Support

Power up the board

- Connect a USB power supply to a **Power Micro USB** connector
- Connect the board to a debug adapter, for example ULINKpro, using the 10-pin Debug Connector

Verify Installation

- Copy an example project using the Pack Installer. Compile, download to Flash, and debug the application. The provided examples are ready to run. Trace settings might have to be adapted.
- Or download examples that apply to this board from www.keil.com/dd2/nxp/lpc4330

More Information

• Evaluation Board Description

Related Information

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

www.keil.com/boards2/ngx/lpc4330_xplorer

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

Debug and Trace Configuration NGX LPC433x-Xplorer

ULINKpro Debugger and Trace Adapter

In μVision, open the dialog	Device Target Output Listing User C/C++ Asm	Linker Debug Utilities
Options for Target – Debug,	C Use Simulator with restrictions Settings	Use: ULINK Pro Cortex Debugger Settings
enable Use and select	Limit Speed to Real-Time	
ULINK Pro Cortex Debugger.	✓ Load Application at Startup ✓ Run to main()	I Load Application at Startup I Run to main()

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



SWO Trace Settings

Click the **Trace** tab and enter the correct CPU **Core Clock** speed as specified in your project.

Check the **Trace Enable** box.

For SWO trace, set **Trace Port** to Serial Wire Output – Manchester.

Debug	Trace Flash Download	
Cor	e Clock: 120.000000 MHz	🔽 Trace Enable
n Tra	ce Port	Timestamps
Serial Wire Output - Manchester 💌		🔽 Enable 🛛 F
SV	/O Clock Prescaler: 1	PC Sampling
	I✓ Autodetect	Presca
9	GWO Clock: 120.000000 MHz	Periodic Peri

ETM Trace Settings

Set **Trace Port** to *Embedded Trace Buffer* and check **ETM Trace Enable**.

Debug Trace Rash Download	
Core Clock: 120.000000 MHz	🔽 Trace Enable 🔲 UnlimitedTrace 🔽 ETM Trace Enable
Trace Port	Timestamps Trace Events
Embedded Trace Buffer	Enable Prescaler: 1 CPI: Cycles per Instruc

Further configuration instructions for trace can be found on <u>www.keil.com/mdk5/ulink/ulinkpro</u>. In **Quick Links**, select **ULINKpro User's Guide**; then **Configure Cortex-M Devices for Tracing** and select chapter **NXP LPC43xx Devices**.