

## Future Technology Devices International Ltd.

## **Application Note**

## AN\_145

## Vinculum-II Toolchain

# **Installation Guide**

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The purpose of this application note is to provide users of Vinculum-II (VNC2) device with a procedure for installing the Vinculum-II software development toolchain

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### **1** Introduction

This document is intended to guide the reader through the process of installing the Vinculum-II software development toolchain. The Vinculum-II toolchain is designed to support the development of user firmware applications for the FTDI <u>Vinculum-II (VNC2)</u> programmable dual USB Host / Slave controller devices. The tool suite is provided as a royalty-free, 'C' based Integrated Development Environment (IDE), which comes complete with compiler, linker and hardware debug tools. The tool suite also contains an RTOS kernel, device drivers and a range of example applications to enable designers to easily migrate to and to quickly develop applications based on the FTDI VNC2.



### 2 Getting Vinculum-II Toolchain Installer

The latest available Vinculum-II toolchain installer can be downloaded from the <u>FTDI website</u> and this can be saved to a location on your PC. The Vinculum-II toolchain runs on Windows 7, Vista and Windows XP.

The instructions in this installation guide are based on the current version at the time of writing (version 1.0.4). The same instructions can be used for any future updates.



### 3 Installing Vinculum-II Toolchain

Run the executable file obtained from the web download by double clicking on "Vinculum-II toolchain Installer 1.0.4.exe" icon. The installer icon is located on the PC wherever the user installed it when the toolchain was downloaded from the web.



It is recommended to uninstall any previous installations of the toolchain before installing a new version. If a previous toolchain is not uninstalled before the installer is run then it will prompt whether to overwrite the existing installation or remove it first (see screenshot below):

Vinculum II Toolchain Installer 1.0.4 Setup 💦 🔀				
	Vinculum II	Toolchain 1.0.2 is	s installed.	
	Do you wan	t to remove the i	current installatio	n first?
Yes No Cancel				

Select "Yes", to uninstall the previous installation. When this has been completed the following screen will appear:

👐 Vinculum II Toolchain In	nstaller 1.0.4 Setup	
Vinculum II Toolchain In	Welcome to the Vinculum II Toolchain Installed         Setup Wizard         This wizard will guide you through the installation of Vinculum II Toolchain Inst         1.0.4.         It is recommended that you close all other applications before starting Setup, make it possible to update relevant system files without having to reboot you computer.         Click Next to continue.	taller . This will
FTDI - USB Made Easy	Next >	Cancel

Click "Next" which will display the License Agreement screen as shown in the following screenshot:



💜 Vinculum II Toolchain Ins	taller 1.0.4 Setup
License Agreement Please review the license terms	before installing Vinculum II Toolchain Installer 1.0.4.
<b>USB MADE EASY</b>	Press Page Down to see the rest of the agreement. Copyright © 2007-2010 Future Technology Devices International Limited THIS SOFTWARE IS PROVIDED BY FUTURE TECHNOLOGY DEVICES INTERNATIONAL LIMITED "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL FUTURE TECHNOLOGY DEVICES INTERNATIONAL LIMITED BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHER VISCI) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. FTDI VINCULUM II TOOLCHAIN, IDE, LIBRARIES, DRIVERS, SAMPLE APPLICATIONS AND VOS KERNEL MAY BE USED ONLY IN CONJUNCTION WITH PRODUCTS BASED ON FTDI PARTS. ALL FTDI COMPONENTS MAY BE DISTRIBUTED IN ANY FORM AS LONG AS OUR LICENSE INFORMATION IS NOT MODIFIED. If you accept the terms of the agreement, click I Agree to continue. You must accept the agreement to install Vinculum II Toolchain Installer 1.0.4.
FTDI - USB Made Easy	< <u>B</u> ack I <u>Ag</u> ree Cancel

Review the license terms and Click "I Agree" to proceed and the following screen will appear.

💜 Vinculum II Toolchain Ins	taller 1.0.4 Setup		
Choose Components Choose which features of Vinculi	um II Toolchain Installer 1.0.4 you w	ant to install.	<b>FTDI</b> Chip
S S	Check the components you want Click Next to continue,	to install and uncheck the components you don't want	to install.
MADE EAS	Select components to install:	<ul> <li>Vinculum II Compiler Tools</li> <li>Firmware Development Environment</li> <li>Integrated Development Environment</li> <li>Plugins</li> <li>Desktop Icon for IDE</li> <li>Vinculum II Firmware Libraries</li> <li>Vinculum II Sample Applications</li> </ul>	
LSB	Space required: 28.2MB		
FTDI - USB Made Easy	< <u>B</u> ack	<u>N</u> ext >	Cancel



By default, all components of the toolchain are installed. This guide, and FTDI's user documentation, assumes that all components are installed on a system.

Click "Next" to proceed and the following screen will appear.

💜 Vinculum II Toolchain In	staller 1.0.4 Setup	
Choose Install Location Choose the folder in which to ir	nstall Vinculum II Toolchain Installer 1.0.4.	Chip
DE EASY	Please select the folder where the Vinculum II Toolchain will be installed.	
MA	-Vinculum II Toolchain Folder C:\Program Files\FTDI\Vinculum II Toolchain	Browse
<b>ES</b>	Space required: 28.2MB Space available: 241.9GB	
FTDI - USB Made Easy	< <u>B</u> ack <u>N</u> ext >	Cancel

Click "Browse" to select the folder where the Vinculum-II toolchain will be installed.

The default installation location is C:\Program Files\FTDI\Vinculum II toolchain It is not essential to use the default location as shown in the above screenshot. Users can change the installation location if required.

The installer will automatically activate User Account Control to request elevated privileges while installing. This allows the installer to store files in the "Program Files" area of the PC and access the registry as required.



Click "Next" to proceed and the following screen will appear

👐 Vinculum II Toolchain Ins	staller 1.0.4 Setup
Choose Install Location Choose the folder in which to in:	stall Vinculum II Toolchain Installer 1.0.4.
DE EASY	Please select the folder where the Vinculum II Firmware Samples will be installed.
MA	Vinculum II Firmware Samples Folder           Ind Settings\Your Name\My Documents\FTDI\Firmware\Samples\1.0.4         Browse
<b>USB</b>	Space required: 28.2MB Space available: 241.8GB
FTDI - USB Made Easy	< Back Next > Cancel

Click "Browse" to browse to the required directory where the firmware samples are to be installed.

The default path is (the 1.0.4 is the revision of toolchain being installed here):

C:\Documents and Settings\"your name"\My Documents\FTDI\Firmware\Samples\1.0.4

For subsequent releases and installation of the toolchain, the installer will, by default, store the samples in a unique folder to avoid overwriting samples from previous installations. If, however, a path is chosen where previous samples are stored then the installer checks that the user wishes to overwrite this area before doing so (see message box below).

😻 Vinculum II Toolchain Installer 1.0.4 S 🔀			
Overwrite HelloWorld Application?			
Yes No			



Once the path has been entered in the box, click "Next" to proceed and the next screen will appear

🖤 Vinculum II Toolchain In	staller 1.0.4 Setup	
Choose Start Menu Folder Choose a Start Menu folder for	the Vinculum II Toolchain Installer 1.0.4 shortcuts.	FTDI Chip
No.	Select the Start Menu folder in which you would like to create the program's shortcu enter a name to create a new folder. FTDI\Vinculum II Toolchain	ts. You can also
<b>JSB MADE E</b>	Accessories Administrative Tools AVG 8,5 Canon DDL1M12 Logger DLL for DS1M12 EasyScopeII for DS1M12 Firefox - HP Virtual Browser Edition FTD1 Games HP HP Backup & Recovery InterVideo WinDVD Microsoft Office Microsoft SQL Server 2005 Microsoft Visual Basic 2005 Power Packs Microsoft Visual Studio 2005 Microsoft Visual Studio 2005 Microsoft Visual Studio 2008 Microsoft Windows SDK v6.0A National Instruments Do not create shortcuts	
FTDI - USB Made Easy	< <u>B</u> ack Install	Cancel

Click "Install" and the next screen will appear.

W Vinculum II Toolchain Installer 1.0.4 Setup	
Installing Please wait while Vinculum II Toolchain Installer 1.0.4 is being installed.	Chip
VINASM_INCLUDE was empty and has been updated with the target	
MAD	
FTDI - USB Made Easy <a>Sack</a>	Cancel



When the installation has completed a completion screen will appear as shown in the following screenshot.

💜 Vinculum II Toolchain Inst	aller 1.0.4 Setup
	<b>FTDI</b> Chip
EASY	Completing the Vinculum II Toolchain Installer 1.0.4 Setup Wizard
	Vinculum II Toolchain Installer 1.0.4 has been installed on your computer.
	Click Finish to close this wizard.
MADE	Read Vinculum II Toolchain Installer 1.0.4 Release Notes
	Visit the FTDI Website http://www.ftdichip.com
FTDI - USB Made Easy	Einish Cancel

Click "Finish" to close the wizard and the installer displays a Readme file (Readme.txt) It is recommended that users read this file.

Following installation it is recommended that the user refer to the following application note: Vinculum-II Tool Chain Getting Started Guide

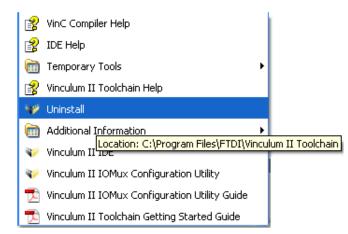


### 4 Uninstalling Vinculum-II Toolchain

Navigate to the directory where the Vinculum-II toolchain has been installed and double click "uninstall.exe icon"



The Uninstaller can also be accessed from the START menu : *Start->AllPrograms->FTDI Vinculum II To*olchain->*Uninstall* on the Windows Toolbar.



If the user has followed the installation wizard illustrated in this application note then the Vinculum-II toolchain will have been saved within the *Program Files/FTDI/Vinculum II Tool Chain* directory on local hard disc of the PC.

The screen will appear as shown below.



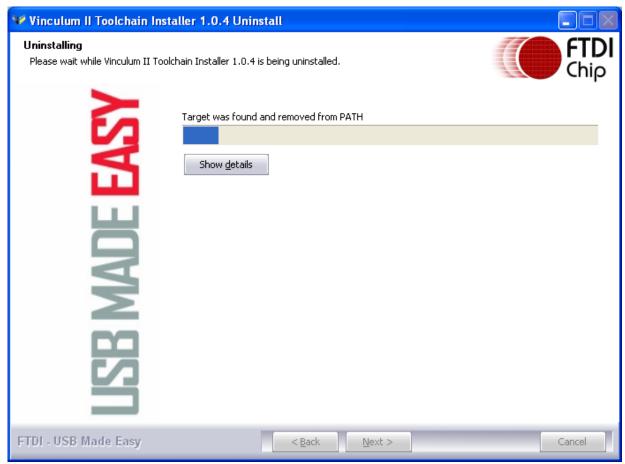
💜 Vinculum II Toolchain Ir	ıstaller 1.0.4 Uninstall
	<b>FTDI</b> Chip
EASY	Welcome to the Vinculum II Toolchain Installer 1.0.4 Uninstall Wizard
MADE	This wizard will guide you through the uninstallation of Vinculum II Toolchain Installer 1.0.4. Before starting the uninstallation, make sure Vinculum II Toolchain Installer 1.0.4 is not running. Click Next to continue.
FTDI - USB Made Easy	<u>N</u> ext > Cancel

Click "Next" and the following screen will appear.



👽 Vinculum II Toolchain Installer 1.0.4 Uninstall			
Choose Components Choose which features of Vinculum II Toolchain Installer 1.0.4 you want to uninstall.			
∑ S	Check the components you want to uninstall and uncheck the components you don't want to uninstall. Click Uninstall to start the uninstallation.		
MADE EAS	Select components to uninstall:	<ul> <li>Vinculum II Compiler Tools</li> <li>Firmware Development Environment</li> <li>Plugins</li> <li>Desktop Icon for IDE</li> <li>Vinculum II Firmware Libraries</li> <li>VOS Kernel</li> <li>Driver Libraries</li> <li>Runtime Libraries</li> </ul>	
<b>L</b> SB	Space required: 0.0KB		
FTDI - USB Made Easy	< <u>B</u> ack	<u>U</u> ninstall Cancel	

Click "Uninstall" and the following screen will appear.



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When Vinculum-II toolchain has been successfully uninstalled, the screen below will automatically appear.

💜 Vinculum II Toolchain Installer 1.0.4 Uninstall				
USB MADE EASY	Completing the Vinculum II Toolchain Uninstall Wizard Vinculum II Toolchain Installer 1.0.4 has been uninstalled from y Click Finish to close this wizard.			
FTDI - USB Made Easy	Einish	Cancel		

Click "Finish" to close the wizard.



## 5 Troubleshooting

#### 5.1 Cannot Find Vinculum-II Firmware Samples

Following the installation wizard of this document, the Vinculum-II Firmware Samples are by default located within the *My Documents* folder of your PC.



#### **6** Contact Information

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### **Appendix A - References**

Vinculum-II (VNC2)

#### **Application and Technical Notes**

Vinculum-II IO Cell Description Vinculum-II Debug Interface Description Vinculum-II IO Mux Explained Vinculum-II PWM Example Migrating Vinculum Designs From VNC1L to VNC2-48L1A Vinculum-II Errata Technical Note Vinculum-II Tool Chain Getting Started Guide VINCULUM-II IO\_Mux Configuration Utility User Guide



## **Appendix B - Revision History**

Version draftFirst DraftVersion 1.0First Release

13/05/2010 26/05/2010