iCEcube2 Installation Guide

AUGUST 26, 2014

INSTALLATION OVERVIEW

Platforms Supported

iCEcube2 Tools

iCEcube2 - Windows Installation

- Assemble required materials
- Perform the installation
- Verify installation success
- Install Programming Tools.

iCEcube2 – Linux Installation

Uninstall/Modify iCEcube2

Floating License Setup

Appendix A: Node Locked License File Troubleshooting.

Appendix B: Install iCEman driver on Vista Home.

LICENSES/PLATFORMS SUPPORTED

Node-locked License

- Windows 7 OS, 32-bit / 64-bit
- Windows XP Professional

Floating License Server

- Windows 7 OS, 32-bit / 64-bit
- Windows XP Professional
- Red Hat Enterprise Linux WS v4.0

ICECUBE2 TOOLS / PLATFORM

iCEcube2 Tool Suite consists of Synthesis, Place and Route, Simulation and programming tool sets.

Features	Windows OS	Linux OS
iCEcube2 Core Tools	Yes	Yes
Lattice Synthesis Engine(LSE)	Yes	Yes
Synplify-Pro Synthesis	Yes	Yes
Integrated ALDEC Active-HDL Simulator*	Yes	No
iCEcube2 Programming Tools*	Yes	No
Lattice Diamond Programmer**	Yes	Yes

*** Integrated ALDEC Active-HDL simulator and iCEcube2 Programming tools are only available in windows platform.**

**** Lattice Diamond Programmer is the preferred device programmer for the Lattice iCE devices.**

ASSEMBLE REQUIRED MATERIALS

Download the latest iCEcube2 installer from Lattice website.

http://www.latticesemi.com/products/designsoftware/icecube2/downloads.cfm

- **Registration is required prior to download**

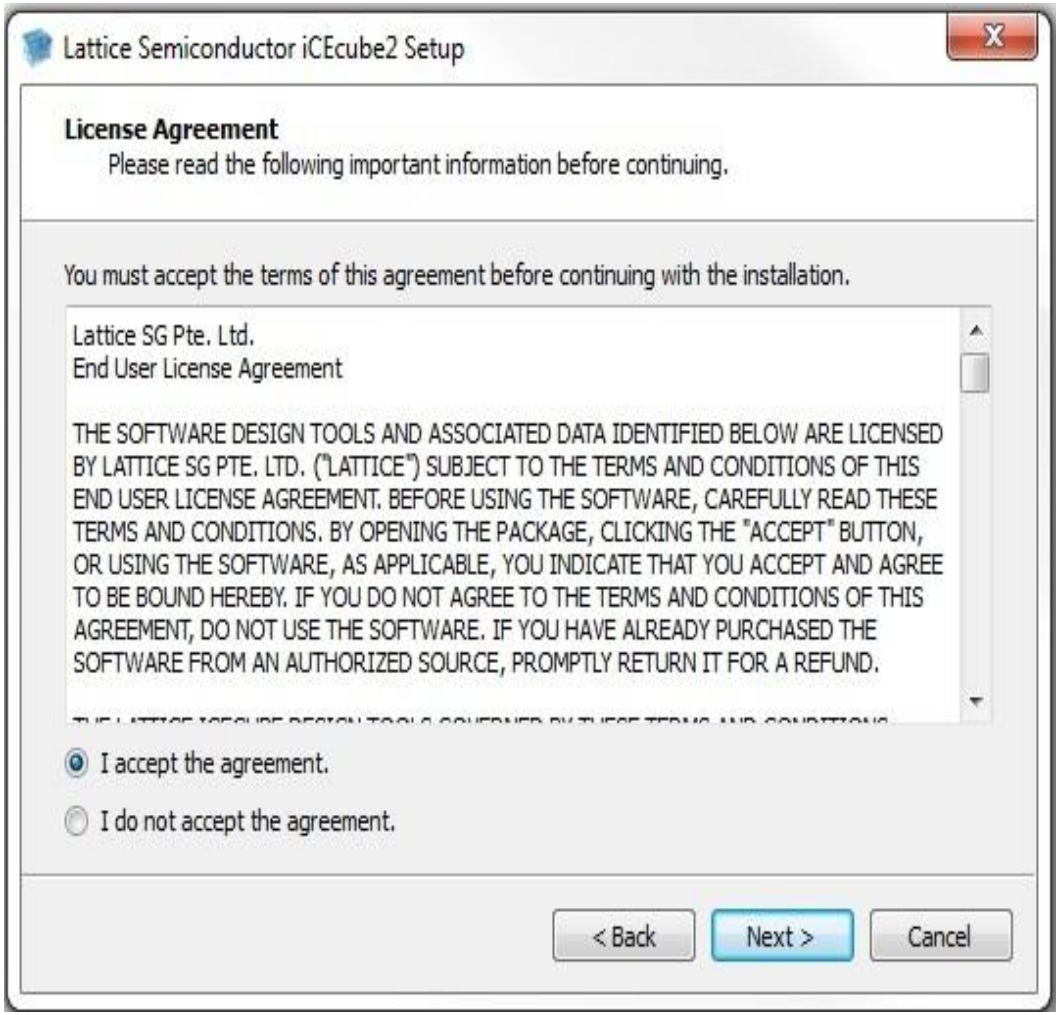
Request the license file from lattice admin(lic_admn@latticesemi.com). License file enables the iCEcube2 IDE, Synplifypro synthesis tool and the Aldec Active-HDL simulator.

- **Node-Locked License (Windows only)**
  - **Launch "cmd" console, type "ipconfig –all" to get the MAC ID of the system.**
  - **Submit your MAC ID to Lattice. If Virtual Machine (e.g. Remote Desktop) is used, the MAC address required by the license is the MAC address of that Virtual Machine, not the machine in which the user is physically using.**

- **Floating License (Linux & Windows)**
  - **Submit the MAC ID of your license server to Lattice.**
    - **Windows**
    - **Launch "cmd" console, type "ipconfig /all" to get the MAC ID.**
  - **Linux**
    - **Type "ifconfig –a". The Ethernet HWAddr gives the required MAC ID.**
  - **You will need to modify the license file to include your license server name and port information.**

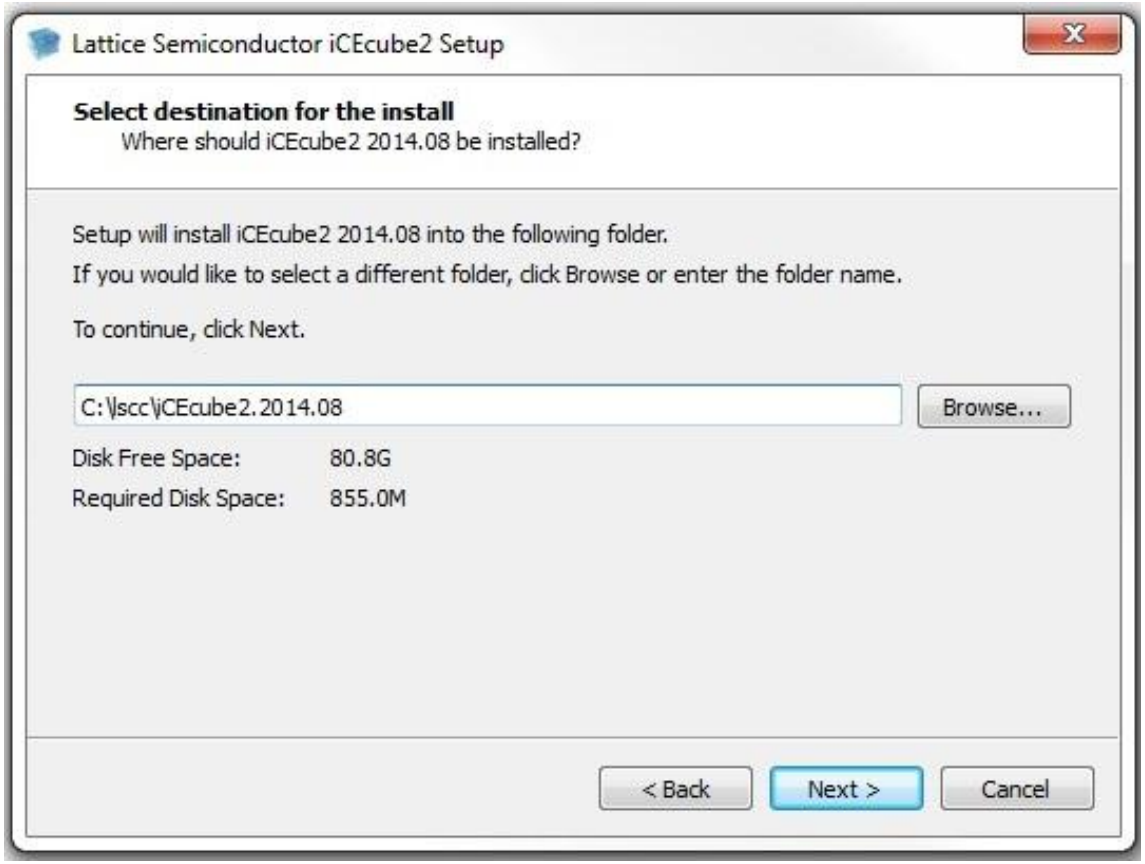
Launch the iCEcube2 windows installer

Accept the license agreement



Select the installation directory

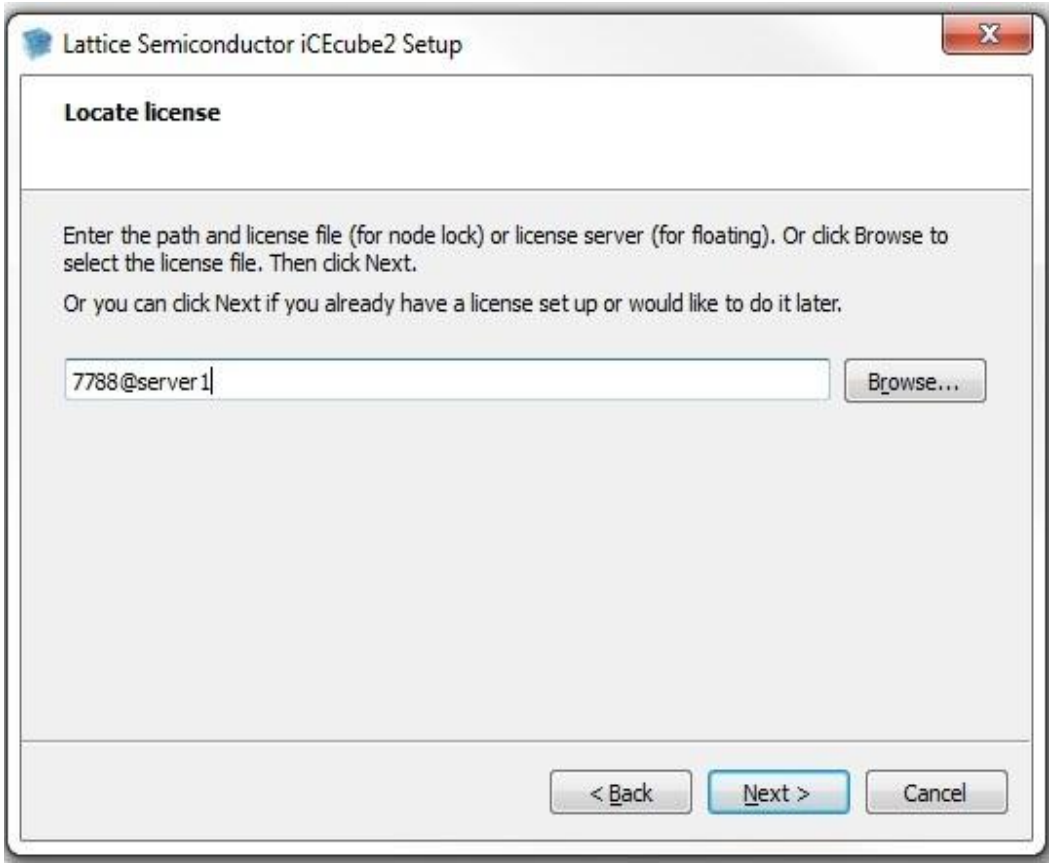
- Default location is recommended
- No spaces are allowed



ICECUBE2 - WINDOWS INSTALLATION

Specify iCEcube2 license by either:

- Browsing to locate a license file on disk
- Typing a floating license server into the text box

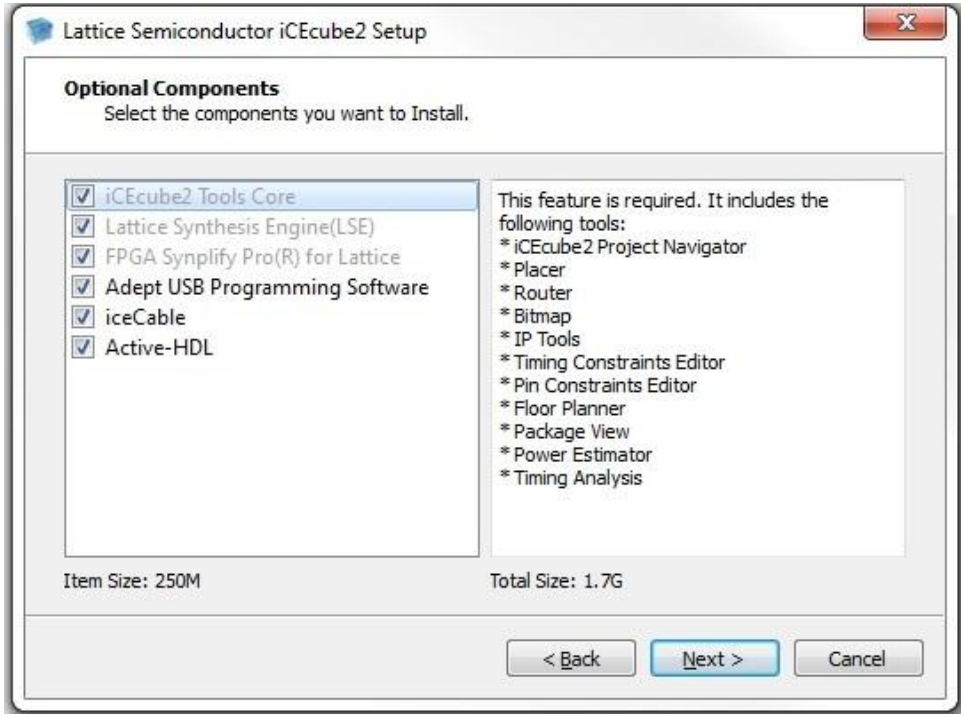


ICECUBE2 - WINDOWS INSTALLATION

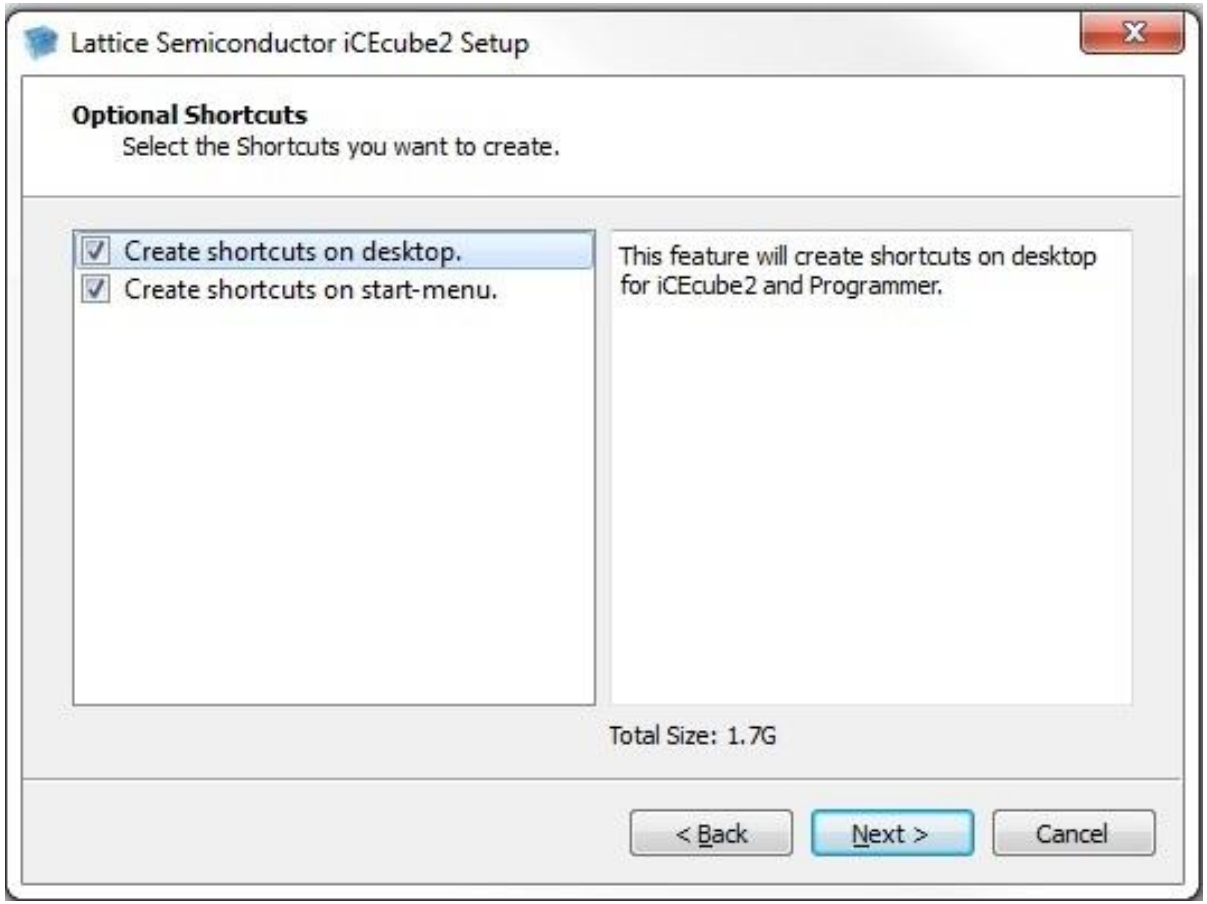
Install Adept USB Programming Software for iCEman or iCEcable.

- **Check off the boxes if you have already installed or do not need to program iCE65/iCE40 Evaluation Boards**

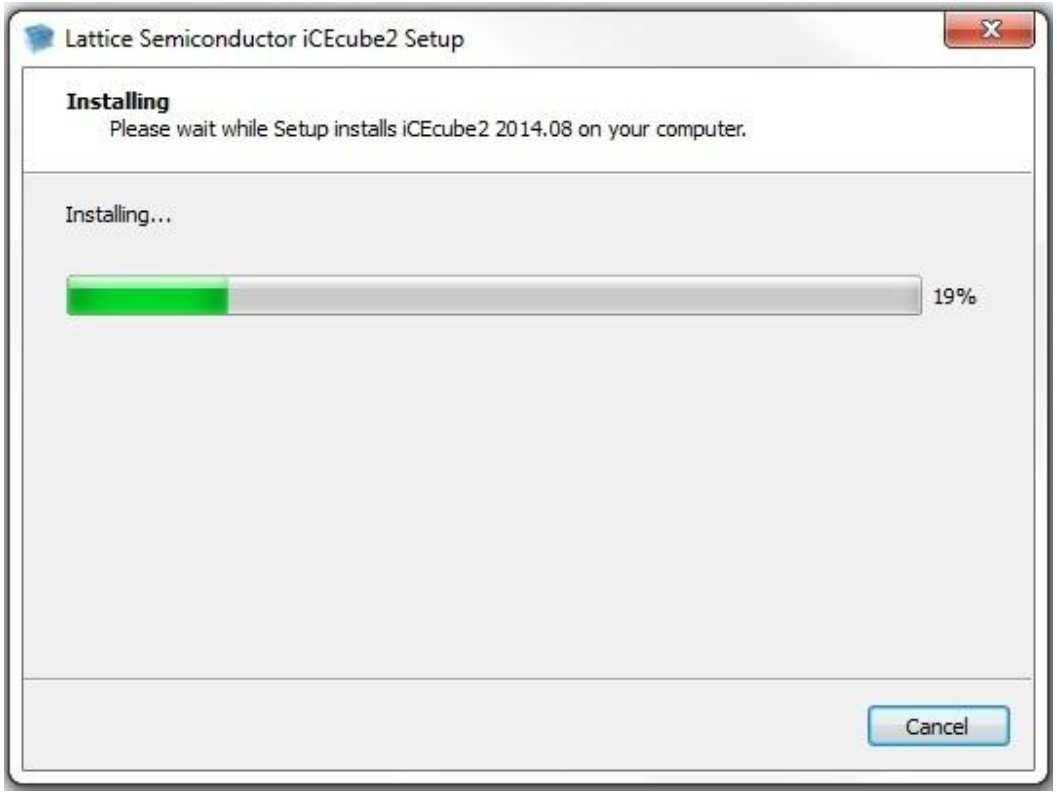
Install the "Active-HDL" Windows based Simulation Software for functional and timing verification.



Create shortcuts on desktop and start-menu.



Installer starts to install iCEcube2 on your computer



ICECUBE2 - WINDOWS INSTALLATION

When the Setup Wizard is finished, click “Finish” to exit and launch iCEcube2.

Congratulations!! You have successfully installed iCEcube2.

INSTALL PROGRAMMING TOOLS

To program the iCE65/iCE40 evaluation boards either the Lattice Diamond Programmer (preferred) or the programming software's shipped with iCEcube2 installer needs to be installed.

Lattice Diamond Programmer:

Lattice Diamond programmer is the preferred programmer to program the iCE devices. Download and install the latest Lattice Diamond Programmer from Lattice website.
http://www.latticesemi.com/Products/DesignSoftwareAndIP/ProgrammingAndConfigurationSw/Programmer.aspx

iCEcube2 Programmer:

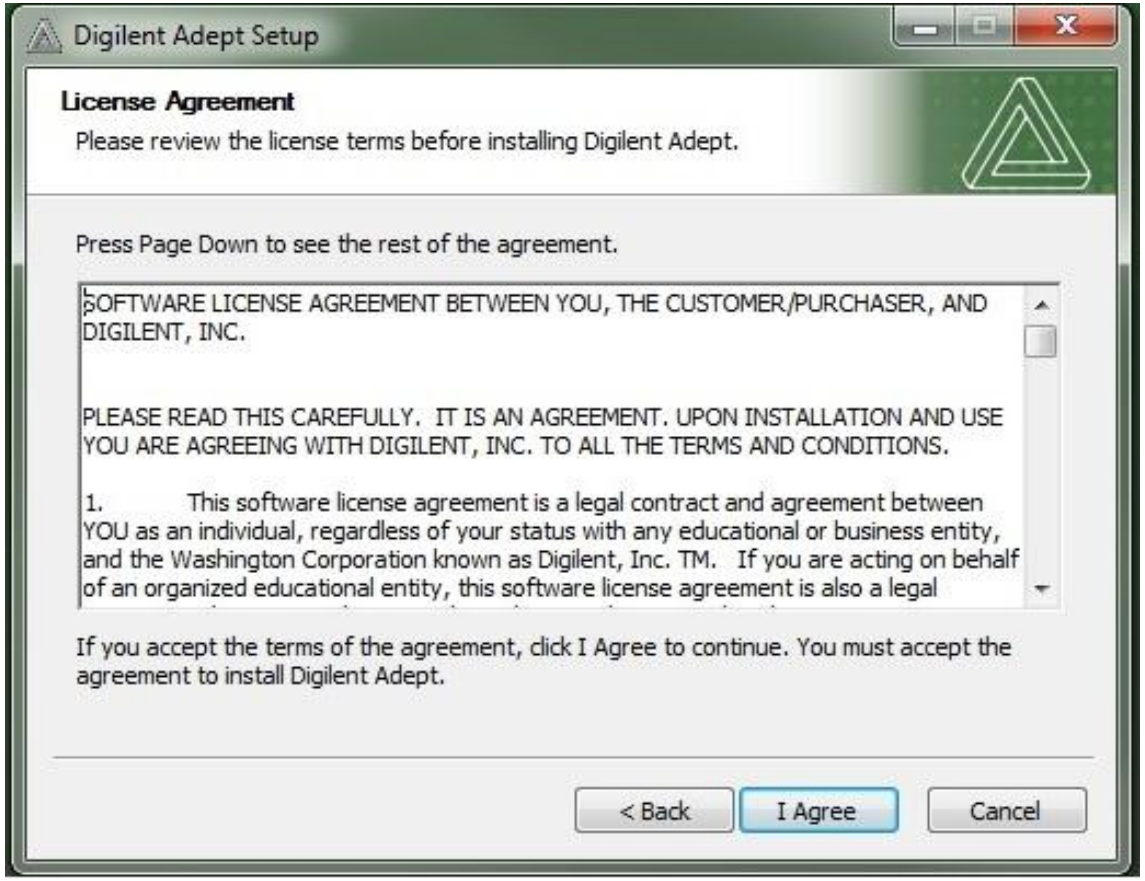
The iCEcube2 programming software's can be either installed along with iCEcube2 installation process (slide 10) or through the "Modify" installation options (slide 32) as and when required. Slide 15 to 25 explain the steps in installing iCEcube2 programming tools.

Note: The iCEcube2 programming tools are only available in windows platform.

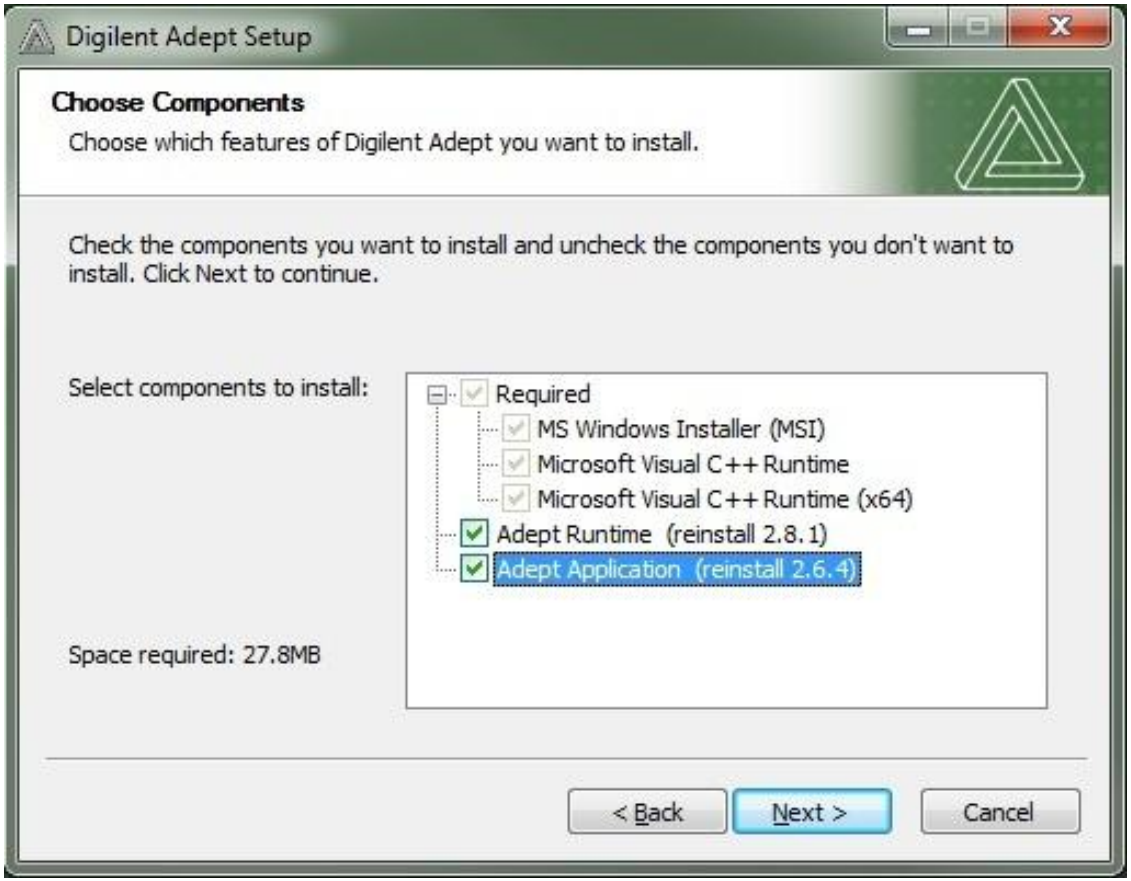
INSTALL ICECUBE2 PROGRAMMING TOOLS

Adept installs the required USB drivers for iCEman65 and iCEblink40 evaluation kit boards in your system.

Review the license agreement and Click on “I Agree”.

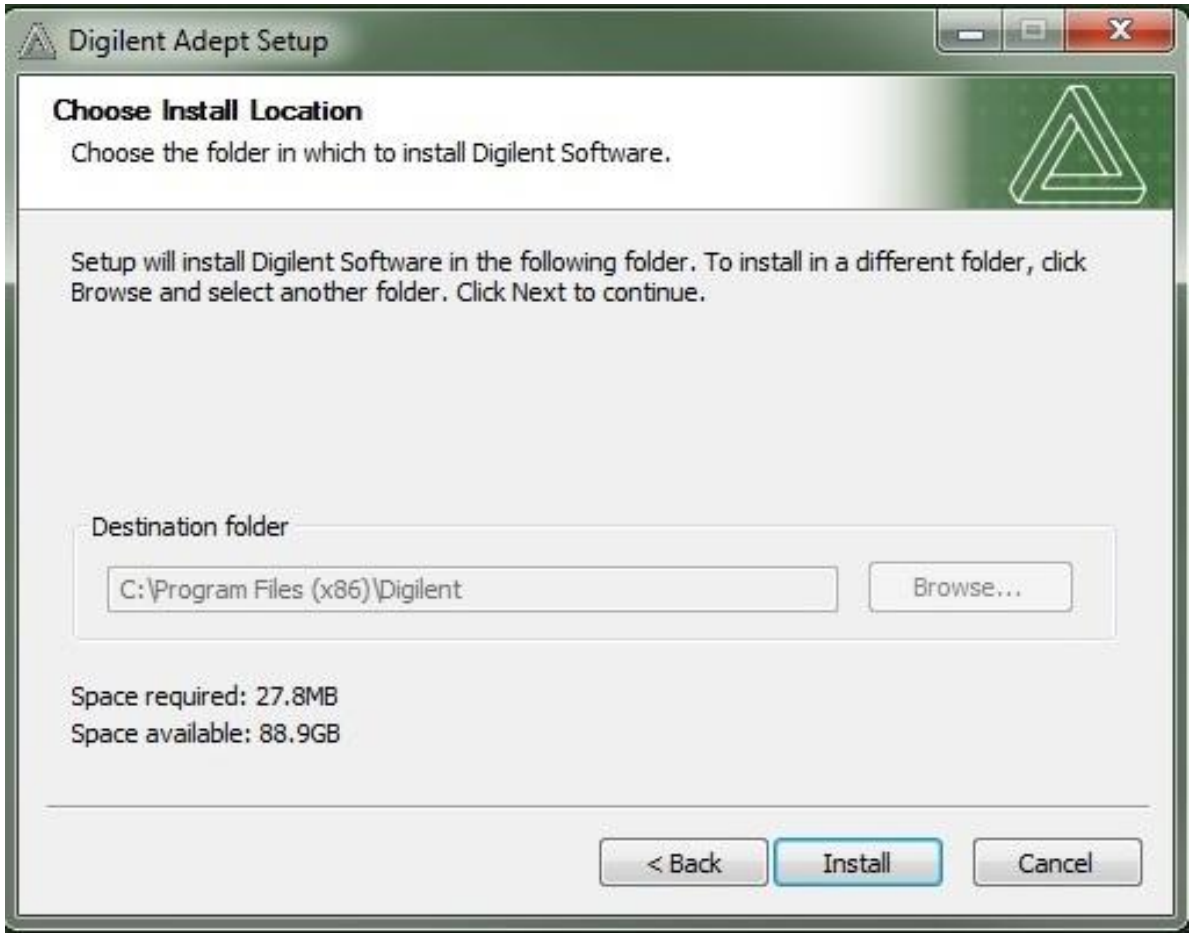


Select the components to Install and click on “Next”.



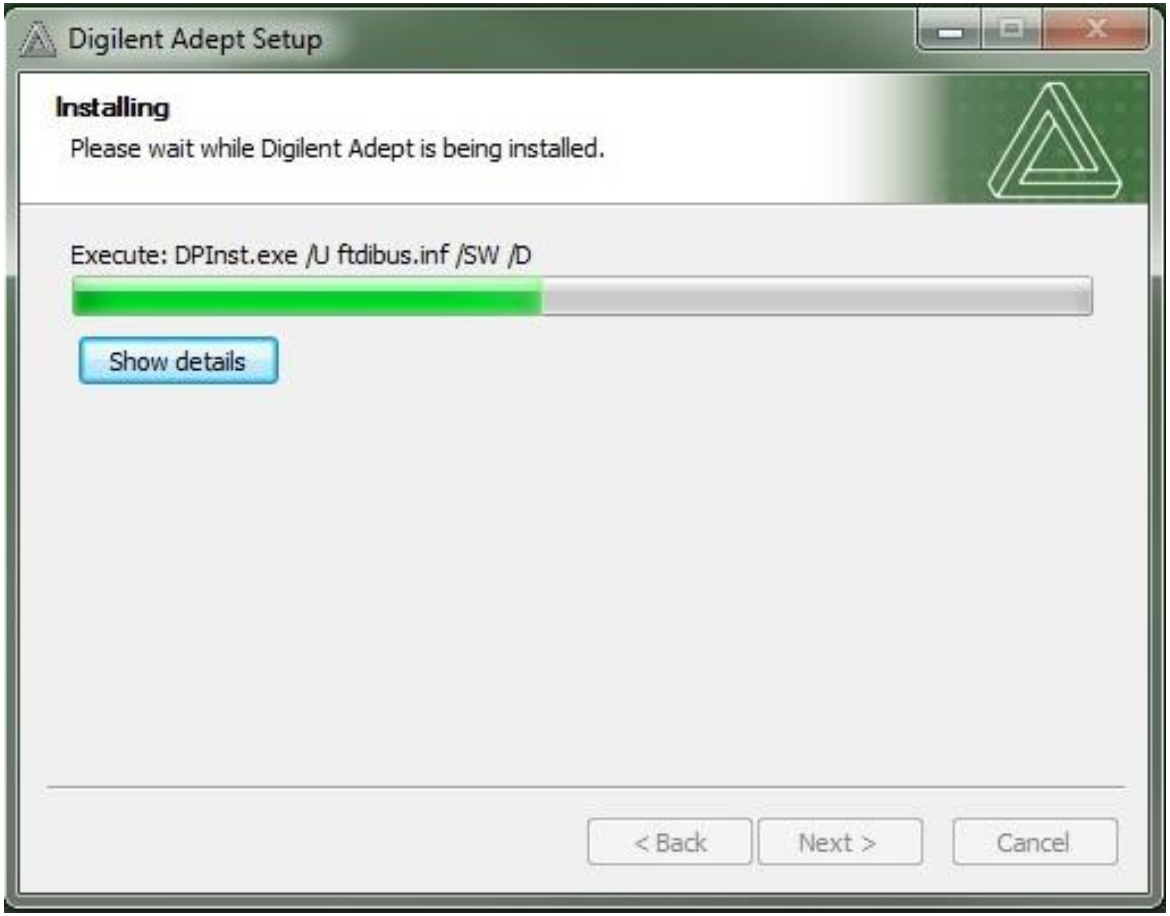
INSTALL ICECUBE2 PROGRAMMING TOOLS

Select the “Destination Folder” and click on “Install”.



INSTALL ICECUBE2 PROGRAMMING TOOLS

Install Wizard starts to install Adept.



INSTALL ICECUBE2 PROGRAMMING TOOLS

Installation of Adept completed. Select “Finish” to close the wizard.

INSTALL ICECUBE2 PROGRAMMING TOOLS

iCEcable driver is required for programming the boards.

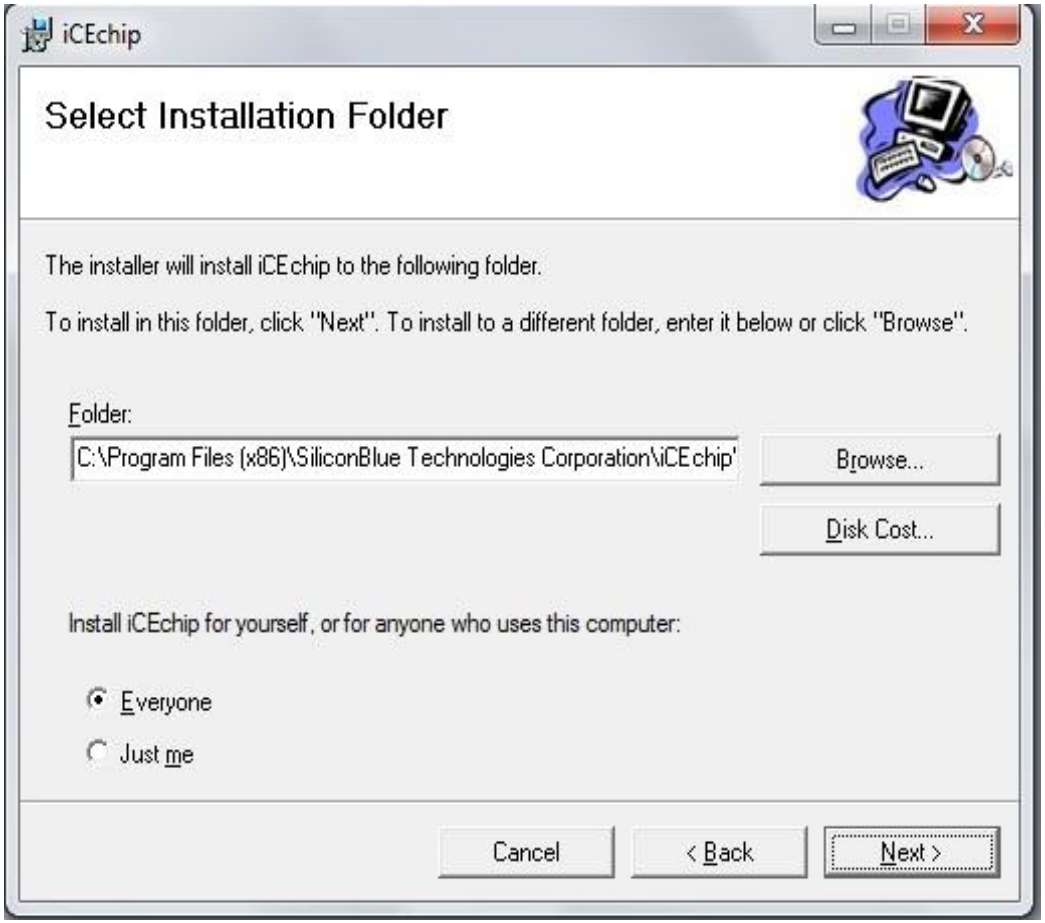
Click on “Install” to install the iCEcable driver.

INSTALL ICECUBE2 PROGRAMMING TOOLS

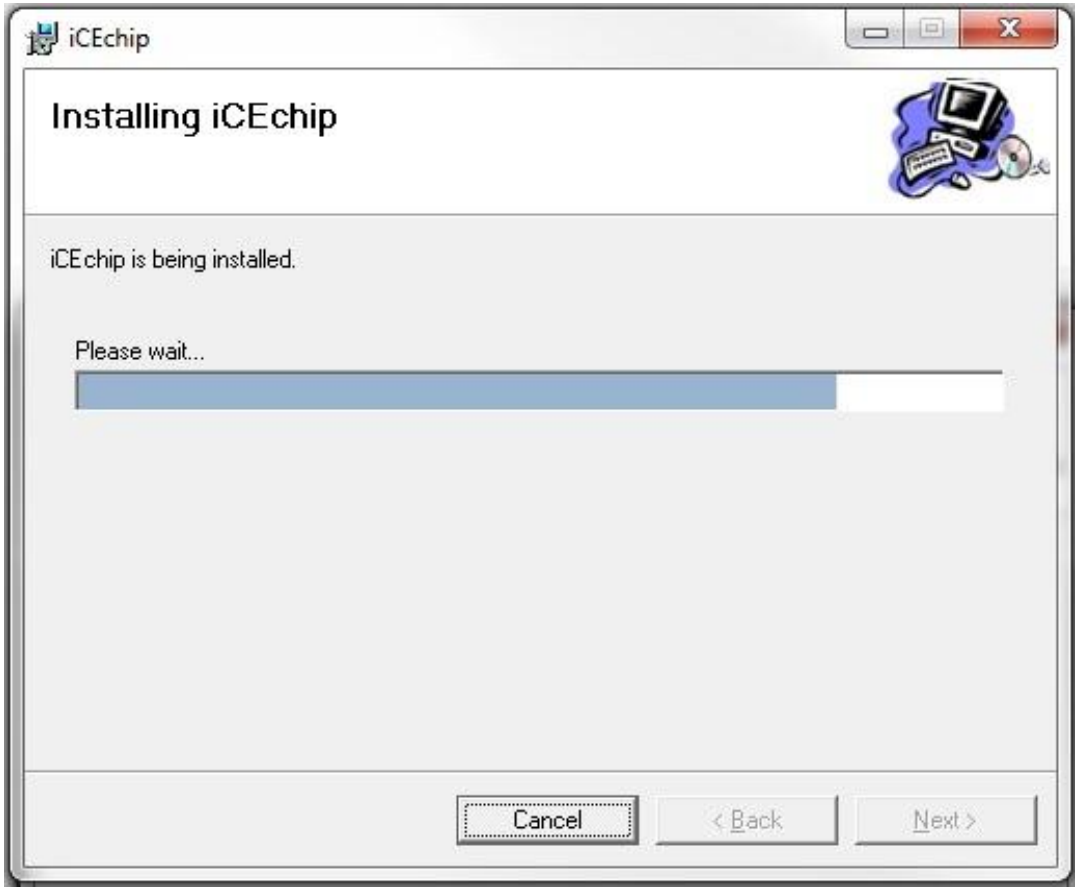
iCEchip is a software tool to program the NVCM for the FPGA devices.

INSTALL ICECUBE2 PROGRAMMING TOOLS

Select the installation folder and click on “Next” to install iCEchip.



Setup starts to install iCEchip.



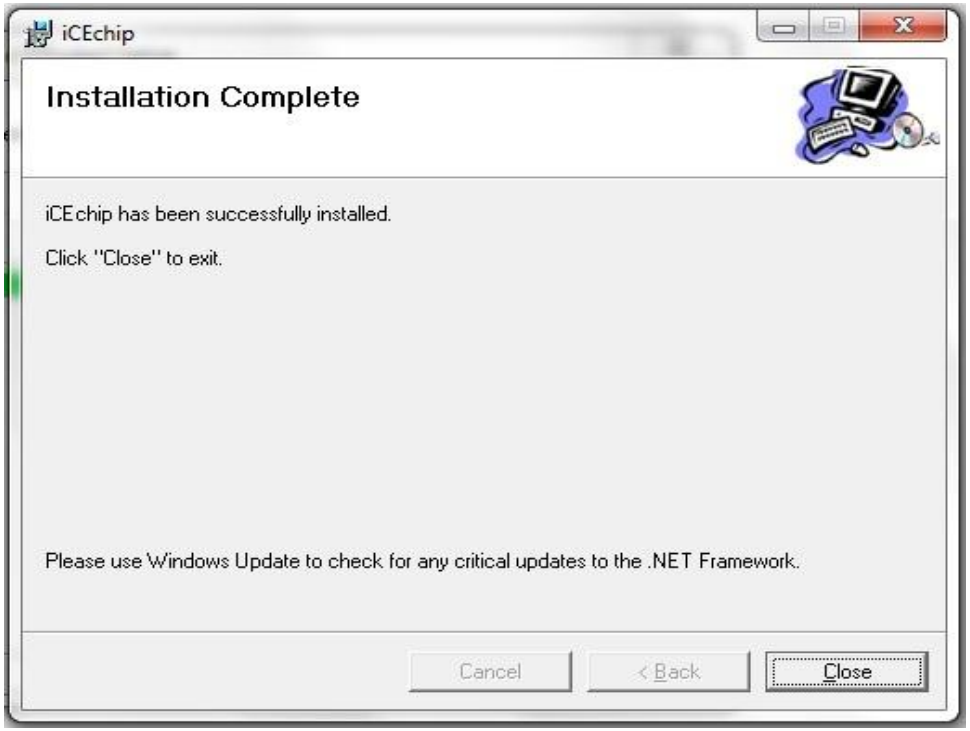
INSTALL ICECUBE2 PROGRAMMING TOOLS

iCEchip installation completed.

iCEchip can be invoked by

- **Double Click on the Desktop Icon.**

- **Start->Programs->iCEchip->icechip.**



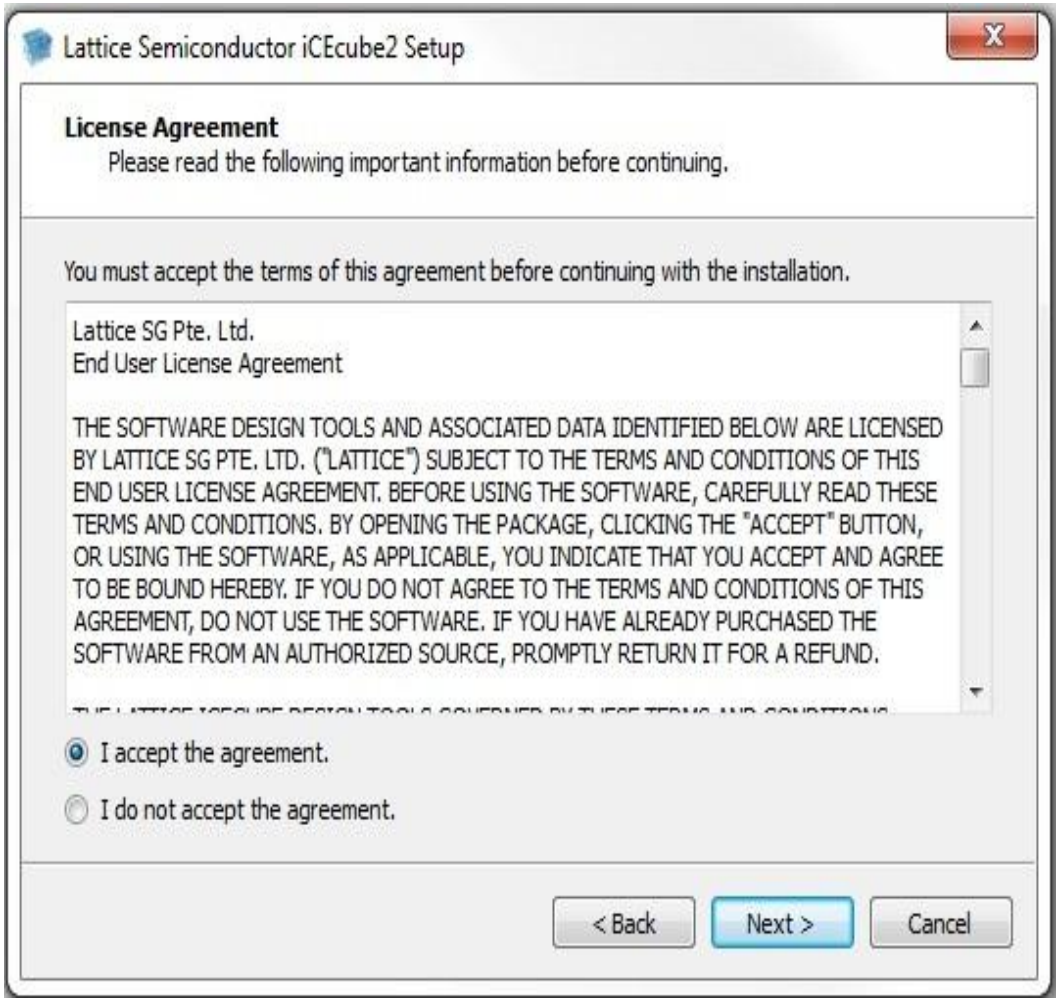
ICECUBE2 - LINUX INSTALLATION

Download the latest iCEcube2 installer for linux from Lattice website.

http://www.latticesemi.com/products/designsoftware/icecube2/downloads.cfm

Launch the iCEcube2 linux installer

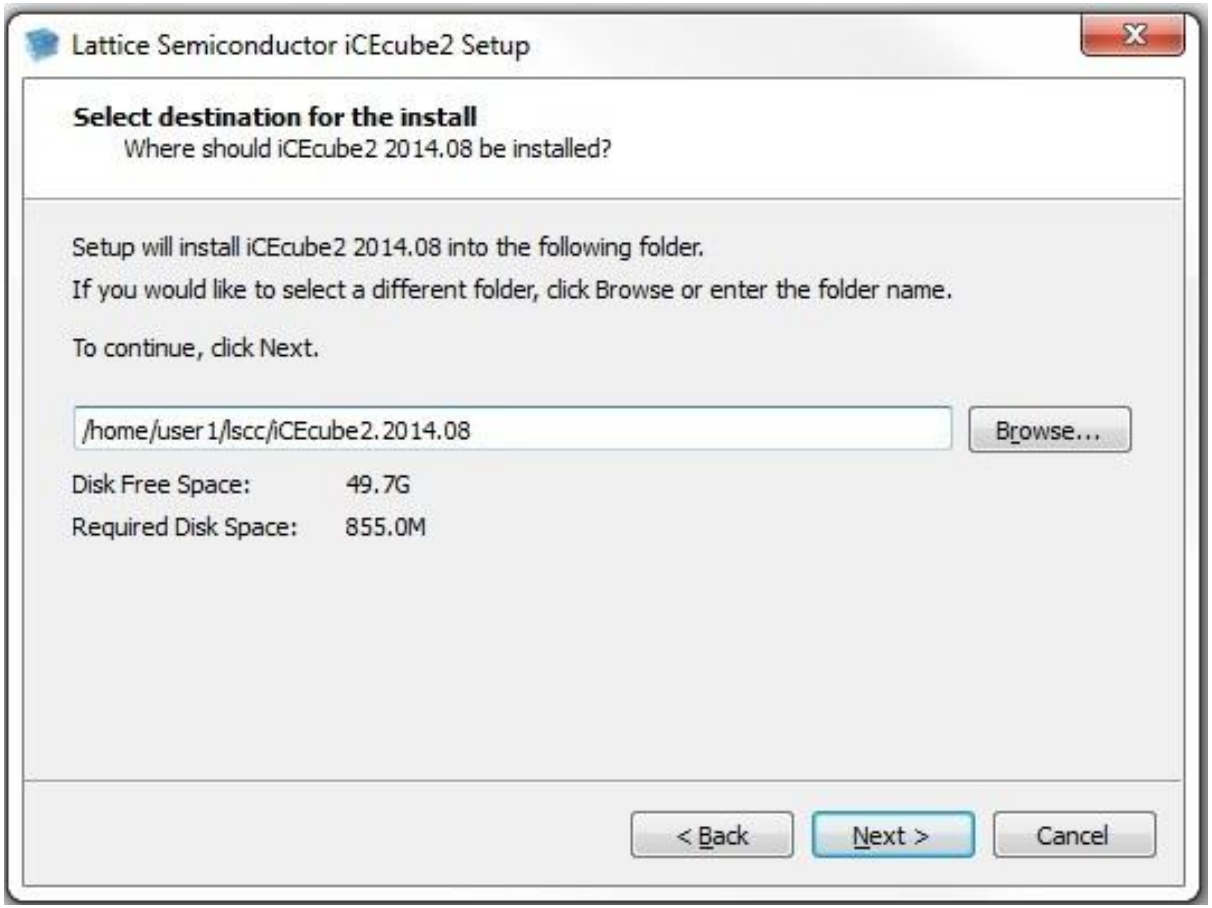
Accept the license agreement



ICECUBE2 - LINUX INSTALLATION

Select the installation directory

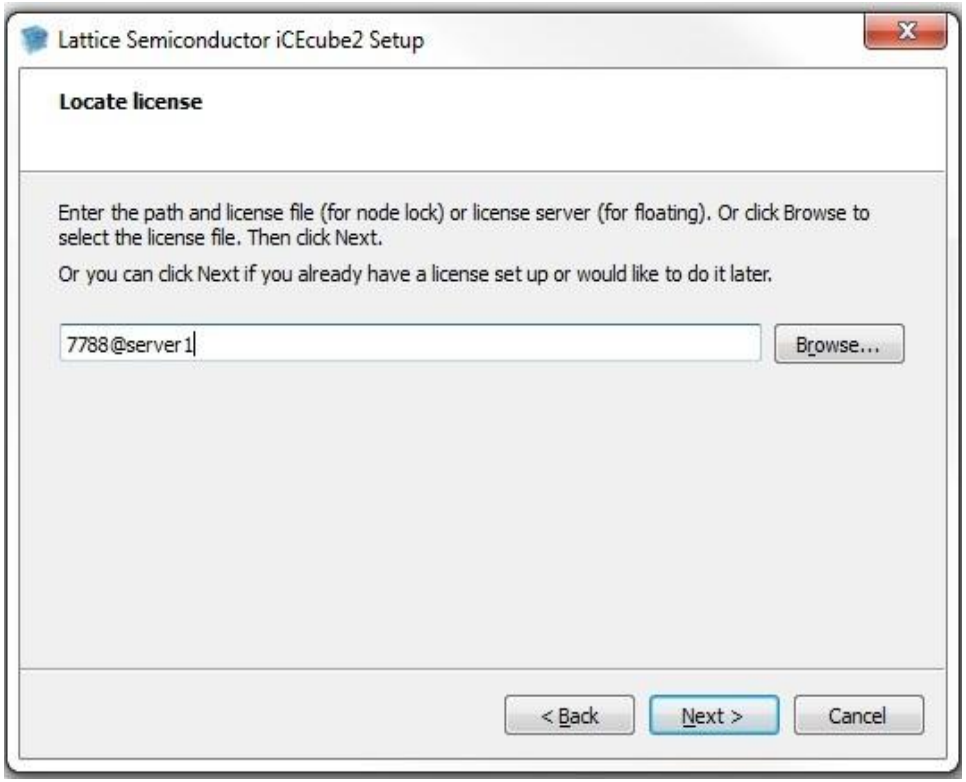
- Default location is recommended
- No spaces are allowed



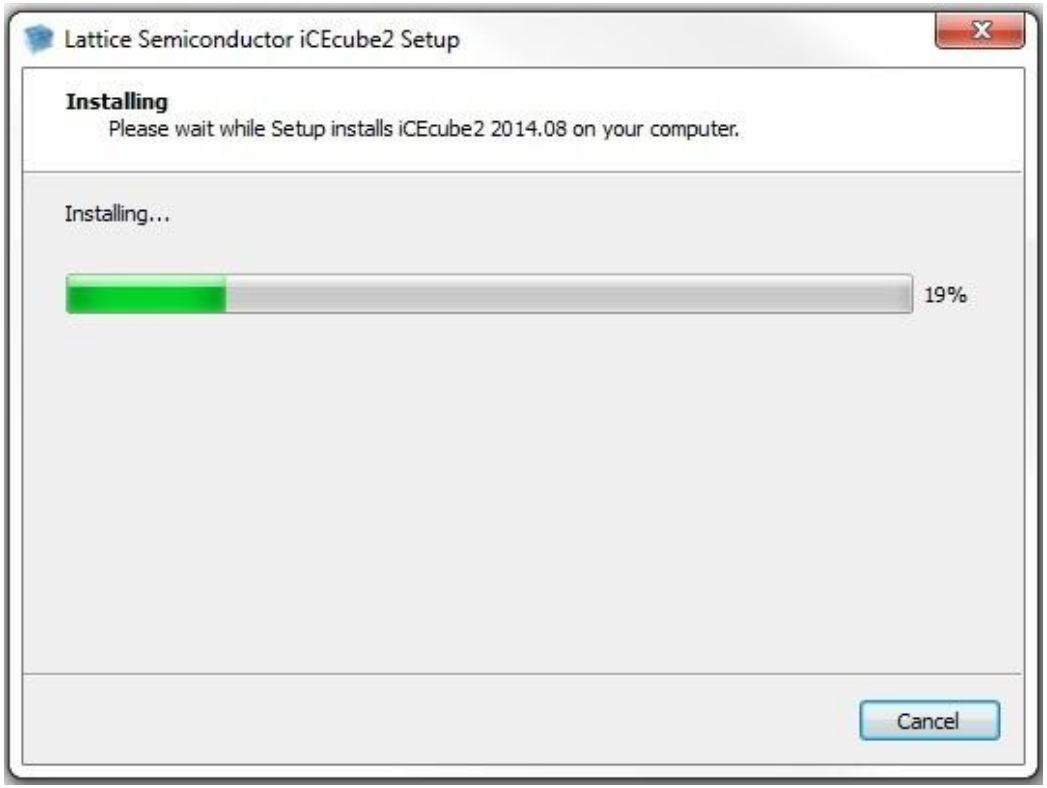
ICECUBE2 - LINUX INSTALLATION

Specify iCEcube2 license by either:

- Browsing to locate a license file on disk
- Typing a floating license server into the text box



Installer starts to install iCEcube2 on your computer



ICECUBE2 - LINUX INSTALLATION

When the Setup Wizard is finished, click “Finish” to exit and Launch iCEcube2.

Invoke iCEcube2 from bash shell by “<*installation_dir*>/iCEcube2 &’

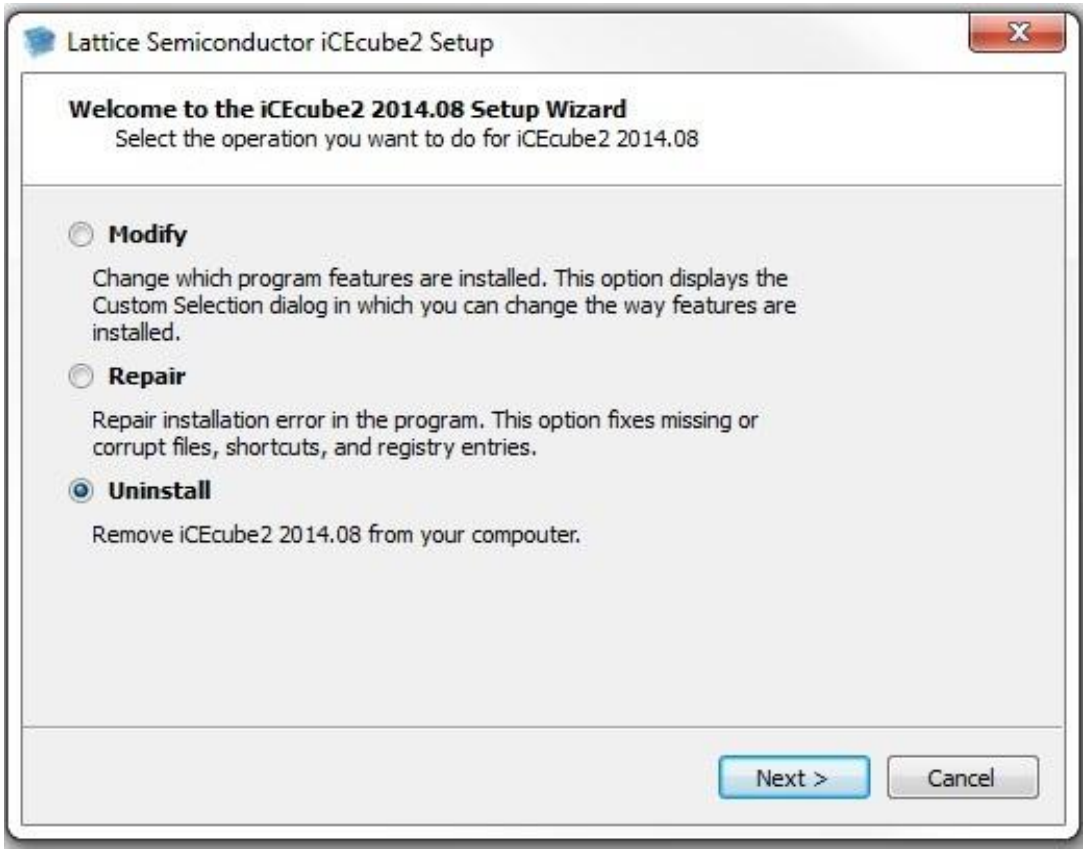
Note : The Integrated Aldec Active HDL simulation software and iCEcube2 programming tools are only available in windows platform.

UNINSTALL/MODIFY iCECUBE2

Invoke <*installation_dir*>/Setup.exe

Use Modify option to install the required programming tools for windows.

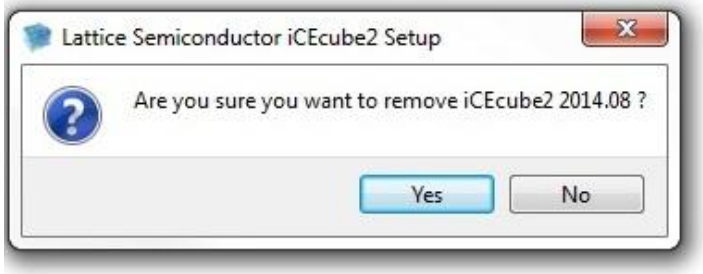
Now, Select Uninstall option to uninstall the iCEcube2 software

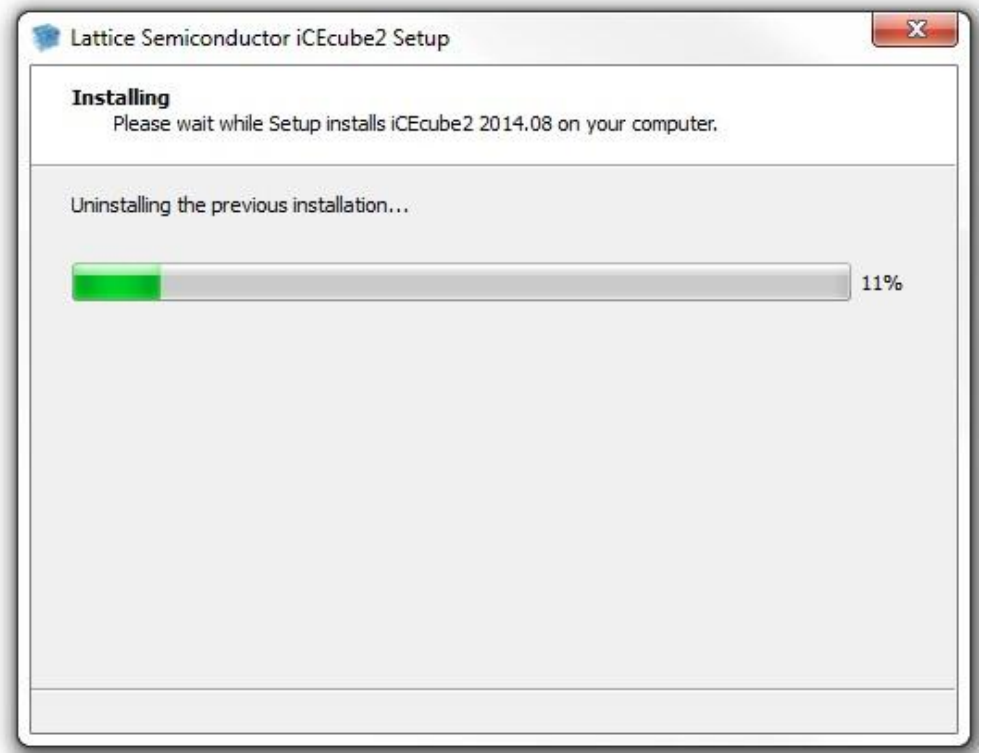


UNINSTALL iCECUBE2

Confirm to uninstall iCEcube2.

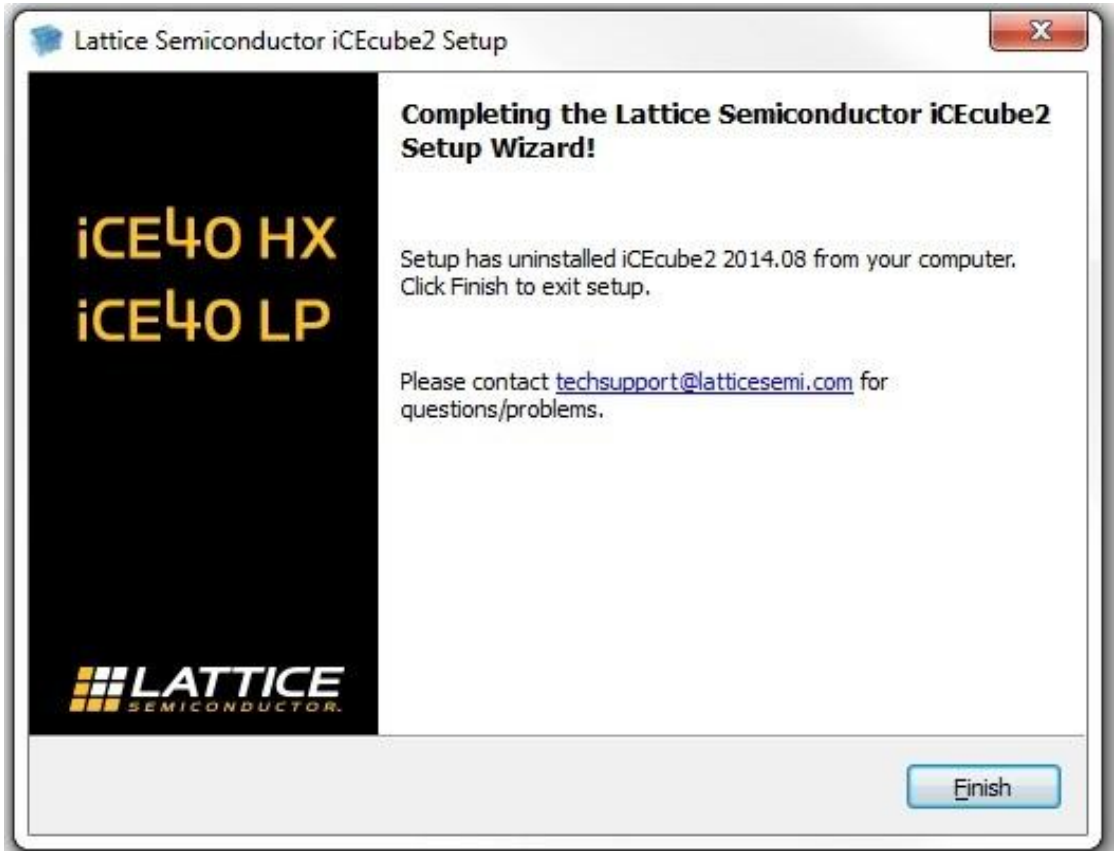
Setup wizard starts to uninstall the software from your computer.





UNINSTALL iCECUBE2

Uninstall process completed. Click on “Finish” to exit the setup wizard.



FLOATING LICENSE SETUP –WINDOWS

iCEcube2 license management utilities are located at <instllation_dir>\sbt_backend\bin\win32\opt

- **lmgrd.exe : License server program.**
- **lmutil.exe : FLEXlm utility to diagnose ,control license**
- **lmtools.exe : Utility to setup and control floating server**
- **ispdsdmn.exe : The Lattice Semiconductor licensing daemon for windows**

FLOATING LICENSE SETUP –WINDOWS

Edit the floating license file to specify the server name , port and the paths to the Lattice daemon.

SERVER *<servername>* 0018d1ye3037 *<portnumber>*
DAEMON lattice *<instllation_dir>\sbt_backend\bin\win32\opt\ispdsdmn.exe*

FEATURE LSC_ICECUBE2_A lattice 10.0 11-mar-2014 10 7B847C77C779 \
VENDOR_STRING="LSC_ICECUBE2_A “

FEATURE LSC_ADVANCED lattice 8.0 11-mar-2014 10 FF474427C07C \
VENDOR_STRING="ispLEVER Advanced “

…..

Start license server using the lmgrd/lmtools program.

Each client PC must have the LM_LICENSE_FILE variable set to point to the license server.

FLOATING LICENSE SETUP –LINUX

iCEcube2 license management utilities are located at <instllation_dir>/sbt_backend/bin/linux/opt

- **lmgrd.exe : License server program.**
- **lmutil.exe : FLEXlm utility to diagnose ,control license.**
- **lattice : The Lattice Semiconductor licensing daemon for linux**

FLOATING LICENSE SETUP – LINUX

Edit the floating license file to specify the server name , port and the paths to the Lattice daemon.

SERVER *<servername>* 0018d1ye3037 *<portnumber>*
DAEMON lattice *<instllation_dir>/sbt_backend/bin/linux/opt/lattice*

FEATURE LSC_ICECUBE2_A lattice 10.0 11-mar-2014 10 7B847C77C779 \
VENDOR_STRING="LSC_ICECUBE2_A "

FEATURE LSC_ADVANCED lattice 8.0 11-mar-2014 10 FF474427C07C \
VENDOR_STRING="ispLEVER Advanced "

.....

Start license server using the lmgrd utility.

Each client PC must have the LM_LICENSE_FILE variable set to point to the license server.

APPENDIX A :
NODE LOCKED LICENSE TROUBLESHOOTING

Verify that the required network adapter is present

- Inspect the license file, and make note of the HOSTID string (e.g. HOSTID=000C2965945E)
- Windows
  - Launch “cmd” console, type “ipconfig –all”
- Linux
  - Type “ifconfig –a”
- Verify that one of the network adapters listed has a physical address that matches HOSTID.
- If Virtual Machine (e.g. Remote Desktop) is used, the HOSTID should match with the MAC address of that Virtual Machine.

Make sure LM_LICENSE_FILE environment variable points to the license.dat file.

Re-run the iCEcube2 license setup wizard

- Navigate to the iCEcube2 installation directory
- Launch “LicenseSetup.exe” and re-enter the license path and file name

APPENDIX B: INSTALL ICEMAN DRIVER ON VISTA HOME

There is a bug in the current installer that occurs only in Windows Vista Home.

- Skip the workaround for other OS versions

Implement workaround before installation by turning off user account control (UAC)

Change this option using the control panel

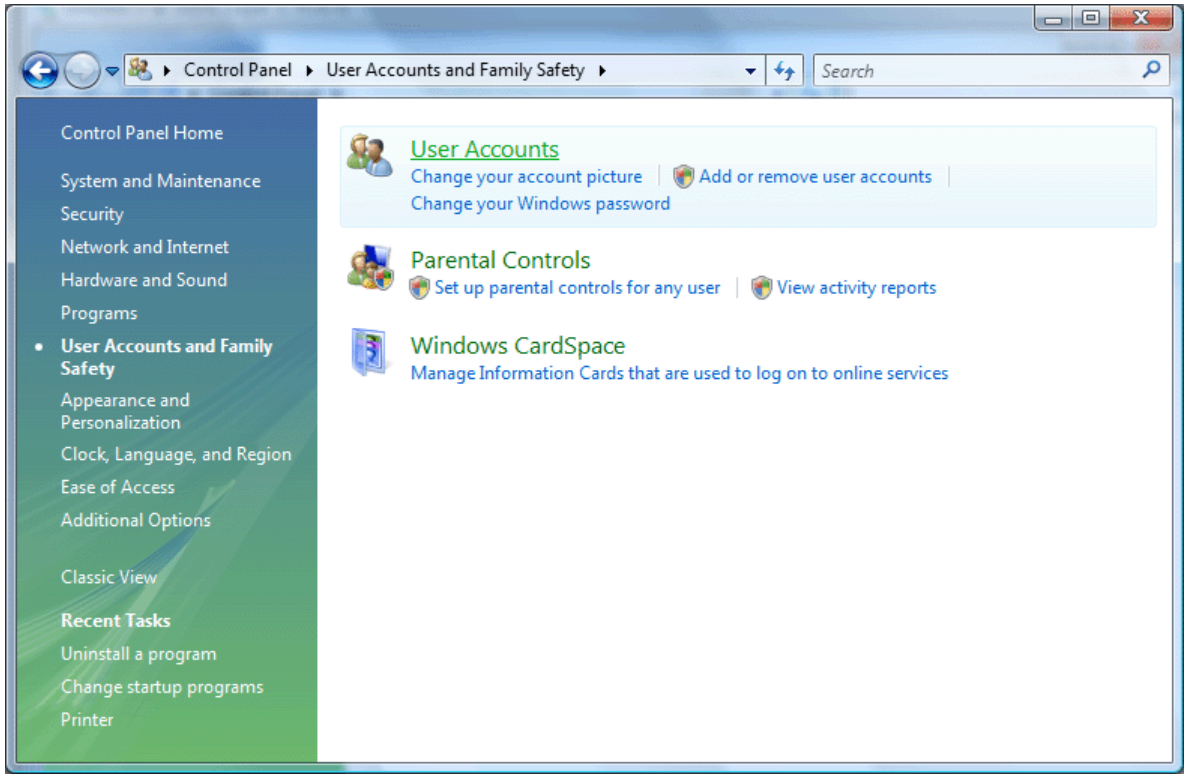
- Method 1: Control Panel Standard View
- Method 2: Control Panel Classic View

REQUIRED WORKAROUND (WINDOWS VISTA HOME ONLY)

Standard View, step 1 of 4: Click “User Accounts and Family Safety”

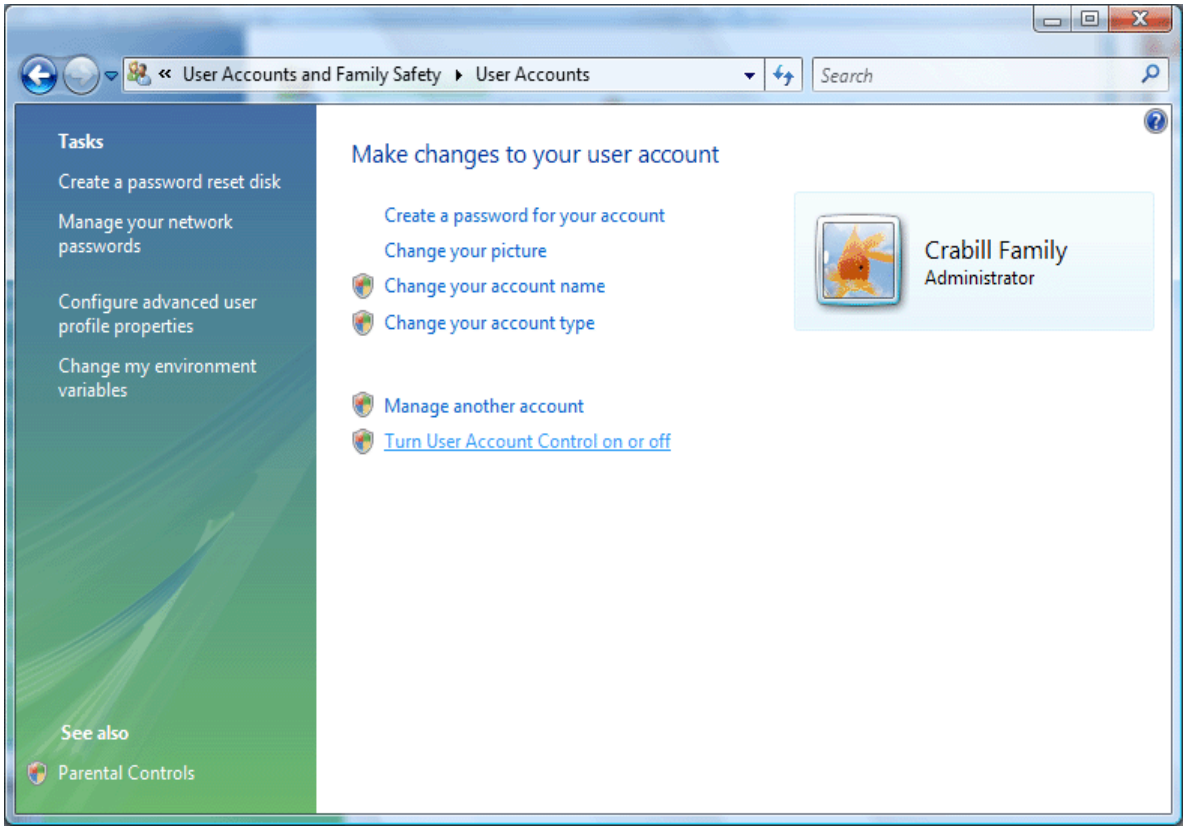
REQUIRED WORKAROUND (WINDOWS VISTA HOME ONLY)

Standard View, step 2 of 4: Click “User Accounts”



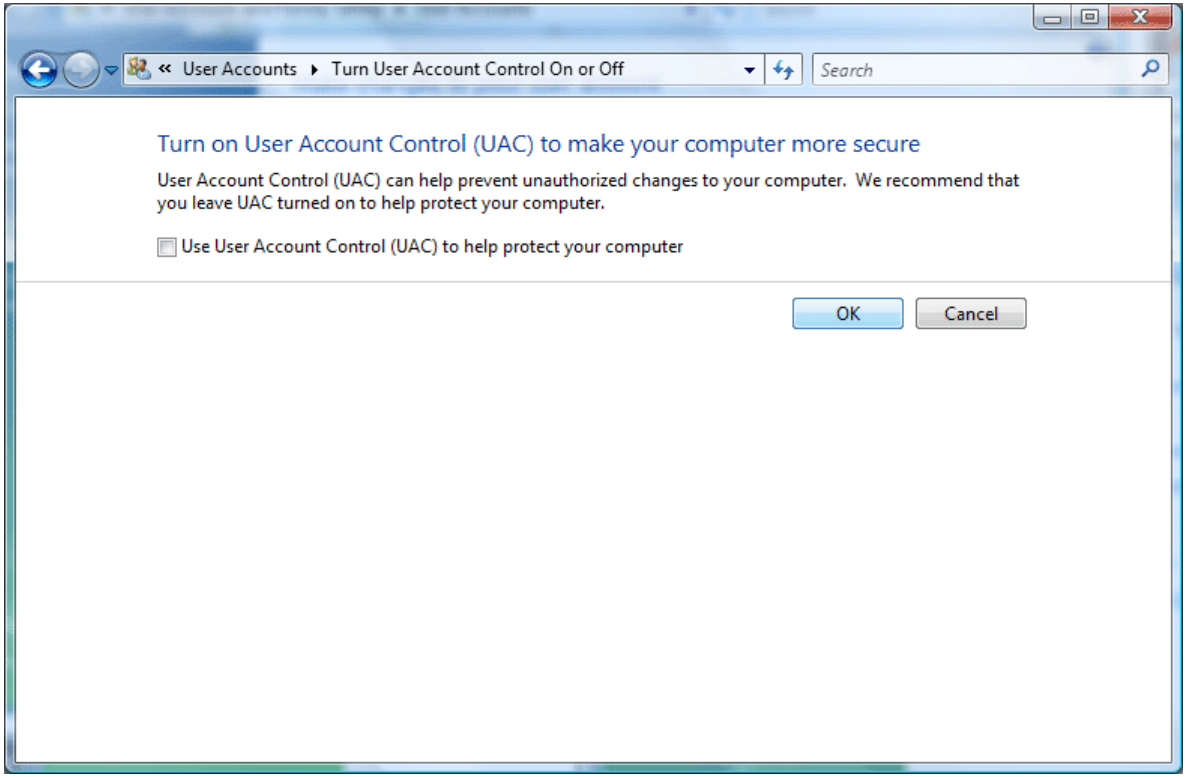
REQUIRED WORKAROUND (WINDOWS VISTA HOME ONLY)

Standard View, step 3 of 4: Click “Turn User Account Control on or off”



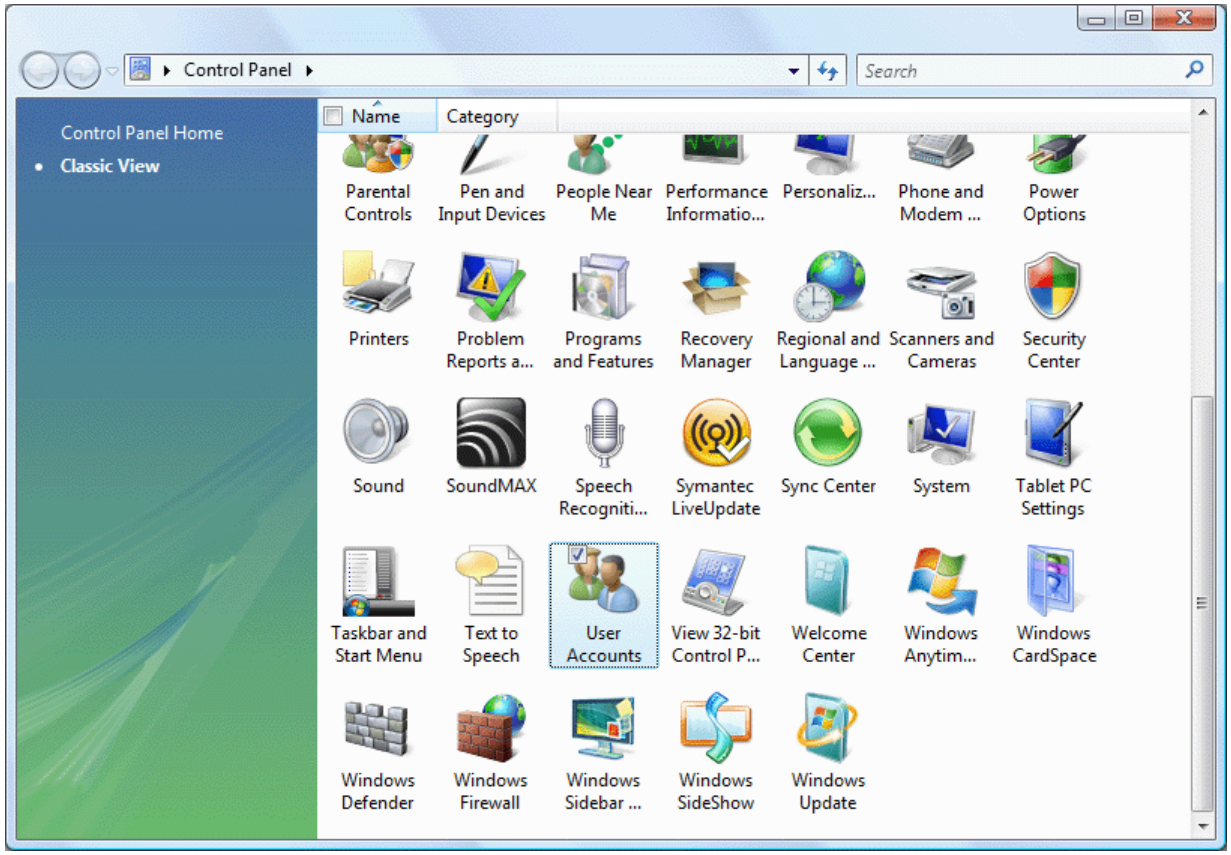
REQUIRED WORKAROUND (WINDOWS VISTA HOME ONLY)

Standard View, step 4 of 4: Uncheck “Use User Account Control” if checked, click OK.



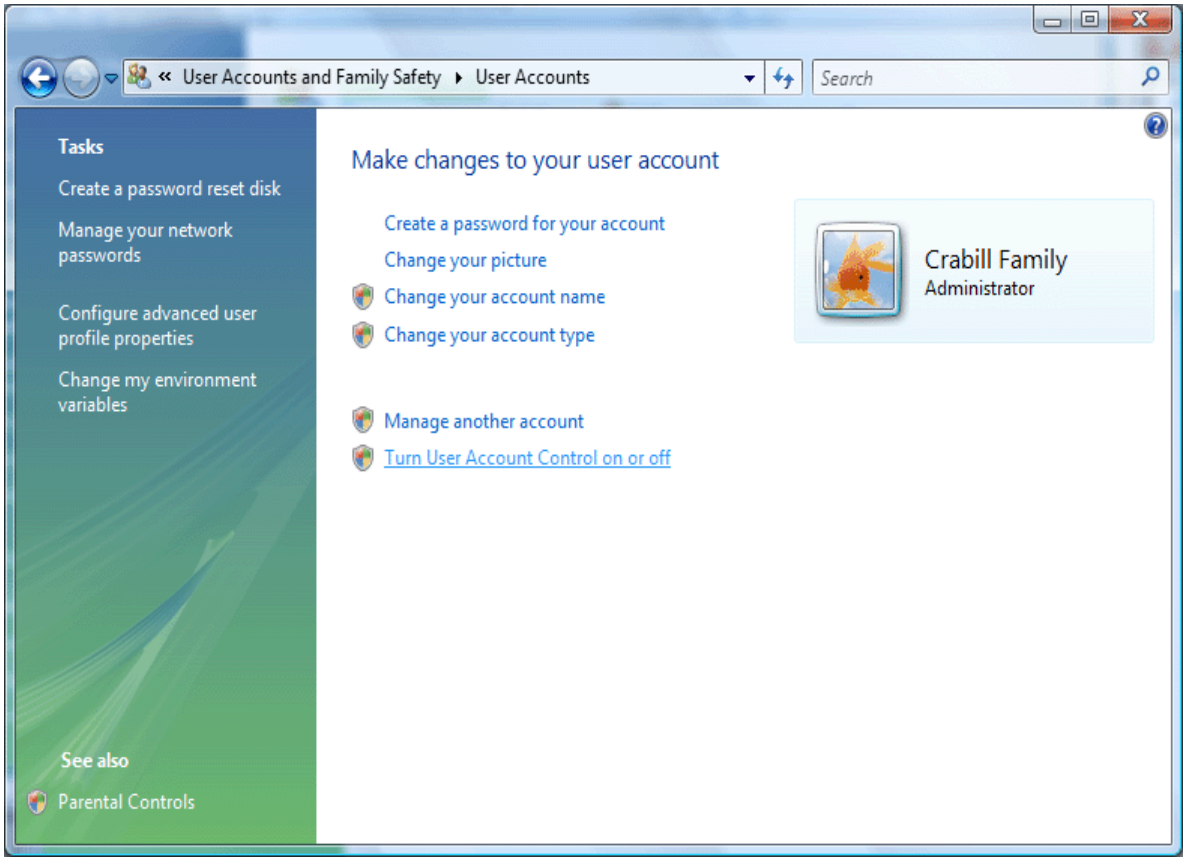
REQUIRED WORKAROUND (WINDOWS VISTA HOME ONLY)

Classic View, step 1 of 3: Click “User Accounts”



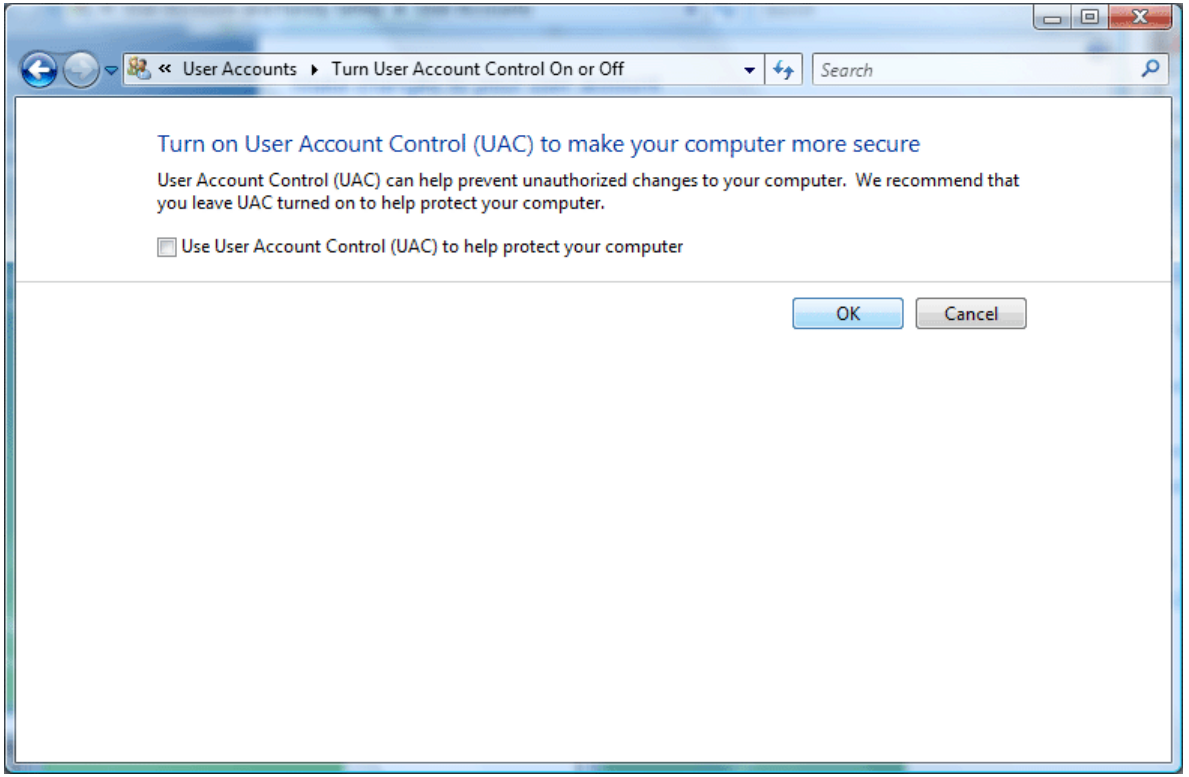
REQUIRED WORKAROUND (WINDOWS VISTA HOME ONLY)

Classic View, step 2 of 3: Click “Turn User Account Control on or off”



REQUIRED WORKAROUND (WINDOWS VISTA HOME ONLY)

Classic View, step 3 of 3: Uncheck “Use User Account Control” if checked, click OK



REQUIRED WORKAROUND (WINDOWS VISTA HOME ONLY)

Windows Security Center may issue warnings once UAC is turned off. If desired, turn UAC on after installation.