

# ROUTER-CIM AUTOMATION SUITE

# 2016

## Installation Guide

**CIM-TECH**   
AUTOMATED CAD/CAM SOLUTIONS

# **Router-CIM Automation**

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## Router-CIM Automation Suite 2016 Minimum System Requirements For 32-bit Systems

- Windows® 7, Windows® 8/8.1
- Intel® Pentium® 4 or AMD Athlon™ 64
- 2GB of RAM (8GB for 3D Modeling)
- 8GB Free disk space for Installation (12GB for 3D Modeling)
- 1,280 x 1,024 True Color video display adapter 128 MB or greater, Pixel Shader 3.0 or greater, Direct3D®-capable workstation-class graphics card (1,600 x 1,050 True Color video display adapter recommended)
- Microsoft® Internet Explorer 9.0 or later web browser with network connection
- .NET Framework Version 4.5 or higher
- 1 Available USB port (2 available USB ports if the nesting option was included)
- DVD Drive

## For 64-bit Systems (Recommended for 3D Modeling)

- Windows® 7, Windows® 8/8.1
- Intel® Pentium® 4 or AMD Athlon™ 64
- 4GB of RAM (8GB for 3D Modeling)
- 8GB Free disk space for Installation (12GB for 3D Modeling)
- 1,280 x 1,024 true color video display adapter 128 MB or greater, Pixel Shader 3.0 or greater, Direct3D®-capable workstation-class graphics card (1,600 x 1,050 True Color video display adapter recommended)
- Microsoft® Internet Explorer 9.0 or later web browser with network connection
- 128 MB or greater, OpenGL®-capable workstation class graphics card
- .NET Framework Version 4.5 or higher
- 1 Available USB port (2 available USB ports if the nesting option was included)
- DVD Drive

## Supported AutoCAD Versions

Router-CIM 2016 supports the following Autodesk products:

AutoCAD 2014

AutoCAD 2015

AutoCAD 2016

Additionally, we provide an Inventor Link to the following versions of Autodesk Inventor:

Autodesk Inventor 2014

Autodesk Inventor 2015

Autodesk Inventor 2016

You should check your hardware against the Autodesk Certified Hardware List to be sure of compatibility with your version of AutoCAD.

## Hardware Locks

In addition to the hardware requirements listed above, it is important to note that Router-CIM and AutoNEST require hardware locks (often called 'dongles') in order to function. These can be either a USB type or a Parallel Port (printer port) type. Since there are two hardware locks required if you are using the nest software, you should have two USB ports available. For the parallel port type, only one port is necessary since these locks can plug into each other.

### **Note on Hardware Locks:**

**The Router-CIM 2007-2016 Hardware Locks are different than the 2004, 2005, and 2006 Hardware Locks. If you are upgrading from a version prior to 2007, you will receive a new Hardware Lock with the 2016 software and will have to return the old Hardware Lock through a traceable carrier. Lost locks are the customer's responsibility so insure your shipment for full software value. If you fail to return the old lock, you will be invoiced for the full purchase price of the software. If you have Router-CIM 2007 or newer, the hardware locks are compatible and no switch is necessary.**

If you are using parallel port hardware locks instead of USB hardware locks, it is not suggested to have a printer, ZIP disk, scanner or any other device connected to the same port as your AutoNest hardware lock. Certain devices may cause hardware lock failure, which will render the software useless until the lock is replaced. Other printing conflicts may occur while printing through the same port as the hardware lock. It may be necessary to have a second parallel port dedicated specifically to the hardware lock.

## Product Overview

The main purpose of Router-CIM Automation Suite is to provide a CAD/CAM solution for both single part machining and also to automate the programming task for quantities of parts. Router-CIM Automation Suite offers both nested based manufacturing technology, used to automatically produce NC Code for parts that are produced or imported into the AutoCAD environment, as well as any other single part that can be parametrically defined, or produced as a drawing or DXF file.

Parametric macros that are defined using Router-CIM's Parametric Macro Builder can be automatically sized and either nested or cut singly, and also from different materials.

With Router-CIM Automation Suite, you can select macros, DXF files, and AutoCAD DWG files, associate a material and specify a quantity of them and Router-CIM Automation Suite will do the rest, automatically.

In Automation, typically, a job file is created that contains all the machining data necessary to perform the programming tasks. Each job contains the macro, drawing, or DXF file name, size, quantity, material, and other variables relevant to your cutting needs. Each part is analyzed, and a layer to knowledge association automatically creates the tooling paths. The part and tool paths are serialized and stored in the database as necessary. Once all parts are cut or cut and/or nested, then sorted NC Code is made. The parts or nests are printed, and external files, like a label file and also a machine schedule file are made.

Each job is stored in an independent folder for easy storage and retrieval. The locations of these folders can be specified either locally on your hard drive, a network drive, or even the machine tools drive if it is able to exist on the same network.

For new users of Router-CIM Automation Suite, there are a few concepts which need to be understood in order to use the product efficiently. These are:

- A basic understanding of the Microsoft Windows environment, and file handling with programs such as My Computer, or Windows Explorer.
- A working knowledge of the AutoCAD environment. How to create and name layers, and assign geometry to those layers.
- Some knowledge of the types of tools, cutting conditions, and materials you are likely to use on your parts.
- Knowing the difference between the file types Router-CIM Automation Suite uses such as DWG, DXF, and SCN.
- Understanding the Layer to Knowledge association feature in Router-CIM Automation Suite.

If you will be using primarily macros for your part definitions, then a solid understanding of Router-CIM's Parametric Macro Builder and how to create a macro is truly necessary. This takes practice and is best done on paper first!

Also solid understanding of the variable types, Global, Dynamic, Tagged, and Local, and how to use them on individual parts or assemblies of parts will be of primary importance in a truly parametric macro. You should know how to incorporate the variables into formulas to define parts or part features.

## Installation Quick Start

***These installation notes assume that AutoCAD 2014 or higher is installed and functioning properly.***

**Make sure you are logged in with at least Local Administrator privileges on your system.**

The Router-CIM program is installed in the following manner.

- Unplug any USB hardware locks previously installed.
- Insert the Router-CIM Installation CD and it will start automatically.
- If the Installation doesn't start automatically, pick Start, Run, D:\SETUP.EXE (where D: is the CD ROM drive letter).
- The Router-CIM installation serial number will determine the installation options of Router-CIM. The serial number is included on the CD that Router-CIM is installed from. If Nesting was purchased, the Router-CIM installation will automatically install the product.
- The Install will place the Router-CIM files in the default locations.
- The install procedure searches for AutoCAD on your hard disk, and uses this location to build icons to run the Router-CIM program.
- Once the install is finished, reboot the computer, plug in the USB hardware locks and you will be able to run the product.
- If any custom post processors are necessary, install them now. The procedure to install the post processors is to simply run the .exe file that contains the post processor, and answer a few default questions during the install.

## Critical Issues



**After Router-CIM is properly installed and configured for use, all pertinent folders should be backed up. A simple method is by copying them and placing them in a new folder. The proper way would be to make a CD, or back up to tape or another easy to restore method.**

CIM-Tech will store a backup of your system if you burn it to a CD and mail it to us. CIM-Tech will archive that as an off-site backup in case you lose your own. This is NOT a substitute for your own backup, as you will likely make changes and edits on a more regular basis than the backup that is shipped to us.

CD Recorders, DVD Recorders, External Hard Drives, and Tape backups are all valid ways to back these folders up. Floppy disks are not a good choice. It would take a large number of them to get each folder in its entirety. Typically all of the folders can fit on one CD. After using the system for a while, the backups that Router-CIM stores on your system could mean that more than one CD is necessary.

A Note on CD Recorders: Each file that is backed up in this fashion may become read-only. This means you can only look at the documents without altering or editing them. It will be necessary to change the properties of the files back from read-only after the folder is copied. The method of doing this varies depending on your operating system.

The folders to back up are as follows:

1. **C:\Router-CIM**
2. **C:\Rcim\_work**
3. **C:\Anest**
4. **C:\Automation\_code**

(C: is assumed here to be the installation drive.)

**CIM-Tech is NOT Responsible for your loss of productivity or data! If you do not back up your system completely and you lose data without a backup, your only option is to re-install the software and start over.**

## Installation Guide

**Notes: 1) Local users will need Administrator privileges to install the software.**

**2) You should remove any hardware locks that have been plugged into the computer.**

**3) Any Anti-Virus or Malware Software should be disabled temporarily prior to starting the installation. Make sure to enable these when the installation has been completed.**

**4) These installation notes assume that AutoCAD 2014 or higher is installed and functioning properly.**

**Failure to do these things may result in an incomplete installation causing the program to not function properly.**

**Note: If you need to install Router-CIM on a different computer and want to transfer your information, please click [here](#).**

**The Router-CIM program is installed in the following manner:**

Insert the Router-CIM Installation DVD and it will start automatically. If it does not start automatically, pick Start > Run then pick or type D:\setup.exe (where D: is the DVD ROM drive letter). In Windows 8, right click on your DVD ROM drive and select 'Open'. Once Windows explorer has opened your DVD ROM drive, double-click the 'setup.exe' file.

The Router-CIM serial number will determine the installation options. The serial number is located on the Router-CIM DVD ROM case. If Basic Nesting was purchased, it will be installed automatically.

The install will search for Router-CIM files in the default location. If your version of Router-CIM was installed to a drive other than C, you can re-direct the setup process to locate the folder in the proper drive by clicking on Browse and then selecting the correct drive location.

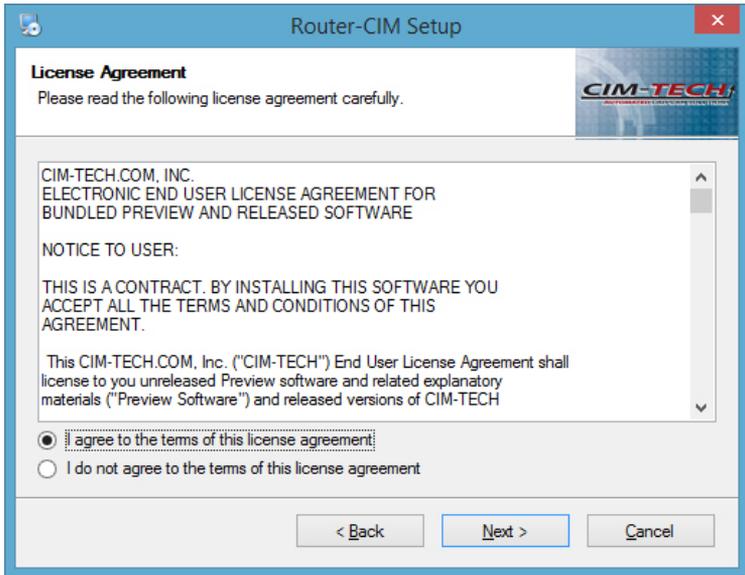
The install procedure searches for AutoCAD on your hard drive, and uses this location to build icons to run the Router-CIM program.

When the installation program starts, the following screen will appear:

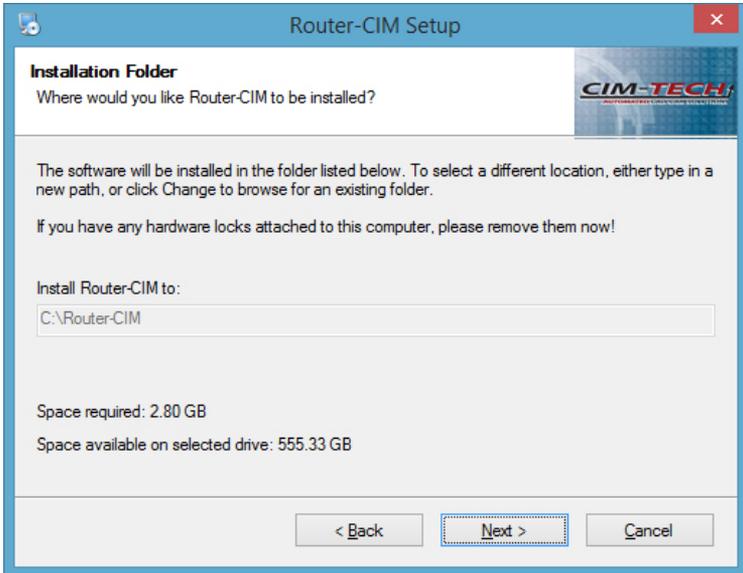


From here, all of the default selections have been made for you. We recommend that you leave the defaults, as it will be simpler for you later if technical support is needed and you need to know the locations of the Router-CIM files.

Select **'Next'** to continue.



This is the license agreement for Router-CIM. Be sure you read the agreement. Selecting **'I do not agree to the terms of this license agreement'** will allow you to exit the program without installing it to your computer. Selecting Back will return you to the previous window. Select **'I agree to the terms of this license agreement'** and **'Next'** to continue.



Router-CIM will specify the location for installation. You may select **'Next'** to continue, or either **'Back'** to go to the previous window or **'Cancel'** to exit from the installation.

***You should remove any hardware locks that have been plugged into the computer.***

**User Information**  
Enter your serial number and folder locations and click Next to continue.

Select a location for the Router-CIM working folder, database files and Letterease folder. It is recommended that the default locations not be changed unless absolutely necessary. If you have any hardware locks attached to this computer, please remove them now!

Serial Number  
XX-XXXX-XXX

Router-CIM Working Folder  
C:\rcim\_work

Letterease Location  
C:\LE16

Select Database Location:  
c:\RcimData

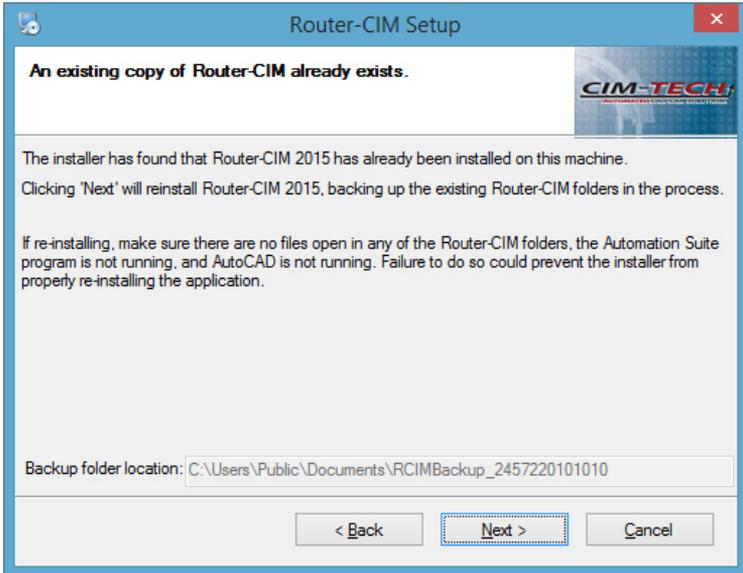
If you have any hardware locks attached to this computer, please remove them now!

< Back    Next >    Cancel

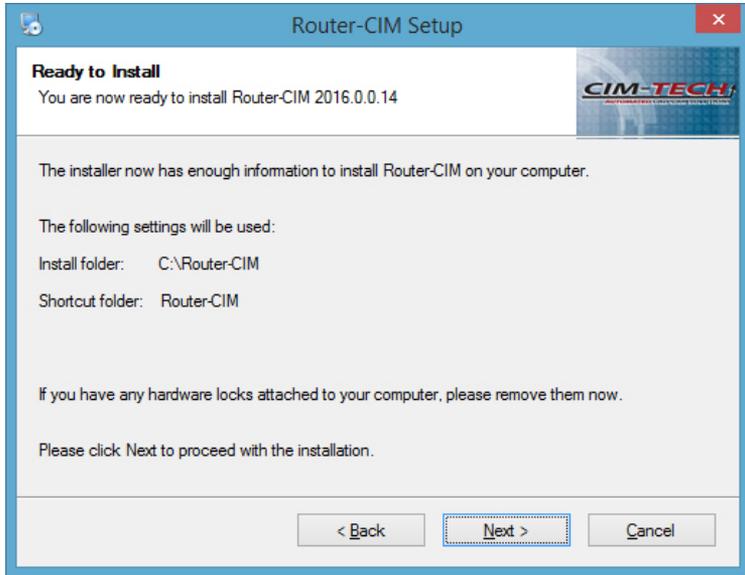
Enter your serial number that is supplied to you with the software. The default database location is on your C: drive in the RcimData folder.

Select '**Next**' to continue.

**Note:** If an existing copy of Router-CIM is found on the computer in which you are installing, you will see this screen:

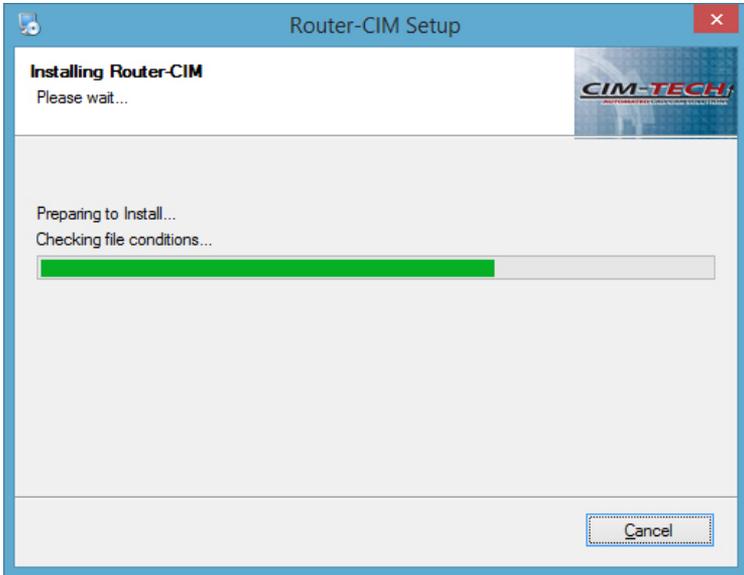


You may select **'Next'** to continue, or either **'Back'** to go to the previous window or **'Cancel'** to exit from the installation.



This screen will recap where Router-CIM is going to be installed to.

You may select **'Next'** to continue, or either **'Back'** to go to the previous window or **'Cancel'** to exit from the installation.

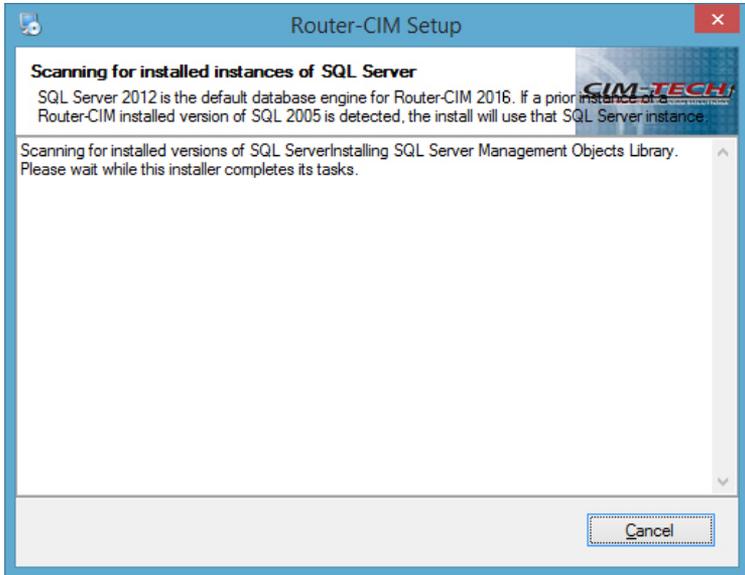


The installer will start copying files to the necessary locations in this section of the install.

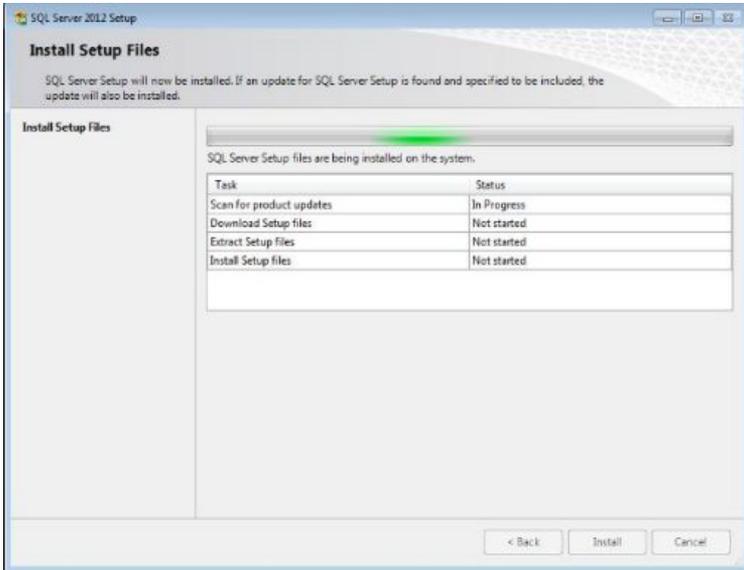
The SQL Server is the second section of the installation. The install will extract some more files and then check your computer for versions of AutoCAD, SQL Server and Microsoft .NET Framework versions.

**This section may take a while, please be patient and allow the installer to finish.**

Once this is finished, the SQL Server install will take place. The Router-CIM progress screen will look like this:



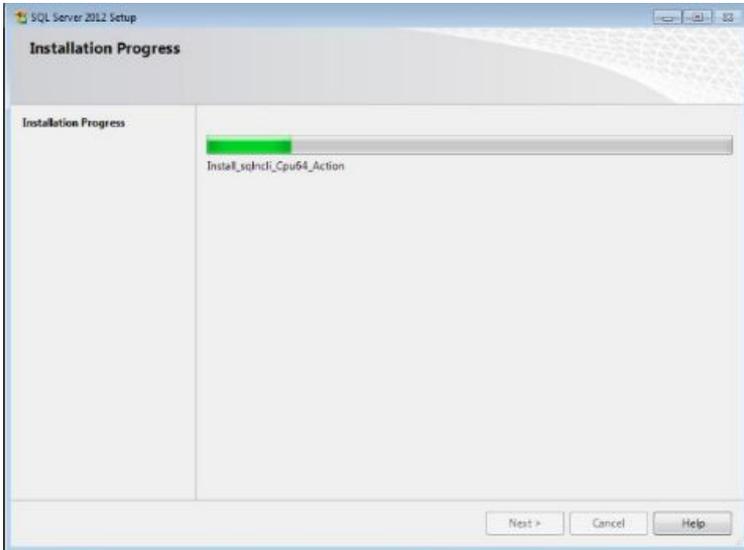
And then the SQL Server install will start if no instance of SQL Server was detected.



During this process, if you are connected to the Internet, SQL Server will download and install updates if they are found. If your system installs an update, you will see a screen like this:



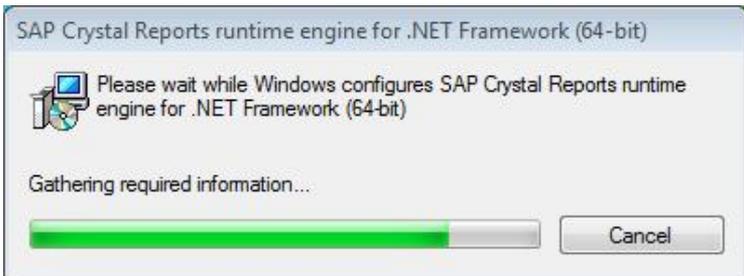
And then the SQL Service Pack will install. During the install you will see the following screen:



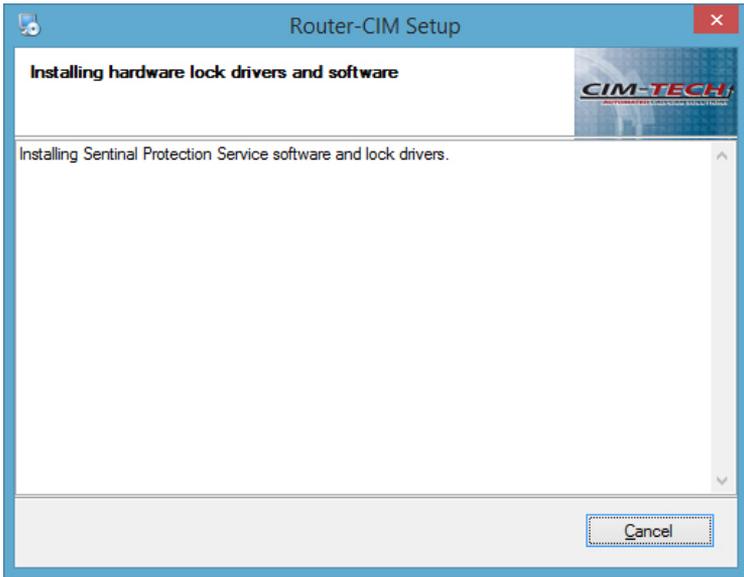
***After SQL installs the service pack, the Management Studio will install. THIS PROCESS CAN TAKE A VERY LONG TIME, Please wait until it is finished and do not cancel the install.***

***It is not uncommon for the status screen to be active for 20-30 minutes while SQL is configured.***

During this step, the Crystal Reports installer will run. You will see a screen like the following:

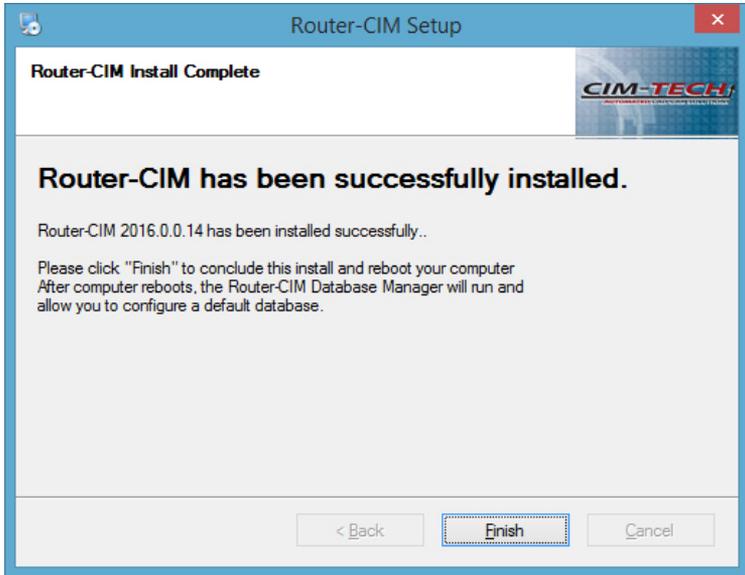


The next step will appear when this is finished.



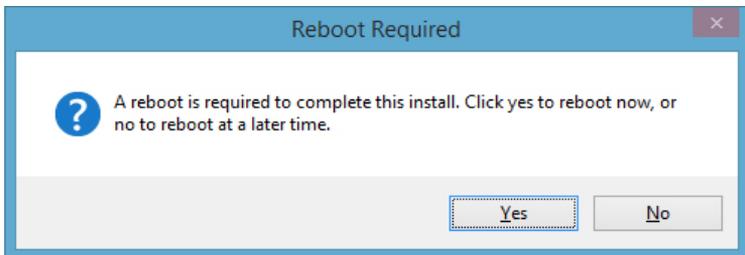
The Sentinel Protection Installer will run next to install the hardware lock drivers. This is usually pretty quick and you may see some windows open with a black background while this is installing.

Once that is finished, the install of Router-CIM is completed and the following screen will appear:

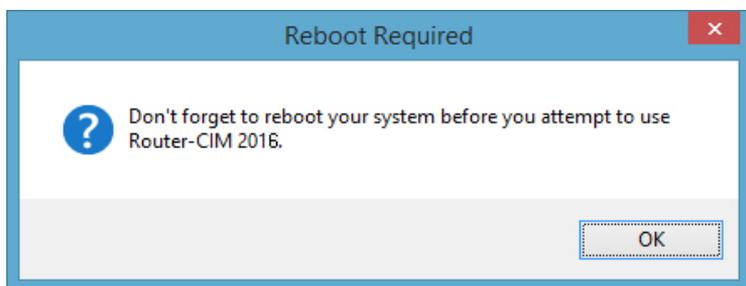


Select '**Finish**'.

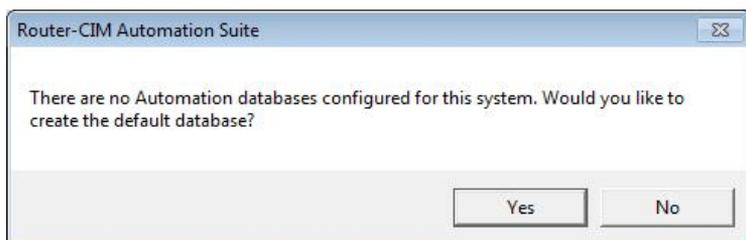
You will see a message requesting you to reboot your computer. The installation is not finished until you reboot your computer.



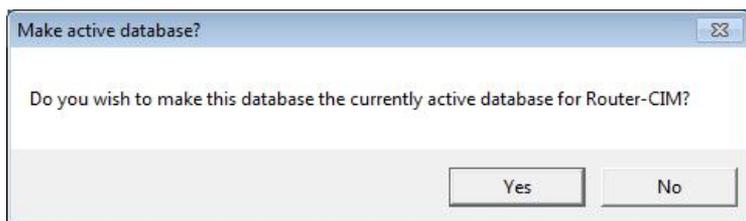
If you select '**No**' at this time, a reminder screen will appear.



Once you reboot your system, prior to the full reboot being completed, Router-CIM will next select a default database, and you will be prompted with the following window:

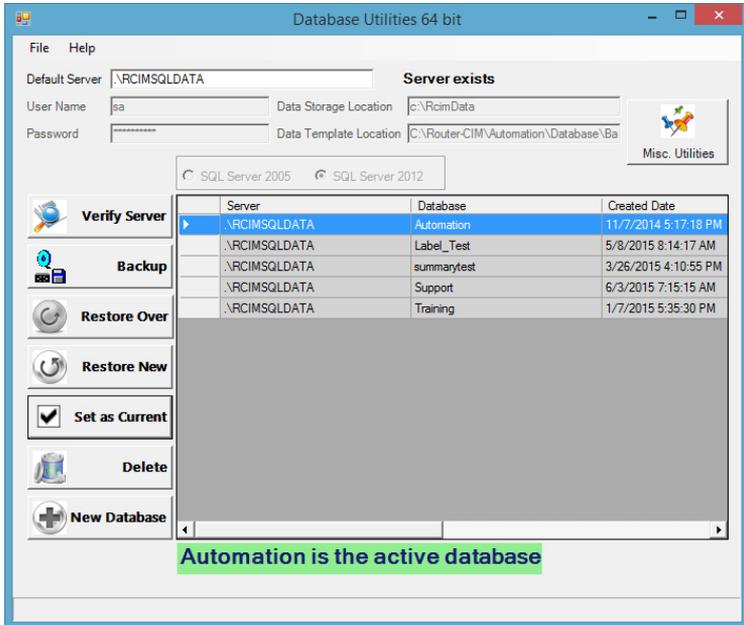


If this is an installation on a computer that has not had Router-CIM loaded prior, select **'Yes'** and a default database will be created. The following screen will be shown:



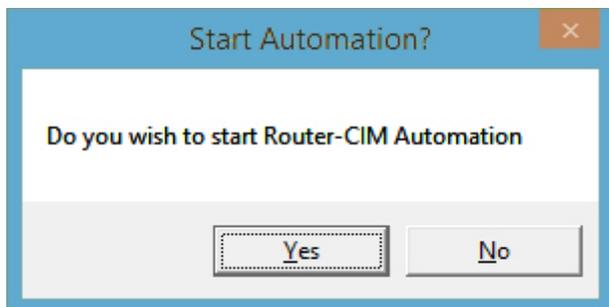
Select **'Yes'** and the default database will be set active.

**Note:** You may be prompted to select the current database to be active for Router-CIM if the computer has already had Router-CIM loaded. If this occurs, you will see the following screen.



Select the database that you want Router-CIM Automation to use and once you have it selected, select the button '**Set As Current**'.

Once a database is set as active, you will be prompted with the following message:



You should select **'No'** and your computer will finish rebooting.

Once that is finished, the install of Router-CIM is complete. There is either a parallel port lock (25 pin device) or a USB lock for a USB port that will need to be plugged in at this time.

## Additional Installs

### Avery Label Pro and Design Pro

The Router-CIM CD includes Avery Label Pro and Avery Design Pro. Browse the CD to find the Avery folder, and run the setup.exe program inside the folder to install.

Router-CIM has built-in links to the Avery software. When a job is finished, the folder containing the NC code includes a Router-CIM.lpd and Router-CIM.zdp file. Double-click that file to open Avery and view the labels. Use Print Preview to see each one.

## Installing On A Different Computer

**Note: Follow the procedure for installing Router-CIM described [here](#) and then proceed to this section.**

- 1) Install your Post Processor(s) from the same setup files you used on the previous system. Or, create a pack and go on the previous system and import it on the new system.
  
- 2) Install any optional add-ons such as Advanced Nesting, CutSim, Multi-CIM or Solid-CIM 3D. If you are installing Solid-CIM 3D, be sure to copy your authorization file (rcimauth.key) to C:\Router-CIM. This file would have been emailed to you at the time the lock was authorized. You can also copy it from the C:\Router-CIM folder of a previous install or backup.
  
- 3) Knowledge drawings and DOIT files are a simple copy and paste. Their location is set under File > Settings > System Folders. Find these files on the old system and place them in the same folder structure on the new system. If your files are located on a network that the new computer also has access to, you will not need to move the files.
  
- 4) Your materials, job library, and Automation settings are stored in the database.
  - A) Either click **File > Database Maintenance** or run the **RCIM DB Manager** shortcut to access the database utilities window.
  - B) From the previous system, use the '**Backup**' button to create a backup of the database(s).For more information on backing up the

database, please refer to the Help Manual in Router-CIM Automation Suite.

C) Copy the backup file from C:\Router-CIM\Automation\Database\Backups to the same location on the new system.

**Note: The backup(s) must be in that folder to be able to restore them.**

D) On the new system, use the 'Restore New' button in the **RCIM DB Manager** to restore the database backup(s).

## Updates

The Router-CIM CD installs a complete version of Router-CIM. There are, however, updates made to the product on a regular basis.

Please visit <http://www.cim-tech.com> for updates to Router-CIM. Typically there will be a regular version update as well as a beta of the next changes we are making to the product. Select Download Updates from the main screen.

***Please update your Router-CIM install as soon as the regular install is complete!***

Visit <http://www.cim-tech.com> for regular updates and information relating to the Router-CIM software.

**Note: Router-CIM Automation Suite will also check regularly to see if a new update is available. To ensure that Router-CIM Automation Suite can access the updates, you will need to have a network connection and you will need to make sure that in Router-CIM Automation Suite your 'Settings' under the 'Advanced Settings' tab that 'Check for Available Updates' is selected.**

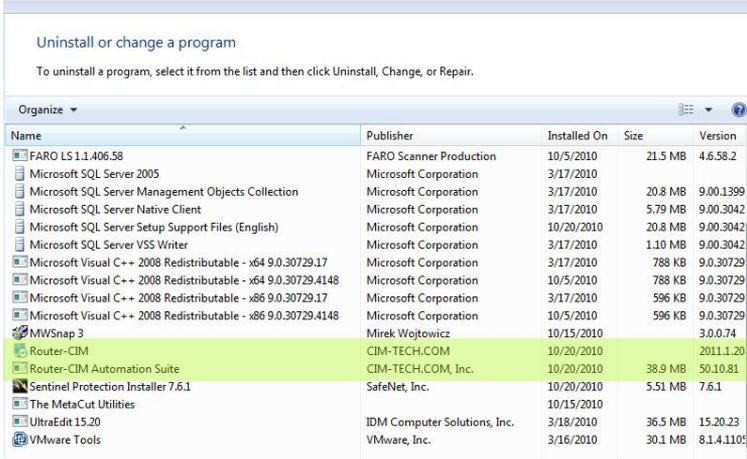
## Uninstall Router-CIM

In order to uninstall Router-CIM, you should use the Add/Remove programs application in Windows.

You will see two entries in this section. You should remove the Router-CIM Automation Suite entry first. Then when that is complete, you can select the Router-CIM entry and remove that.

If you are not re-installing on the current machine, you can also remove the Sentinel Protection Installer x.x.x.

**Note: If you have other software that uses a Sentinel hardware lock, you should not remove the Sentinel Protection Installer program.**



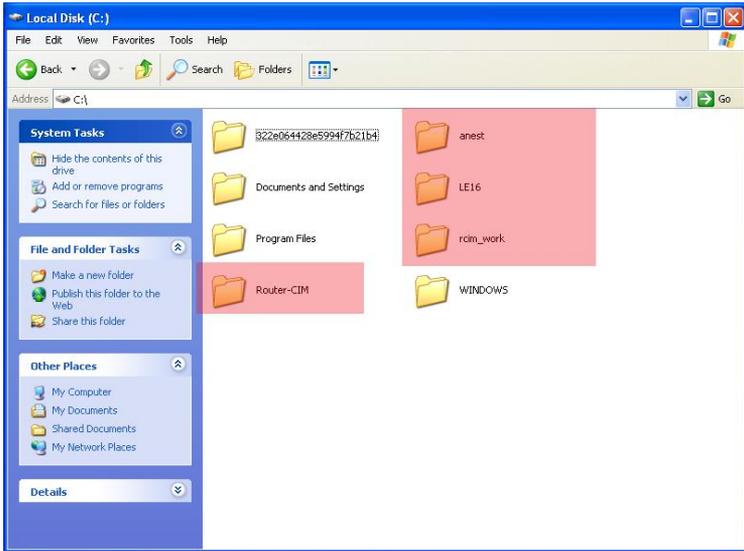
Uninstall or change a program

To uninstall a program, select it from the list and then click Uninstall, Change, or Repair.

Name	Publisher	Installed On	Size	Version
FARO LS 1.1.406.58	FARO Scanner Production	10/5/2010	21.5 MB	4.6.58.2
Microsoft SQL Server 2005	Microsoft Corporation	3/17/2010		
Microsoft SQL Server Management Objects Collection	Microsoft Corporation	3/17/2010	20.8 MB	9.00.1399
Microsoft SQL Server Native Client	Microsoft Corporation	3/17/2010	5.79 MB	9.00.3042
Microsoft SQL Server Setup Support Files (English)	Microsoft Corporation	10/20/2010	20.8 MB	9.00.3042
Microsoft SQL Server VSS Writer	Microsoft Corporation	3/17/2010	1.10 MB	9.00.3042
Microsoft Visual C++ 2008 Redistributable - x64 9.0.30729.17	Microsoft Corporation	3/17/2010	788 KB	9.0.30729
Microsoft Visual C++ 2008 Redistributable - x64 9.0.30729.4148	Microsoft Corporation	10/5/2010	788 KB	9.0.30729
Microsoft Visual C++ 2008 Redistributable - x86 9.0.30729.17	Microsoft Corporation	3/17/2010	596 KB	9.0.30729
Microsoft Visual C++ 2008 Redistributable - x86 9.0.30729.4148	Microsoft Corporation	10/5/2010	596 KB	9.0.30729
MWSnap 3	Mirek Wojtowicz	10/15/2010		3.0.0.74
Router-CIM	CIM-TECH.COM	10/20/2010		2011.1.20
Router-CIM Automation Suite	CIM-TECH.COM, Inc.	10/20/2010	38.9 MB	50.10.81
Sentinel Protection Installer 7.6.1	SafeNet, Inc.	10/20/2010	5.51 MB	7.6.1
The MetaCut Utilities		10/15/2010		
UltraEdit 15.20	IDM Computer Solutions, Inc.	3/18/2010	36.5 MB	15.20.23
VMware Tools	VMware, Inc.	3/16/2010	30.1 MB	8.1.4.110!

Once Router-CIM is uninstalled, you may remove the folders that remain on the C: drive that uninstall did not remove. Any folders which contain files that have been added or modified after

the install will not be removed. The folders that can be removed are shown below:





**CIM-TECH.COM, Inc.  
7512 Dr. Phillips Blvd.  
Suite 50-859  
Orlando, FL 32819  
United States  
[www.cim-tech.com](http://www.cim-tech.com)**

**Toll-Free Technical Support:  
(877) 549-8211**