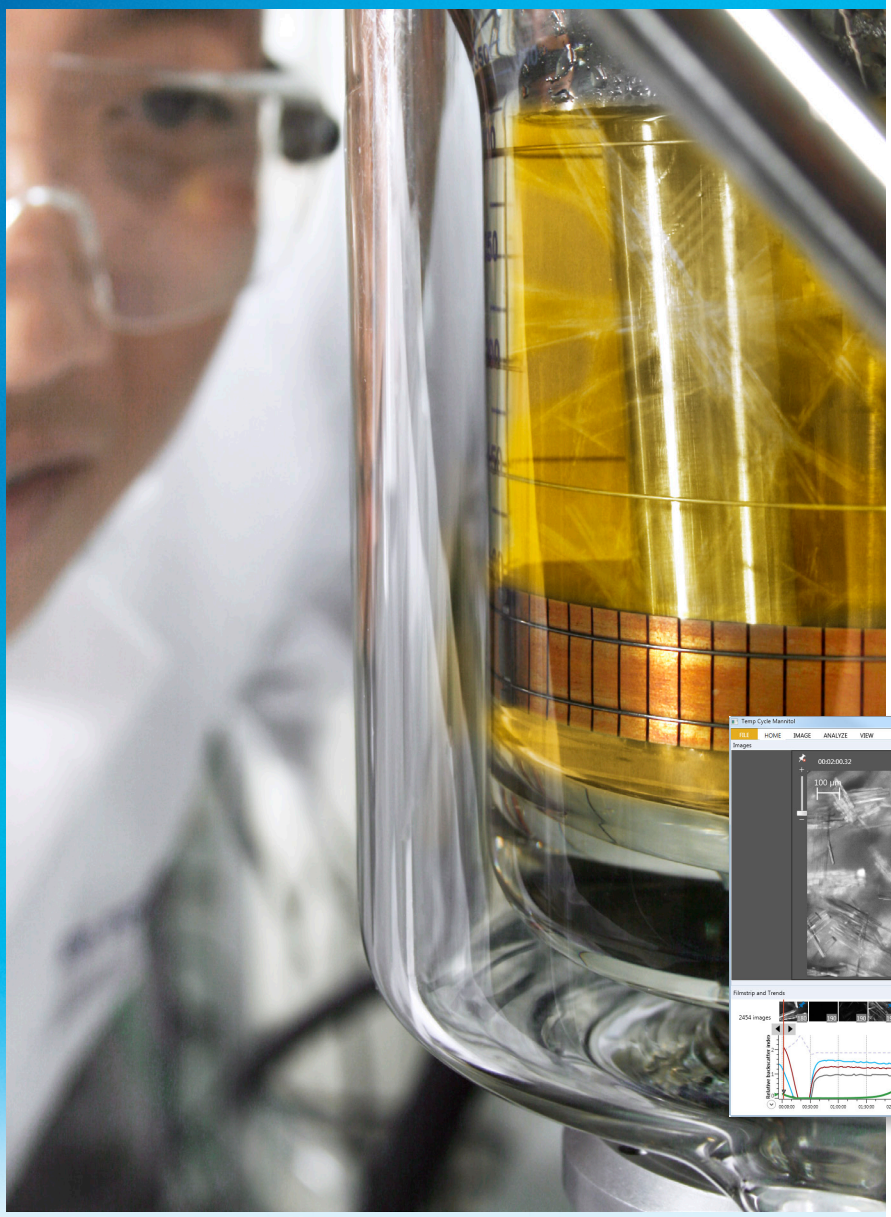
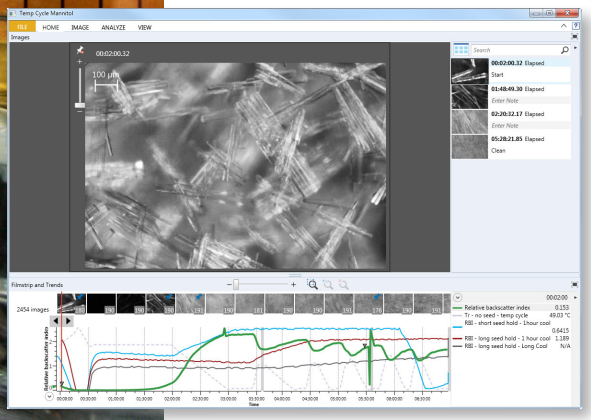
Install Guide for Admins





January 2015

MK-PB-0119-AC Rev B

DCN 2674

iC PVM™ 7.0

Study Particles in Real Time

METTLER TOLEDO

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1. Introduction

iC PVM installation is wizard-guided. Refer to the "iC PVM Quick Install" guide included in the iC PVM software box for basic steps.

This guide includes more detailed installation steps along with implementation information for the iC PVM administrator. The wizard guides you through the steps to install the iC PVM software and ParticleView instrument drivers. The installer prompts for prerequisite Microsoft® Windows® components and camera drivers, as applicable.

NOTE: The windows shown in this guide are from a Microsoft® Windows® 7 installation. Corresponding windows displayed for Microsoft® Windows® 8.1 will differ slightly in appearance, but the functionality is the same for each operating system.

In addition to the installation process, this guide also includes license activation (page 11) and connection information (page 5).

2. System Requirements

Below are the **minimum** computer requirements to run iC software and control one instrument. Please note that these are the minimum specifications to run the software. Verify the operating system and hardware configuration before installation

NOTE: For more information on the latest computer recommendations for iC software, please refer to the "Computer Specifications Guide" on the METTLER TOLEDO website: link to guide.

	Minimum Requirements: Instrument PC Specifications
CPU	Intel Core i7 Quad or better
Memory	8 GB (4GB for 32-bit)
Hard Drive	Solid-State Disk (SSD)
Graphics	SXGA 1280 x 1024 with 3D hardware acceleration
USB Port	At least one USB 3.0 port for ParticleView V19

Supported operating systems (32-bit and 64-bit):

- Microsoft® Windows® 8.1
- Microsoft® Windows® 7

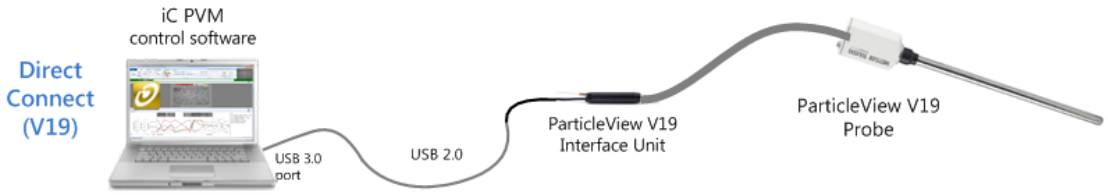
Some additional applications should be installed on the PC to access special functions like Reporting and some Help features. At time of release, iC PVM was specifically tested with the following versions of accessory software:

- Microsoft® Office® 2013
- Adobe® Reader 11
- Microsoft® Internet Explorer® 11
- Windows® Media Player 12

3. Connection Information

ParticleVIew V19 and PVM V819 instrument configurations consist of three hardware components: the probe, the interface unit/base unit, and the PC that runs iC PVM control software. The system is normally installed in a direct-connect configuration.

3.1 ParticleView V19



NOTE: If another instrument, such as a ParticleTrack G400, is also connected to the same internal PC via USB 3.0, it must **not** share the same USB hub. Plug the additional USB 3.0 device to a port on the other side of the control computer to possibly avoid this.

3.2 PVM V819

PVM V819 connects to the iC PVM control PC via a single Ethernet cable. There are three possible connection scenarios:

1. **iC PVM PC → V819**: The iC PVM control PC must be in the same subnet as the PVM V819 hardware. Since all V819s have the IP address **192.18.0.50**, the IP address for the iC PVM PC's built-in port must be set to **192.18.0.*x*** (where ***x*** = any number from 0-255, except 50). Refer to the "PVM V819 System Manual" configuration (Network Communication Settings) for details.
2. **iC PVM PC → V819 and office LAN**
3. **iC PVM PC → V819 and another iC or iControl application PC**

Scenarios 2 and 3 require the iC PVM PC have a second Ethernet port (for example, a USB-Ethernet device). To communicate with another iC application, the IP address for this second Ethernet port must be in the same subnet as the other control PC where the iC application is running.

3.2.1 Upgrading from PVM 8.* for PVM V819

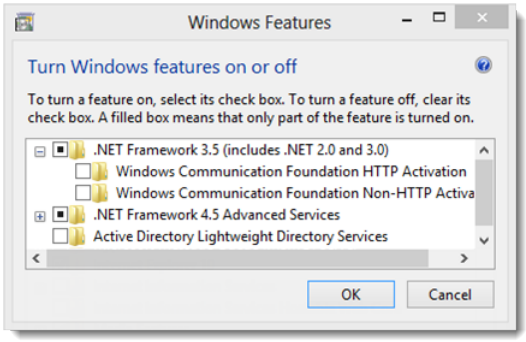
If iC PVM will be controlling a PVM V819 instrument, the **PVM.ini** file from PVM v. 8.* is required. The file contains calibration settings. If iC PVM is being installed on the same PC that ran PVM v. 8.*, this file will be automatically imported. If the initialization file is not installed prior to running iC PVM, the software instrument configuration includes a browse button to enable you to locate the file.

1. From the iC PVM Start Page, click/tap Instrument.
2. Click/tap **Load** next to the PVM.ini path text box and locate the file from the PC where the legacy PVM v8.* software was installed.

3.2.2 Vimba Camera Install (V819) on Windows 8.1

The Vimba (x64) on Windows 8.1 requires the following setting:

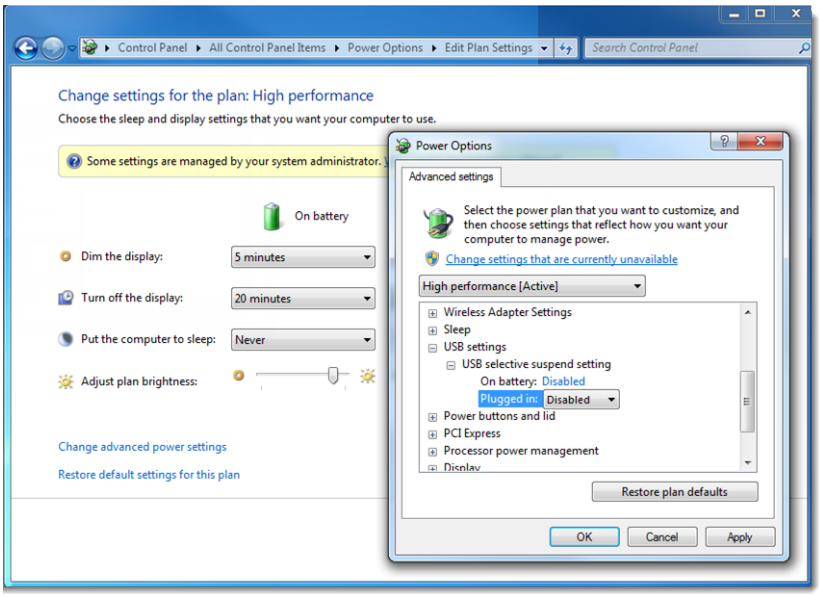
1. Go to Control Panel > Programs > Turn Windows features on or off.
2. Ensure both 3.5 and 4.5 are selected (filled box).



3.3 Disable Sleep Mode

On a PC that will be controlling an instrument, you must adjust the power settings to ensure the computer will **never go into sleep mode**.

1. Search 'Power Options,' and select 'High Performance.'
2. Select **Change plan settings** link.
3. Set 'Put the computer to sleep' to **Never**.
4. Select **Change advanced power settings** link and set as follows:
   - Sleep → **Sleep after** = Never
   - Sleep → **Hibernate after** = Never
   - For ParticleView V19 instruments only: USB Settings → **USB selective suspend setting** = 'Disabled'
   - For laptop computers: Power button and lid options → **Lid Close Action** = 'Do nothing'
5. Click **OK** and **Save changes**.



4. Installing iC PVM 7.0

Important: PVM instrument should be unplugged from the control PC during software installation.

4.1 Necessary User Rights

NOTE: Installation requires Administrative privileges. If the user account is not part of the Admin group on the local PC, right-click setup.exe and select "Run as administrator."

To run iC PVM, normal user privileges are sufficient.

4.2 Starting iC PVM Installation

1. Insert the installation CD or go to the downloaded installation folder.

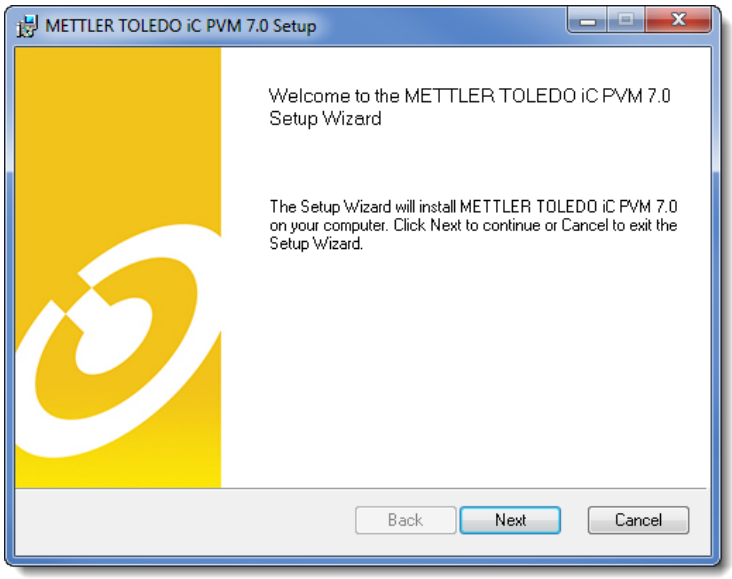
   If you inserted the CD, the iC PVM 7.0 installation wizard welcome window appears.

   If the installation wizard welcome window does not appear because the PC does not have AutoRun enabled, or if you have downloaded the installation folder, open the CD or folder for browsing through Windows Explorer.

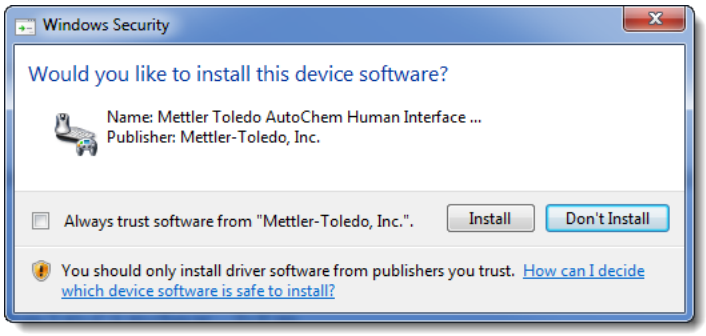
   Run **setup.exe** to display the welcome window.

2. If not already installed, accept the following prerequisite component installations :
   - **Microsoft® .NET 4.5 Framework**
   - **Vimba camera driver** (Allied Vision Technologies) for PVM V819.
   - **IDSuEye camera driver** (Imaging Development Systems) for ParticleView V19.

3. When the iC PVM installation page appears, click through the wizard steps.



4. Depending on the Microsoft® Windows® Security setup, you may see a prompt for the METTLER TOLEDO AutoChem Human Interface device driver installation. Install the driver.



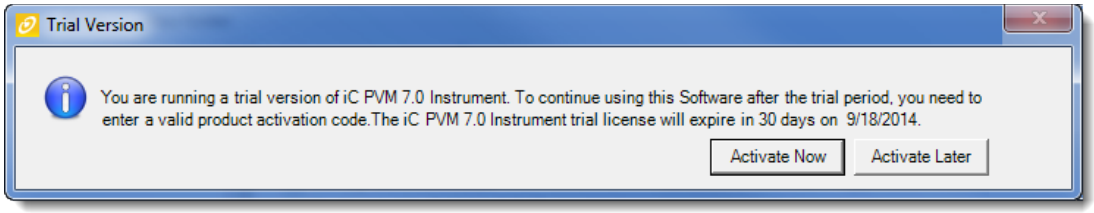
4.3 Starting iC PVM Software

1. Plug the ParticleView V19 instrument USB cable into the USB 3.0 port of the control computer. For the PVM V819, connect power and Ethernet to the base unit and turn it on.

   NOTE: The instrument must be plugged in to the iC PVM control computer before starting the software.

2. If you have not already done so, start the iC PVM software application by clicking the desktop icon or selecting iC PVM 7.0 from the METTLER TOLEDO program menu in the Start menu.

3. A message appears indicating the software is running on a trial license:

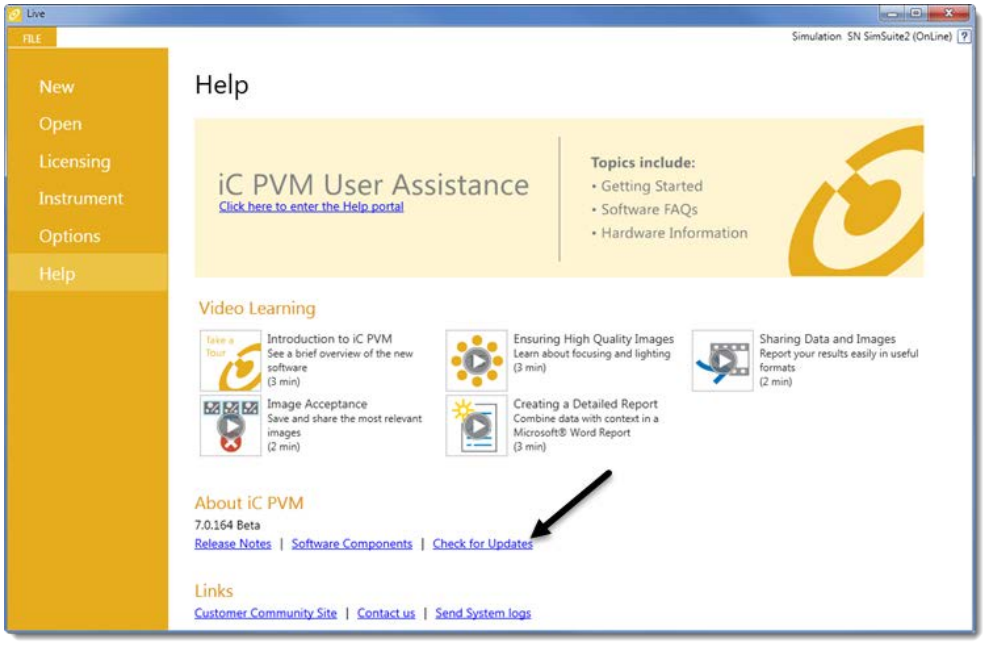


- If you have a License Key, click **Activate Now** to proceed with the registration process. Instructions begin under section 7 iC Licensing.
- If you prefer to remain on the 30-day trial license, click **Activate Later**.

  NOTE: The 30-day trial provides access to all iC PVM 7.0 features.

5. Checking for Updates

If you already have a release of iC PVM installed and want to see if you have the latest service pack, select "Check for Updates" from the FILE > Help menu.



After login to the AutoChem Customer Community website, you will see a message that indicates whether or not you are running the latest software. The next section describes how to apply a service pack.

5.1 Applying an iC PVM 7.0 Service Pack

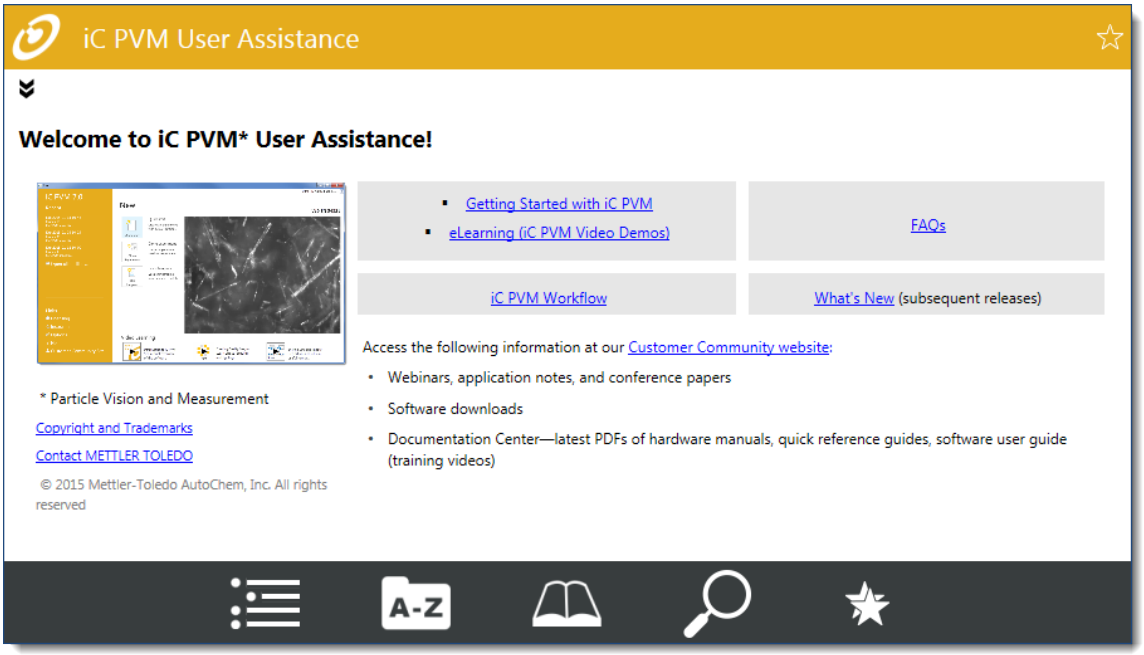
NOTE: Updating to a new service pack retains the 7.0 license.

If you already have a release of iC PVM 7.0 installed and want to apply the latest iC PVM 7.0 service pack, run the service pack installers, as follows.

1. Download the service pack installer. Then, follow the instructions provided to extract the contents. (Options for accessing the service pack installers are in the next section.)
2. Locate the **data.msi** file in the extracted contents.
3. Run the **.msi** file to launch the installation wizard and follow the prompts to install the service pack. Then, run the **data.msi** for the iC PVM software. Use the instructions under Installing iC PVM that begin on page 7.

6. Help System Active Content

The iC PVM user assistance (Help system) has interactive features that enable you to expand and collapse information.



Also included is the option to tag favorite topics. Note the following related information:

6.1 Enable Active Content

The iC PVM Help system uses HTML5 JavaScript active content features. To enable viewing in the Microsoft® Internet Explorer® browser version 10 or higher, make a one-time change to allow the Help system to run active content: Internet Options > Advanced > Security > Allow active content to run in files on My Computer.

Alternatively, select the option to allow blocked content each time you open the Help file.

NOTE: This is **not** required when using browsers such as Chrome™ or Firefox®.

6.2 Favorites Notification

The iC PVM user assistance enables users to tag selected topics as 'favorites.' The following statement is required for compliance with the European Union cookie law: If you designate 'favorite' topics in the Help system, cookies will be stored in the browser. New versions of software retain prior favorites, as long as the end user does not clear all cookies or change the installation folder. See http://www.ffw.com/pdf/cookie-consent-tracking-table.pdf for more information.

7. iC Licensing

iC applications use a licensing scheme to control distribution and use of the software. The following types of licenses are available:

- **Instrument version**—Enables the application to connect to a live instrument and run experiments.
- **Office version**—Enables the user to run the application without a connection to an instrument. Office version users can review and analyze experiment data obtained from a computer with an Instrument license.
- **Trial version**—A trial version is equivalent to an Instrument license with a 30-day time limit.
- **iCare subscription**—A special annual subscription license that entitles you to all release upgrades and service packs for instrument and Office versions of your iC and iControl software as well as priority telephone and email support. Please refer to Activating an iCare Subscription on page 13.
- **Site license**—Specific companies that have large software agreements with METTLER TOLEDO may also have a Site License for a particular product or products. Please refer to Installing a Site License on page 13.

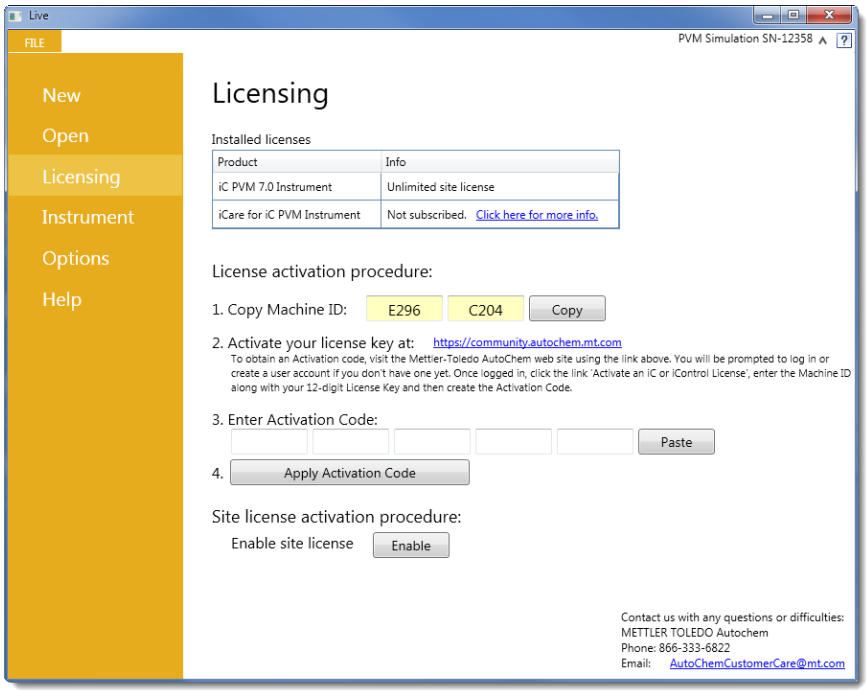
7.1 Activating an iC PVM License

NOTE: Although you need to activate your software on a website, the PC where you are installing the iC PVM software does **not** require an internet connection. You can activate the software license using any internet-enabled PC.

You can activate the license at any time by selecting Licenses from the iC PVM software Start Page or from the main FILE menu.

The license activation process starts in the Licensing page and links to the AutoChem Customer Community website to obtain an activation code. Then, you return to the Licensing window.

NOTE: If you purchased iCare at the same time as iC PVM 7.0, activate your 7.0 license first. Then, follow the steps on page 13 to activate the iCare subscription.



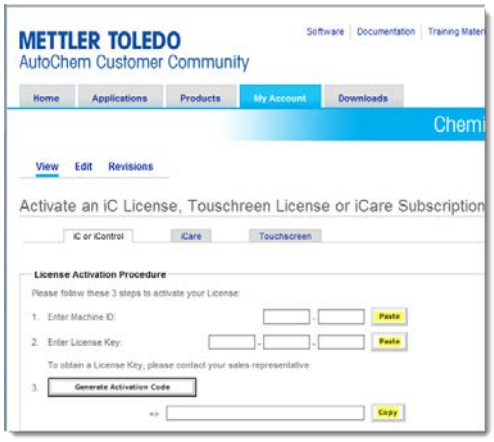
1. Have your License Key sheet ready.
   The sheet is usually a letter-sized certificate delivered with the software.
2. On the Licensing page, click **Copy** after step 1 to copy the machine ID to your clipboard.
3. Click the link (https://community.autochem.mt.com) after step 2.

   NOTE: Access the MT website from any internet-enabled PC—This step does not necessarily need to be performed on the PC where the iC PVM software is installed.
4. Set up a new account or log in using the username and password. When setting up a new account, you will receive an email with instructions and a link to confirm your email address and complete the new account process.
5. Click **Activate an iC or iControl License** from the My Account tab.

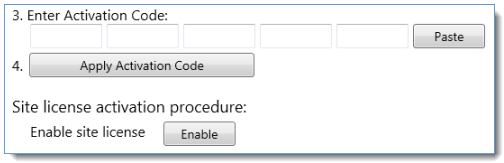
6. Enter the Machine ID and License Key or use the **Paste** buttons (highlighted below).

   NOTE: **Paste** and **Copy** buttons only apply to Microsoft Internet Explorer. In any other browser, you must enter the information.

   The Machine ID can be copied from the License Manager window. License Key is on a license certificate sheet delivered with your software.



7. Click **Generate Activation Code** to produce the code in the text box. Then, click **Copy** to save the code to the clipboard.
8. Return to the License Manager in the iC PVM software (see page 11), and click **Paste** to enter the activation code in step **3. Enter Activation Code**.



9. Click **Apply Activation Code** to complete the registration.

7.2 Activating an iCare Subscription

The procedure to activate an iCare subscription is similar to that for obtaining an activation code from the MT website for a single-user license. The 12-character iCare Subscription Number will be provided on an iCare Subscription Certificate that shipped with your order.

1. Login to the METTLER TOLEDO AutoChem Community website.
2. Click **Activate an iCare Subscription** from the My Account tab.
3. Enter the required Machine ID and Subscription Number
4. Click the **Activate Subscription**. You should receive a confirmation email message in a few minutes that provides some additional information about the program and the iCare Subscription Activation code.

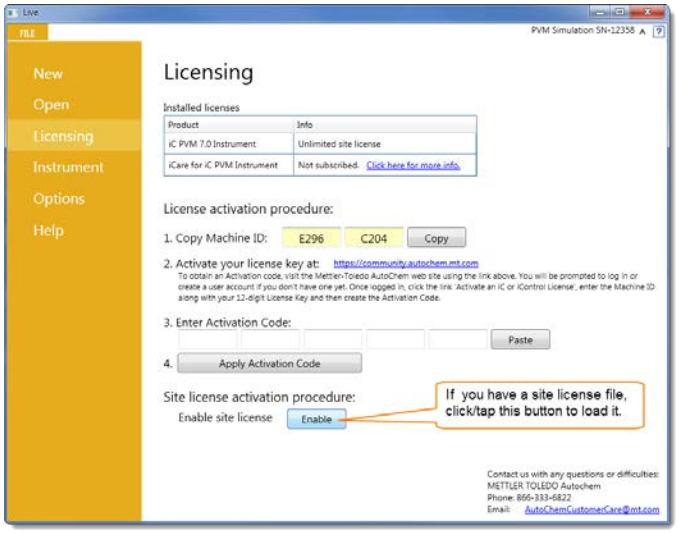
Activating the iCare subscription in the software itself is not required, but if you perform this step, then you will not need to update any licensing information if a new iC PVM version is released before the iCare subscription expires.

7.3 Installing a Site License

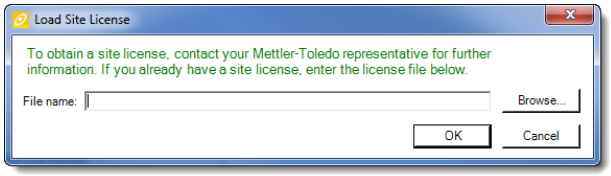
NOTE: Most companies do NOT have a site license, so only follow this procedure if specifically directed by your organization.

A Site License is supplied as a file and must be loaded into each copy of the iC software in use.

1. To install the Site License, open the License Manager by selecting it from the from the FILE menu > Licensing link.
2. In the Licensing window, click **Enable**.



3. Click **Browse** to navigate to the Site License file location. Then, click **OK**.



The license loads and the software is ready to use.

4. Repeat on the other computers with iC PVM installed.

8. Sharing Data between iC/iControl Applications

This section details the steps needed to set up a connection between different iC software such as iC PVM, iControl, iC IR, iC FBRM, or iC Raman so trend data can easily be shared.

The simplest way to connect different iC software applications is to install them on the same computer.

8.1 Connecting iC Applications Installed on Different PCs

If the different iC software applications are on separate computers, the two PCs must have an Ethernet connection between them, either over the corporate network or a private LAN.

This section provides a general summary of the steps needed to connect two computers running iC software over a corporate network. If the PCs and instruments are connected to each other on a private hub or you have difficulties with any of these steps and need additional troubleshooting information, please refer to the full Software Tip Sheet on Sharing Data between iC/iControl applications which is available on the AutoChem Customer Community website (https://community.autochem.mt.com/index.php?q=iCAppInterop)

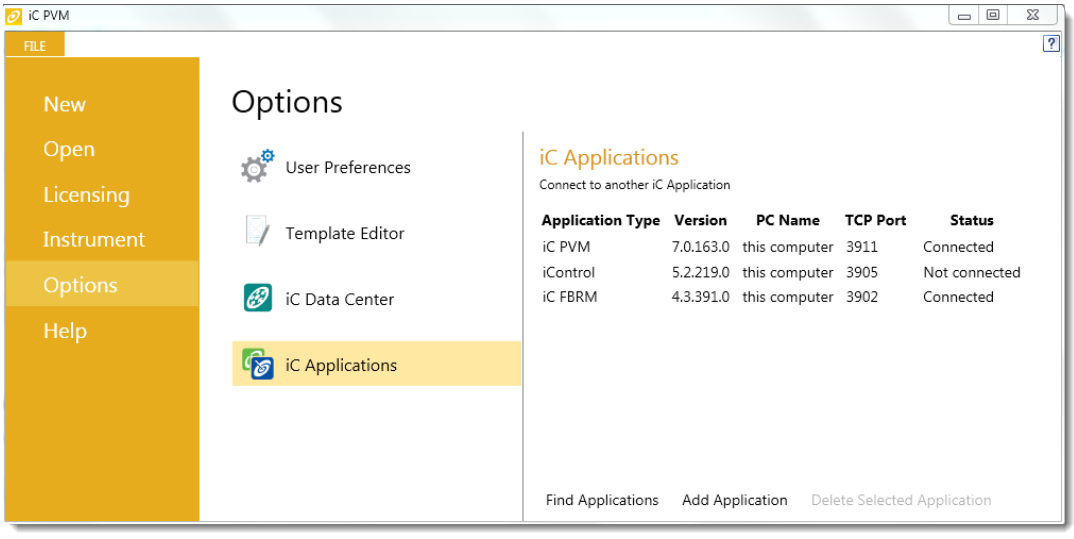
Before starting the steps below, ensure that:

- The iC and iControl applications on each PC are properly installed and can successfully execute an experiment with their respective equipment
- The two Computers are connected on the same network

If a connection cannot be fully established, then the Windows Firewall should be updated on each computer to allow the iC applications to communicate. See section 8.3 for detailed instructions on creating the exception.

8.2 View/Manage iC Application Connections

iC PVM will automatically detect and link to any other iC or iControl applications that are installed on the same computer.

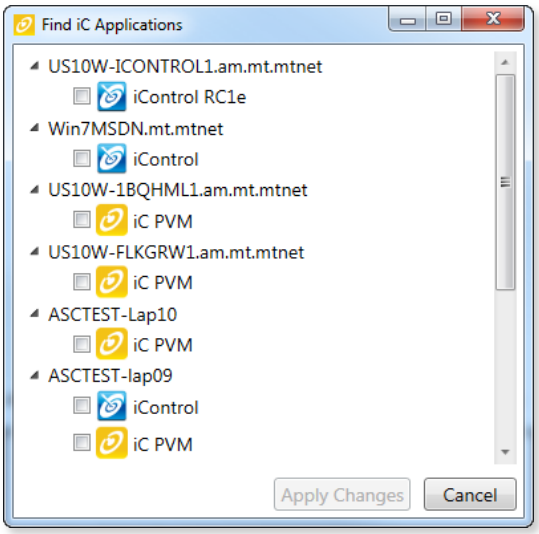


Once a link is setup, then the **Add Trends** list available from the **Home** ribbon will automatically update to include any experiments open in the other linked iC applications.

You can also set up connections to other computers with iC Applications.

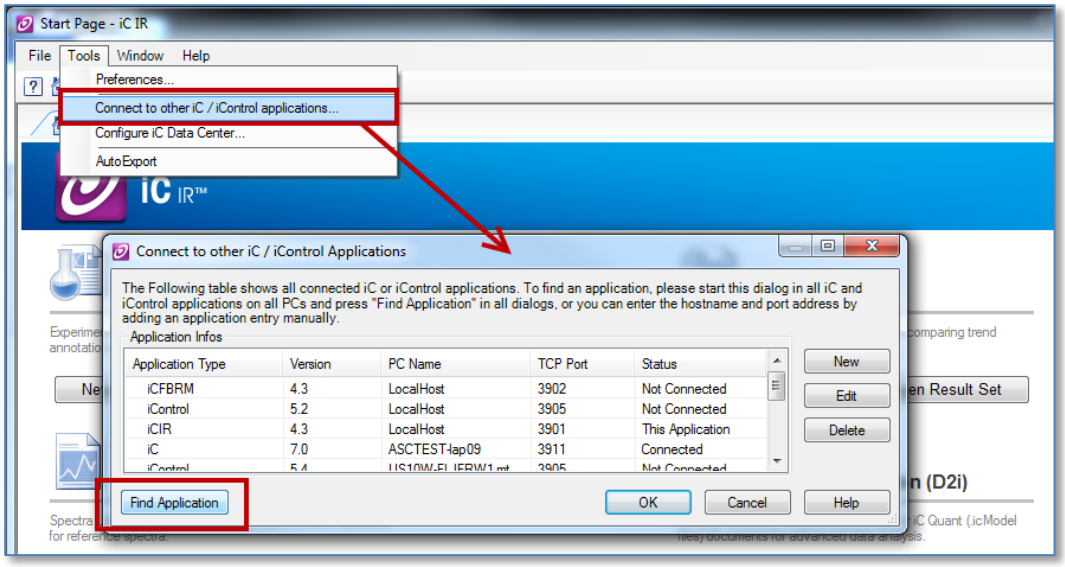
8.2.1 Creating a Link to a Different Computer using Find Applications

iC PVM can automatically detect other iC applications currently running on the network. Select the **Find Applications** button to browse the available iC applications broadcasting on the network and select the one you wish to link to.



Some iC applications always broadcast their availability whenever they are running, while other require the user manually start a broadcast so iC PVM can detect it. In general, any software with a version 5.2 or higher is set to always broadcast mode (such as iC PVM 7.0 or iControl 5.3). Earlier software versions (like iC FBRM 4.3 or iC IR 4.3) require the following steps to broadcast their location over the network:

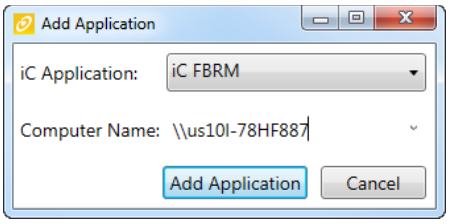
1. Go to the main **Tools** menu and select **Connect to other iC/iControl applications**
2. On the Connect dialog, select the **Find Application** button to start the broadcast.



The application should soon appear in the iC PVM Find Applications dialog box list. If it does not appear, the firewall may be blocking communication. Please see section 8.3 Configuring the Windows Firewall to see how to create exceptions in the firewall for the iC applications.

8.2.2 Manually Adding a Link

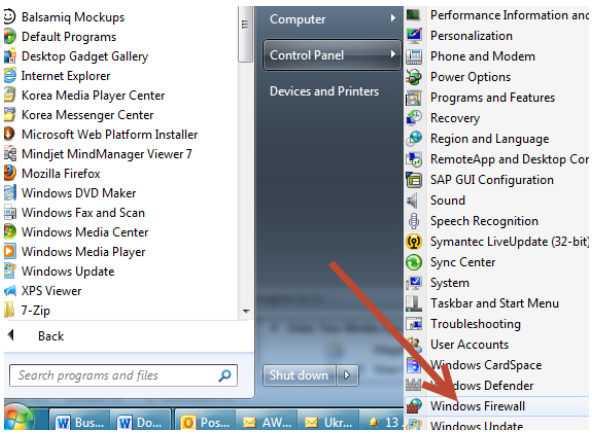
For networks with a large number of systems or if the other software is not currently running but the computer name is known, a link can be manually created using the **Add Application** button.

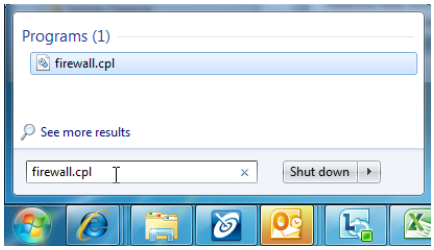


8.3 Configuring the Windows Firewall

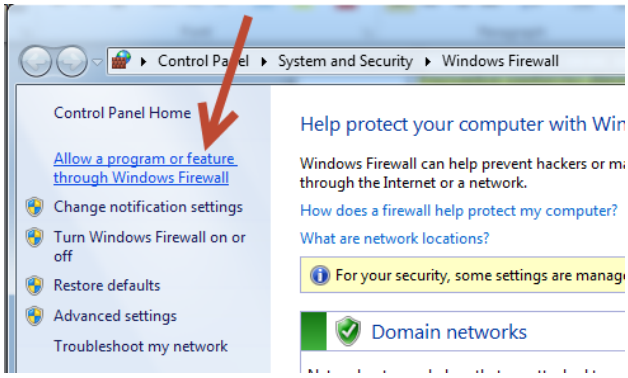
The instructions in this section are only required if the iC software applications are on different computers and the initial connection setup did not work.

1. On the PC running the iC PVM application, click the **Start** → **Control Panel** → **System and Security** → **Windows Firewall** (or use the start search option for **firewall.cpl**).

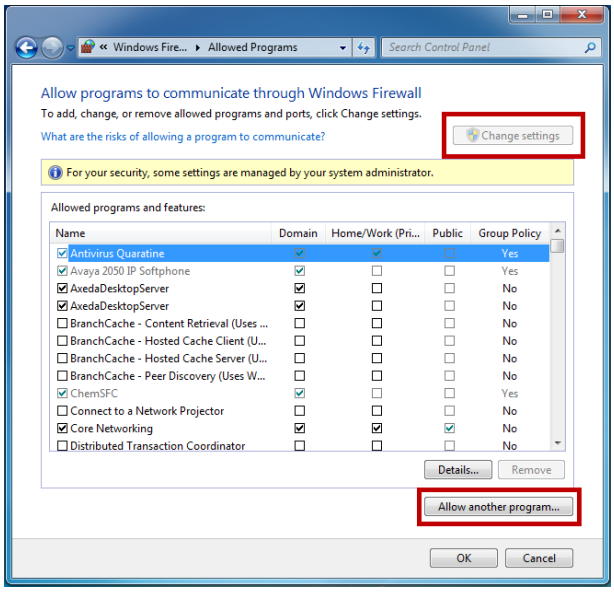




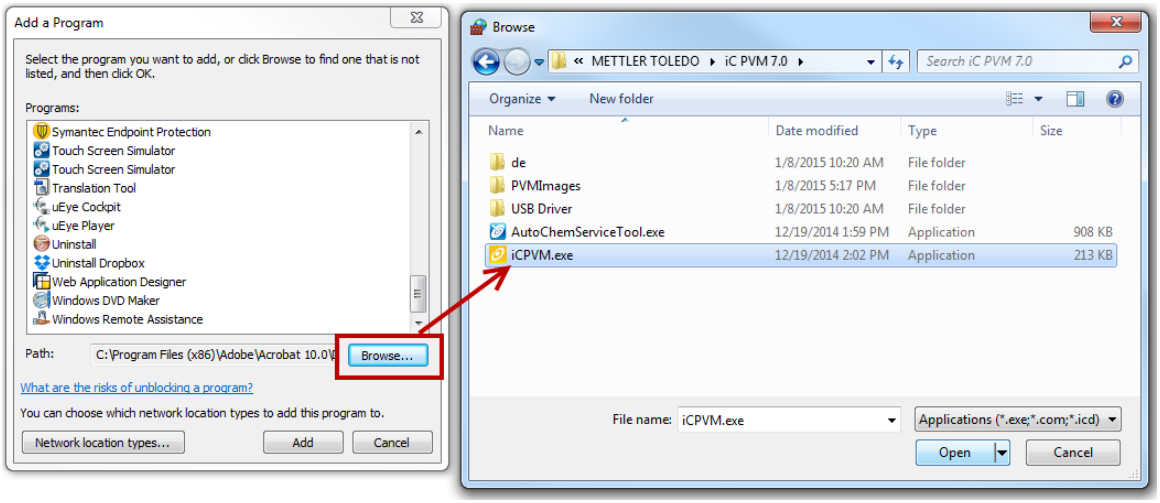
2. Select the **Allow a program** option.



3. Select the **Allow another program** button (if this button is not enabled, you may need to first click the **Change Settings** button).



4. Select the Browse option and locate:
C:\Program Files (x86)\METTLER TOLEDO\iC PVM 7.0**iCPVM.exe**



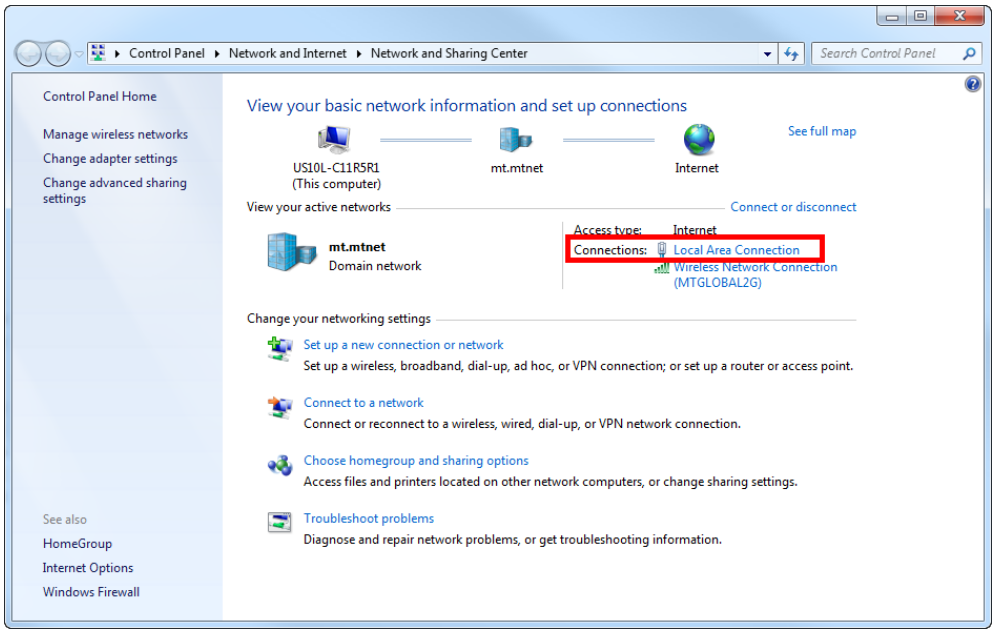
NOTE: If you install a different version of iC PVM, you will need to repeat this process for the new version.

5. On the PC running the other iC software, repeat steps 1–4 and add an exception for appropriate programs such as:
   - C:\Program Files (x86)\METTLER TOLEDO\iControl 5.2**iControl.exe** AND
     C:\Program Files (x86)\METTLER TOLEDO\iControl 5.2**iControlServer.exe**
   - C:\Program Files (x86)\METTLER TOLEDO\iC IR 4.3**iCIR.exe**
   - C:\Program Files (x86)\METTLER TOLEDO\iC FBRM 4.3**iCFBRM.exe** AND
     C:\Program Files (x86)\METTLER TOLEDO\FBRM Server 4.3**FBRMServer.exe**
   - C:\Program Files (x86)\Kaiser\iC Raman 4.1**iCRaman.exe**

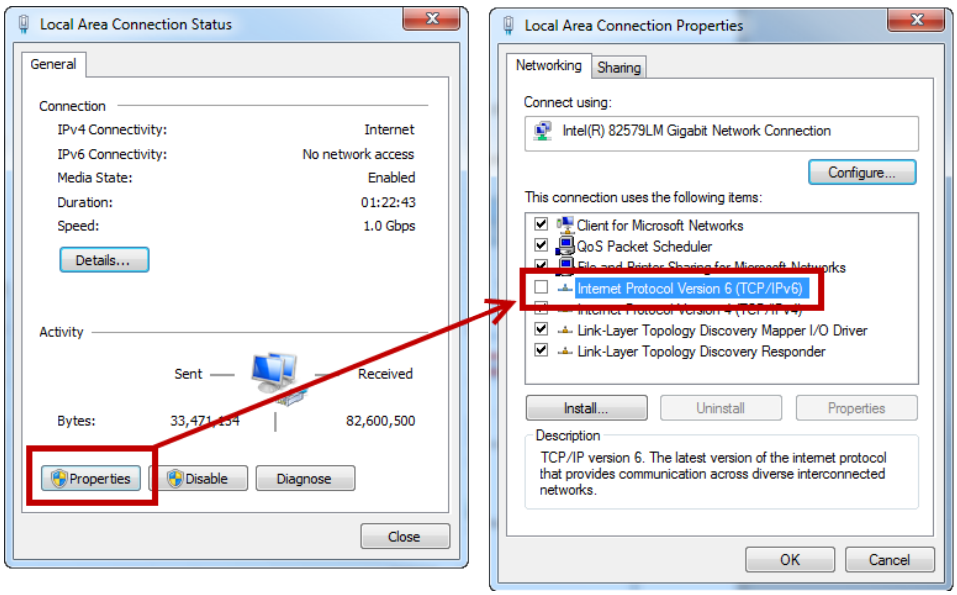
8.4 Turning Off TCP/IPv6 Protocol

If there are still communications issues (either failures to connect or long waits for connections) between iC PVM and the other iC or iControl computer, another suggestion to try is to disable the IPv6 protocol on the network adapter used to connect to the other computer. IPv6 is the new computer address protocol that will eventually replace IPv4 which is currently the most popular standard. The iC applications use IPv4 to communicate but if IPv6 is enabled, it is usually tried first before IPv4 and this can cause delays in connections or timeout errors. Unless your network has a specific requirement for IPv6, and very few do, you can safely disable IPv6.

1. On the PC running iC PVM, click the **Start** → **Control Panel** → **Network and Sharing Center**.
2. In the 'View your active networks' area, click **Local Area Connection**.



3. Click **Properties** and, on the Networking tab, uncheck the Internet Protocol Version 6 (TCP/IPv6) check box, and click **OK**.



If you have issues connecting to other iC/iControl applications, send an email to iC@mt.com for assistance.

9. Appendices

9.1 Installing iC PVM Office via Scripting

iC PVM installation options include the following argument syntax that enables IT personnel to silently install iC PVM Office licenses using your organization's scripting tool.

1. Note the folder location path and filename for the **data.msi** file.
2. If applicable, note the server name where iC Data Center (**icdcserver**) resides and ensure the server is running.
3. Use the following argument syntax:

   msiexec /i "*<folder path>* **Data.msi" /qn quiet=true InstallDir=***<install path>* **icdcserver=***<server name>*

   Example:

   msiexec /i "C:\Installer\data.msi" /qn quiet=true InstallDir=C:\ABC icdcserver=abc10-svr2

   NOTE: If a path includes spaces, the entire name must be surrounded by double quotation marks.

4. Complete the installation wizard. Verify the wizard shows the install path specified in silent command.

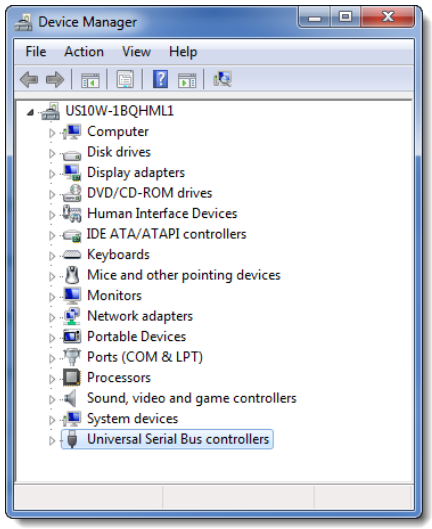
   NOTE: When silently installing upgrades, ensure the **InstallDir=**<install path> is the same as that used in the previous installation.

9.2 Note for ParticleView V19 Installations

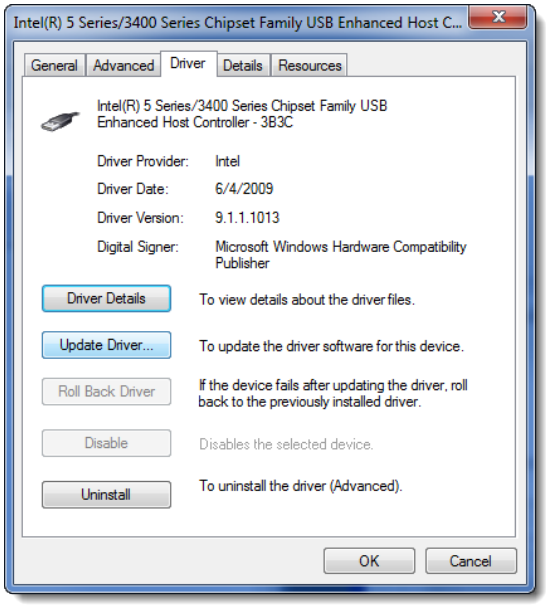
If, when starting iC PVM, a blue screen appears, it can indicate older USB 3.0 drivers. Ensure the latest USB 3.0 drivers are installed on the control computer. It is a known issue that older drivers for the C216 chipset will cause a blue screen.

With an Internet connection, follow the steps below to update the drivers.

1. Go to the Control Panel → Device Manager → Universal Serial Bus controllers and open the list of USB controllers.



2. Right-click on **Universal Serial Bus controllers** and select **Properties**.



3. Click **Update driver** in the Properties > Drivers dialog box and wait for the update to complete.

9.3 Software Deployments and Drivers

The iC software installation program runs scripts that deploy packages as part of the installation process. Packages deployed by the installer include items such as device drivers, product licensing, and documentation. Dependencies include third-party prerequisites such as the Microsoft® .NET framework. Specific versions of each package and dependency are included, where applicable (shown in upcoming tables).

iC Software Deployments	Ver.	Notes	Third-Party
Software deployed to: C:\Program Files (x86)\METTLER TOLEDO\iC PVM 7.0		Installation path	
Deployed with software: iC PVM software documentation and videos		Available in Help menu	
.NET Framework	4.5	Refer to FILE > Help > **Software Components** for details	Microsoft® Corporation
DevExpress UI Toolkiit	3.1		Development Express, Inc.
ChartFX			Software FX, Inc.
OpenCV Computer Vision Library			Open Source
Configuration files: C:\ProgramData\METTLER TOLEDO\iC PVM\7.0			

Drivers Installed with Software	Notes	Third-Party
IDSuEye (V19) and Vimba (V819)	Camera drivers	IDS and AVT
METTLER TOLEDO HID class	Windows hardware driver package	

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MK-PB-0119-AC Rev B