iC PVM™ Quick Start Guide

This guide introduces a new user to the iC PVM graphical user interface (GUI) and describes several choices for getting started. Create and record an experiment to save images that best represent a particle system and its process dynamics. Each experiment can easily generate a report, image slideshow, or video.

Start Page

A start page appears when you first open iC PVM. At a glance you can see instrument status and begin an experiment, open a recent experiment file, or import an image sequence file (*.seq).

Click/tap **Quick Start** to quickly create a new iC PVM experiment.

- Open recent experiments.

- Browse to other experiment files
- Import a sequence file

Open links to:
- Activate software licenses
- View instrument configuration
- Check options including templates and iC Data Center
- Access iC PVM information and user assistance
- Go to AutoChem customer website

Live

V19 SN 54321 (OnLine)

iC PVM 7.0

Recent

Exp 2015-01-13 10-43
Images: 39
C:\iC PVM image files

Exp 2015-01-09 10-24
Images: 49
C:\iC PVM image files

Exp 2015-01-12 10-00
Images: 1
C:\iC PVM image files

📁 Open other files ...

Links
- ✔ Licensing
- ✏ Instrument
- ⚙ Options
- ? Help
- 👤 Customer Community Site

New

Quick start
Create an experiment with default settings

Clone Experiment
Clone experiment
Use settings from a previous experiment

From Template
From template
Use settings from a user defined template

V19 SN 54321

Video Learning

Take a Tour — Introduction to iC PVM
See a brief overview of the software

Ensuring Quality Images
Learn about focusing and lighting

Sharing Data and Images
Report your results in useful formats

Glance at instrument connection status.

Images appear when instrument is connected, powered, and inserted in a particle/droplet system.
NOTE: A **clean** probe window appears black when it is not inserted in a particle system.

Links to product video tutorials.

Alternatives for starting a new experiment:
- Cloning an existing experiment (tweak settings)
- From a template (advanced option)

Next—Name experiment file and set timing options...

Name Experiment File and Set Basic Options

After you click/tap **Quick Start** on the Start Page, click **Create** to accept the default filename and location of the experiment file that will have either the default or specified save interval and duration settings.

Edit or accept experiment file name and location. If using iC Data Center, name the experiment according to your Standard Operating Procedure.

You can change these interval and duration settings now or during the experiment.

Quick Start

☀ Create an experiment with default settings

File Specifications

Experiment Name: Exp 2015-01-07 10-01

Folder: C:\iC PVM image files

Experiment Duration

Save Interval: 10 seconds ⌄

Experiment Duration: 8 hours ⌄

☀ Create

Amount of time between each image saved.

Experiment file holds up to 6,000 images.

Click/tap **Create** to make the experiment.
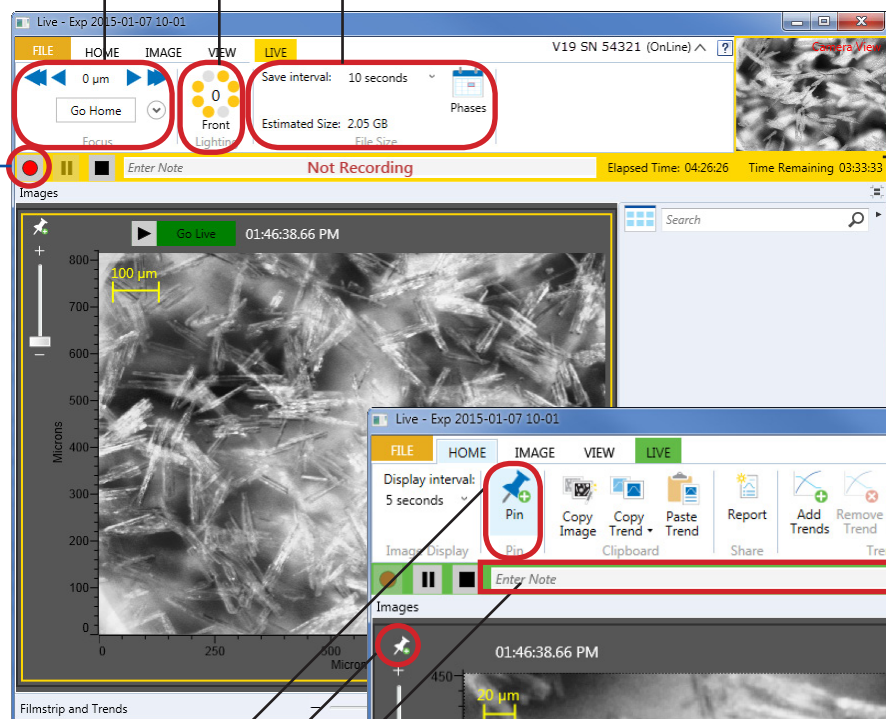
Next—Begin Recording images to the experiment file…

Record Images

After you click/tap **Create** to make the experiment, the main iC PVM workspace appears with the LIVE ribbon. NOTE: Live images on display are unsaved until you click/tap the record button (⏺). When recording starts, the LIVE experiment toolbar changes to green.

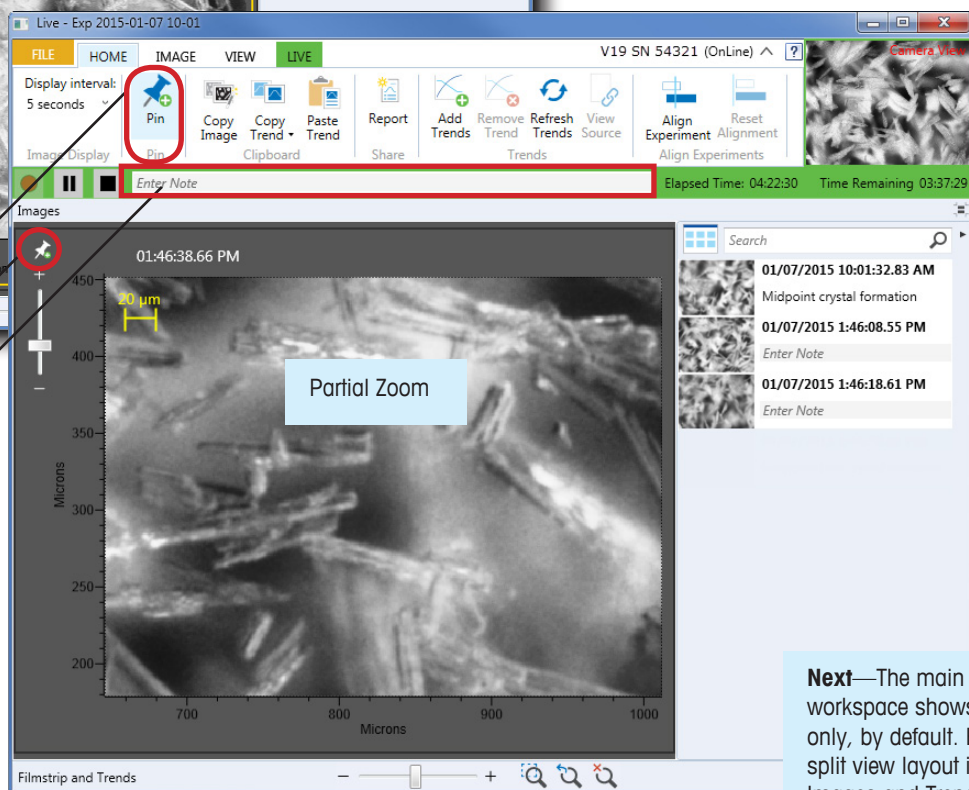Adjust, as needed: Focus (V19 only), Lighting, Save interval (and experiment phases)

Multiple **ribbon tabs** show options and tools for the iC PVM workspace. (LIVE ribbon for ParticleView V19 shown)

Click/tap (⏺) to start recording images.

LIVE experiment toolbar

HOME ribbon shown

Begin 'pinning' selected images by:
• Clicking/tapping the Pin button (from either location), or
• Entering a process note

Partial Zoom

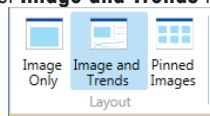**Next**—The main workspace shows images only, by default. But a split view layout includes Images and Trends…

Observe Images and Trends

iC PVM includes a trends viewer and filmstrip of the saved images in sequence. The sample below shows a split layout of the two main sections in the iC PVM workspace—**Images** at the top and **Filmstrip and Trends** on the bottom.

To change the layout:

- Click/tap the split icon (▭). Notice the icon changes to the full version (▭) on the Images bar.
- Or, select **Image and Trends** layout from the VIEW ribbon.

Image Only | Image and Trends | Pinned Images
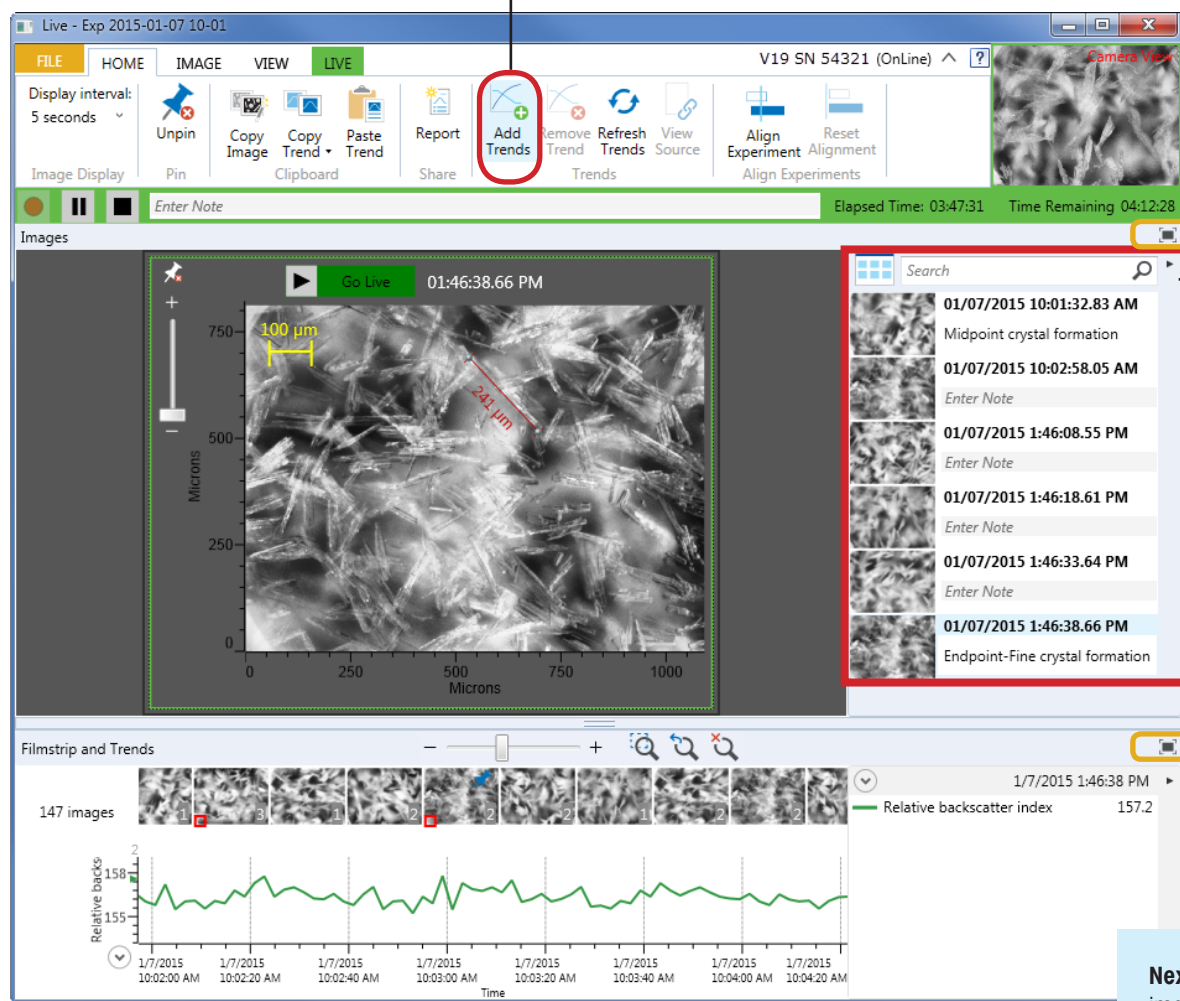
Layout

Import an iControl or iC FBRM trend.

HOME ribbon shown

This is the **Image and Trends** layout where the workspace layout is split into two main sections:

1. **Images** collected

2. **Filmstrip** of saved images, and

Trends chart of image trends such as Relative Backscatter Index (RBI) or trends imported from iC FBRM or iControl

Notes panel
- When you pin an image, it appears here.
- If panel is collapsed, click/tap Notes bar to expand it.

Enter note on pinned images.

Double-click/tap in an image thumbnail to move back and forth between the main workspace and the **Pinned images** view, described next…

Next—Review all the images pinned from the experiment…

View Pinned Images

When you click/tap the **Pinned** button ( ) in the Notes panel or from the VIEW ribbon, the iC PVM workspace displays a gallery of all pinned images in this experiment.

Select preferred image size

To return to main workspace:
- Double-click/tap on an image, or
- Click/tap the view button, or
- Click/tap one of the first two layout buttons in the VIEW ribbon.
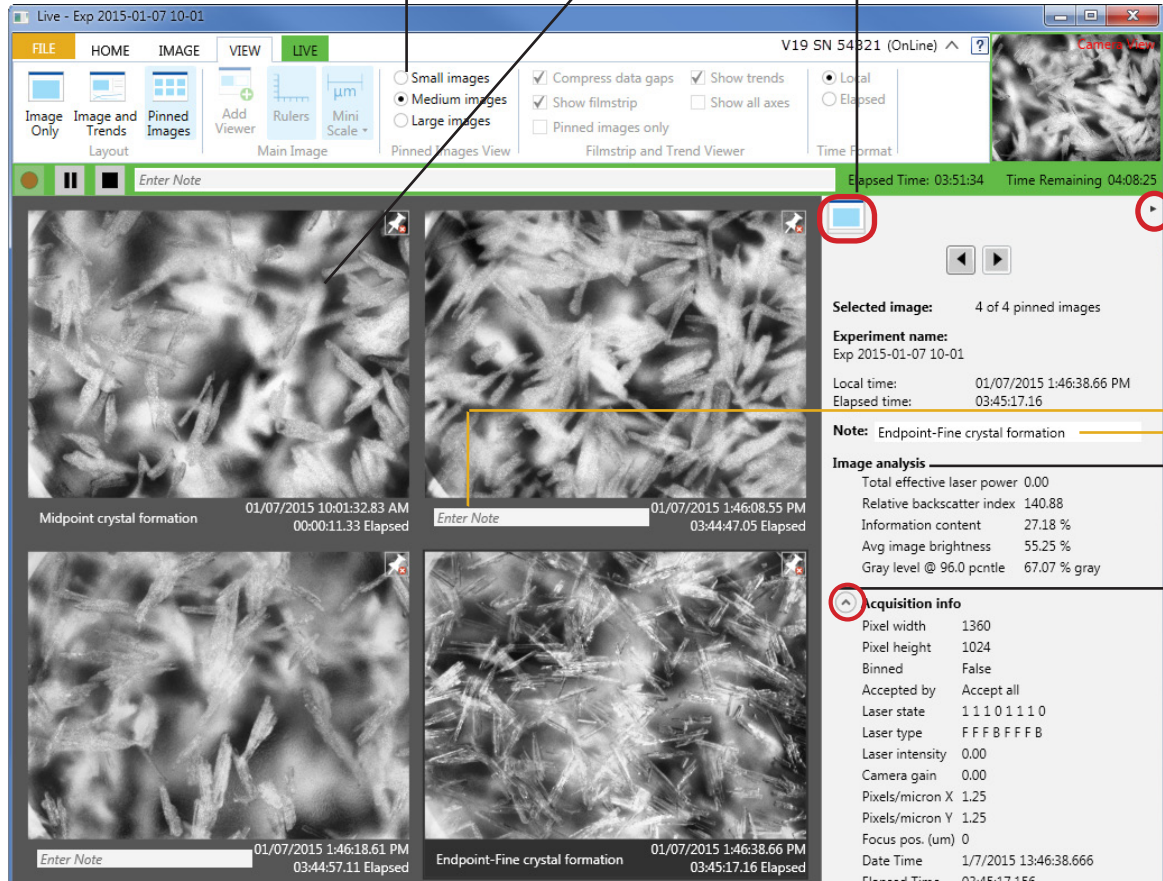
VIEW ribbon shown

Expand/collapse image properties including notes, image analysis, trend data, and acquisition information for a selected image.

Enter/edit notes (in either place).

Selected image: 4 of 4 pinned images

Experiment name:
Exp 2015-01-07 10-01

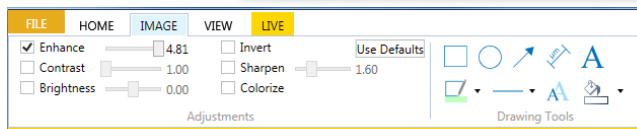Local time: 01/07/2015 1:46:38.66 PM
Elapsed time: 03:45:17.16

Note: Endpoint-Fine crystal formation

Image analysis
Total effective laser power	0.00
Relative backscatter index	140.88
Information content	27.18 %
Avg image brightness	55.25 %
Gray level @ 96.0 pcntle	67.07 % gray

Review image analysis data.

Acquisition info
Pixel width	1360
Pixel height	1024
Binned	False
Accepted by	Accept all
Laser state	1 1 1 0 1 1 1 0
Laser type	F F F B F F F B
Laser intensity	0.00
Camera gain	0.00
Pixels/micron X	1.25
Pixels/micron Y	1.25
Focus pos. (um)	0
Date Time	1/7/2015 13:46:38.666
Elapsed Time	03:45:17.156

Expand/collapse technical details about image acquisition.

For completed experiments, iC PVM includes automatic reporting and a choice of export options (slide show, video, sequence files). Access both options from the HOME ribbon and FILE menu.

Midpoint crystal formation
01/07/2015 10:01:32.83 AM
00:00:11.33 Elapsed

01/07/2015 1:46:08.55 PM
03:44:47.05 Elapsed

01/07/2015 1:46:18.61 PM
03:44:57.11 Elapsed

Endpoint-Fine crystal formation
01/07/2015 1:46:38.66 PM
03:45:17.16 Elapsed

IMAGE ribbon: Apply common image adjustments to enhance an image, and mark up images using drawing/measuring tools.

ANALYZE ribbon: In completed experiments, you can set image acceptance properties as an aid in filtering saved images.

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Subject to technical changes

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