

Application Note

DataAnalyst: Maximizing the Benefits of the Lasair® III and Lasair II

Why DataAnalyst?

DataAnalyst is Particle Measuring Systems® supporting software package for the Lasair® III and Lasair II particle counters. The software allows for secure downloading, archiving and reporting that is fully compliant with all secure data transfer requirements including 21 CFR part 11. While the software is not designed for real time data viewing or facility monitoring (Particle Measuring Systems' FacilityNet software would be the appropriate solution for this need), it offers a time plot feature that allows users to view trends. DataAnalyst is the perfect solution for customers who value the robust features of the Lasair III and II and want the same data viewing capability away from their instrument and also offers long term data storage and the ability to create various reports, including cleanroom certificates.

The program will support a multitude of installation configurations, from a single base station to integrated networks of multiple Lasair III or II particle counters connected to a LAN for distribution and reporting. From a single work station, you can:

- Download data from any Lasair III or Lasair II on your network
- View data trends
- Generate multiple reports
- Archive your data in a secure format

Data from instruments throughout a facility can be downloaded to the network for data viewing by multiple users. Alternatively, you can download the Lasair III data via the USB data download and upload to your workstation* or to the network.

Installing DataAnalyst

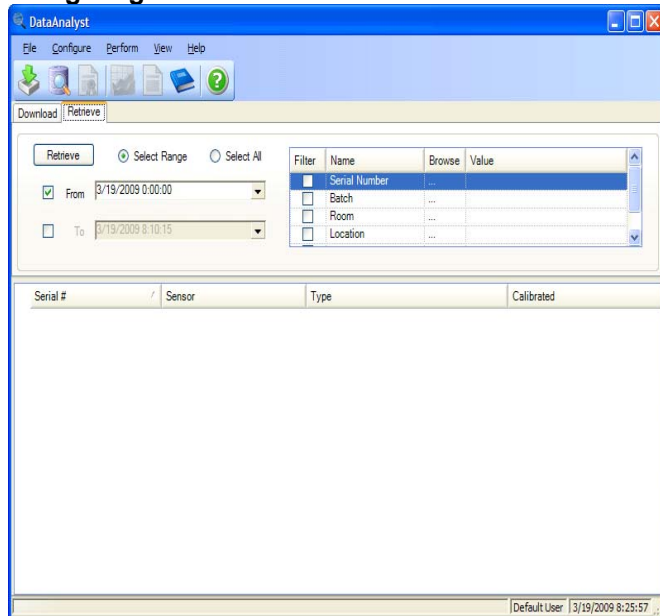
Each Lasair III and Lasair II Particle Counter is shipped with a 30 day trial version of DataAnalyst on CD. Particle Measuring System also offers this same trial version at <http://www.pmeasuring.com/particleCounter/software/DataAnalyst>. Please note that the file is large (over 100 MB) and will take some time to download. These trial versions are fully functional copies of the software. Running the CD or clicking the download link will walk you through the complete installation process. Upon software purchase, a USB key is supplied which allows for continued use of the software.

Using DataAnalyst with networked Lasair III or Lasair II

Your Lasair III or Lasair II can be connected to your network via the Ethernet connection on the back of the machine or via the optional wireless connection feature. Your network administrator must assign a static IP address which you can configure into your particle counter on the Network screen.

Open DataAnalyst via the icon on your desktop, and the following screen will appear:

Navigating the Main Toolbar



The main toolbar offers several options for the user. From configuring individual or group security settings to customizing the way your data is displayed, you can create the reports that you need using DataAnalyst. The most commonly used functions are available in the toolbar as well as via icons on the main menu.

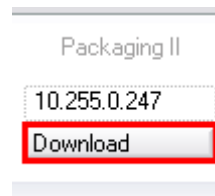
There are two options to gather data – data download (via networked Lasair particle counters or secure USB download) or data retrieval. The Download tab allows you to locate an instrument currently on the network and download data directly from the particle counter. The Retrieve tab allows you to access previously downloaded data (from USB or networked instruments) and create reports or certifications.

[\[BMY2\]](#)

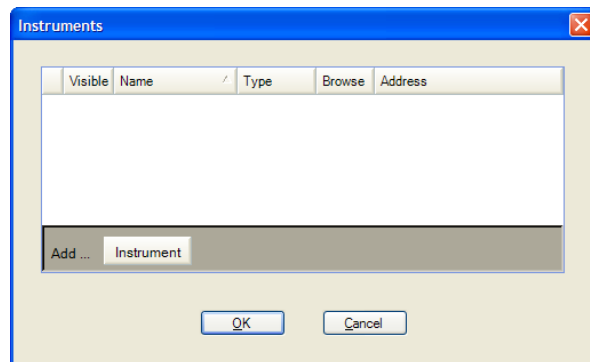
Downloading from Networked Lasair Aerosol Particle Counters

First, select the Download tab.

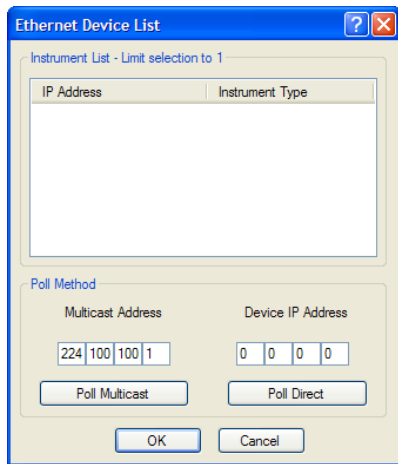
If you have already configured an instrument select the download button below the instrument you want to store the data for (as shown below).



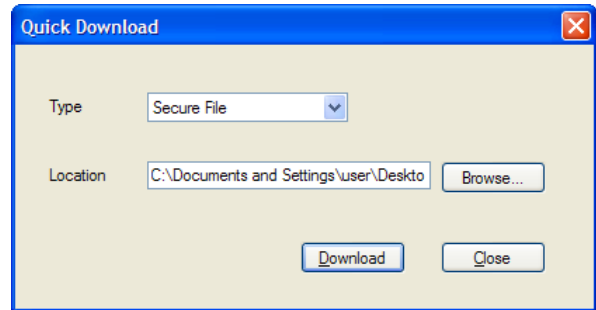
If this is the first time you are using Data Analyst, select Add→Instrument, you will see an Instruments box pop up that does not list any options. If this is the case, select Add→Instrument. If you have used the Download feature previously, any of the instruments you had added will be shown. If it is an instrument you have not added before, select Add→Instrument.



After selecting Add→Instrument a new row will appear, you can enter a name for the particle counter by clicking in the cell and select the type of download from the drop down menu. Select Ethernet. To find the instrument on the network, select Browse and the following window opens:



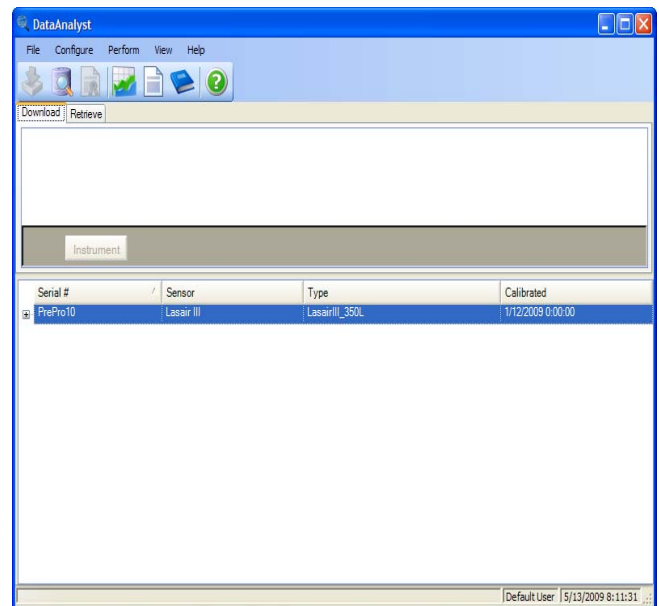
As shown in graphic above, select Quick Download from the Perform menu. Select Secure File and click the Browse button to find the file on your USB drive. The secure file will have the file extension “.sec”. Once you have located your file, click Download.



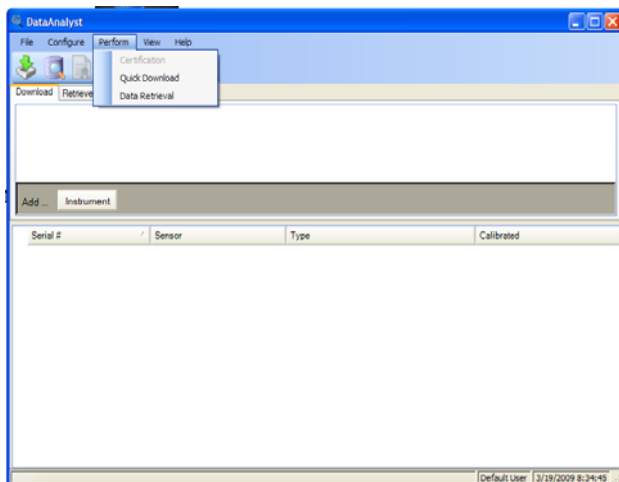
In order to locate your instrument, you can either enter the specific IP Address of your instrument (you can find this on the Network screen on the Lasair III or II), or, if you are looking to add multiple instruments, it may be more convenient to poll the Multicast address. The Multicast address can be found on the Network screen of the Lasair III or Lasair II particle counter or on your computer.

After your data has been downloaded, the instrument will show on the main DataAnalyst screen, shown below:

Once you have added the IP address and name of the instrument you can select OK to close the dialog. The newly configured instrument is now added to the toolbar and you can now download the data from the instrument by selecting the download button.



Using DataAnalyst with USB data download



By clicking on the plus sign (+) next to the Serial Number, the data from the instrument will be shown.

Serial #	Sensor	Type	Calibrated
PrePro10	Lasair III	LasairIII_350L	1/12/2009 0:00:00

Sample Date & Time	Location	Interval	Volume	Flow	Laser	Sample
1/28/2009 8:11:44		60 s	1.77 ft ³		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1/28/2009 8:12:44		60 s	1.77 ft ³		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2/11/2009 8:57:31		10 s	0.29 ft ³		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2/11/2009 8:57:41		10 s	0.29 ft ³		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2/11/2009 8:57:51		10 s	0.29 ft ³		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2/11/2009 8:58:01		10 s	0.29 ft ³		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2/11/2009 8:58:11		10 s	0.29 ft ³		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2/11/2009 8:58:21		10 s	0.29 ft ³		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2/11/2009 8:58:31		10 s	0.29 ft ³		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2/11/2009 8:58:41		10 s	0.29 ft ³		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2/11/2009 8:58:51		10 s	0.29 ft ³		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2/11/2009 8:59:01		10 s	0.29 ft ³		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

The data is now stored! Next, reports can be generated from this data.

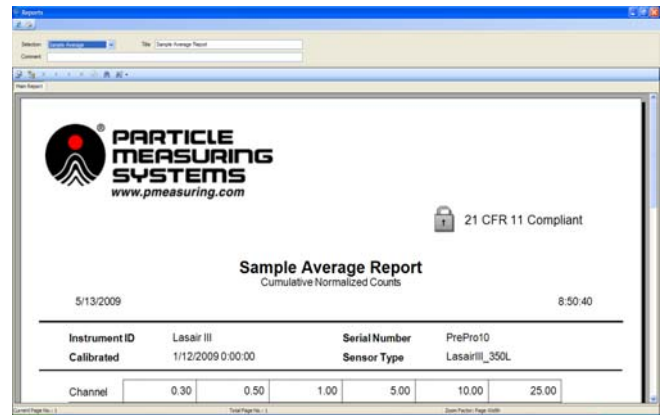
Generating Reports

The comprehensive reporting structure works with specific inputs from the particle counter and filters sampling data based upon location, date/time

or in the case of the Lasair III, product batch information. Reports can be generated to meet industry requirements and configured to include raw data, tabular data, statistical and graphical formats. The reporting tool can also be configured to give various report formats, including certification to ISO14644, FDA/EU GMP, or FS209 standards. Reports are generated using Crystal Reports, so the user can either customize these reports themselves or work with Particle Measuring Systems to have custom reports created.

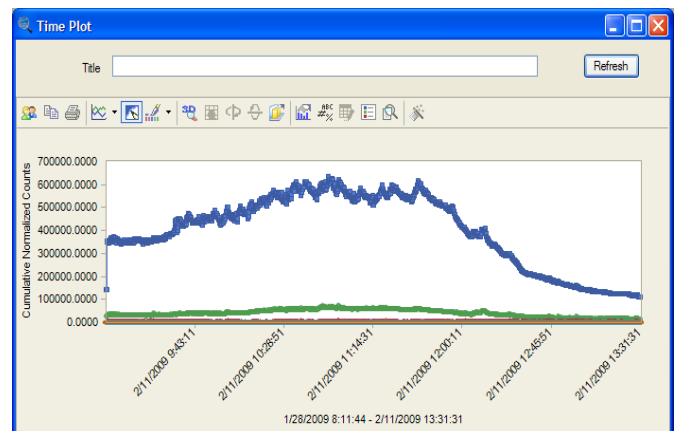
To create a report, select View→Reports [\[BMY3\]](#).

The default report, the Sample Average Report, will load automatically. Other reports can be chosen from the drop-down menu. Users will notice the 21 CFR 11 Compliant stamp on the top of each report indicating that the data storage is secure.



Generating Time Plots

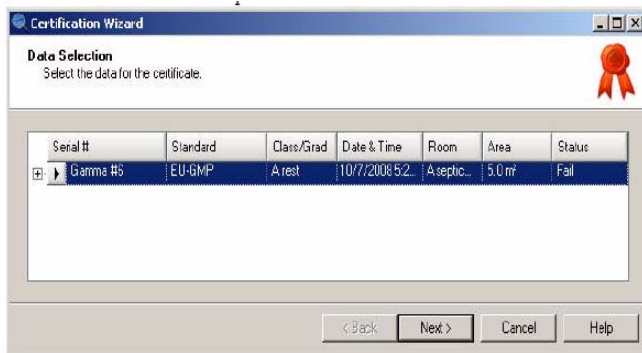
During different processing activities, the particle counts in a room can vary significantly. In order to minimize the potential for particulate contamination, it is necessary to understand the causes of particle generation. Time plots are an excellent way to gain further understanding of a process and can show periodic particle count changes to indicate how those events can be prevented in order to mitigate the risk of a particle event affecting product quality. DataAnalyst offers a tool for viewing the data from Lasair IIs and IIIs over time. From the main menu, select View→Time Plot and the following window will open:



The toolbar on this window offers many options, from altering the colors, the scale, and offering labeling capabilities to identify any excursions on your plot.

Generating Cleanroom Certificates

Perhaps the most valuable capability of DataAnalyst is the ability to create cleanroom certificates. From the main menu, select Perform→Certification. The window below will open:



Users will then be allowed to select any of the data created from utilizing the certification capability of the Lasair III or Lasair II. The certificate that is generated will be to the same standard as used when in Certification mode in the Lasair II or III Particle Counter. For example, if you selected the ISO standard when certifying your cleanroom with your Lasair Particle Counter, DataAnalyst will provide a

Author

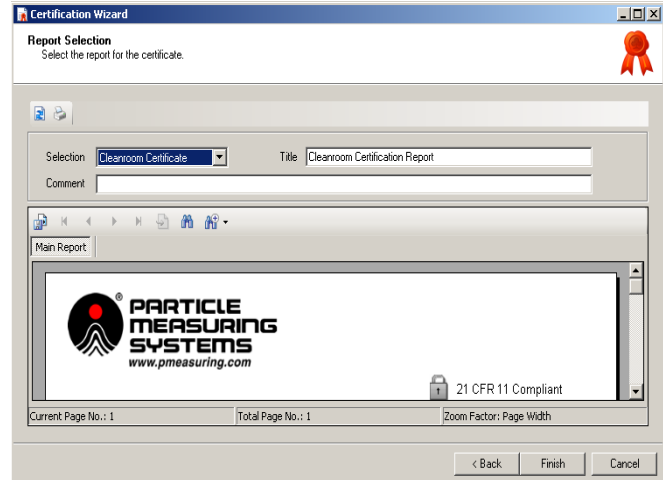
Rebecca Thompson

rthompson@pmeasuring.com

303.443.7100 x253

Rebecca is an Application Engineer at Particle Measuring Systems. She has a B.S. in Chemical Engineering from the University of Colorado.

certificate detailing the testing to that particular standard. Available standards that are included in the Lasair firmware are: ISO 14644-1, EC GMP Annex #1, and FS209E. After selecting the data to be used, the following report will display:



DataAnalyst is a robust program that provides extended functionality over the user friendly interface of the Lasair III and Lasair II to provide users with valuable reporting tools to further the capabilities of their microcontamination monitoring program.

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