

Airnet® OPC Set Up Guide

Airnet® OPC provides data via an OPC Server. The server supports OPC Data Access Custom Interface Standard 2.05a. Information on the OPC specifications and standards can be found at <http://www.opcfoundation.org/>. These specifications and standards are essential for understanding how to use OPC.

OPC (OLE for Process Control) is an industry standard created with the collaboration of a number of leading worldwide automation and hardware software suppliers working in cooperation with Microsoft. The organization that manages this standard is the OPC Foundation. The Foundation has over 420 members from around the world, including nearly all of the world's major providers of control systems, instrumentation, and process control systems.

Based on Microsoft's OLE (Object Linking and Embedding), COM (Component Object Model) and DCOM (Distributed Component Object Model) technologies, OPC consists of a standard set of interfaces, properties, and methods for use in

<http://www.opcfoundation.org/Downloads.aspx?CM=1&CN=KEY&CI=282&CU=2>

process-control and manufacturing-automation applications. The Active X/COM technologies define how individual software components can interact and share data. OPC provides a common interface for communicating with diverse process-control devices, regardless of the controlling software or devices in the process.

OPC Set Up

The OPC data access components need to be installed on any PC prior to connecting to the OPC Server. The data access components are available for download from the OPC Foundation. The Airnet OPC was tested with version 3.00 (3.00.1.02) of the data access components.

Adjustments to your DCOM settings will likely be required to your PC to allow it to read data via OPC. We recommend following the settings set forth in the OPC Foundations document: *Using OPC via DCOM with Microsoft Windows XP SP2*. This document is available to download from their website at:

Basic Set Up

The Airnet OPC Server can be configured from a HyperTerminal connection via an RS-232 connection or telnet via an ethernet connection.

Once connection to the instrument is made, a status command, **sta**, can be entered to see the current configuration. The current configuration will display the IP Address, sample interval, operation mode, etc. To access a list of available functions the help command, **?**, can be used.

Select OPC operation by setting the OPC mode selection to 1 in setup interface. The command **set opc 1** should be issued. The unit will respond with **OPC mode selected**, the unit will reboot, and the status message will have **Ethernet connection via OPC** listed at the end.

In addition to setting the operation mode, you will want to set the IP address, gateway, and netmask to suit your network's needs. If you do not know the appropriate configurations for your network, contact your IT administrator. Please see the *Airnet® II Particle Sensors 301, 501, 501A, 510, 510XR Operations Manual* for additional instructions.

The particle counter will always be sampling. Data will be made available at the end of each defined sample interval, which can be set via a telnet or serial connection to the instrument.



OPC Server

The Airnet OPC Server provides data that can be accessed by OPC Clients. The Airnet OPC Server was created using tools provided by Wind River.

Connecting to the Server

Most client applications allow the user to browse for the server based on the IP address. If your client requires the OPC server to be “registered” in your local computer’s registry settings, go to the Particle Measuring Systems Airnet II website and download the registry file to include the correct settings needed:

<http://www.pmeasuring.com/particleCounter/air/sensor/AirnetII>

then download the link Airnet® OPC Users CD.

Adding registry settings to your PC allows it to correctly poll for the Airnet OPC server.

The Airnet OPC identifiers are:

OPC Server Class ID: { 0x813f2fd1, 0xd2a1, 0x4caf, {0x97, 0x45, 0x02, 0x32, 0x30, 0x56, 0x00, 0x82} }

OPC Server Program ID:

ParticleMeasuringSystems.Airnet.1 OPC
Server Description: Particle Measuring
Systems Airnet OPC Server

Airnet OPC remains registered after it shuts down. However, clients can only connect to the Airnet OPC server when it is already running.

Server Browsing

Airnet OPC supports IOPCServerList, which is a 2.0 interface for browsing the registered OPC servers on a computer. Some clients cannot use this interface. In that case, the 1.0 method of browsing, which involves searching the registry for OPC entries, should be used.

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