Application Note 112

WPC OPC Software Overview

Introduction

This document describes how to setup and configure the WPC OPC Software. WPC Explorer supports 1900 WPC Particle Counters, IM-420 two channel current loop inputs, and LanNode 16 channel current loop input devices.

System Requirements

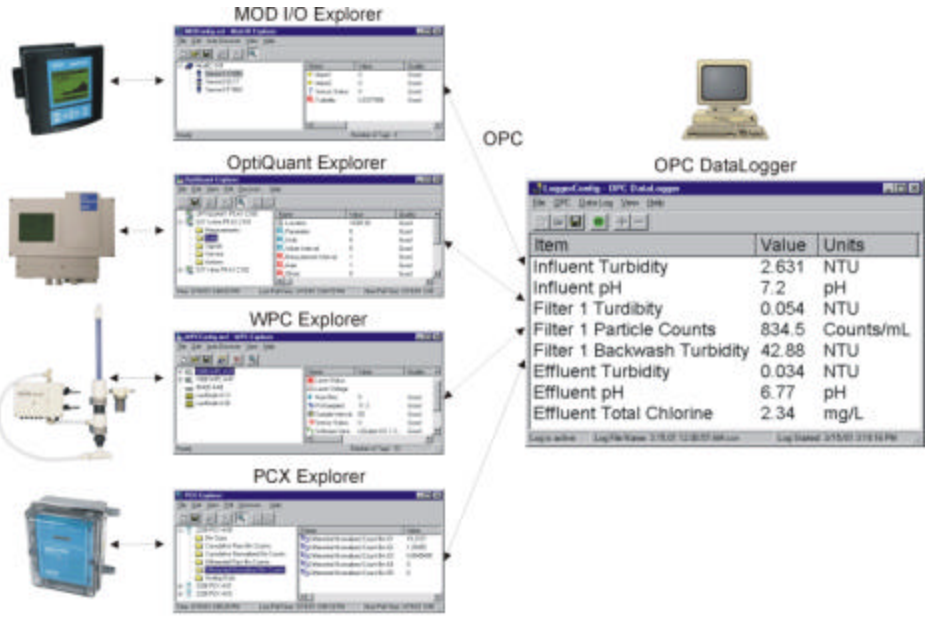
* Pentium 233 mHz or faster processor with 1 free serial (RS-232) port
* RS-232 to RS-458 Converter Kit (Cat. No. 57378-00)

Overview

OLE for **P**rocess **C**ontrol (OPC) is a communication standard developed by the OPC Foundation®. OPC uses Microsoft COM technology to send Process Control messages between programs. This is the same technology used to link Microsoft Office® products such as Word™ and Excel™.

Fundamentally, OPC is comprised of two parts, servers and clients. Servers translate data from hardware devices and convert the data to a standard format called Tags. Each tag represents a piece of data such as a sensor reading, an alarm state, or a status value. Clients connect to servers and use the OPC tags to perform tasks Process Control tasks or log data to disk.

The WPC Explorer, for example, is an OPC Server. It communicates with 1900 WPC particle counters, IM-420 modules, and Lan Nodes, and translates the data into OPC tags. The Hach OPC DataLogger is an OPC client. It communicates with any OPC server, and logs data to simple text files. As the figure below demonstrates, multiple OPC servers can run on a single machine – at the same time – providing a unified system.



Installing the WPC OPC Software

1. Insert the WPC OPC Software CD into the CD drive.

2. Click on the Windows Start button, from the pop-pup menu, select "Run..."

3. Type "x:\setup" where "x" is the CD drive letter.

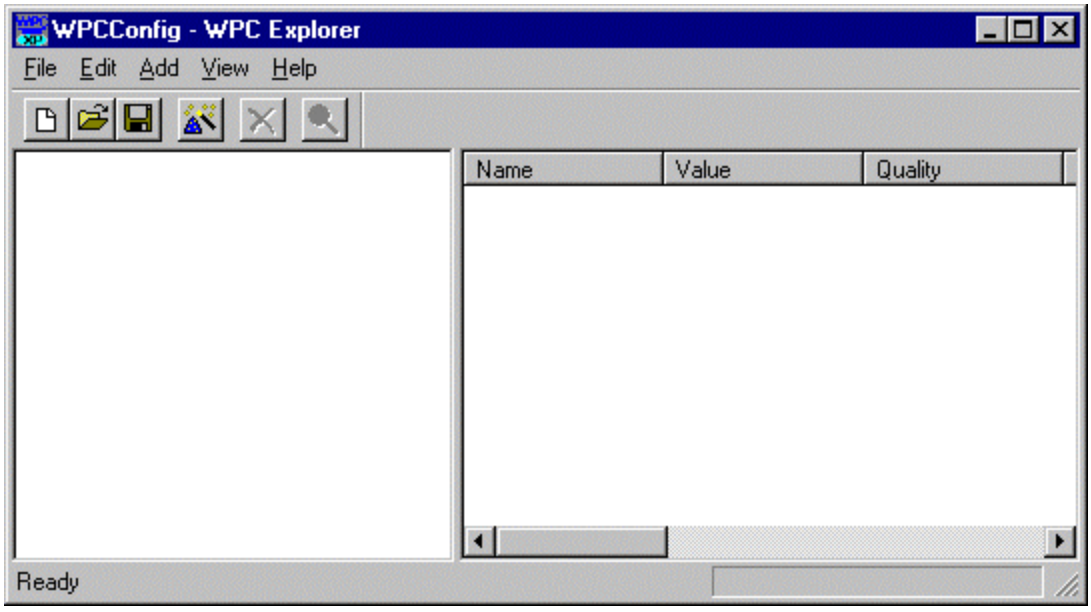
The installation program will install both WPC Explorer (the OPC server) and OPC DataLogger (a datalogging utility).

Running the WPC Explorer

Start the WPC Explorer by clicking Start, Programs, Hach, WPC Explorer. Ensure each 1900 WPC, IM-420, and Lan Node is connected to the RS-485 network, and the RS-485 converter / surge protector is connected to a COM port on the personal computer.

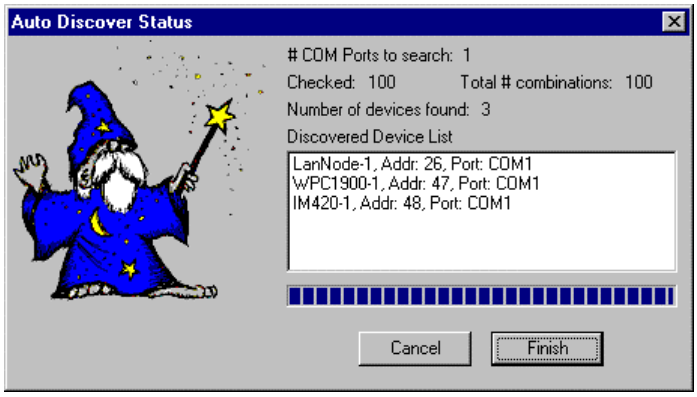
Discovering Devices

Click the magic wand toolbar button  to begin discovering devices on the network.

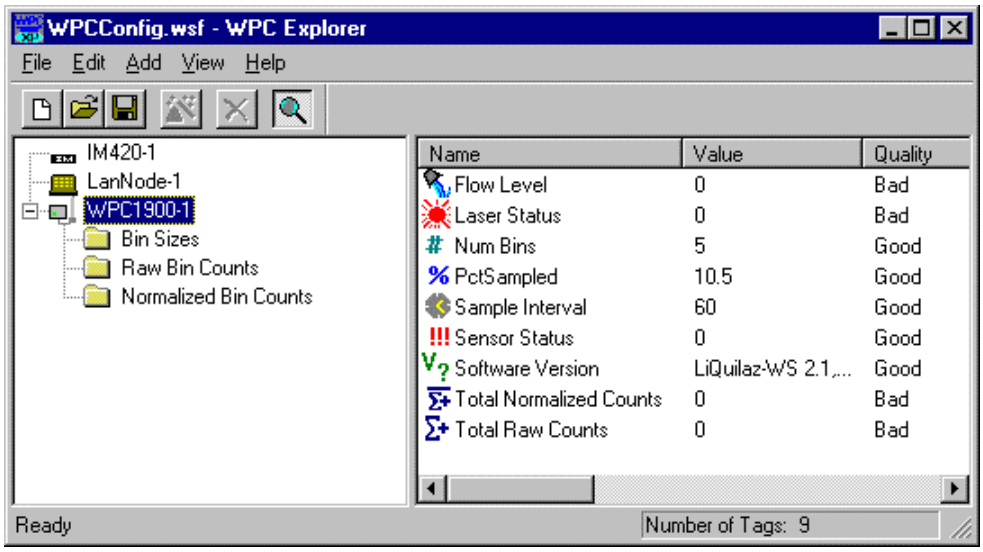


Click Next

Wait until the progress bar moves across the screen. Each device on the network will show up in the discovered devices list. Click Finish.



WPC Explorer supports 1900 WPC Particle Counters, IM-420 two channel current loop inputs, and LanNode 16 channel current loop input devices. Each device shows up on the left side of the WPC Explorer.



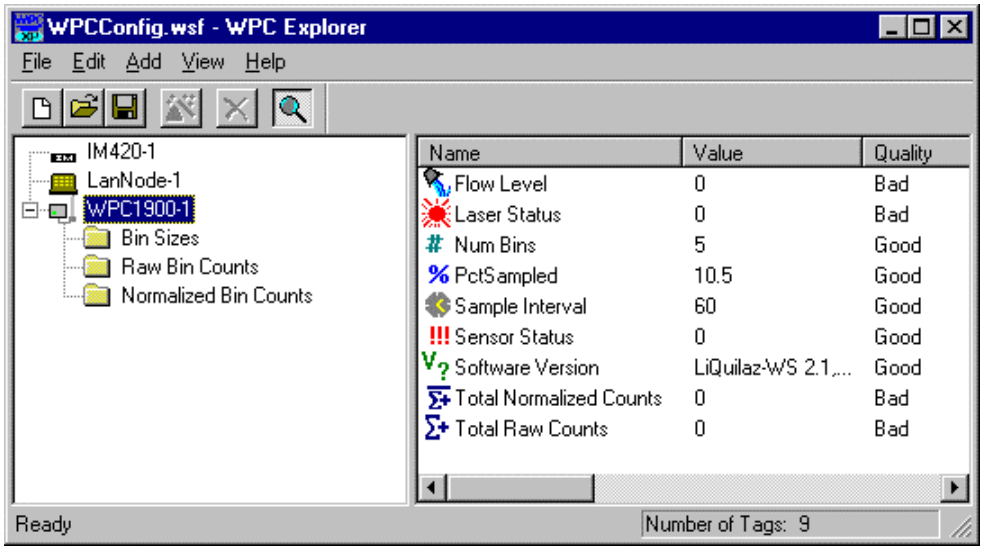
Saving the Configuration

Click File, Save to save the WPC Explorer configuration file. This eliminates the need to start the wizard each time the WPC Explorer is started.

Monitoring Devices

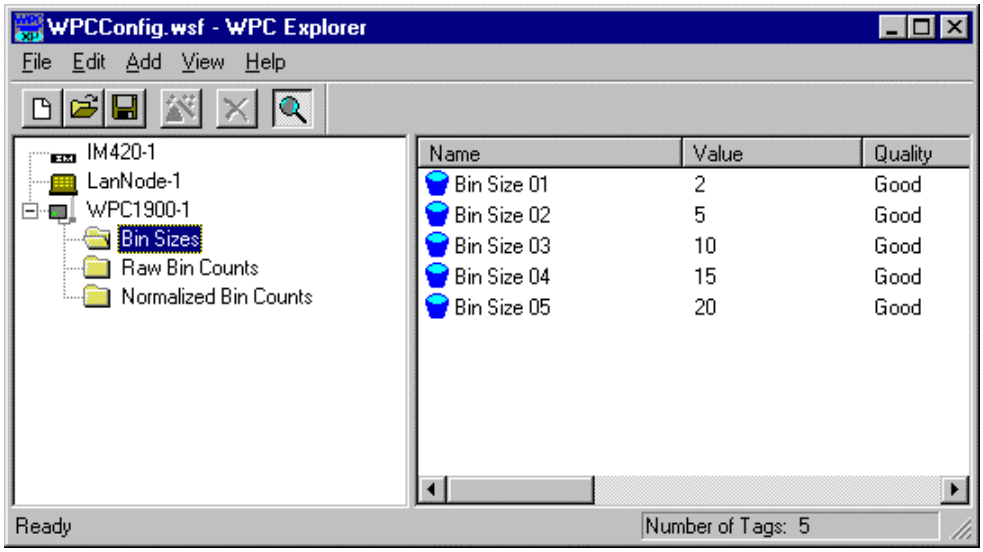
Click the spyglass toolbar button  to begin polling each device.

To view OPC tag values, double click a device such as WPC1900-1. Note that both Raw and Normalized Counts are available as OPC Tags. Normalized counts take into account the percent sampled and flow rate factors and are typically used instead of raw counts.

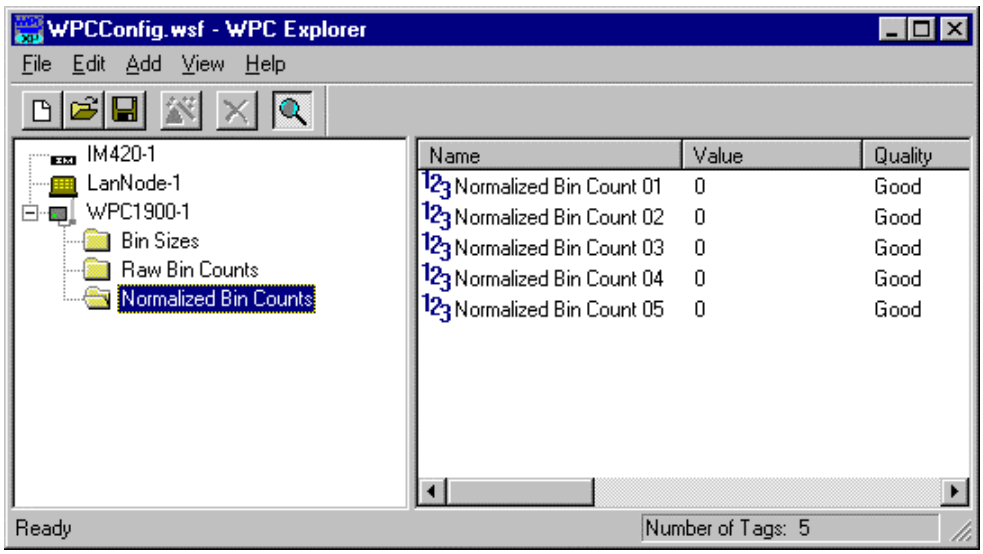


Note: OPC Servers do NOT Log Data, they make data available to other programs using the OPC protocol! The spyglass icon on the tool bar allows the OPC server to monitor data only

Double click on Bin Sizes, Raw Bin Counts, or Normalized Bin Counts to change bin sizes, or to view individual bins. From the factory, the bins are set as follows:

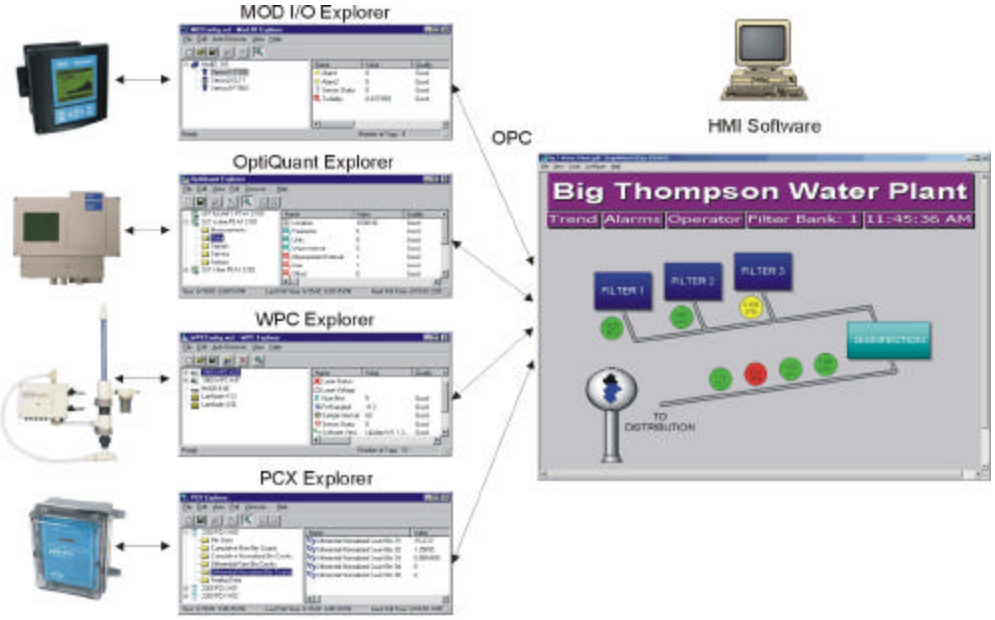


The Normalized Bin Counts show up as follows.



Configuring an OPC Client

A variety of Application Notes are available to help with configuration of OPC client programs. These include Hach's OPC DataLogger (Application Note 115) and common SCADA / HMI packages. Application Notes can be downloaded from http://www.AquaTrend.com.



For more information, visit our AquaTrend Technical Information site at:

http://www.AquaTrend.com

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HACH COMPANY
WORLD HEADQUARTERS
Telephone: (970) 669-3050
FAX: (970) 669-2932