

Using National Instruments Lookout with Hach's OPC Servers

Introduction

This document details how to connect the Hach's Mod-IO Explorer to National Instruments Lookout OPC Client Driver. Lookout uses the OPC Client Driver to read from and write to any OPC server.

Install and Configure the Mod-IO Explorer

Refer to the Hach Mod-IO manual #57100-18 for details on installing and configuring the Mod-IO and Mod-IO Explorer software.

Creating an OPC Client

To create an OPC Client select Object, Create from the Lookout menu bar and in the Select Object class dialog, select Drivers, OPCClient. Then Click OK.

 ✓ Categorize Calculation Control Display Drivers Drivers (Applicom) Logging Monitoring Networking Statistical Process Control 	Select object class:	x
File Name: Date Modified: File Size: CBX Version:	Categorize Calculation Control Display Drivers Drivers (Applicom) Logging Monitoring Networking Statistical Process Control Timers	File Name: Date Modified: File Size: CBX Version: OK Cancel

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Click Ok in the Select Location for New Object Dialog.

Lookout - [Process1]			-101×
Elle Edit Insert Object Allange Eh	ange Ophone Alams Window Help		
Control Panel		_ O ×	
	Select Location for new object:		
	Manu Ersten		
	In soft object into:		
	E asampson3		
	0K Cancel		
AlamaVind Mile X			
		1 alor	ms
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In the Create OPC Client dialog, select Hach.ModIO.1 from the Server Name drop down list box. Enter 3000 (3 seconds) for the Update Rate and click OK.

Create OPC Client	×	
Name: 0PCclient1		
CPC Server Settings		
Server Name: Hach.ModIO.1	_	
C In-Process Server		
C Remote Server	Browse	
Browsing © Disabled © Elat © Hierarchical Errore Befresh aftr	1/0 r Write	
OPC Group Settings		
Update Rate: 3000 milliseconds		
Deadband: 0 percent		
Poll Device =	(optional)	
Default Access Path:	(optional)	
Communication alarm priority: 8 OK Cancel	Help	
4		4.5
The Med IO explorer abould automatically fire up and its	icon 🗮 MIOConfig.osf chould be visit	hla in tha

The Mod-IO explorer should automatically fire up and its icon should be visible in the Start menu bar located at the bottom of your screen.

Editing the Database

By placing the tag in the Lookout database, one can view historical trends.

Select Edit,Object Database from the Lookout menu bar and OPCclient1 from the selection tree under your computer name (asampson3 for this example). Then click OK.

Edit object database:	×
Current location: 🍞 Universe	<u>.</u>
e asampson3 Process1 Process1 Panel1 Network	
OK Cancel	
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Double click on ModIO1 folder in the Native Members list box of the OPCclient database dialog.

OPCclient1 database		×
Configured points:	Native members: Activate CommFail DataError PollDevice Update	
Alias (optional):	Member:	
Save Delete	Select object	Quit <u>H</u> elp

Double click on the sensor folder of your choice in the Native Members list box (Sensor1-1720D for this example).

OPCclient1 database	×
Configured points:	Native members: Sensor1-1720D Sensor2-1720D Sensor3-1720D Sensor3-1720D Sensor4-1720D Sensor5-1720D
Alias (optional):	Member:
Save Delete	Select <u>o</u> bject Import Export Quit <u>H</u> elp

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Select Turbidity from the Native members list and numeric in the undefined read/write drop down list box.

Configured points:	Native members:	Alarm conditions
	C Alarm1 Alarm2 Status Turbidity	Area: Condition Level Priority HiHi: Hi:
ndefined read/write	numeric	
Alias (optional):	Member:	
	ModI01.'Sensor1-1720D'.Tu	irbi Deadband:
Description		- Eilters (engineering units) -
		Deviation:
Prefix:	Suffix:	Forced:
Scaling	Maximum Lifespan	cal database

Enter an Alias (Sensor1Turbidity for this example). Select the Log to historical database check box and enter 0.001 (resolution of the 1720D turbidimeter) in the Deviation text box. If an analog value surpasses or equals the Deviation setting, Lookout saves a new value to disk in the database. You can reduce the amount of disk space required for the database by increasing the Deviation value. *See your Lookout documentation for additional details on the database parameters.* Next click the Save button.

OPCclient1 database		×
Configured points:	Native members:	Alarm conditions
	C Alarm1 Alarm2 Status Turbidity	Area: Condition Level Priority HiHi: Hi:
undefined read/write	numeric	
Alias (optional):	Member:	
Sensor1 Turbidity	ModI01.'Sensor1-1720D'.Tu	rbi Deadband:
Description Prefix:	Suffix:	Eilters (engineering units) Deviation: 0.001 Forced:
Scaling Minimum Raw units: Eng. units:	Maximum Max	cal database Database Computer: asampson3 Path: e:\lookout4\database
Save Delete	Select <u>o</u> bject	Export Quit <u>H</u> elp

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Click Ok on the Warning dialog.

Warning	×
⚠	This may cause an existing data member to become unusable until this alias is removed. Continue?
	Cancel
10	

Click the Quit button on the OPCclient1 database dialog.

OPCclient1 database		×
Configured points:	Native members:	Alarm conditions
Sensor1 Turbidity	Alarm1 Alarm2 Status Turbidity	Area:
undefined read/write	numeric	
Alias (optional):	Member:	
Sensor1Turbidity	ModI01.'Sensor1-1720D'.Turbi	Deadband:
Description Prefix:	Suffix:	Filters (engineering units) Deviation: 0.001 Forced:
Scaling Minimum Raw units: Eng. units:	Maximum C Perpetual Safety days	tabase Database Computer: asampson3 Path: e:\lookout4\database
New database entry saved. Update Delete S	elect <u>o</u> bject	ort Quit <u>H</u> elp

Refer to your Lookout documentation for details on how to display a historical trend chart.

Displaying a real time reading on a panel

A gage can be created to display a reading on a panel. To create a gage object, select Object, Create from the Lookout menu bar. Select Diplay, Gauge in the Select object class dialog and click OK.





Click Ok on the Select Location for new object dialog.

Tookout - [Process1]	<u>_</u> _×
Control Panel	
Select Location for new object:	
Insert object into: New Folder	
⊡-È, Process1	
OK Cancel	
	1 alarms 3

Right click in the Signal = text box.



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Select Sensor1-1720D in the left hand list box and Turbidity in the Right hand list box of the Expression Editor dialog. Next click the Paste button to insert the path "OPCclient1.ModIO1.'Sensor1-1720D'.Turbidity" in the top yellow text box of the Expression Editor. Then click OK.



Click Ok to close the New Gauge dialog.



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Select Digital for the Display Style in the Display Gauge dialog, 0.000 for the Numeric format, and click OK.

Display Gauge		×
Background color	Background style C Plate C Inset C Rectangle C Transparent	Frame style C Black C White C None
Minimum 0.000 Maximum 100.000 Numeric format	Ift Centered C Right	Display Style Digital Bar (up) Bar (down) Bar (right) Bar (left)
Font 10 pt Arial Bold	OK	Cancel

The real time reading is now displayed on the Panel and the process can be saved by selecting File,Save from the Lookout menu bar.

