

# **OPC Binding Module 1.0 - Administrator's Guide**

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IndigoVision

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# 1 Overview

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The OPC Binding Module allows events from an OPC Server to be integrated into the IndigoVision IP Video Solution. This document explains how to install and configure the OPC Binding Module.

## 1.1 Compatibility

### 1.1.1 OPC

The OPC Binding Module is compatible with OPC Servers that support OPC Data Access specifications 2.x or 3.0.

### 1.1.2 Tour Andover Controls (TAC)

Because the OPC Binding Module supports OPC Data Access, TAC systems with OPC Servers are also supported. Installing and configuring the OPC Binding Module will enable integration with the TAC system.

### 1.1.3 USB License Dongle

The OPC Binding Module is a licensed product. A correctly licensed USB dongle should be present on the platform running the OPC Binding Module.

**NOTE:** The OPC Binding Module should not be run on the same server as any other dongle-licensed IndigoVision software.

The OPC Binding Module is a licensed product. A correctly licensed USB dongle should be present on the platform running the OPC Binding Module.

## 1.2 References

- 1 Using OPC via DCOM with XP SP2  
<http://www.opcfoundation.org/DownloadFile.aspx?CM=3&RI=326&CU=2>.

## 2 Installation

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The installation process for the OPC Binding Module is as follows:

1. Insert the product CD.
2. Run the **setup.exe** file and follow the on-screen instructions. This installs the OPC Binding Module, by default, to: **C:\Program Files\IndigoVision\Integration\OPC**
3. Specify at least the IP address of the Alarm Server (NVR) and the name of the OPC Server (ProgID) in the system configuration file when it appears. Close the file when finished.
4. Add events (OPC ItemIDs) to the events configuration file (events.conf) when it appears. Close the file when finished.
5. Insert the USB dongle license key.
6. Start the IndigoVision OPC Binding module service from the Service Control Manager (Services) in the Administrative Tools in Control Panel.

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## 3 Configuration

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The Binding Module is configured through two plain text files that can be accessed from the Program Group shortcuts: the system configuration file and the events configuration file.

### 3.1 System Configuration (system.conf)

The system configuration file provides the Binding Module with system information such as the name and location of the OPC Server and the IP Address of the IndigoVision Alarm Server (NVR). To access this file (called 'system.conf'), use the Windows Start menu:

*All Programs | IndigoVision | OPC Binding Module | Edit System Configuration File.*

The various sections and properties of the system configuration file are explained below.

#### [AlarmServer]

**IP** – (mandatory) The IP address of the IndigoVision Alarm Server (NVR) to which events/alarms will be forwarded.

#### [OPCServer]

**Host** – the OPC Server host machine name or IP address. Leave this property undefined if the Binding Module is running on the same machine as the OPC Server.

**Name** - (mandatory) The Name (ProgID) of the OPC Server. If the OPC Server is hosted on a remote machine then specify the Name as ProgID/CLSID (the CLSID should be contained in braces {}). For example, for the TAC OPC server the following should be used:

```
Name=AndoverControls.ControllerOPCServer.1/{C5A8EC31-9E9B-11D3-8087-00104BD11E80}
```

**RetriesOnServerShutdown** – When an OPC server sends a shutdown request to the OPC Binding Module, the Binding Module can optionally retry connecting to the OPC server for the number of times specified by this property.

**RetryDelayOnServerShutdown** – If the RetriesOnServerShutdown property is set, the OPC Binding Module will delay for the period (in seconds) specified by RetryDelayOnServerShutdown before trying to re-establish a connection with the OPC server.

#### [SystemEvents]

**BMShutdownEventNumber** –If BMShutdownEventNumber is defined, an event with this number will be sent to the NVR/Alarm Server whenever the OPC Binding Module stops, either manually, at system shutdown or when the USB license dongle expires/is removed. An alarm source with this number must also be

configured in Control Center (on an external system with the IP Address of the OPC Binding Module machine) in order to notify an operator.

**OPCServerOfflineEventNumber** – If the OPCServerOffline event number property is defined, an event with this number will be sent to the NVR/Alarm Server whenever the OPC Server goes offline.

**OPCServerOnlineEventNumber** – If the OPCServerOnline event number property is defined, an event with this number will be sent to the NVR/Alarm Server whenever the OPC Server comes back online.

### [EventTable]

**ShutdownOnInvalidItemID** – If ShutdownOnInvalidItemID is set to true and if any ItemIDs are not recognised by the OPC server, the OPC Binding Module will shutdown. If ShutdownOnInvalidItemID is set to false (or is not defined) and if any ItemIDs are not recognised by the OPC server, the OPC Binding Module will log them but not shutdown.

### [Log]

The OPC Binding Module logs information about its state to the following directory by default:

*C:\Documents and Settings\All Users\Application Data\IndigoVision\Integration\OPC\Log*

The log files take no more than 1MB of space.

**Dir** – controls which directory the Binding Module will log information to.

**opcclient** – controls the amount of information written to the OPC Binding Module log. Set this property to 'err' to only log error information, or to 'debug' to log all available information.

## 3.2 Events Configuration (events.conf)

The events configuration file is a plain-text comma-separated value file that controls which ItemIDs from the OPC Server should be used to trigger events in the IndigoVision Alarm Server (NVR). It maps ItemIDs to user-defined external system input numbers in Control Center, and can also be used to specify the alarm source description text when used with Control Center's ImportAlarmSources tool. To access events configuration file, use the Windows Start menu:

*All Programs | IndigoVision | OPC Binding Module | Edit Event Configuration File.*

### Format

- Only one mapping per line.
- Each alarm mapping must start with the Control Center external system input number (between 1 and 32767) followed by a comma and then the OPC ItemID e.g.  
*100, Warehouse.Door 1.Door Forced*
- Alarm source description text may be specified in a third field for the ImportAlarmSources tool e.g.  
*100, Warehouse.Door 1.Door Forced, Door forced: inward goods*
- Any text following a '#' is treated as a comment and ignored by the Binding Module.

- Each OPC ItemID must appear only once in the file.
- Duplicate event numbers are allowed.

### **3.3 DCOM Configuration**

See reference [1] for the OPC Foundation guide to configuring DCOM.

## 4 Troubleshooting

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If alarms are not appearing in Control Center then the following end-to-end check for a single alarm may help to determine the source of the problem. First enable debug level logging by setting `opclient=debug` in the [Log] section of the system configuration file, then restart the 'IndigoVision OPC Binding Module' service.

1. Verify that the OPC Binding Module is receiving ItemID notifications.
  - 1.1. Open the OPC Binding Module log file (see section 3.1 for its location) and check for messages stating that the alarm has been received e.g.

```
2007-12-10 10:13:07 [opclient]
Item(CX01/Numeric/test1_3/Alarm1): 1
```
2. Verify that the OPC Binding Module is sending events to the nominated Alarm Server (NVR).
  - 2.1. Open the OPC Binding Module log file (see section 3.1 for its location) and check for messages stating that the alarm has been sent e.g.

```
2007-12-10 10:13:07 [opcclient] Event number 104 sent to alarm
server.
```
3. Verify that the corresponding alarm sources have been created and enabled in Control Center. In the Site Setup mode select the relevant Site then:
  - 3.1. Click on the External Systems tab. Ensure that an External System with the IP address of the PC running the OPC Binding Module has been created.
  - 3.2. Click on the Alarm Sources tab. Ensure that an Alarm Source has been created from an External Input with the event number from 2.1 above. Also ensure that the external system is that specified in 3.1 above. The Alarm Source must be enabled.
  - 3.3. Ensure that the Alarm Source has been configured to use the same NVR as the OPC Binding Module. Right-click on the Alarm Source, select *Properties* then on the *General* tab ensure that the Primary NVR is the same as that configured in the system.conf file for the OPC Binding Module.