

# Hirsch Velocity Server

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A Whole World of Integration



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## 1 Document Versions

Version	Date	Name	Change
<b>1.0</b>	2016-01-13	RA	Document Created.
<b>1.1</b>	2016-06-11	RA	Updated to include new property
<b>1.2</b>	2017-01-17	RA	Updated to include new Input state persistence management

## 2 Referenced Documents

Document	Version	Description
<b>Driver Project Requirements (DDK-PR)</b>	1.0	The Hirsch Velocity Server driver must conform to all the requirements detailed in this document.
<b>Driver Connection and Online States Requirements (DDK-DC)</b>	1.0	The Hirsch Velocity Server driver must conform to all requirements in this document detailed in the section: <a href="#">Device Connection and Online States</a>

### 3 Manufacturer

**Name** Hirsch



**Website** <http://www.identiv.com>

**Description** Identiv is a global security technology company that establishes trust in the connected world, including premises, information, and everyday items.

## 4 IPSecurityCenter Versions

The driver must be compatible with the following IPSecurityCenter versions:

IPSecurityCenter Version	Supported
4.9	<input checked="" type="checkbox"/>
5.0	<input checked="" type="checkbox"/>



## 5 Operating Systems

### 5.1 Client Side Functionality

Operating Systems	Supported
Windows 7 64 bit	<input checked="" type="checkbox"/>

### 5.2 Server Side Functionality

Operating Systems	Supported
Windows Server 2008 R2	<input checked="" type="checkbox"/>
Windows Server 2012	<input checked="" type="checkbox"/>

## 6 Models / Firmware Versions

Model	Versions	SDK
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## 7 Hardware Configurations



## 8 Driver Package

The driver package is named:

CNL.IPSecurityCenter.Driver.Hirsch.Velocity.Version.3.0.0.{Build Number}.ipsedriver

## 9 Driver Features

### 9.1 Velocity Server

#### 9.1.1 Device Connection and Online States

The full requirements for these features can be found in the [Device Connection and Online States Requirements](#)

Feature	
<b>DC1.0 Device Online Status</b>	None
<b>DC2.0 Authentication</b>	None

### **9.1.2 Video**

This device does not support video.

### 9.1.3 Properties

General requirements for properties can be found in [Driver Project Requirements](#).

Name	Type	Description	Default Value & Ranges
<b>Check Online Status</b>	bool	If set to true, the driver will check the online state of the Hirsch Velocity device every 10 seconds.	Default: true Min: Max:
<b>Workstation</b>	string	The workstation on which the Hirsch Velocity SDK is located.	Default: Min: Max:
<b>Listener Port</b>	int	The port on which the Hirsch Velocity SDK broadcasts events.	Default: 10025 Min: Max:
<b>Door Patch Enabled</b>	bool	Use this method to activate CNLs custom Hirsch Velocity patch.	Default: false Min: Max:
<b>Use Velocity Address as identifier</b>	bool	Use Address As Identifier	Default: Min: Max:
<b>Label Override</b>	bool	If true, IPSC will not allow the user to change the label of this device, as the device itself may change the label at any time due to changes in the subsystem.	Default: False

**Note:** the *Use Velocity Address as identifier* property should be set to True for all new implementations of this driver. It should be left as the default (False) if upgrading a previous version of the driver to this one.

### 9.1.4 Methods

General requirements for methods can be found in [Driver Project Requirements](#).

#### 9.1.4.1 Acknowledge Alarm

This method is used to acknowledge alarms.

This method is exposed as an operator action.

Returns bool.

## Performance

The method must complete within 2 seconds.

## Parameters

Name	Type	Description	Default Value and Ranges
<b>Identifier</b>	int	The alarm identifier	Default: Min: Max:

### 9.1.4.2 *Clear Alarm*

This method is used to clear alarms.

This method is exposed as an operator action.

Returns bool.

## Performance

The method must complete within 2 seconds.

## Parameters

Name	Type	Description	Default Value and Ranges
<b>Identifier</b>	int	The alarm identifier	Default: Min: Max:

### 9.1.4.3 *AddAndExecuteAccessCommandSet*

This method is used to add and execute a new command set. Used when the DoorPatchEnabled property on the main object is set to true.

Returns void.

## Performance

The method must complete within 2 seconds.

## Parameters

Name	Type	Description	Default Value and Ranges
<b>Controller Name</b>	string	The name of the Hirsch Velocity controller.	Default: Min: Max:



<b>Command Set Name</b>	string	The name you wish to give the newly created or updated command set.	Default: Min: Max:
<b>DigiTRAC Command</b>	string	The DigiTRAC Command to pass to the stored procedure.	Default: Min: Max:
<b>Door Index</b>	int	The index of the Door you wish to control with your command set.	Default: Min: Max:

#### 9.1.4.4 *Reset State*

Reset SQL Event Bus State

Returns void.

#### Performance

The method must complete within 2 seconds.

#### Parameters

Name	Type	Description	Default Value and Ranges
<b>Base Date</b>	DateTime	Base Date for reset	Default: Min: Max:

### 9.1.5 Events

General requirements for events can be found in [Driver Project Requirements](#).

#### 9.1.5.1 *Alarm Event*

This event is fired when an alarm is received from the Hirsch Velocity

#### Performance

The driver must be able to handle 4000 events per hour.

#### Event Properties

Name	Type	Description
<b>Address</b>	string	The address the velocity alarm originated from.
<b>Alarm Level Priority</b>	int	The priority of the alarm.

<b>Controller Date Time</b>	string	The date time of the Velocity controller.
<b>Controller ID</b>	int	The id of the Velocity controller.
<b>Description</b>	string	The description of the alarm event.
<b>Domain ID</b>	int	The domain the alarm event occurred on.
<b>Destination Address</b>	int	The destination address of the alarm.
<b>Event ID</b>	int	The event id of the alarm type.
<b>Event Type</b>	string	The type of the alarm event.
<b>Port Address</b>	int	The port address of the alarm event.
<b>Report as Alarm</b>	string	Specifies if the alarm should be highlighted.
<b>Server Date Time</b>	string	The server date time.
<b>Server ID</b>	int	The server id.
<b>Transaction Type</b>	int	The alarm transaction type.
<b>UID 1</b>	int	Unique ID 1
<b>UID 2</b>	int	Unique ID 2
<b>XAddress</b>	int	The XAddress of the velocity SDK.
<b>Global Message</b>	int	The global message associated with the alarm.
<b>Identifier</b>	int	The identity of the alarm.
<b>P1</b>	int	Parameter 1
<b>P2</b>	int	Parameter 2

## 9.2 Velocity Control Door

### 9.2.1 Device Connection and Online States

The full requirements for these features can be found in the [Device Connection and Online States Requirements](#)

Feature	
<b>DC1.0 Device Online Status</b>	None
<b>DC2.0 Authentication</b>	None

## 9.2.2 Video

This device does not support video.

### 9.2.3 Properties

General requirements for properties can be found in [Driver Project Requirements](#).

Name	Type	Description	Default Value & Ranges
<b>Controller Name</b>	string	The controller which the door is associated with.	Default: Min: Max:
<b>Index</b>	int	The door index as defined by the Velocity SDK.	Default: Min: Max:
<b>Velocity Address</b>	string	Hirsch Velocity Address string for this device	Default: Min: Max:

## 9.2.4 Methods

General requirements for methods can be found in [Driver Project Requirements](#).

### 9.2.4.1 *Momentary Access*

Open the specified door for a brief period of time.

This method is exposed as an operator action.

Returns bool.

#### **Performance**

The method must complete within 2 seconds.

#### **Parameters**

Name	Type	Description	Default Value and Ranges
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## 9.2.5 Events

General requirements for events can be found in [Driver Project Requirements](#).

### 9.2.5.1 Access Denied

A failed authentication event occurred.

#### Performance

The driver must be able to handle 4000 events per hour.

#### Event Properties

Name	Type	Description
Description	string	Event Description
First Name	string	First Name
Last Name	string	Last Name
Middle Name	string	Middle Name
	string	Title
Suffix	string	Suffix
User-Defined Field 1	string	User-Defined Field 1
User-Defined Field 2	string	User-Defined Field 2
Host Card Data	string	Host Card Data
Host Card Stamp	string	Host Card Stamp
Credential Description	string	Credential Description
Card Match Code	string	Card Match Code
Credential Id	string	Credential Id
Host User Id	string	Host User Id
Velocity Event Id	string	Velocity Event Id
Host Transaction Card	string	Host Transaction Card
Host Transaction PIN	string	Host Transaction PIN

### 9.2.5.2 Access Granted

Successful Access

#### Performance

The driver must be able to handle 4000 events per hour.

## Event Properties

Name	Type	Description
Description	string	Event Description
First Name	string	First Name
Last Name	string	Last Name
Middle Name	string	Middle Name
Title	string	Title
Suffix	string	Suffix
User-Defined Field 1	string	User-Defined Field 1
User-Defined Field 2	string	User-Defined Field 2
Host Card Data	string	Host Card Data
Host Card Stamp	string	Host Card Stamp
Credential Description	string	Credential Description
Card Match Code	string	Card Match Code
Credential Id	string	Credential Id
Host User Id	string	Host User Id
Velocity Event Id	string	Velocity Event Id
Host Transaction Card	string	Host Transaction Card
Host Transaction PIN	string	Host Transaction PIN

### 9.2.5.3 Door Open Too Long

The door is being held open.

#### Performance

The driver must be able to handle 4000 events per hour.

## Event Properties

Name	Type	Description
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### 9.2.5.4 Door Forced Open

The door has been forced open.

#### Performance



The driver must be able to handle 4000 events per hour.

#### Event Properties

Name	Type	Description
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##### *9.2.5.5 Door Unlocked*

The door has been unlocked.

#### Performance

The driver must be able to handle 4000 events per hour.

#### Event Properties

Name	Type	Description
Description	string	The unlock event description.

##### *9.2.5.6 Door Relocked*

The door has been locked.

#### Performance

The driver must be able to handle 4000 events per hour.

#### Event Properties

Name	Type	Description
Description	string	The lock event description.

##### *9.2.5.7 Door User Under Duress*

A door event is happening with a user under duress

#### Performance

The driver must be able to handle 4000 events per hour.

#### Event Properties

Name	Type	Description
First Name	string	First Name
Last Name	string	Last Name
Middle Name	string	Middle Name
Title	string	Title

<b>Suffix</b>	string	Suffix
<b>User-Defined Field 1</b>	string	User-Defined Field 1
<b>User-Defined Field 2</b>	string	User-Defined Field 2
<b>Host Card Data</b>	string	Host Card Data
<b>Host Card Stamp</b>	string	Host Card Stamp
<b>Credential Description</b>	string	Credential Description
<b>Card Match Code</b>	string	Card Match Code
<b>Credential Id</b>	string	Credential Id
<b>Velocity Alarm Id</b>	string	Velocity Alarm Id
<b>User Id</b>	string	User Id

### 9.2.6 Built-In Interfaces

This section provides details of built-in interfaces that are implemented on this device. Full details of these interfaces can be found in the DDK documentation.

Interface	Description
<b>ILockableDoor</b>	Interface for a door that can be locked

## 9.3 Velocity Control Input

### 9.3.1 Device Connection and Online States

The full requirements for these features can be found in the [Device Connection and Online States Requirements](#)

Feature	
<b>DC1.0 Device Online Status</b>	None
<b>DC2.0 Authentication</b>	None

### 9.3.2 Video

This device does not support video.

### 9.3.3 Properties

General requirements for properties can be found in [Driver Project Requirements](#).

Name	Type	Description	Default Value & Ranges
<b>Controller Name</b>	string	The controller which the door is associated with.	Default: Min: Max:
<b>Index</b>	int	The input index as defined by the Velocity SDK.	Default: Min: Max:
<b>Velocity Address</b>	string	Hirsch Velocity Address string for this device	Default: Min: Max:
<b>Is Secure</b>	bool	Is Input considered Secure by Hirsch	Default: Min: Max:
<b>Input Type</b>	CNL.IPSecurityCenter .Driver.Hirsch.Velocity.InputType	Type of site hardware connected to this input.	Default: Min: Max:

### 9.3.4 Methods

General requirements for methods can be found in [Driver Project Requirements](#).

### 9.3.5 Events

General requirements for events can be found in [Driver Project Requirements](#).

#### 9.3.5.1 State Change

The state of the the input has changed

#### Performance

The driver must be able to handle 4000 events per hour.

#### Event Properties

Name	Type	Description
Input is Secure	bool	If true, input is in a Secure state

## **10 Installation**

### **10.1 Prerequisites**

There is no-specific SDK software for the Hirsch Velocity integration with IPSC. The SDK functionality is exposed over HTTP and TCP streams.



## 10.2 Driver Installation

- Start the IPSecurityCenter™ client and any supporting services
- Open the Device Driver Manager from the System Configuration
- Click the **Install** button
- Select the Hirsch Velocity Server Driver Package in the Open file dialog
- Wait for the driver to be uploaded

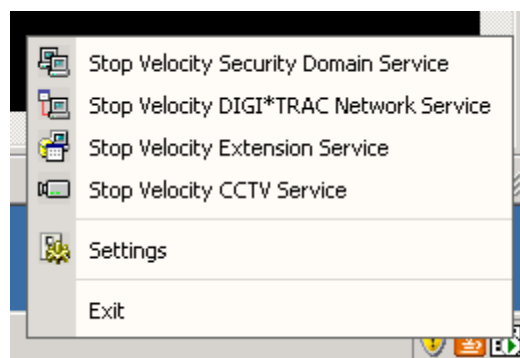
The driver packages should be listed in the Device Driver Manager.

### 10.2.1 Additional Installation Details

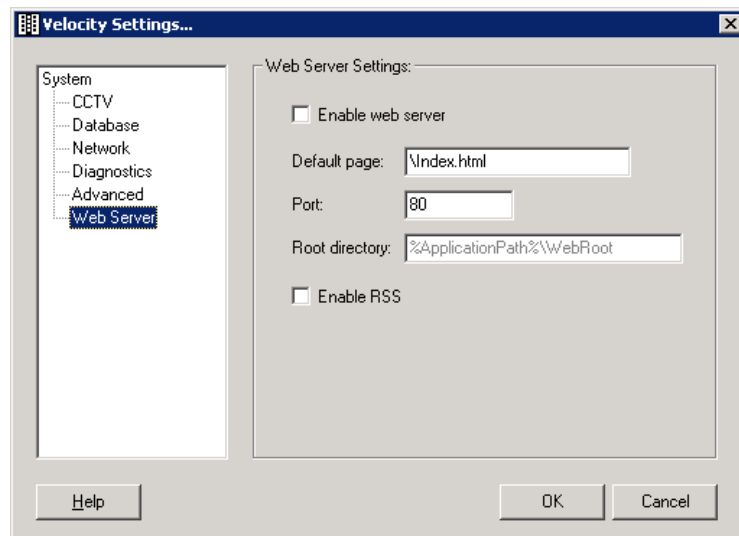
The Hirsch Velocity panel needs to be connected to a PC running the Hirsch Velocity software. IPSecurityCenter receives events from the panel via this software.

To enable communication from the software:

- First the Hirsch Velocity web service needs to be started:  
Start → Programs → Hirsch Electronics Velocity → Service Control Manager
- In the system tray right click on the 'Velocity Service Control Manager' Icon and click on the 'Settings' context menu item:



This will bring up the following dialog:



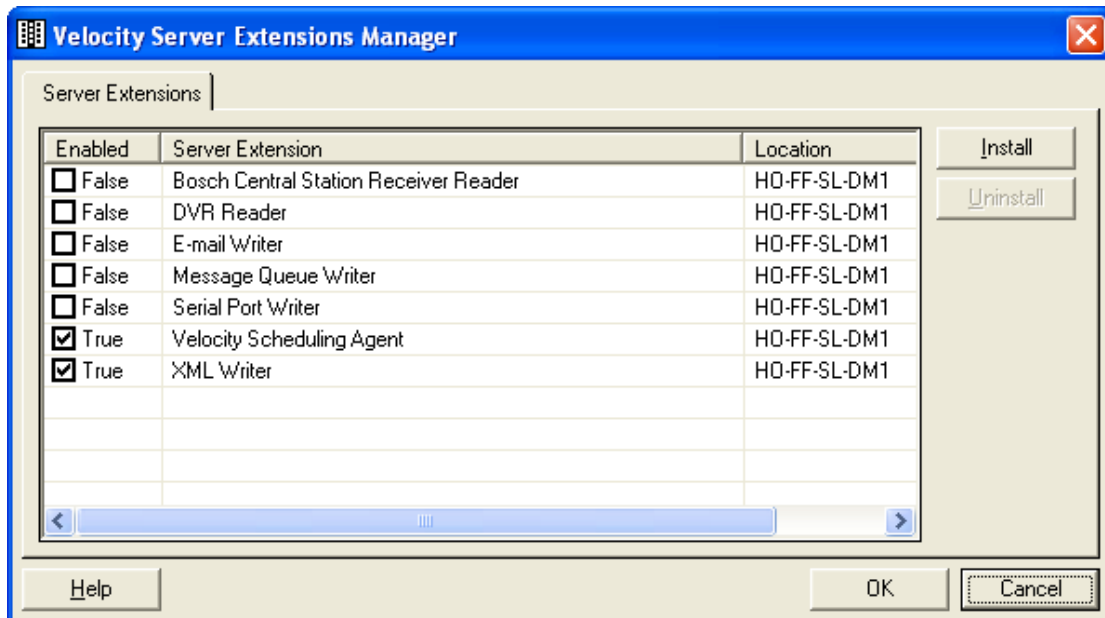
- Select 'Web Server' and Check the 'Enable web server' check box and click ok.
- Restart the Velocity services from 'Velocity Service Control Manager'

To configure events open the Hirsch Velocity administration tool:

Start → Programs → Hirsch Electronics Velocity → Velocity

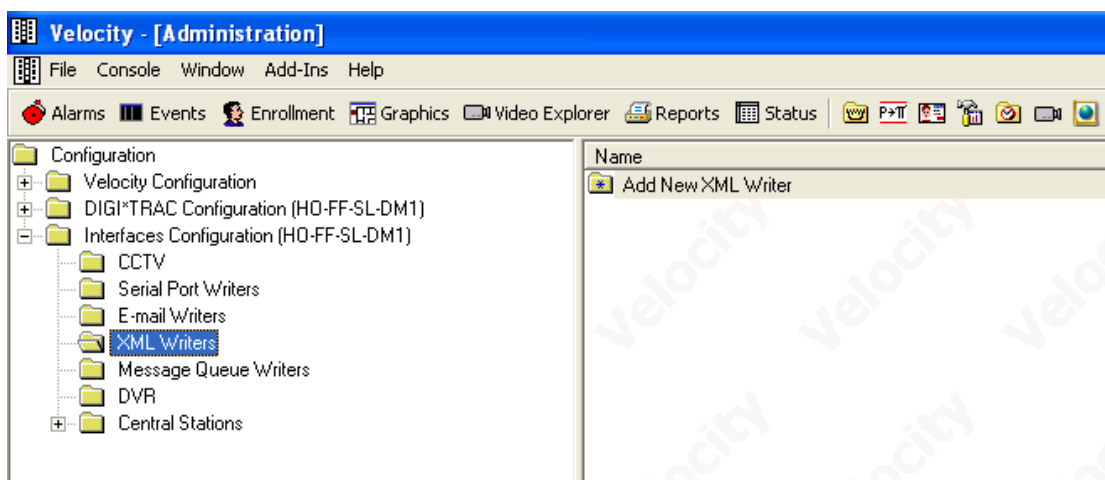
When the application has started open the Menu → Addins → Server Extensions dialog

Ensure the 'XML Writer' server extension is checked and click Ok.



Next add a new XML Writer from the Configuration Tree (shown in the following diagram, if it is not visible it can be accessed through the menu [Console → Administration](#))

*Note: If the XML Writer is not listed you will need to add the server extension. Click Install and select the XMLWriter.HEX from the Velocity installation folder. The XML Writer will appear in the server extension list. Ensure it is checked. You will need to restart the Velocity server before you proceed.*



This will bring up the Add New XML Writer dialog:

The screenshot shows a dialog box titled "XML Interface - xmlw1 Properties". It has a "Settings" tab. The "Name" field contains "xmlw1" and the "Port" field contains "10025". The "Encryption" checkbox is unchecked, and the "Password" field is empty. The "Active during time zone" dropdown is set to "<Always>". A list of event types is shown with checkboxes: Alarms (checked), Transactions {Granted/Denied} (checked), Internal Events (unchecked), External Events (checked), Miscellaneous Events (unchecked), Communication Events (unchecked), Software Events (checked), and Integrated Events (unchecked). A "Select Events" button is to the right of the list. At the bottom, there is an "Enabled" checkbox which is checked, and buttons for "Help", "OK", and "Cancel".

Enter a Name, a port (10025), select no encryption, and select the events that should be reported. Click ok to save changes

### 10.2.2 Door Patch Enabled

If the access methods specified above are not performing as desired, then this option should be set to true. The Hirsch Velocity SDK is known to give false responses which do not truly reflect the current state of the system and thus it has been noted that attempting to Unlock, Relock or Momentary Access a door don't work with the Velocity SDK Web Server. Therefore a CNL Door Patch has been provided to achieve this functionality with the use of an SQL Procedure that utilized Command Sets to achieve its goals.

### 10.2.3 Device Configuration

- Right click in a folder (e.g. Devices) in the System Configuration: **New** → **Device On** → **Server**
- Click **Next** on the introduction
- Select **Hirsch** in the **Device Manufacturer** list
- Select **Velocity Server** in the Available Devices list
- Click **Next** to enter the device details: Enter the Hirsch Velocity Server hostname or IP address, the port (use 0 to use the default port), and user name and password if integrated security is not being used.
- Click **Next** and **Finish** to add the device.
- Enable the device to bring it online.

This is how to configure the Hirsch Velocity

## 10.2.4 Driver Compatibility

The following devices are known to be incompatible with the Hirsch Velocity Server.

Model
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## 10.3 Restrictions/Limitations

The Hirsch Velocity SDK does not provide “offline”/“online” status in the usual IPSC way. If a Controller panel goes offline for some reason, then the devices attached to it are marked as “Offline”.