AxxonSoft

ACFA Intellect

Integration Module Settings Guide

ApolloSDK

Version 1.4

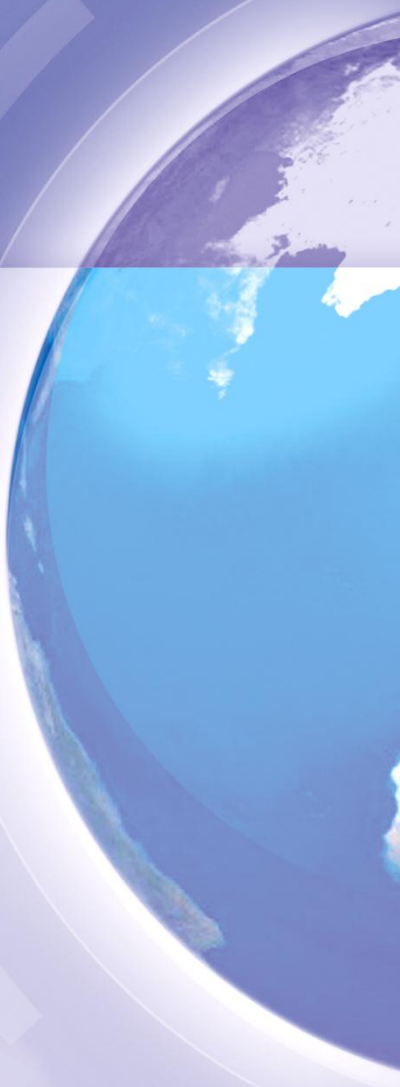

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Table of Contents

1 List of Terms

Server - a computer configured as an *Intellect* Software System **Server**.

Access control system (ACS) – a system of hardware and software designed to monitor and control access.

Controller - an electronic device designed to monitor and control access points.

Access point – a place where access is controlled.

AIM Interface Module – an interface module for connecting readers or keypads to an AAN controller.

AIO alarm panel – a microprocessor-based alarm panel that monitors the state of alarm inputs and manages relay outputs.

ASA status panel – a panel used to display the state of the security alarm.

Alarm input – an input to switch alarm sensors (magnetic-contact, impact-contact) or the output circuits of IR sensors and alarm panels.

Readers – electronic devices designed for entering a memorized code using a keypad or reading encoded data from system keys (identifiers).

Access key – a physical or digital key used to access objects in facilities, buildings, zones, and areas.

Access card – a physical access key accepted by a reader.

Access time – the time allotted to pass through an access point. When the allotted time has passed the access point locks automatically.

Impulse – a signal used to close a relay.

Time schedule - a set of any number of time intervals during a day (24 hours) defined for several days (1 to 366), and the time intervals during specific dates. Time schedule defines a schedule of access to the secured object.

2 Introduction

2.1 Purpose of the document

This *ApolloSDK Module Settings Guide* is a reference manual designed for *ApolloSDK* Module configuration technicians and operators. This module functions as part of security- and fire alarm systems and access control systems built on the basis of the *ACFA Intellect* Software System.

This Guide presents the following materials:

1. General information about the *ApolloSDK* integration module;
2. Configuration of the *ApolloSDK* integration module;
3. Working with the *ApolloSDK* integration module.

2.2 General information about the *ApolloSDK* integration module

The*ApolloSDK* integration module is part of *SFA*/*ACS* systems built based on the *ACFA Intellect* Software System. It is designed to configure and control *ApolloSDK* hardware.

The following hardware is integrated with the *ACFA Intellect* Software System:

1. *AAN* controllers (an *ACS* component);
2. *AIM* interface modules (an *ACS* component);
3. *AIO* alarm panels (an *SFA* component);
4. *ASA* status panels (an *SFA* component).

The network connection for these devices is either Ethernet or RS-485.

Note: Detailed information about the ApolloSDKsystem can be found in the official documentation (manufacturer AAM Systems).

Attention! The ApolloSDK software must be installed on the Server for the ApolloSDK integration module to operate.

Before configuring the *ApolloSDK* integration module, the following actions must be performed:

1. Install the required hardware on the site.
2. Install the *ApolloSDK* software on the Server.

3 Configuration of the ApolloSDK integration module

3.1 How to configure the ApolloSDK integration module

The *ApolloSDK* integration module in the *ACFA Intellect* Software System is configured as follows:

1. Configuration of an *AAN* controller.
2. Configuration of the connection with ACS modules and alarm panels.
3. Configuration of the access-card format.
4. Configuration of readers and sensors.

3.2 Configuration of an AAN controller

Before configuring an *AAN* controller in the *ACFA Intellect* Software System, an **ApolloSDK** object must be created based on the **Computer** object on the **Hardware** tab of the **System Settings** dialog (Fig.3.2-1).

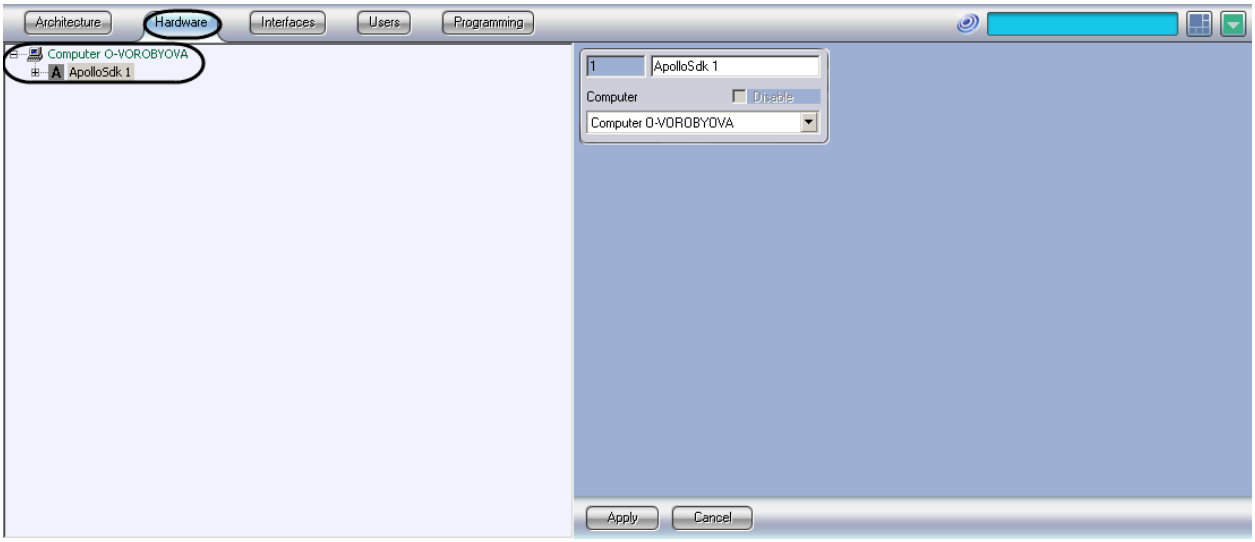

Fig.3.2-1 ApolloSDK object

The *AAN* controller is configured as follows:

1. Create an **AAN Controller** object based on the **ApolloSDK** object (Fig.3.2-2).

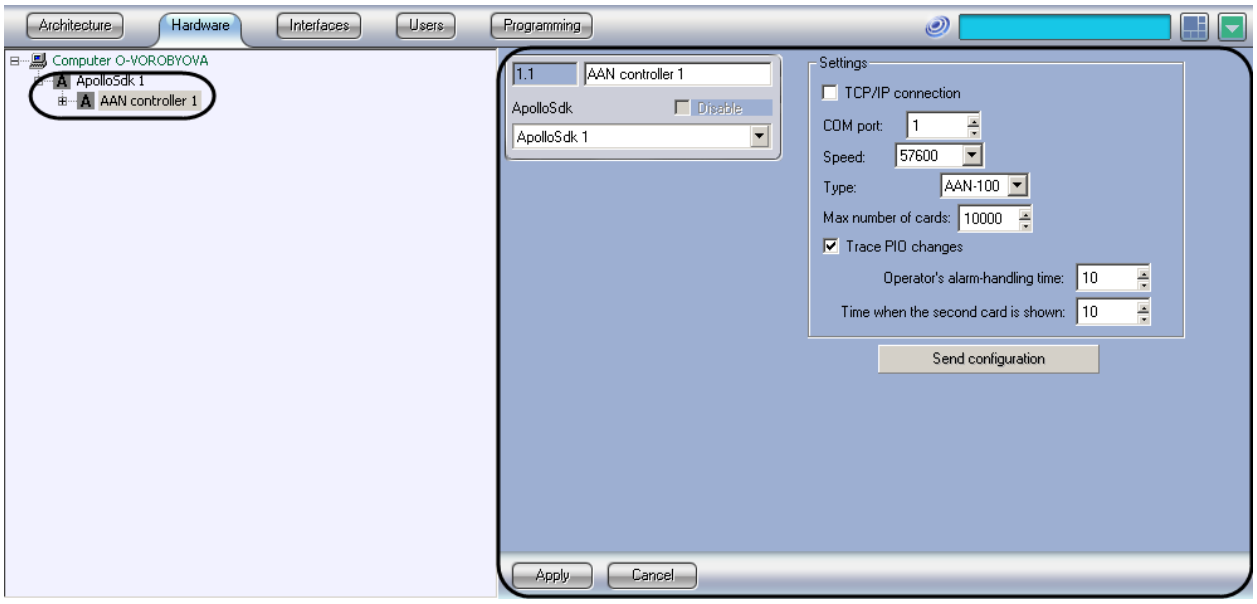

Fig.3.2-2 AAN Controller object

2. Go to the **AAN Controller** object's settings pane (see Fig.3.2-2, **1**).
3. If the *AAN* controller is connected to the Server through a COM port, then do the following:
   3.1 In the **COM port** field, enter the number of the COM port used to connect the *AAN* controller to the Server (Fig.3.2-3, **1**).

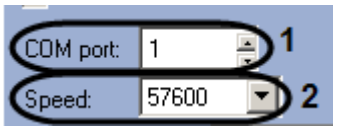

Fig.3.2-3 Configuration of the AAN controller's COM-port connection

   3.2 From the **Speed** dropdown list, select the speed of the *AAN* controller's COM-port connection (see Fig.3.2-3, **1**).
4. If the *AAN* controller is connected to the Server over Ethernet, then do the following:
   4.1 Check the **TCP/IP connection** checkbox (Fig.3.2-4).

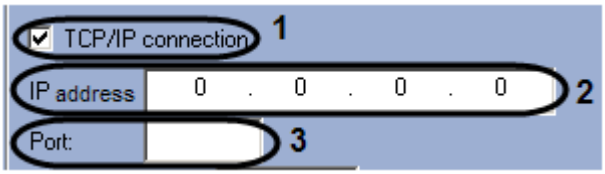

Fig.3.2-4 Configuration of the AAN controller's Ethernet connection

   4.2 In the **IP address** field, enter the *AAN* controller's IP address (see Fig.3.2-4, **2**).
   4.3 Enter the *AAN* controller's port number in the **Port** field (see Fig.3.2-4, **3**).
5. Select the type of *AAN* controller (*AAN-32* or *AAN-100*) from the **Type** dropdown list, depending on the type of hardware being used (Fig.3.2-5, **1**).

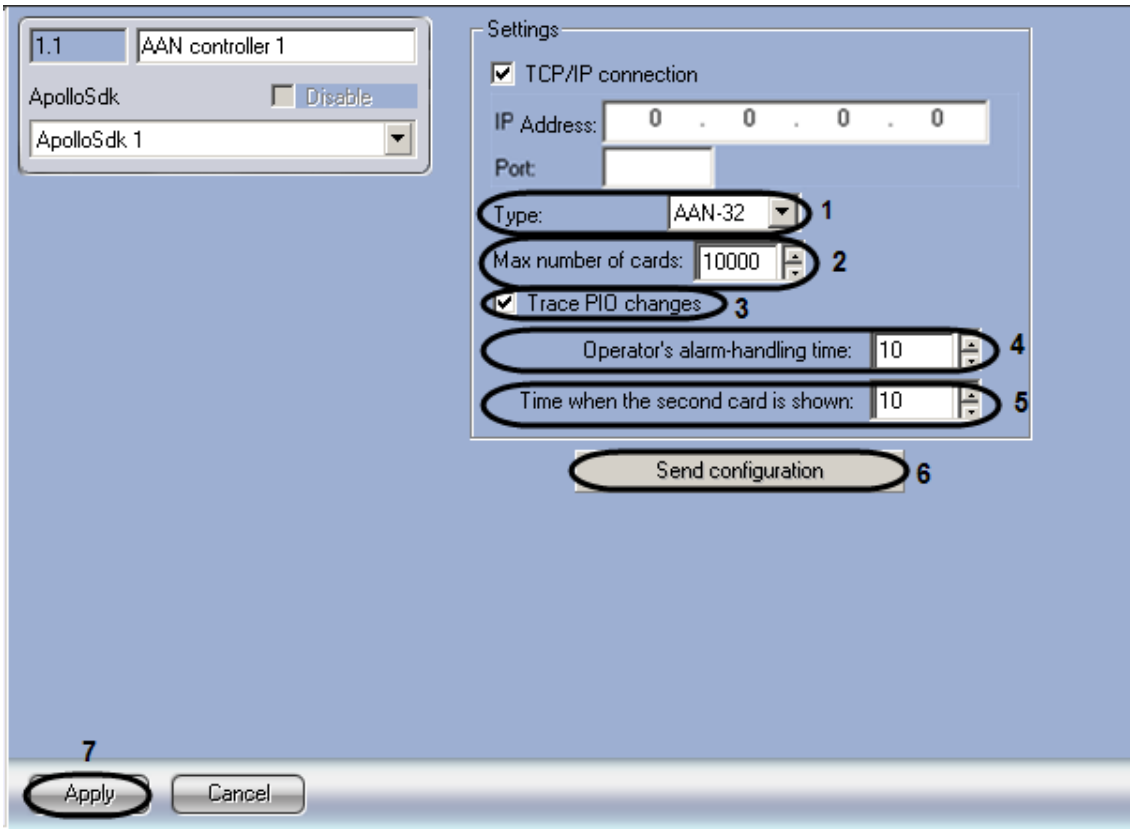

Fig.3.2-5 AAN Controller object's settings pane

6. In the **Max number of cards** field, enter the maximum number of access cards that will be stored in the controller's memory (see Fig.3.2-5, **2**).

Note: The maximum number of access cards that can be stored in the controller's memory depends on the number of memory cards installed in it.

7. Check the **Trace PIO changes** checkbox to enable dynamic forwarding of access parameters to the controller (see Fig.3.2-5, **3**).
8. In the **Operator's alarm-handling time** field, enter the time in seconds allotted to the operator to make a decision to grant or deny access (see Fig.3.2-5, **4**).
9. In the **Time when the second card is shown** field, enter the period of time in seconds between the presentation of the first and second access cards which, if exceeded, will result in access not being granted (see Fig.3.2-5, **5**).
10. To save any changes made, click the **Apply** button (see Fig.3.2-5, **7**).
11. To save users and access rights to the controller's memory, click the **Save users** button (see Fig.3.2-5, **6**).

This completes the configuration of the *AAN* controller.

3.3 Configuration of the connection with ACS modules and alarm panels

3.3.1 Configuration of the connection with an AIM interface module

The connection with an *AIM* Interface Module is configured on the settings panel of the corresponding object. An **AIM Interface Module** object is created based on the **AAN Controller** object (Fig.3.3-1).

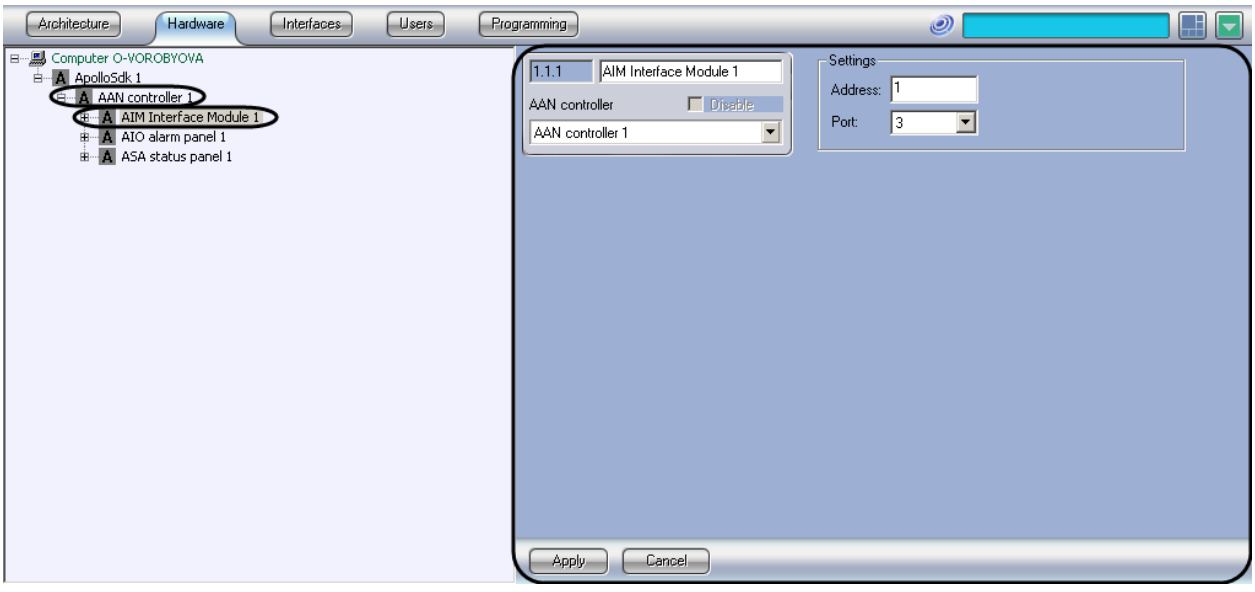

Fig.3.3-1 AIM Interface Module object

The connection with an *AIM* Interface Module is configured as follows:

1. Go to the **AIM Interface Module** object's settings panel (Fig.3.3-2).

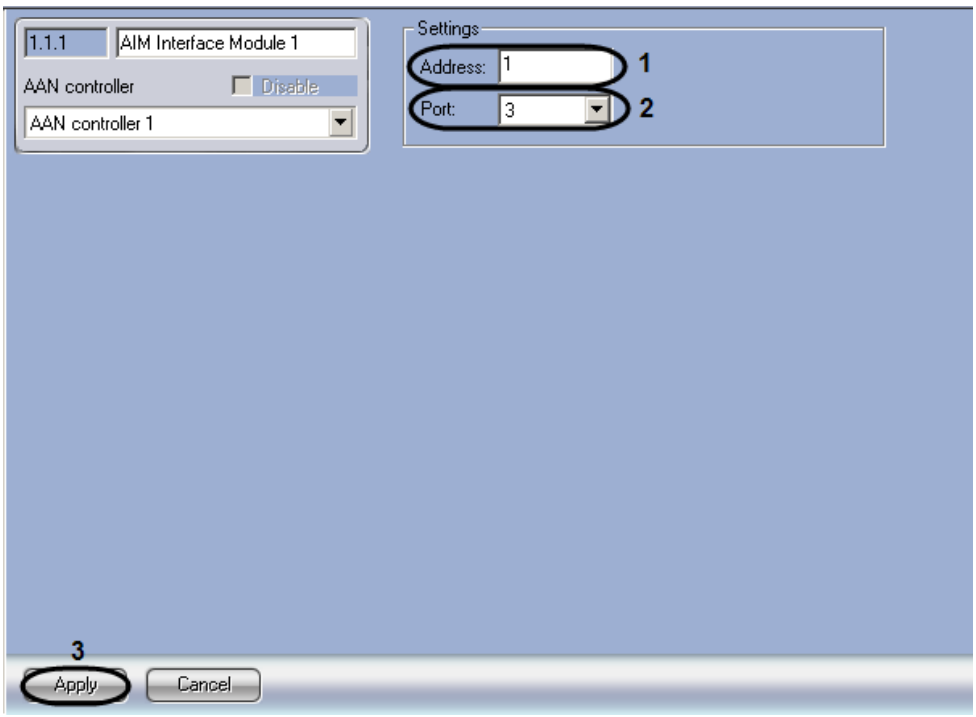

Fig.3.3-2 Settings pane of an AIM Interface Module object

2. In the **Address** field, enter the *AIM* Interface Module's unique address (see Fig.3.3-2, **1**).
3. Select the port used to connect to the *AIM* Interface Module from the **Port** dropdown list (see Fig.3.3-2, **2**).
4. To save changes, click the **Apply** button (see Fig.3.3-2, **3**).

This completes the configuration of the connection with the *AIM* interface module.

3.3.2 Configuration of the connection with an AIO alarm panel

The connection with an *AIO* alarm panel is configured on the settings pane of the corresponding object. An **AIO Alarm Panel** object is created based on the **AAN Controller** object (Fig.3.3-3).

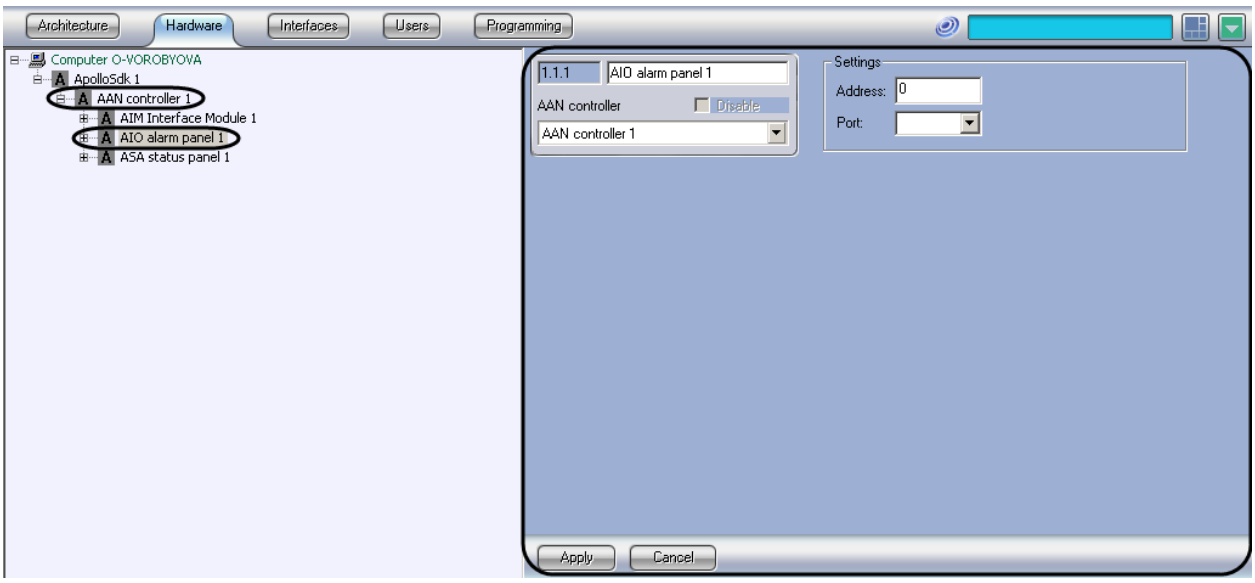

Fig.3.3-3 AIO Alarm Panel object

The connection with an *AIO* alarm panel is configured as follows:

1. Go to the **AIO Alarm Panel** object's settings panel (Fig.3.3-4).

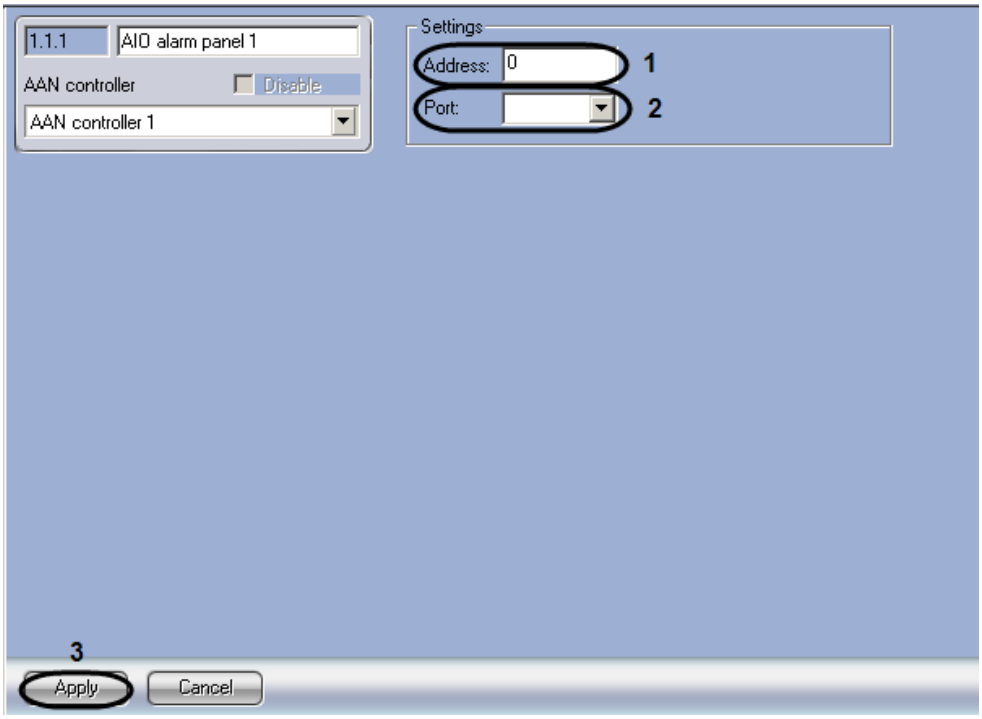

Fig.3.3-4 Settings pane of an AIO Alarm Panel object

2. In the **Address** field, enter the *AIO* alarm panel's unique address (see Fig.3.3-4, **1**).
3. Select the port used to connect to the *AIO* alarm panel from the **Port** dropdown list (see Fig.3.3-4, **2**).
4. To save changes, click the **Apply** button (see Fig.3.3-4, **3**).

This completes the configuration of the connection with the *AIO* alarm panel.

3.3.3 Configuration of an ASA status panel

An *ASA* status panel is configured on the settings pane of the corresponding object. An **ASA Status Panel** object is created based on the **AAN Controller** object (Fig.3.3-5).

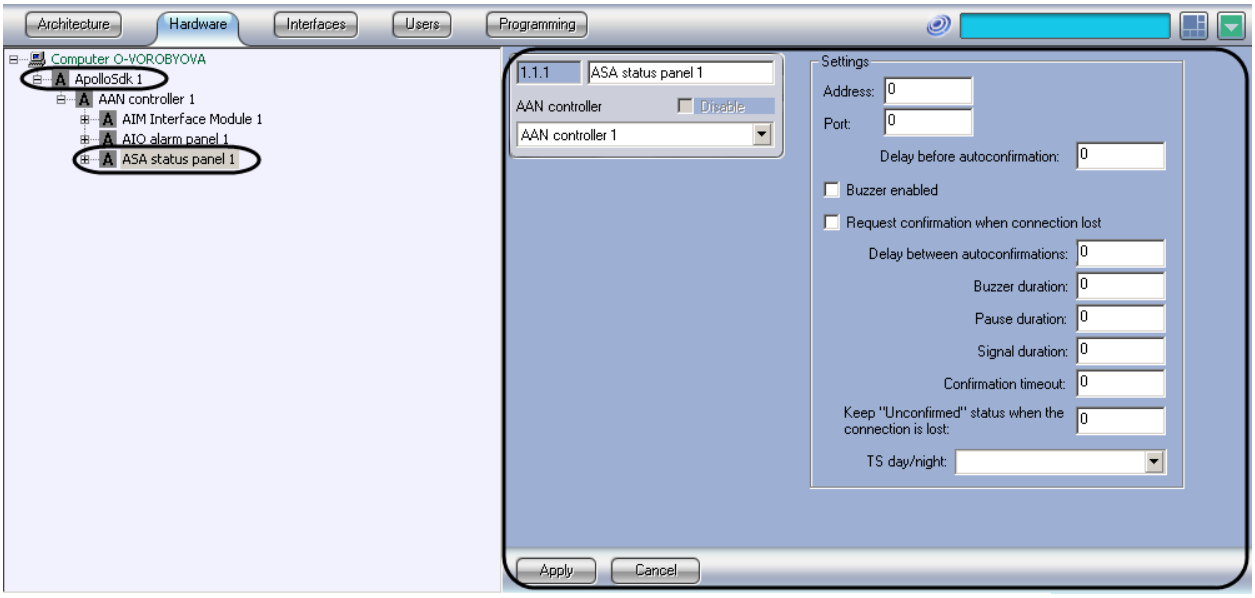

Fig.3.3-5 ASA Status Panel object

The connection with an *ASA* status panel is configured as follows:

1. Go to the **ASA Status Panel** object's settings panel (Fig.3.3-6).

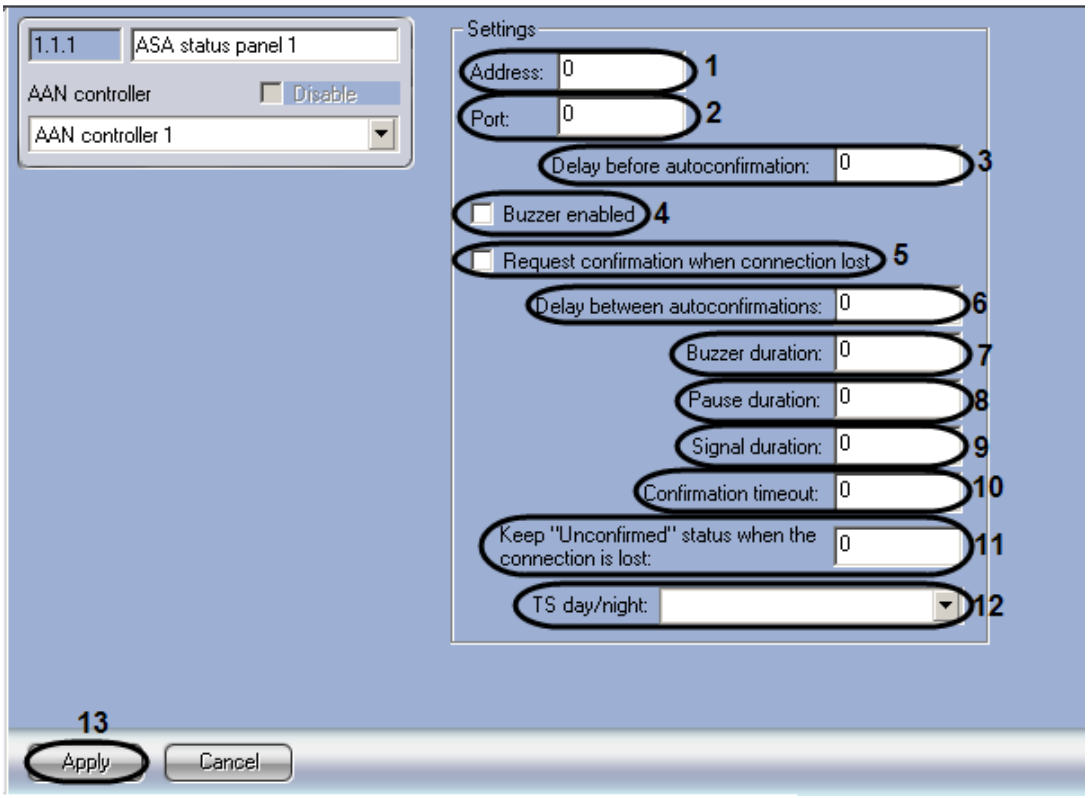

Fig.3.3-6 Settings pane of an ASA Status Panel object

2. In the **Address** field, enter the *ASA* panel's unique address (see Fig.3.3-6, **1**).
3. Select the port used to connect to the *ASA* panel from the **Port** dropdown list (see Fig.3.3-6, **2**).
4. In the **Delay before autoconfirmation** field, enter the time in seconds before an alarm is automatically confirmed (see Fig.3.3-6, **3**).
5. Check the **Buzzer enabled** checkbox if the *ASA* panel's buzzer is to be enabled (see Fig.3.3-6, **4**).
6. If confirmation is required when the connection between the *ASA* panel and the controller is lost, then check the appropriate checkbox (see Fig.3.3-6, **5**).
7. In the **Delay between autoconfirmations** field, enter the time delay (in seconds) between automatically confirmed alarms (see Fig.3.3-6, **6**).
8. In the **Buzzer duration** field, enter the duration (in seconds) of the buzzer's tones (see Fig.3.3-6, **7**).
9. In the **Pause duration** field, enter the duration (in seconds) of the pause between the buzzer's tones (see Fig.3.3-6, **8**).
10. In the **Signal duration** field, enter the duration (in seconds) of the buzzer's light signal (see Fig.3.3-6, **8**).

*Note: The signal consists of buzzing and pauses. In order for the ASA panel's buzzer to operate correctly, the value of **Signal duration** must be greater than or equal to the sum of **Buzzer duration** and **Pause duration**.*

11. In the **Confirmation timeout** field, enter the time period (in seconds) before confirmation of an alarm (see Fig.3.3-6, **10**).

12. In the **Keep "Unconfirmed" status when the connection is lost** field, enter the time period (in seconds) during which the **Unconfirmed** status will be preserved during connection loss (see Fig.3.3-6, **11**).
13. From the **TS day/night** dropdown list, select the time schedule that will define day for the *ASA* panel (see Fig.3.3-6, **12**).

Note: Any time outside the selected time schedule will be considered night.

14. To save changes, click the **Apply** button (see Fig.3.3-6, **13**).

This completes the configuration of the *ASA* panel.

3.4 Configuration of access cards

3.4.1 Specification of access card formats

Access card formats are specified on the **Card Format** object's settings panel. This object is recorded based on the **AAN Controller** object (Fig.3.4-1).

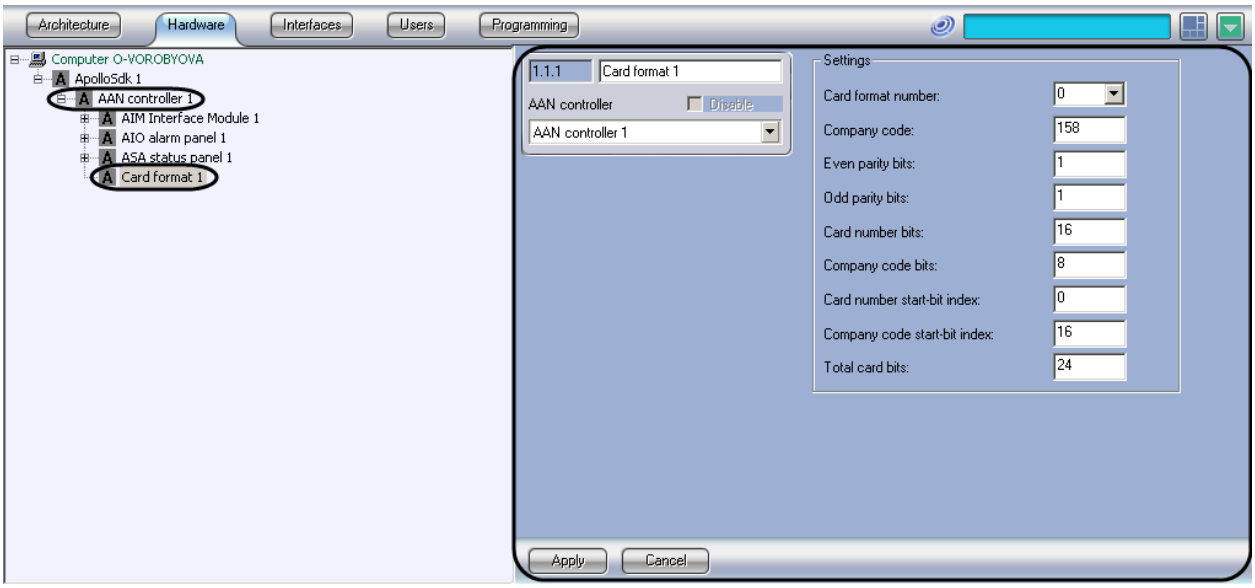

Fig.3.4-1 Card Format object

An access card's format is specified as follows:

1. Go to the **Card Format** object's settings panel (Fig.3.4-2).

Fig.3.4-2 Card Format object's settings pane

2. From the **Card format number** dropdown list, select a unique number to assign to this access card format (see Fig.3.4-2, **1**).

Note: Up to 8 access-card formats can be specified.

3. In the **Company code** field, enter the company code (facility code) (see Fig.3.4-2, **2**).
4. In the **Even parity bits** field, enter the number of even parity bits on the access card (see Fig.3.4-2, **3**).
5. In the **Odd parity bits** field, enter the number of odd parity bits on the access card (see Fig.3.4-2, **4**).
6. In the **Card number bits** field enter the number of bits in the access card's number (see Fig.3.4-2, **5**).
7. In the **Company code bits** field enter the number of bits in the access card's company code (see Fig.3.4-2, **6**).
8. In the **Card number start-bit index** field, enter the index of the bit where the access card's number begins (see Fig.3.4-2, **7**).
9. In the **Company code start-bit index** field, enter the index of the bit where the access card's company code begins (see Fig.3.4-2, **8**).
10. In the **Total card bits** field, enter the number of bits on the access card (see Fig.3.4-2, **9**).
11. To save changes, click the **Apply** button (see Fig.3.4-2, **10**).

This completes the specification of the access card format.

3.4.2 Creation of access-card format lists

Lists of access card formats are created as follows:

1. Create a **List of Card Formats** object based on the **AAN Controller** object (Fig.3.4-3).

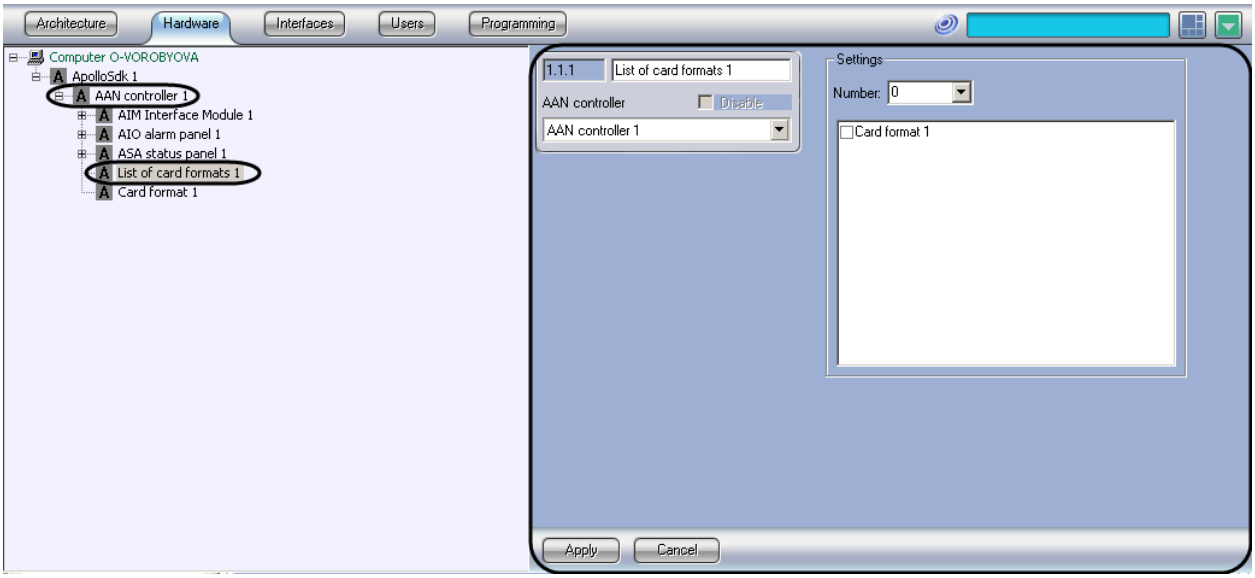

Fig.3.4-3 List of Card Formats object

2. Go to the **List of Card Formats** object's settings panel (Fig.3.4-4).

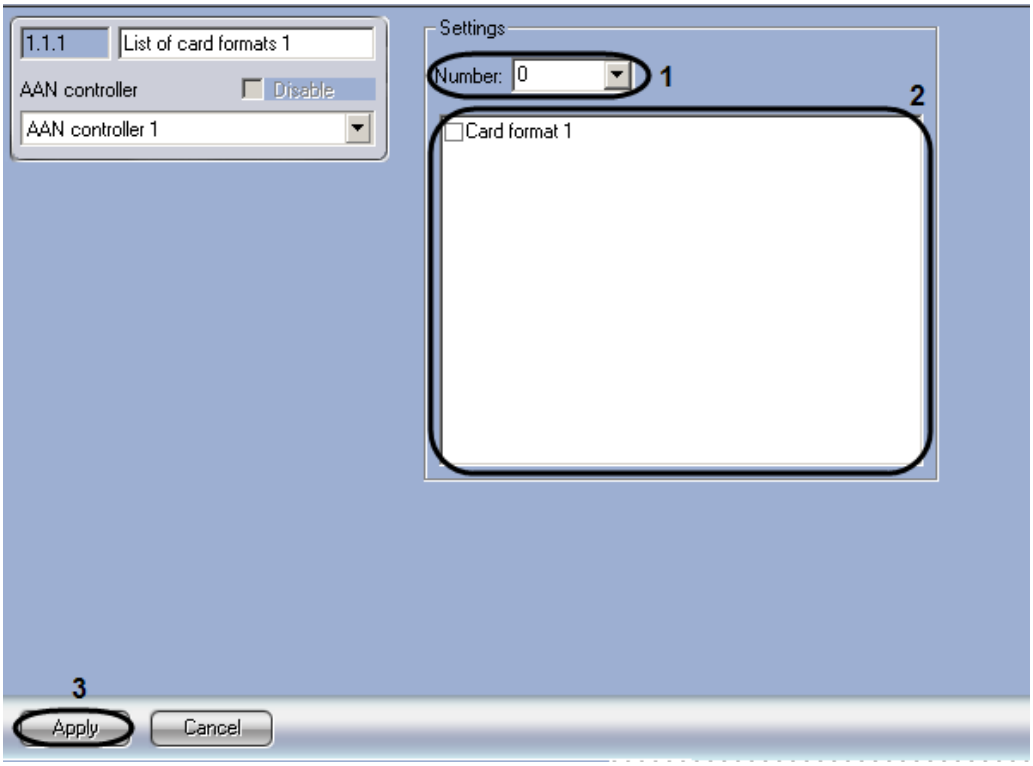

Fig.3.4-4 Setting pane of a List of Card Formats object

3. From the **Number** dropdown list select a unique number to assign to this list of access card formats (see Fig.3.4-4, **1**).

Note: Up to 16 lists of access card formats can be specified.

4. Place a checkmark next to the access card formats that should be included in this list (see Fig.3.4-4, **2**).

5. To save changes, click the **Apply** button (see Fig.3.4-4, **2**).

This completes the creation of the access-card format list.

3.5 Configuration of readers and sensors

3.5.1 Configuration of the AIM interface module's readers

The *AIM* Interface Module's readers are configured on the settings panel of the corresponding object. A **Reader** object is created based on the **AIM Interface Module** object (Fig.3.5-1).

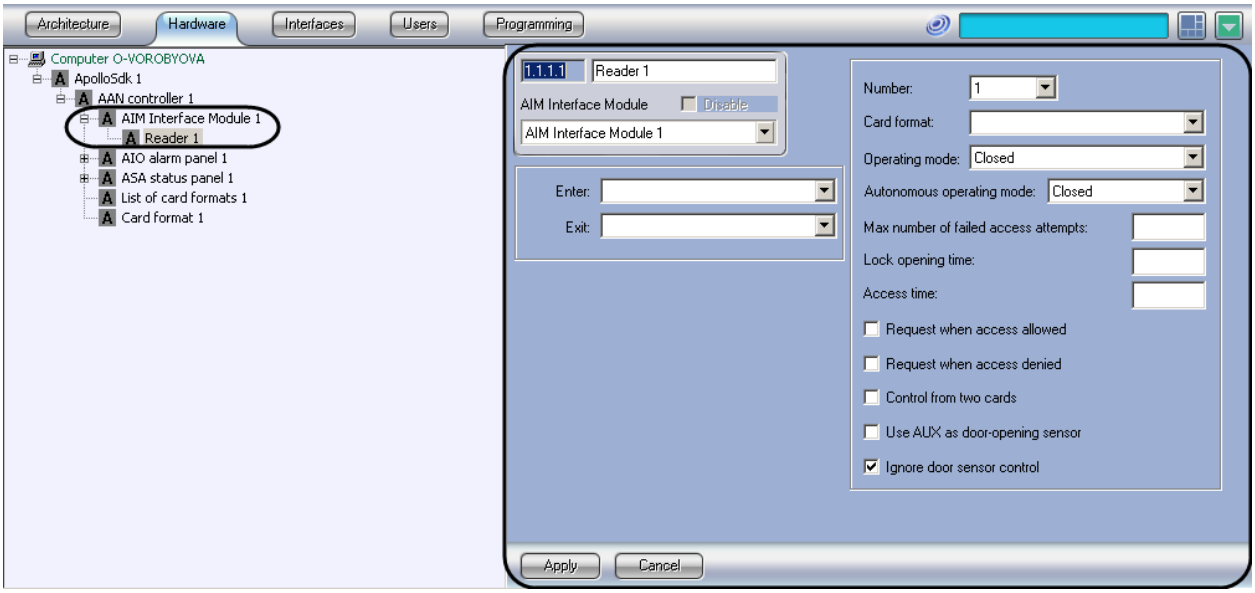

Fig.3.5-1 Reader object

Readers are configured as follows:

1. Go to the **Reader** object's settings panel (Fig.3.5-2).

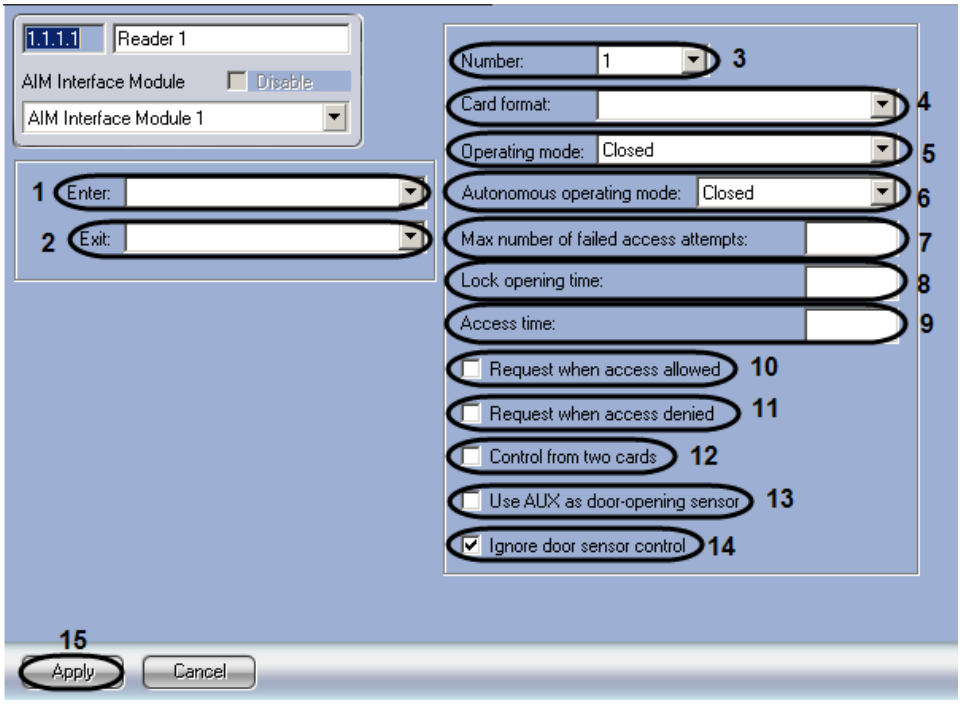

Fig.3.5-2 Reader object's settings pane

2. From the **Enter** dropdown list select the **Section** object that corresponds to the area to which this reader enters (see Fig.3.5-2, **1**).
3. From the **Exit** dropdown list select the **Section** object that corresponds to the area to which this reader exits (see Fig.3.5-2, **2**).
4. From the **Number** dropdown list select the reader's index number (see Fig.3.5-2, **3**).
5. From the **Card format** dropdown list select a list of access card formats for this reader (see Fig.3.5-2, **4**).
6. From the **Operating mode** dropdown list select the reader's operating mode (see Fig.3.5-2, **5**, Table 3.5-1).

Table 3.5-1 Reader operating modes

Operating mode	Operating mode description
Closed	Access is denied to all
Card only	Access is granted based on access cards
PIN or Card	Access is granted based on access cards or PIN codes
PIN and Card	Access is granted based on access cards and PIN codes
Opened	Access is granted to all
Company code	Access is granted based on company codes

7. From the **Autonomous operating mode** dropdown list select the operating mode to be employed by the reader if the connection with the controller is lost (see Fig.3.5-2, **6**, Table 3.5-1).
8. In the **Max number of failed access attempts** field, enter the number of failed access attempts that can be made before a **Break-in Attempt** message is sent (see Fig.3.5-2, **7**).
9. In the **Lock opening time** field, enter the time period (in seconds) in which the lock will be unlocked (see Fig.3.5-2, **8**).
10. In the **Access time** field, enter the time allotted for access (see Fig.3.5-2, **9**).
11. Check the **Request when access allowed** checkbox if an access request must be sent to the operator when an access attempt has been made successfully (see Fig.3.5-2, **10**).
12. Check the **Request when access denied** checkbox if an access request must be sent to the operator when an access attempt has failed (see Fig.3.5-2, **11**).
13. Check the **Control from two cards** checkbox if access requires two access cards being presented (see Fig.3.5-2, **12**).
14. If the *AIM* module's auxiliary sensor *AUX* is to be used as the door-opening sensor, then check the corresponding option (see Fig.3.5-2, **13**).
15. If the door sensor should be ignored, then check the corresponding option (see Fig.3.5-2, **14**).
16. To save any changes made, click the **Apply** button (see Fig.3.5-2, **15**).

This completes the configuration of the *AIM* interface module's readers.

3.5.2 Configuration of the AIO alarm panel's inputs

The *AIO* alarm panel's inputs are configured on the settings panel of the corresponding object. An Alarm input object is created based on an **AIO Alarm Panel** object (Fig.3.5-3).

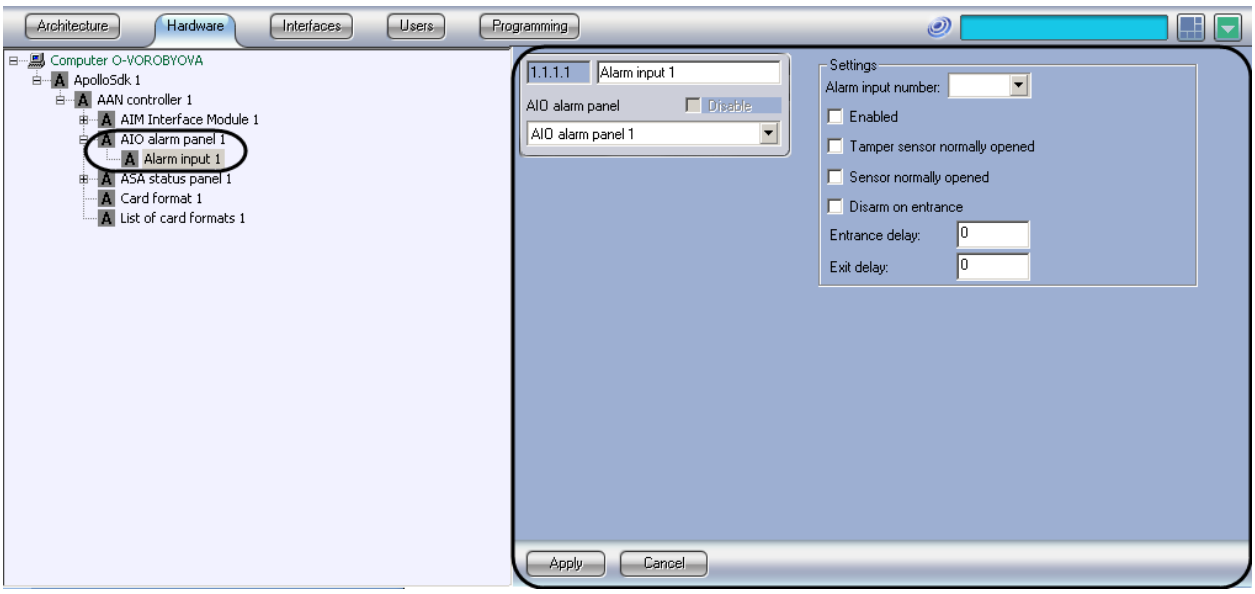

Fig.3.5-3 Alarm Input object

Alarm inputs are configured as follows:

1. Go to the **Alarm Input** object's settings panel (Fig.3.5-4).

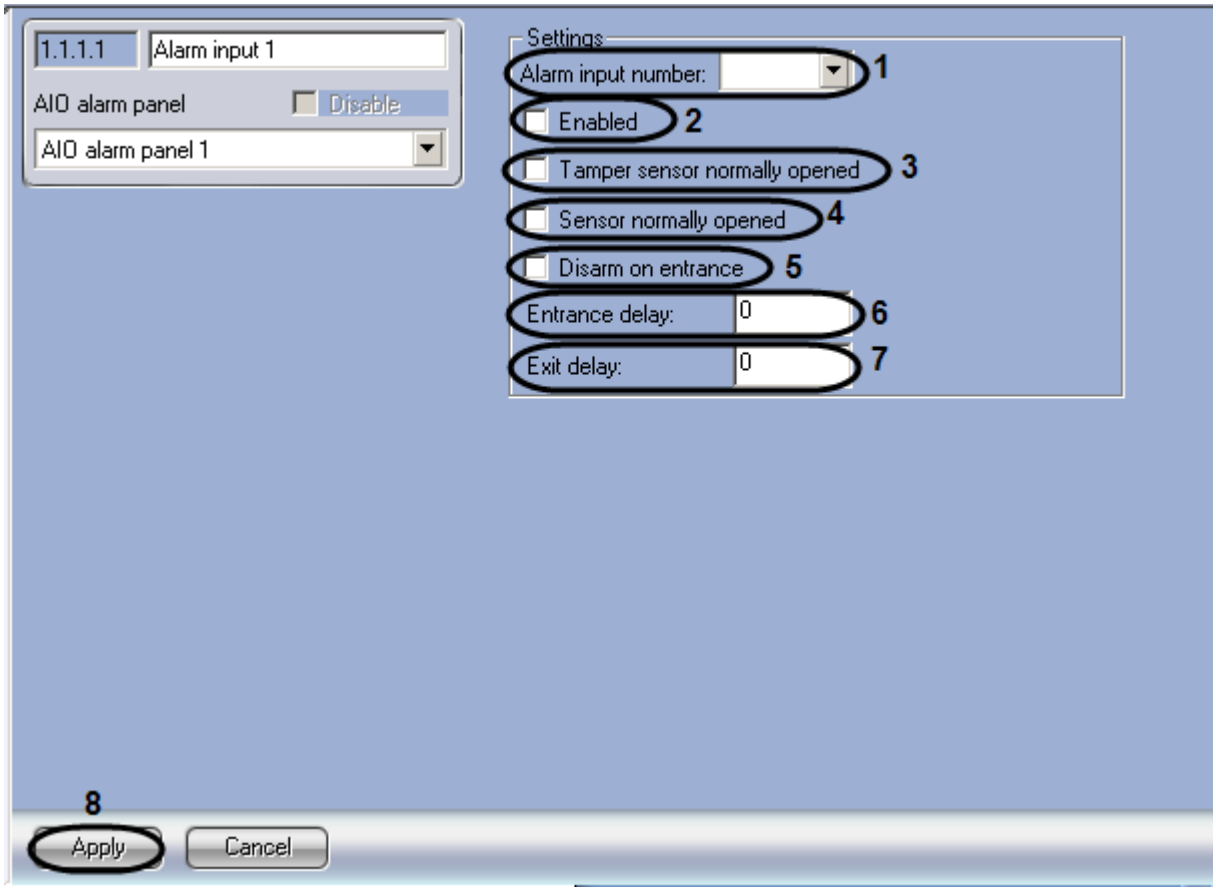

Fig.3.5-4 Alarm Input object's settings pane

2. From the **Alarm input number:** dropdown list select the alarm input's index number (see Fig.3.5-4, **1**).
3. Check the **Enabled** checkbox if the alarm input is operational (see Fig.3.5-4, **2**).

4. Check the **Tamper sensor normally opened** checkbox if the alarm events are to be received while destroying or tampering the sensor cabinet (see Fig.3.5-4, **5**).
5. Check the **Sensor normally opened** checkbox if the alarm input should be in its normal state (non-alarm state) when the contacts are open (see Fig.3.5-4, **4**).
6. If the alarm input should be disarmed upon entrance, set the corresponding option (see Fig.3.5-4, **5**).
7. In the **Entrance delay** field, enter the time period (in seconds) in which the alarm input will be disarmed on entrance (see Fig.3.5-4, **6**).
8. In the **Exit delay** field, enter the time period (in seconds) in which somebody can exit once the alarm input has been armed (see Fig.3.5-4, **6**).
9. To save any changes made, click the **Apply** button (see Fig.3.5-2, **8**).

This completes the configuration of the *AIO* alarm panel's inputs.

3.5.3 Configuration of the AIO alarm panel's relay

The *AIO* alarm panel's relay is configured on the settings panel of the corresponding object. A **Relay** object is created based on an **AIO Alarm Panel** object (Fig.3.5-5).

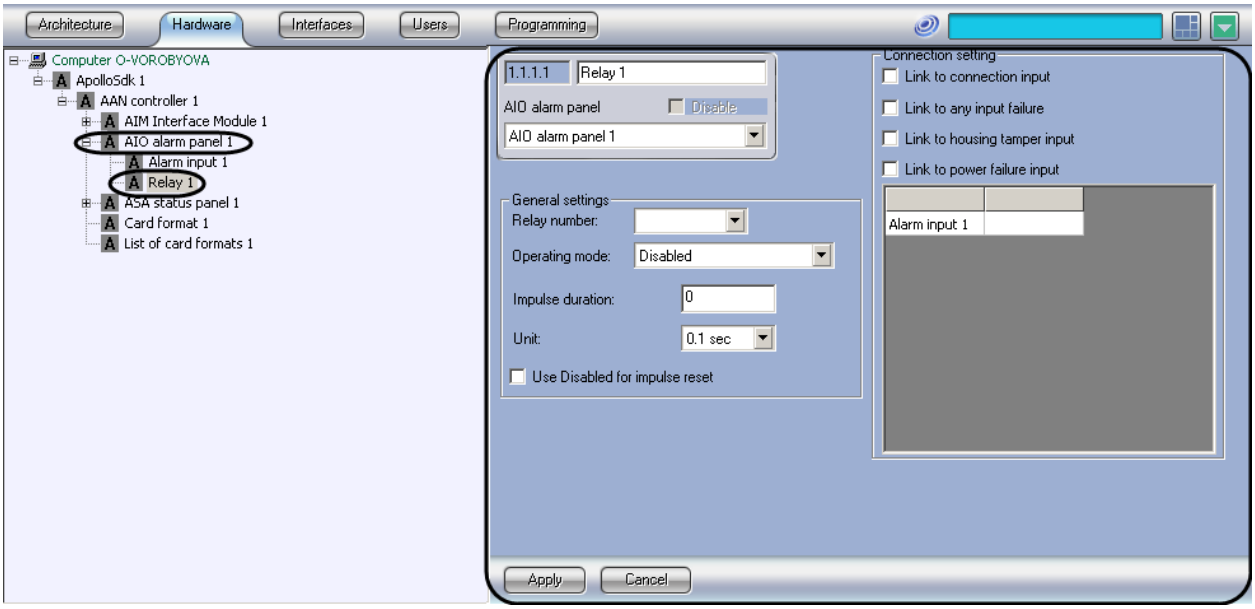

Fig.3.5-5 Relay object

The relay is configured as follows:

1. Go to the **Relay** object's settings panel (Fig.3.5-6).

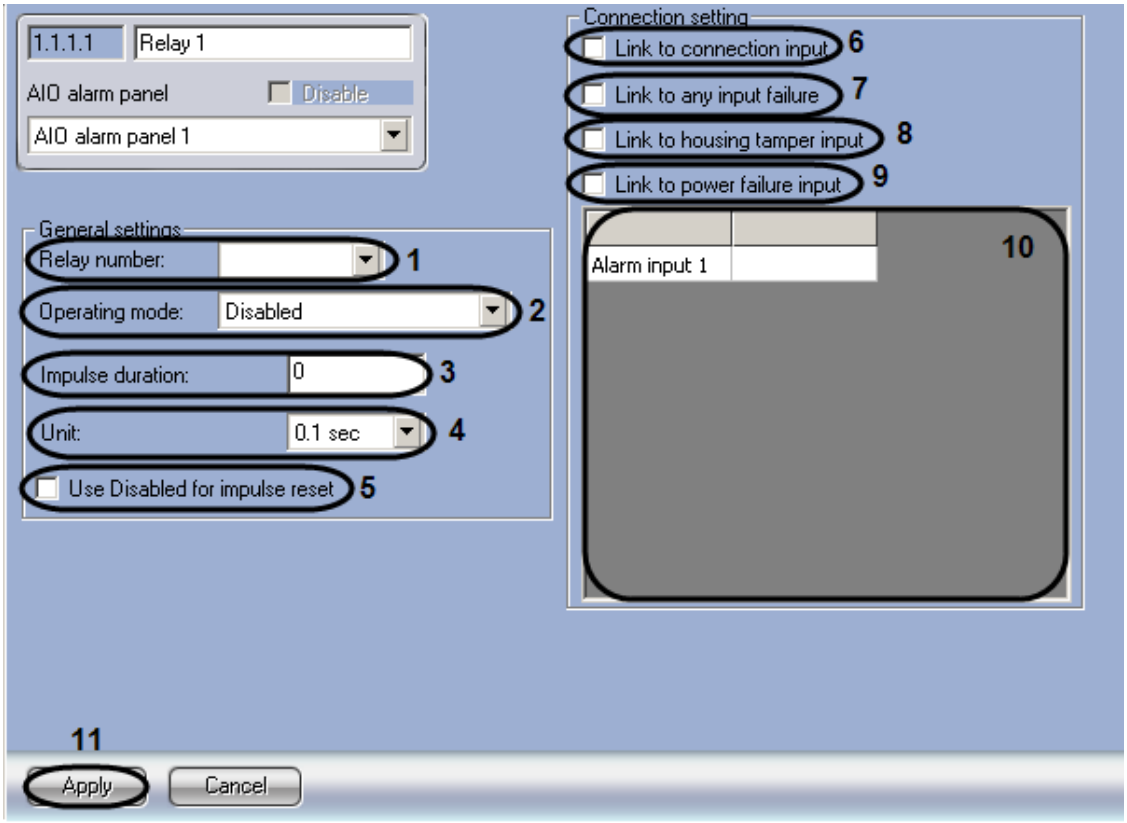

Fig.3.5-6 Relay object's settings pane

2. From the **Relay number** dropdown list select the relay's index number (see Fig.3.5-6, **1**).
3. From the **Operating mode** dropdown list select the relay's operating mode (see Fig.3.5-6, **2**, Table 3.5-2).

Table 3.5-2 Relay operating modes

Relay operating mode	Description
Disabled	The relay is open
Enabled	The relay is closed
Locally linked to inputs	The state of the relay depends on the state of the alarm inputs and inputs

4. Set the Impulse duration:
   - 4.1 From the **Unit** dropdown list select the units of measurement for the impulse duration (see Fig.3.5-6, **4**).
   - 4.2 In the **Impulse duration** field, specify the duration (in terms of the selected units of measurement) of the impulse (see Fig.3.5-6, **3**).
5. To make it possible to reset the impulse when changing the operating mode to **Disabled**, set the **Use Disabled for impulse reset** option (see Fig.3.5-6, **5**).
6. Set the **Link to connection input** option if the relay should react to the state of the **Connection** input (see Fig.3.5-6, **6**).
7. Set the **Link to any input failure** option if the relay should react to a fault on any of the inputs (see Fig.3.5-6, **7**).
8. Set the **Link to housing tamper input** option if the relay should react to the state of the alarm panel's cabinet (see Fig.3.5-6, **8**).
9. Set the **Link to power failure input** option if the relay should react to the state of the alarm panel's power supply (see Fig.3.5-6, **9**).

10. Configure the interaction between the relay and the alarm inputs (see Fig.3.5-6, **10**). In the **Action** column, select the alarm input states in which the relay will close (Table 3.5-3).

Table 3.5-3 Interaction between the relay and the alarm inputs

State	Description
None	The relay will be open regardless of the alarm input state
Alarm and tamper sensor	The relay will be actuated in the following cases: 1. An alarm message is received from the alarm input. 2. A message is received from the tamper sensor.
Alarm/mask and tamper sensor	The relay will be actuated in the following cases: 1. An alarm message is received from the alarm input. 2. An alarm message is received from the alarm input when it is disarmed. 3. A message is received from the tamper sensor.
Alarm/mask, tamper sensor and failure	The relay will be actuated in the following cases: 1. An alarm message is received from the alarm input. 2. An alarm message is received from the alarm input when it is disarmed. 3. A message is received from the input's tamper sensor. 4. A fault message is received.

11. To save any changes made, click the **Apply** button (see Fig.3.5-6, **11**).

This completes the configuration of the *AIO* alarm panel's relay.

3.5.4 Configuration of an ASA status panel's sensors

An *ASA* status panel's sensors are configured on the **LED** object's settings panel. This object is created based on an **ASA Status Panel** object (Fig.3.5-7).

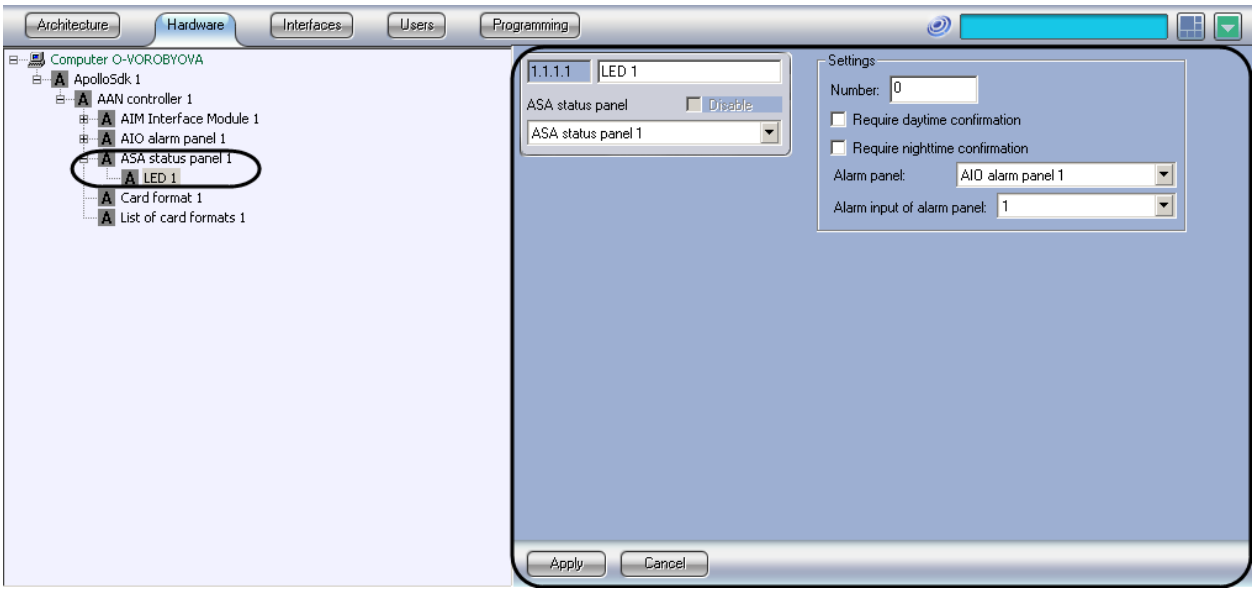

Fig.3.5-7 LED object

The *ASA* status panel's sensors are configured as follows:

1. Go to the **LED** object's settings panel (Fig.3.5-8).

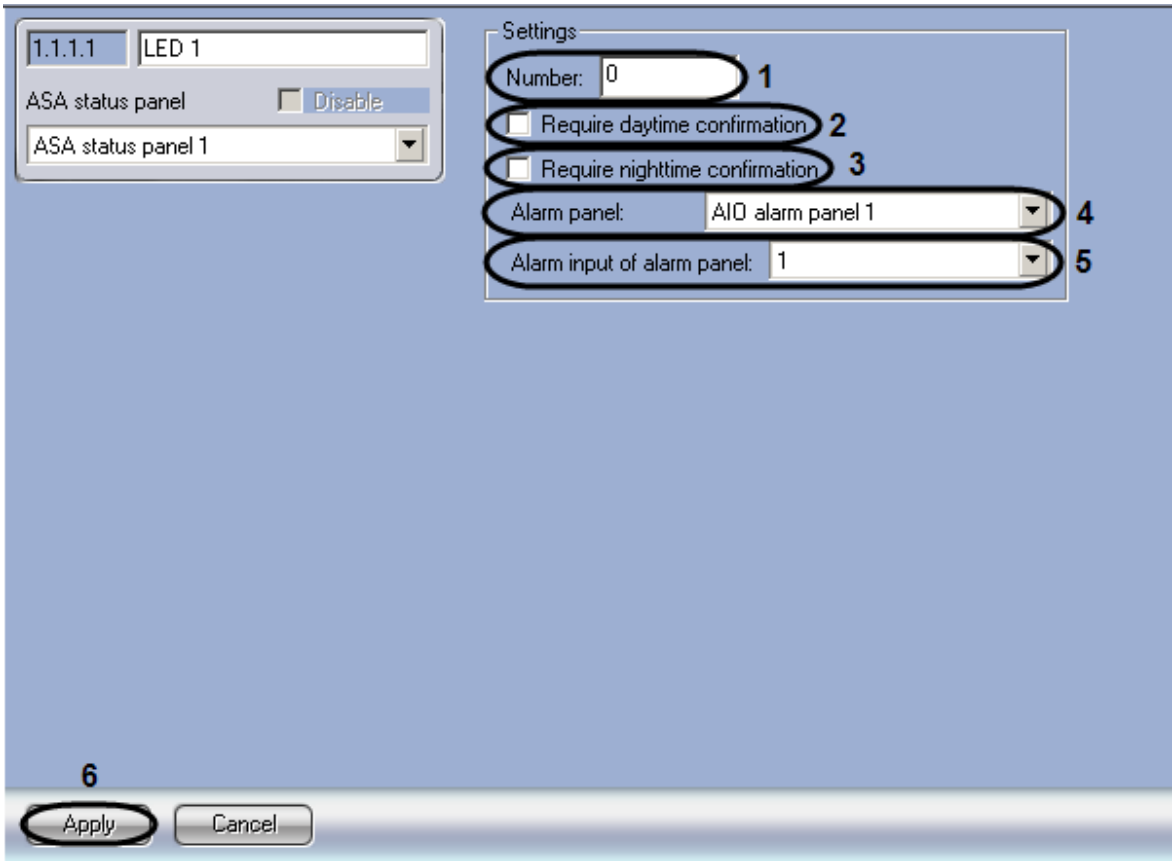

Fig.3.5-8 LED object's settings pane

2. In the **Number** field, enter the sensor's index number (see Fig.3.5-8, **1**).
3. If alarms must be confirmed during the day, check the **Require daytime confirmation** option (see Fig.3.5-8, **2**).
4. If alarms must be confirmed at night, check the **Require nighttime confirmation** option (see Fig.3.5-8, **3**).
5. Select the alarm panel associated with this sensor from the corresponding dropdown list (see Fig.3.5-8, **4**).
6. Select the alarm panel input associated with this sensor from the corresponding dropdown list (see Fig.3.5-8, **5**).
7. To save any changes made, click the **Apply** button (see Fig.3.5-6, **11**).

This completes the configuration of the *AIO* alarm panel's relay.

4 Working with the *ApolloSDK* integration module

4.1 General information about working with the ApolloSDK Module

The following interface objects are used to work with the *ApolloSDK* integration module:

1. **Map**;
2. **Event Log**;
3. **Pass and ID Office**;
4. **Photo Identification**.

Information about configuring these interface objects is presented in the following *Intellect* Software System documents: *Administrator's Guide*, *Pass and ID Office User's Guide*, and *Photo Identification Settings Guide*.

How to work with interface objects is described in detail in *Intellect Software System:* Operator's Guide.

4.2 Managing an AAN controller

An *AAN* controller is managed in the interactive **Map** window using the corresponding object's menu (Fig.4.2-1):

Fig.4.2-1 AAN Controller object's menu

To reset the controller's settings, select **Restart controller** in the **AAN Controller** object's menu (see Fig.4.2-1).

4.3 Managing the AIM interface module's readers

The *ApolloSDK* integration module's readers are managed in the interactive **Map** window using the **Reader** object's menu (Fig.4.3-1, Fig.4.3-2).

Fig.4.3-1 Reader object's menu

Fig.4.3-2 Description of the Reader object's menu commands

Menu command	Function
Allow access	Grants access
Open door	Opens the door for the "access time" period
Deny access	Denies access

4.4 Managing the AIO alarm panel's inputs

The *AIO* alarm panel's inputs are managed in the interactive **Map** window using the **Alarm Input** object's menu (Fig.4.4-1, Fig.4.4-2).

Fig.4.4-1 Alarm Input object's menu

Fig.4.4-2 Description of the Alarm Input object's menu commands

Menu command	Function
Arm	Arms the alarm input
Disarm	Disarms the alarm input

4.5 Managing the AIO alarm panel's relay

The *AIO* alarm panel's relay is managed in the interactive **Map** window using the **Relay** object's menu (Fig.4.5-1).

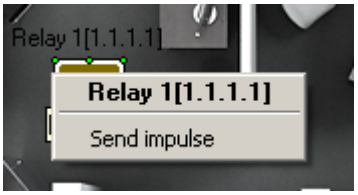

Fig.4.5-1 Relay object's menu

Select **Send impulse** in the **Relay** object's menu to send an impulse (see Fig.4.5-1).