Reference Design

AXIS A1001 integration with Herta BioSurveillance

In cooperation with:
# Table of contents

1. Purpose and scope  
2. Concept  
3. Configuration of Herta  
4. Herta SDK  
5. Controlling the AXIS A1001  
6. Contact information
1. Purpose and scope

The purpose of this document is to illustrate how to integrate Herta BioSurveillance, a software for facial recognition, with the AXIS A1001 Door Controller. This is intended for System Integrators, and serves only as an example for demonstrating the possibility of integration; this is not a readily available solution. This document refers to version 2.1 of BioSurveillance.


2. Concept

Herta BioSurveillance can be configured to send real-time information when it detects or identifies a face to a listening server. This is implemented as a .NET library called BioCom. The client part of BioCom resides in the BioSurveillance software and the server part is given as a SDK. The communication between the server and client is over TCP. Integration with 3rd party software is implemented on the server side. In this case, the API of the AXIS A1001 is used to control a door.

3. Configuration of Herta

The configuration of where and when to send events is performed in the Settings tab. Here, in Communication, you first have to enable the BioCom client by checking Enable. The Type should be binary. In URL you enter the IP address (or URL) of your BioCom server and its port in the field port. You can configure what to send to the server by checking corresponding boxes in Send. In this case check the Identification alarm box.
4. **Herta SDK**

Herta provides a .NET library called BioCom that includes following services:

- A TCP server that allows connections from many clients
- Functionality to retrieve alarm logs and camera information from clients
- Retrieval of real-time alarm info

To integrate with the AXIS A1001 Door Controller we make use of the BioCom TCP server and information about whether the identified faces are white listed or not, from the alarm info. For a basic system we would also need information about which camera was used to capture the face in order to open the correct door. This information is also present in the alarm info that BioSurveillance sends to the server.

For detailed information about the SDK, contact Herta.

5. **Controlling the AXIS A1001**

The AXIS A1001 Door Controller provides an API on JSON format for easy integration. To control a door we need following:

- IP address to the door controller
- User credentials to controller
- Device token number to the door we want to unlock
- Command to unlock the door

The IP address and user credentials we consider to be known. Device token numbers to the doors controlled by the controller is given by:

```
"tdc:GetDoorInfoList":{}
```

To unlock the door with a certain device token number, use:

```
{"tdc:AccessDoor":{"Token":"<device token number>"}}
```

6. **Contact information**

**Axis Communications**
See contact information at www.axis.com/corporate/contact.htm

**Herta Security**
See contact information at www.hertasecurity.com/en/contact

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