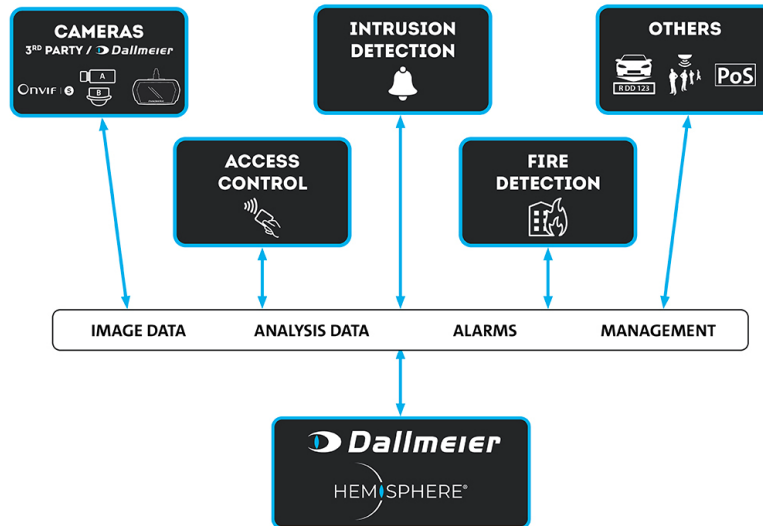


Products and security systems from other manufacturers can be easily integrated into the Dallmeier HEMISPHERE® Software Platform for Security & Business. HEMISPHERE® already supports a variety of interfaces for third-party systems such as access control systems, intrusion detection systems, fire detection systems, point-of-sale systems and much more.



Integration does not mean Integration straight away

Our philosophy of "Making things easier." means that we put a very high effort into integration. "Integration does not mean Integration straight away", but rather the controlled extraction of data from 3rd party systems and – where allowed – the writing/controlling of 3rd party systems from within the HEMISPHERE® Platform.

This offers a high customer benefit through

- Minimization of unnecessary processing steps
- Maximum „informedness“ of the system
- Highest workflow transparency and customizability

While other systems often only allow access to 3rd party systems from within their own software, our integration into the HEMISPHERE® Software Platform offers all the advantages of an overall system.

Optimized Integration

The integration of 3rd party systems into the Dallmeier HEMISPHERE® Software Platform is always done with the goal of optimal data integration. An application-based implementation efficiently filters, sorts and localizes data from other software infrastructures and merges them from the different sources into one HEMISPHERE® system. This approach thus also enables effective interaction with 3rd party vendors and the control of applications.

Controlled Data Security

Intelligent security analyses control the data flows in the HEMISPHERE® Platform at all system levels. All available data from external systems is not tapped indiscriminately, but rather only that which is required for functionality is aggregated. The interfaces provided are continuously reviewed (interface monitoring) to ensure that all system and data protection requirements are permanently met in use, in order to guarantee the greatest possible security for all components and to avoid unwanted data outflows.

System Stability

The overall stability of a system is always at the forefront of interface development. Extensive and continuous test procedures ensure that the reliability of a system is not compromised. Malfunctions or even failures are eliminated as far as possible through constant adjustments and improvements.

ActiveMQ

The ActiveMQ message broker ensures efficient and controlled message flow in a HEMISPHERE® network. It receives messages/analytical events in JSON data format from external applications and makes them available to the HEMISPHERE® Enterprise Event Processing Module (EEP). The EEP module listens and then takes care of addressing the messages to the correct HEMISPHERE® components according to its configured distribution rules. Communication takes place via industry-standard protocols, including OpenWire, STOMP, MQTT and WebSocket.

REST API

All HEMISPHERE® modules offer a standardized REST interface through which messages can be sent, but also data can be queried. In this way, external applications send alarms directly to the HEMISPHERE® Enterprise Alarm Processing Module (EAP), for example, which processes these alarm messages based on rules. However, it is also possible for external applications to query alarms from a HEMISPHERE® system via the REST API, to always be informed about new alarms and then to further evaluate them in their own system.

HEMISPHERE® Data Interface Module

The central element of integration in the HEMISPHERE® Platform is the HEMISPHERE® Data Interface Module (DIM). It offers a variety of plugins for the connection of 3rd party systems. Plugins are available for standardized protocols in the field of IoT/Industry 4.0 (including MQTT, OPC UA) and building automation (BACnet, KNX), as well as various plugins for proprietary communication protocols.

The plugins enable the visualization and further processing of states and event messages from the connected systems in the HEMISPHERE® system.

In addition, data can also be sent to the connected systems, which in turn enables the control of these systems.

The Data Interface Module supports among others:

IoT / Industrial Communication

- MQTT
- OPC UA
- OPC DA
- Modbus/TCP

Building Automation

- BACnet
- KNX

Access Control

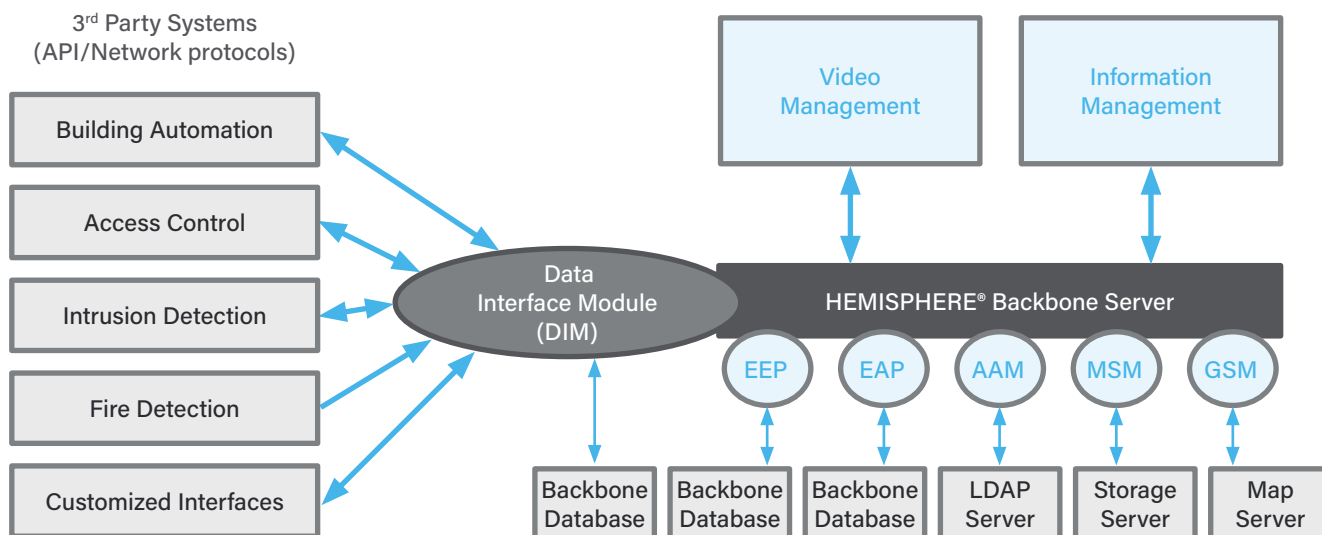
- Grosvenor Sateon Advance
- Interflex IF-6040
- Paxton Net2 V6
- Software House C·CURE 9000

Fire Detection

- Integration of various fire detection systems via Schraner SMART-RYX

Others

- Moxa ioLogik E1200 Series



OPC UA/OPC DA

The open, platform-independent communication standard enables secure communication of HEMISPHERE® with 3rd party applications at the control and automation level. In this way, a HEMISPHERE® system offers a uniform, industrial interface for the control and data exchange of building automation or access control systems, for example. In addition to the modern OPC UA API, access to external systems/devices via an OPC DA interface is also supported.

KNX

KNX is a standardized, widely used field bus in the area of building automation. For the connection to the HEMISPHERE® Platform – besides the Data Interface Module and the corresponding plugin – only a KNX IP interface is required.

BACnet

BACnet is a protocol for data transmission for building automation and building control. With BACnet it is possible to exchange data between heating, ventilation and air conditioning systems. Included here are also sensors and drives, as well as the automation (DDC devices, controllers) and management level (building control system).

MQTT/Sparkplug B

MQTT is an open network protocol for machine-to-machine (M2M) communication. Among other things, it is used to connect IoT devices. It is a client-server protocol that works according to the subscriber model. The MQTT.Plugin in the Data Interface Module supports the Sparkplug B specification in addition to pure raw payload.

Customized Interfaces

Individually developed interfaces also take into account very specific requirements of external applications. Custom-fit interfaces can be programmed for use with the HEMISPHERE® Data Interface Module (DIM), which we develop in close customer contact.

This enables external applications to achieve a high level of integration in a HEMISPHERE® system and to benefit from the advantages and possibilities offered by the HEMISPHERE® Data Interface Module (see above).

Contact us to find out what possibilities an individually programmed interface can bring to your application. We will advise you and show you the advantages of professional interface programming.

Summary: Interfaces and Functions

| Interfaces / Functions | Events | Alarms | Active Objects | Control |
|------------------------|------------------|------------------|------------------|------------------|
| ActiveMQ | X | X | - | - |
| REST | X | X | - | - |
| OPC UA ^{*)} | X | X | X | X |
| OPC DA ^{*)} | X | X | X | X |
| BACnet ^{*)} | X | X | X | X |
| KNX ^{*)} | X | X | X | X |
| MQTT | X | X | X ^{*)} | X ^{*)} |
| Customized API | X ^{**)} | X ^{**)} | X ^{**)} | X ^{**)} |

*) In combination with HEMISPHERE® Data Interface Module

***) If supported by external system

