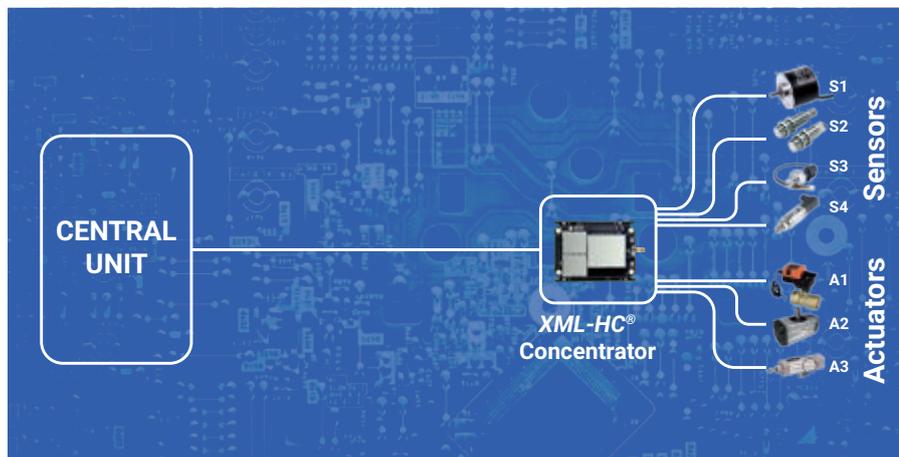
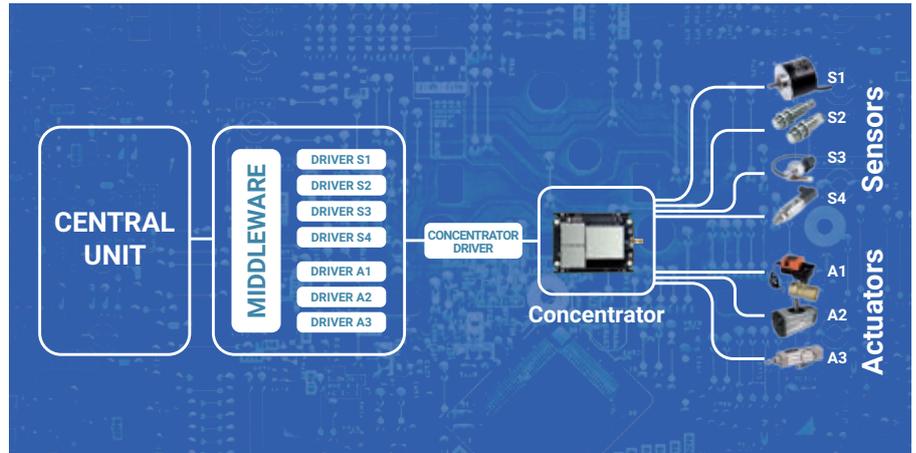


# XML-Hèrmes-Comm® Concentrator for complex and IoT systems

It simplifies the architecture of a complex device, reduces development and maintenance times, increasing the performance of the whole system.

## HETEROGENEOUS SYSTEMS

In complex systems, the *Central Processing Unit* connects *peripherals* (sensors and relays) through a *concentrator*; the heterogeneity of devices and the fragmentation of protocols, requires *middleware* software which acts as an “adhesive”. For each device it is necessary to install the appropriate *driver*: the connection and replacement of a *device* requires heavy interventions on the software and firmware logics.



## SIMPLIFICATION

XML-Hèrmes-Comm® significantly simplifies the architecture of complex systems: it no longer requires *middleware* and it connects *peripherals* directly without *software drivers*. The whole system is simpler and more essential. **Implementing a complex project costs less and is faster**, replacing the device no longer requires lengthy, complicated and costly software and firmware modifications.

## QUALITY

### 1 Architecture

The *Central Processing Unit* is connected directly to the *concentrator*; as a result the peripherals are connected in a direct way, without any further intermediation of the *software drivers*. **The entire system is not only simplified but also more responsive.** Therefore, flexibility, quick customization and lower costs.

### 2 Stability and Speed

**Communication with peripherals is more stable** than with *drivers*. **Faster data transfer** for both *large* and *small strings*. Latency times, in the order of *milliseconds*, are hardly affected by working conditions.

### 3 Self-Configuration

XML-Hèrmes-Comm® makes communication with peripherals **self-configuring, regardless of the type of element connected**. Building a complex system, adding or replacing a *sensor* or *relay* is no longer a problem: there are no more constraints to change or to adapt to new models.



## 4 Time and cost reduction

The costs and *lead times* of complex devices are significantly reduced, as are the *service* and *maintenance* times and costs. **Changes in the architecture** of the entire system no longer require time-consuming and costly work; the number and type of peripherals can be changed immediately.



## 5 Flexible Format

The XML-Hèrmes-Comm® format is defined in a *flexible* way, **open to any future expansion**. It is easy to change the number of *fields* based on the number of *inputs* and *outputs* of the system, add different types of *inputs* or *outputs* not provided in the version in use. It's a true "backwards compatibility" with *hardware*.



## 6 System Performance

XML-Hèrmes-Comm® improves the entire system: The *hosted* software is simplified, *host-peripheral* protocols become standard, input and output data are managed more quickly, required bandwidth is reduced, each device is independently configured. **It also improves the stability and speed** of dialogue with peripherals.



## INTERNET OF THINGS

There are more and more *Internet of Things (IoT)* applications, an evolution of great interest: simple devices (*sensors* and *relays*) become recognizable and perform many practical functions. *Sensors* have the task of collecting data from the environment in which they are placed, the *relays* transform the *data* into *actions*. With XML-Hèrmes-Comm®, creating an *IoT* project costs less and is faster.

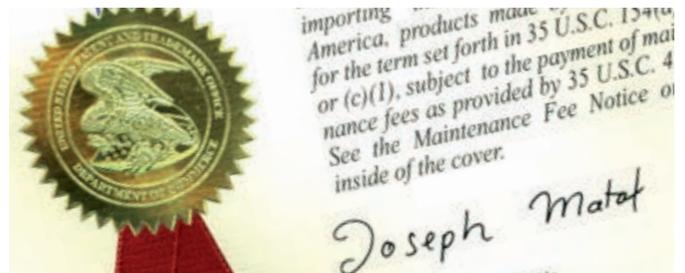


## HIGH-SPEED TRAINS

*High-speed* trains are equipped with independent *bogies* including *motors*, *sensors* and *relays*; data from these components are processed in the booth to control, coordinate and optimise the functionality of each bogie, carry out diagnostic assessments and take corrective action. With XML-Hèrmes-Comm®, creating a *concentrator* for **hostile environments** costs less and is faster.

## CERTIFICATIONS

XML-Hèrmes-Comm® is **certified at the highest level of inventiveness** by EPO - European Patent Office (Ref. IT201800008857). Gartner Inc. has included Hèrmes-Comm® among the "Cool Vendors 2017 in the Unified Workspaces category", indicating it as **one of the five innovations** in the world that will produce a positive discontinuity in the technological world.



**XML-Hèrmes-Comm® makes applications in a wide range of industries cost-effective**

Home automation, robotics, avionics, automotive, biomedical, monitoring, telemetry, surveillance, event detection, smart grid, smart city, agriculture, zootechnics and many more.