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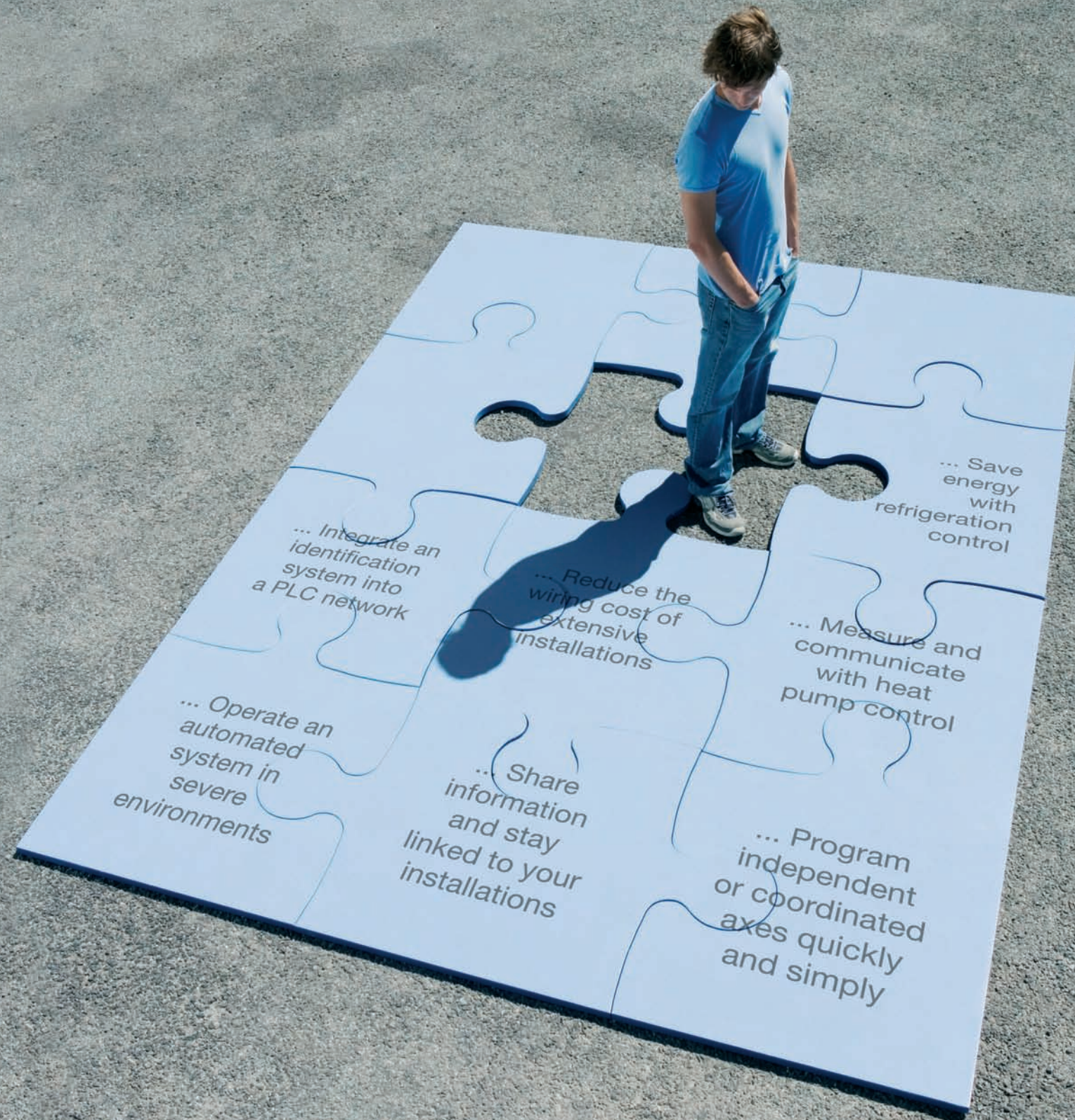


Simple Machines success stories  
*Build together...*





> Build together your solution to...







Program independent or coordinated axes quickly and simply...



*We have a solution dedicated to industrial simple machines.*

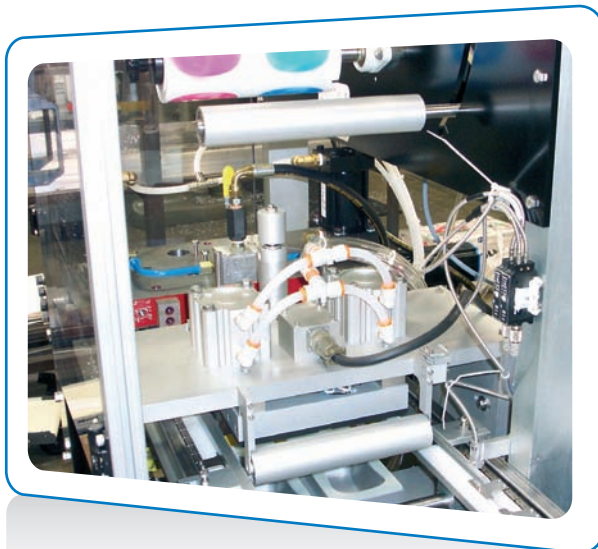


Twido, Lexium05 & Magelis XBT GT

This is based on association of the **Twido** programmable controller and **CANopen** field bus. It enables access to more advanced functions such as **variable speed** drive and servo-drive control. Thanks to its Ethernet communication bus, it simplifies remote monitoring and maintenance.

For this type of machine, our customers are not only looking for an installation that is **simple, fast** and without risk of error, but also a programming tool enabling simplified communication and guaranteeing **easy, adapted** implementation and maintenance.

Reduction in programming and debugging time **35%**



## Application case



### How our solution met the expectations of a packaging machine manufacturer (USA)

Requirements of this customer were:

#### Global cost reduction

- Hardware
- Installation time
- Programming time
- Maintenance time

#### Increased machine productivity

- In a developing and competitive market

#### Remote communication with machines

- Monitoring
- Management
- Maintenance



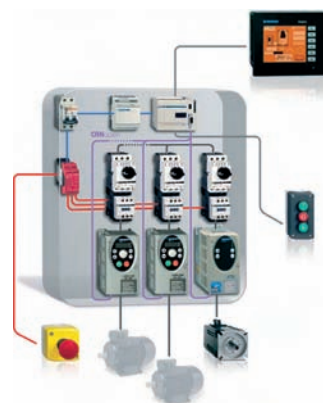
## Conclusion

Using of the CANopen field bus as the wiring system considerably reduced installation and maintenance costs, as well as risk of error. It also enabled a significant increase in machine performance thanks to speed data exchange of the Twido controller and Lexium 05 servomotor.

The ergonomic and easy implementation of macros via TwidoSuite software reduced programming and debugging time by some 35%.

The choice of communication between Twido controller and XBT GT touch screen via Ethernet greatly simplified installation operation and maintenance.

Reduction in  
programming and debugging time **35%**



**Compact upgradable optimised**  
Find details of the architecture related to this application on [www.schneider-electric.com](http://www.schneider-electric.com)

Discover our movie  
of this application solution



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Reduce the wiring cost of extensive installations...



Twido, master coupler,  
IP20 & IP 67 I/Os

*We have a highly-adapted, open  
and flexible solution.*

This is based on association of the **Twido** programmable controller, its **AS Interface master coupler** and **IP20** and **IP67 input/output** modules.

For this type of installation, our customers are looking for a **fast, reliable** wiring system offering a high level of immunity to electromagnetic interference (EMC).

Reduction in  
programming **30%**  
installation and  
implementation time





## Application case



### How our solution met the expectations of a commercial building machine manufacturer (Spain)

Requirements of this customer were:

#### Global cost reduction

- Installation time
- Equipment
- Installation

#### Open and flexible automated system solution

- Single architecture adaptable to different machine types
- Simplified maintenance

#### A reliable and secure architecture

- Improve the safety of installation



Reduction in programming  
installation and  
implementation time **30%**

**Distributed AS-Interface optimised**  
Find details of the architecture related to this application on [www.schneider-electric.com](http://www.schneider-electric.com)

## Conclusion

Use of Twido and AS-Interface bus as wiring system enabled a 30% reduction in installation and implementation costs and the introduction of high level communication and diagnostics thanks to use of a single cable (power and communication) with its quick connection system (plug & play).

The machine data security function integrated with AS-interface Safety at Work and use of a range of security components enabled the customer to achieve the high security objectives for the installation.

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of this application solution



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## Save energy with refrigeration control...



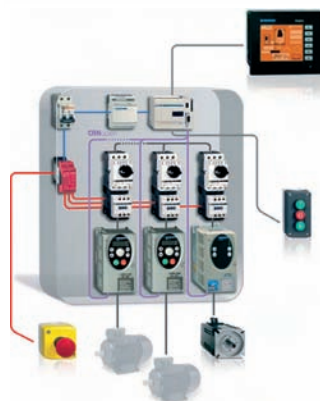
Twido & module PT100/PT1000

*We have an open, flexible solution adapted to refrigeration control and management.*

This is based on the **Twido Compact** controller, **Ethernet** and the **PT100/PT1000** 8-input temperature extension module.

For this type of machine, our customers are not only looking for an installation that is **simple**, **fast** and without risk of error, but also an easy programming tool enabling simplified communication and guaranteeing **easy**, **adapted** implementation and maintenance.

**22%**  
Energy saving



**Compact evolutive optimised**  
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**22%**  
Energy saving

## Application case



### How our solution met the expectations of a refrigeration system integrator (Canada)

Requirements of this customer were:

#### Operating energy cost reduction

- By choice of decentralised automated system architecture (each cold producer, tank and unit independently controlled)
- By high-performance regulation functions

#### Global solution cost reduction

- Reduced wiring time
- Reduced installation errors
- Reduced equipment costs

#### Improved communication network performance

- Communication of all systems with central supervision for monitoring and configuration functions

## Conclusion

Choice of decentralised architecture with independent control, use of the PID regulation functions integrated in the Twido controller and the application know-how of this manufacturer enabled optimisation of temperatures (monitoring and regulation) of each element in the cold chain (tanks, units) thus offering the end user an energy saving of 22% against traditional solutions.

Use of RJ45 connectors for the Ethernet communication network, RJ11 connectors for the PT100/PT1000 extension modules and an increased number of inputs, 8 instead of 4 previously, significantly reduced global solution cost (wiring and product).

Choice of an Ethernet network enabled direct communication between all elements in the cold chain (without requiring addition of a specific gateway) and improved communication flow compared to a traditional field bus.

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of this application solution



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## Measure and communicate with heat pump control...



**Twido, TWD AMI4LT analogue module  
& Magelis XBT GT**

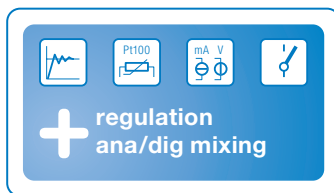
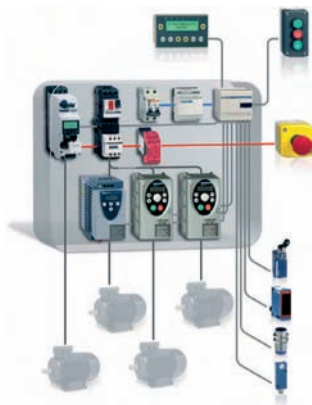
*We have a highly-adapted, open and flexible solution.*

This is based on association of the **Twido Compact** programmable controller, its **TWD AMI4LT** analogue extension module and an **XBTGT** graphic terminal.

For this type of machine, our customers are looking for a controller accepting **mixing** of different numbers of analogue and digital inputs, with implementation software that is both **simple** and **powerful** (alarm management, regulation, Boolean logic).







#### Compact optimised

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## Application case



### How our solution met the expectations of a HVAC machine manufacturer (China)

Requirements of this customer were:

#### Single measurement acquisition/processing system

- Temperature and pressure measurement
- Regulation via PIDs
- Valve and compressor control

#### Single communication system

- Communication with end user building management systems
- Simplified remote access for maintenance operations
- Local control via user-friendly interface

## Conclusion

The technical solution proposed to this machine manufacturer enabled acquisition of analogue and digital signals and valve and compressor control, as well as ergonomic and easy implementation of PID algorithms using TwidoSuite programming software.

The Modbus port integrated in Twido enabled simplified exchanges with BMS systems and remote control by telephony network.

This solution proposed to our customer also applies to production machines in the refrigeration sector.





Integrate an identification system  
into a PLC network...



*We have an adapted solution to interface  
a tracking system in a network.*

This is based on association of the **Twido compact** programmable controller and **Ositrack RFID** system.

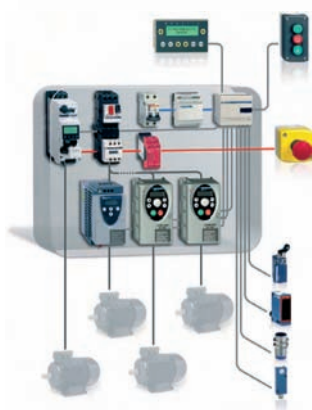
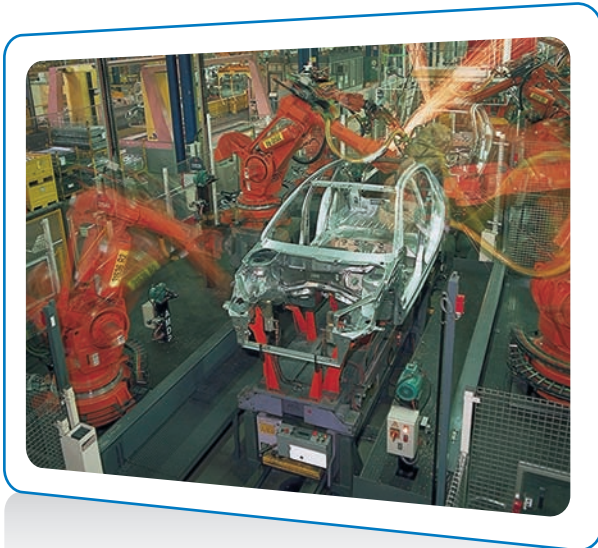
For this type of machine our customers are looking for an installation that is **simple** and highly **reliable** enabling an **adapted** design.



Twido & Ositrack

Reduction in  
installation  
and implementation  
costs **20%**





#### Compact optimised

Find details of the architecture related to this application on [www.schneider-electric.com](http://www.schneider-electric.com)

Reduction in  
installation  
and implementation  
costs **20%**

## Application case



### How our solution met the expectations of an automobile manufacturer (France)

Requirements of this customer were:

#### Simple, economical interfacing of new RFID system in existing PLC network

- Solution integration without modification of existing PLC programmes
- Adaptation of protocol and physical line between PLCs and identification system

#### Global cost reduction

- Adapted implementation (simplified programming and installation)
- Improved reliability of production means
- Optimisation of installed equipment maintenance

## Conclusion

The association of Twido-Ositrack and Modbus port simplified communication exchanges. The openness of Twido to different communication profiles facilitated integration in an existing PLC network.

This winning association is a real solution ensuring ease of installation and maintenance by product availability.

Thanks to highly competitive pricing, integration adapted to the applications of this customer reduced overall cost of investment, installation and implementation by around 20%.

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Operate an automated system in severe environments...



*We have a solution particularly adapted to extreme conditions.*

This is based on the **Twido Extreme** programmable controller and its interfacing capabilities (**Modbus, CANopen, CANJ1939** and hydraulic function blocks).

For this type of machine, our customers are looking for a simple, rugged installation that resists attack of severe environments (climatic, corrosive, mechanical, etc.).



**Twido Extreme, Advantys FTB  
& Magelis XBT GT**







## Application case



### How our solution met the expectations of a vehicle manufacturer (Finland)

Requirements of this customer were:

#### Rugged installation

- Extreme temperature resistance of PLC (to around -20°)
- Resistance to regular vehicle high-pressure cleaning
- Shock and vibration resistance

#### Improved communication performance

- Hydraulic valve systems interface
- Touch screen interface
- Joystick interface

#### Simplified installation

- Reduced installation time (direct machine frame mounting without enclosure)



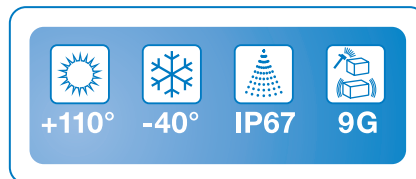
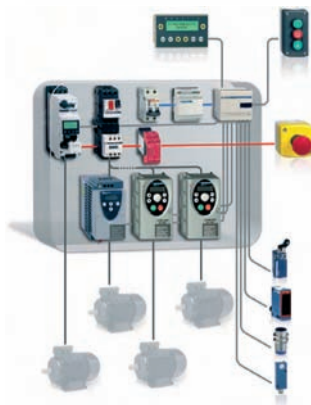
## Conclusion

The rugged characteristics of Twido Extreme (-40°/+ 110°/IP67/9G) provided the answer to customer requirements, while simplifying installation by direct mounting without enclosure on the machine frame.

Use of CANopen field bus, CANJ1939 and Modbus integrated in Twido Extreme simplified communication with:

Advantys FTB IP67 inputs/outputs, Customer external unit (diesel engine speed and temperature), XBT GT screen (data management and video streams),

Twido Extreme PWM input/output functions simplified the use of hydraulic valve systems.



#### Compact optimised

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Share information and stay linked to your installations...



*We have a highly-adapted, simple and economical solution.*

This is based on the **Zelio Logic** controller, ready-to-run modem and a wireless network (GSM).

For this type of installation our customers are looking for a remote management system **simple** to implement with a single programming software package using widespread **SMS** technology.



Zelio Logic, modem communication interface & GSM modem

**100%**

- Interventions justified
- UNLIMITED activity scope





## Application case



### How our solution met the expectations of an ecological heating systems integrator (Spain)

Requirements of this customer were:

#### Improved installation control and safety

- By temperature measurement and management (hot sanitary water, heating, ambient, etc.)
- By control and automation of fuel supply and air inlet

#### Customer service continuity by limiting operating costs

- Real time installation state information (fuel level, equipment faults, maintenance level) while optimising site visits and collaborator travel
- Offer start-up assistance service to installer partners eliminating their need for additional personnel

## Conclusion

Our customer improved the performance of machines and installations thanks to the management capabilities of Zelio Logic analogue and digital automation functions. This solution also enable installation development with a little or without wiring modifications.

Easy operation of the Zelio Soft programming tool helped our customer in production of the application and ensured transparency of implementation of communication related to the control part of the machine.

Use of Zelio Logic, the communication interface and GSM offered the possibility of remotely receiving and/or sending information and therefore 100% of interventions were justified.

Location of the modem solution at partners and sale of the remote management option to end users enabled our customer to consolidate activity scope without the need for company expansion.



# 100%

- Interventions justified
- UNLIMITED activity scope



#### Compact optimised

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