

Take command!



New!  
CompactPCI bus



## PAC SYSTEM MSX-BOX

- Open and transparent Programmable Automation Controller system – in real time
- With free development tools
- Field bus interfaces
- Available as PCI and CompactPCI versions

# PAC SYSTEM MSX-BOX

## Distributed data acquisition and control in real time

The MSX-Box is an open Programmable Automation Controller system (PAC). It has been specially developed for industrial measurement, control and automation applications in real time where processes have to be carried out within a defined time.



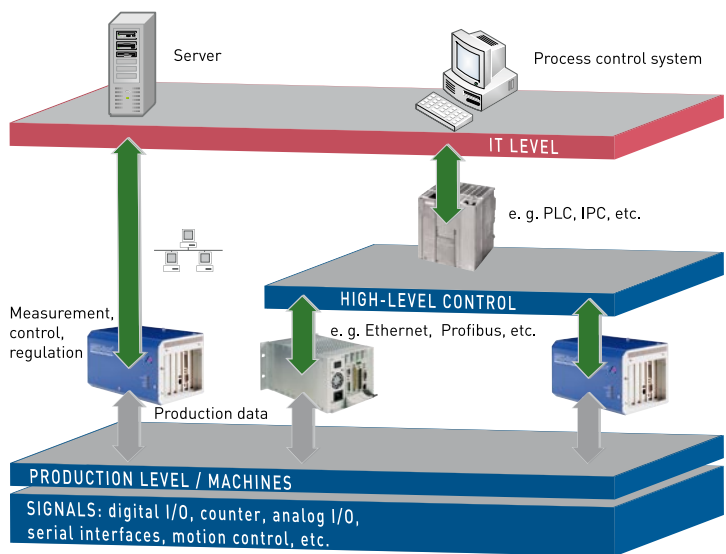
### The concept

- **Modular platform** for distributed measurement, control and regulation applications in real time
- **Based on established standard technologies** like PCI backplane or CompactPCI backplane
- **Non-proprietary system:** I/O PCI boards or CompactPCI boards from other producers can be used.
- **Low maintenance:** Linux operating system with RTAI extension – no update obligations
- **Reduced costs:** no software licence costs
- **No unnecessary multimedia features:** Full machine time only for your application
- **Optimise your system:** Free access to the software down to the kernel source code for extensive adaptations of your measuring system
- Real-time development tools without additional costs
- **Investment security:** Long-term availability of the products thanks to the ADDI-DATA supply philosophy

## Between the production and IT level

The MSX-Box acquires sensor and machine data, processes them, and controls or regulates the corresponding terminals.

The MSX-Box can be integrated into a higher-level control system via Ethernet or Profibus. By integrating the MSX-Box into the company network via Ethernet, data can be forwarded to software packages on the IT level for use in statistics or process optimisation.



## PAC SYSTEM

### Programmable Automation Controller

PAC systems are mainly used for industrial measurement and control or regulation tasks as well as for motion control.

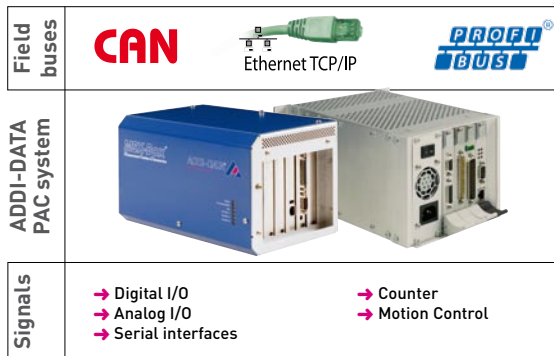
They execute several tasks simultaneously and in a deterministic way.

### Core features of a PAC system:

- Compact and robust design
- Programmable
- Standard Ethernet (TCP/IP)
- CPU board as system controller
- Different I/O modules

## Integrated into the field level

Measurement and control systems that monitor entire processes and interact with machines or hardware must be capable of working with data of different origins.



### Field buses and signals

With the MSX-Box, you can acquire signals from different field buses: CAN, Profibus, Ethernet, or signals from serial lines such as ultrasound sensors or scales.

The PAC system can also process the following signals:

- Digital I/O
- Counter: incremental, SSI, etc.
- Analog I/O
- Serial interfaces
- Motion control
- etc.

### Good for retrofits, too

→ The MSX-Box is suitable both for setting up a new automation project and for optimising existing installations. That means you continue to benefit from your familiar hardware, while still equipping your installation with the latest technology for more efficiency where it counts.

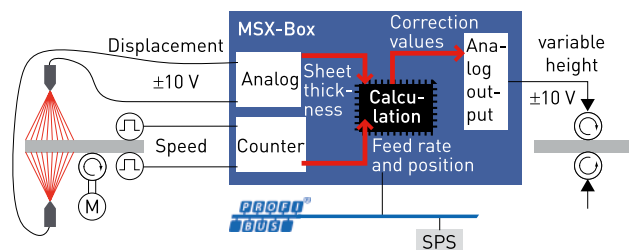
## Application examples

### Example 1

In a steel plant, the MSX-Box is used to measure the thickness of sheets. Laser sensors ( $\pm 10$  V) are used to measure the sheet thickness. Simultaneously with the thickness measurement, incremental counters are used to determine the position of the sheet and the feed rate.

The deviation in sheet thickness is calculated in real time. The result of the calculation is used to control the position of the rollers in the next process step and thus to produce sheets of a uniform thickness.

This information is then provided to higher-level control systems through a Profibus interface, e.g. for statistics, process analysis, or as specification values for downstream processes.

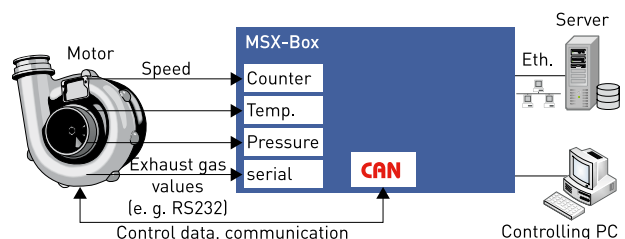


### Example 2

During inspection of engines, different metrics are acquired based on different signal types: speeds, temperatures, pressures, exhaust gas values, etc. Using the integrated CAN interface, messages from the CAN bus can also be recorded.

To obtain a meaningful measurement result, all metrics must be acquired at defined points in time. The value of all metrics is then measured at time  $t$ .

To use the data for later evaluation, the MSX-Box stores the measured values in a database.



# BESPOKE SOLUTIONS

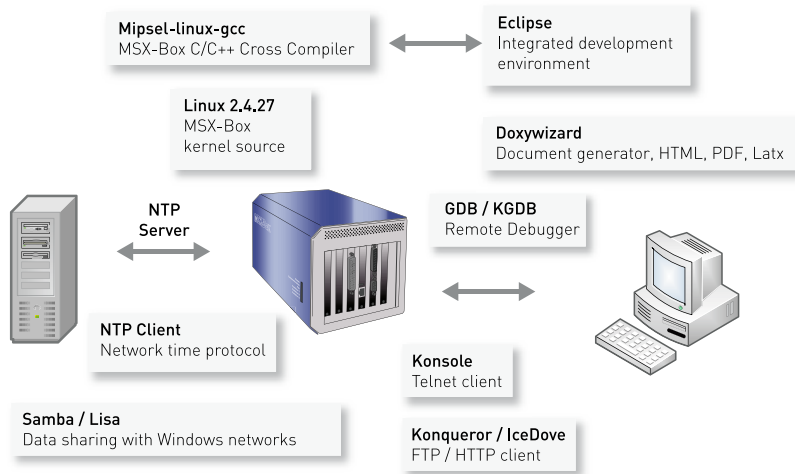
## Develop your own applications – with the right tools

To develop your measurement, control, and regulation applications quickly and easily, we provide you with a Live DVD with numerous free development tools.

The Live DVD is based on the Eclipse development environment and the Ubuntu distribution.

### No costs for later changes

→ The development tools are free of charge. That means no additional costs for future software changes.



## Our service: We will develop your applications

Save time and resources without forgoing the advantages of a customised solution. Describe your requirements to us, and we will take care of the programming.

Call us! We will be happy to advise you: +49 7229 1847-120.

You can also send an e-mail to [info@addi-data.com](mailto:info@addi-data.com)

## SERVICE FAX +49 7229 1847 222

Please send me information about the following products:

- MSX-Box for PCI bus
- MSX-Box for CompactPCI bus
- Bespoke solutions

Company

Name, title

Department

Street

Postal code / City

Country

Please send me the new product guide

- digital on CD-ROM
- print version

I have questions on your products, please call me on the phone.

Phone

I wish to receive the product information via e-mail.

Please keep me well informed about your innovations. Send me your E-newsletter.

E-mail

ADDI-DATA GmbH  
Airpark Business Center • Airport Boulevard B210  
77836 Rheinmünster • Germany  
Phone: +49 7229 1847-0 • Fax: +49 7229 1847-222  
[info@addi-data.com](mailto:info@addi-data.com) • [www.addi-data.com](http://www.addi-data.com)

**ADDI-DATA**<sup>®</sup>  
SPIRIT OF EXCELLENCE