Industrial Measurement and Automation

PRODUCT OVERVIEW

NEW!
Boards for
CompactPCI Serial

MSX-*i*log

www.addi-data.com

ADDI-DATA®
SPIRIT OF EXCELLENCE

INTELLIGENT ETHERNET SYSTEMS

Measurement and control in the field

IP 65

+ 85 °C*
- 40 °C

*Operating temperature

Integrated
Ethernet switch

Timer function or
compare logic for
synchro trigger signal

Cascadable,
can be synchronised
in the µs range
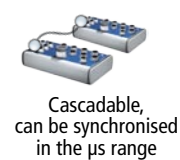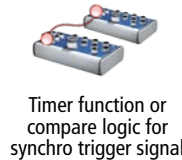
The intelligent systems of the MSX-E series are especially suited for reliable data acquisition and signal output directly at the measurement point. They are robust, easy to handle and can be directly connected to sensors and actuators. The Ethernet interface allows to visualise and to evaluate the measurement results immediately through the company network, in order to initiate prompt process corrections.

Signal types

- Digital I/O
- Counter: incremental, sin/cos (1 V_{pp}, 11 $µA_{pp}$), EnDat2.2
- Analog I/O
- Temperature measurement
- Pressure measurement
- Length measurement with transducers, also simultaneously
- Noise and vibration measurement
- Force-distance measurement
- 4-port serial interfaces, RS232, RS422, RS485, 20 mA CL

Easy configuration

After entering the IP-address of the MSX-E system into the browser, the web interface of the system opens.

The application parameters are set through mouse click and can then be saved on an external media.

FEATURES

- Processing of different signal types
- Easy installation
- Comfortable configuration
- Easy connection to the company network
- Systems can be combined and synchronised
- Robust and interference-free
- Stand-alone mode
- Onboard data calculation
- Direct administration via PLC

System combination

Example with two different systems

Synchronisation

Allows for example the acquisition of values with position indication - combination of an analog input system and a counter system.

ETHERNET DATA LOGGERS

New!

*i*ndustrial + *i*nternet technology + *i*ntelligent + *i*ntuitive + *i*ntegrated
= *i*nnovative data loggers from ADDI-DATA

Data recording and visualisation made easy

MSX-*i*log

MSX-ilog data loggers from ADDI-DATA are used for continual data acquisition and storage over longer periods of time. Diverse physical measurements can be acquired and shown in three different display modes. Data storage and visualisation take place parallel to one another.

Different hardware versions are available to meet the various application requirements:

- Ethernet systems
- PCI systems
- CompactPCI systems

The version with the Ethernet systems is intended for use in the field. These are equipped with numerous protective circuits and an IP 65 protection level and they can be used at an operating temperature from -40 °C to +85 °C. In order to safeguard your investments, MSX-ilog data loggers can be supplied by ADDI-DATA over a period of years.

Functions

- Long-term recording of many signal types
- Visualization: Live or recorded data using a curve diagram or display of value
- Setup of the test point without programming knowledge
- Web-based user interfaces without installation of programs
- Can be used as a stand-alone system

Versions:

- MSX-ilog-AI-16: 16 diff. analog inputs, 16-bit
- MSX-ilog-RTD: 16 inputs for RTD, 24-bit
- MSX-ilog-TC: 16 inputs for thermocouples, 24-bit
- MSX-ilog-AI16-DIO40: 16 analog inputs, 40 digital I/O

ADVANTAGES

- Industry standard solutions
- One-time acquisition costs (no additional license costs)
- Independent of operating systems
- Software integrated in hardware - no installation necessary
- Simple operation via the web-based user interface
- Recording of a number of signals as physical measurement data
- Fast acquisition

PAC SYSTEMS

Distributed data acquisition and control in real time
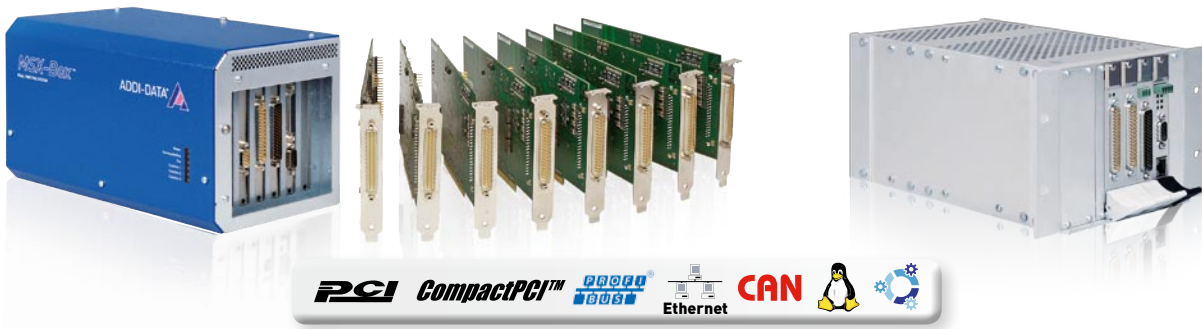
The MSX-Box is an open and transparent Programmable Automation Controller system (PAC). It has been specially developed for industrial measurement, control and automation applications in real time. In addition to the previous versions for PCI boards, a version for CompactPCI boards is now available, the MSX-Box-CPCI.

With the **MSX-Box**, you can enhance your real-time measurement and control applications: You will be working with a system that can be adapted to your needs. Even complex controls can be easily developed with the tools supplied. To limit the acquisition costs for series of **MSX-Boxes**, the Linux operating system has been chosen and all development tools are supplied free of charge.

Thanks to the ADDI-DATA supply philosophy, the products are available for a long time. In this way, you secure your investment in the long term.

Find out today how to realise your applications of tomorrow: www.msx-box.com.

You will find a large range of adapted PCI and CompactPCI board on page 6 or in the product catalogue

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

OPEN SOURCE INSIDE

- Based on the Debian distribution
- Integrated Eclipse development environment
- Debugging via GDB / KGDB (user and kernel mode)
- Compiling with Mipsel-linux-gcc 2.95 and 3.3 possible
- Calculation and visualisation package Scilab © INRIA-ENPC

ETHERCAT AND PROFINET SYSTEMS

Precise, robust and reliable

EtherCAT®

PROFINET®

The real-time component plays an important role in distributed control and regulation tasks. That's why ADDI-DATA has developed a new product family of real-time Ethernet systems: x-ARTS. These robust systems are designed for measurement, control and automation applications with various real-time requirements.

High level of protection

The x-ARTS are available for EtherCAT (EC-ARTS) and PROFINET (PN-ARTS). They are particularly suited for use in the field, where interferences are an everyday event. In order to assure reliable operation, many protective mechanisms are built-in.

- Protective circuits such as optical isolation, etc.
- Robust metal housing
- IP 65 degree of protection
- Extended temperature range from -40 °C to +85 °C (operating temperature)

The x-ARTS stand for quality and reliability. Like all other ADDI-DATA products, they are available for years. So for you, they make an all-around safe investment.

BENEFITS

- Fast, robust systems
- For use directly in the field
- Highly precise inputs
- Hot-plug enabled
- Diagnostic possibility
- Long-term availability of the product

The optimal solution

The real-time Ethernet systems from ADDI-DATA in many respects make an optimal choice for measurement and automation tasks. They are characterised by highly precise inputs. While the bus is clocking time, they are able to measure more quickly and to buffer these values. Moreover, the measurement can be started independent of the bus, since by the use of the 24 V trigger input, the x-ARTS may be combined with hardware that is not connected to the bus. For example, a light barrier can serve as a trigger signal. In addition, several systems or signals can be synchronised with one another using the synchro line, all in a period of less than 1 µs.

The x-ARTS can also tie together signals from various external devices, such as encoders and analog inputs, and in this way acquire values faster than the bus cycle. This increases the efficiency of your application. Various diagnosis possibilities, retrievable via Ethernet, can be set to work in the real-time Ethernet systems from ADDI-DATA.

INTERFERENCE-FREE PC BOARDS

For harsh industrial environments

NEW!

−40 °C to +85 °C

PCI EXPRESS® **PCI** **CompactPCI™** **CompactPCI® Serial** **PC/104-PLUS**

PC-based solutions are indispensable in the world of measurement and automation. They can acquire and process a high amount of data in a short time. But to be able to work reliably in the industrial field with many interferences and to acquire precise data, PC boards and accessories must be specially protected and adapted to each other.

Signal types

Thanks to the wide range of available signal types, nearly all types of applications can be realized with our PC boards.

Digital boards, 30 V / 24 V / 12 V / 5 V
- Digital inputs
- Digital outputs
- Digital I/O
- Relay boards

Counter
- Multifunction counter board with FPGA

Analog boards
- Analog inputs, 12 or 16-bit
- Analog outputs, 12 or 14-bit
- Temperature measurement
- Pressure measurement
- Length measurement with transducer
- Noise and vibration measurement

Serial interfaces
- 1- to 8-port serial interfaces, RS232, RS422, RS485, 20 mA CL

Motion control
- Intelligent boards for servo or stepper motors

FEATURES

- Processing of different signal types
- More performance through FPGA technology
- Fast data transfer through DMA
- Dedicated accessories
- Many protective circuits
- 64-bit drivers for Windows 8/7/XP as well as Linux and real-time drivers
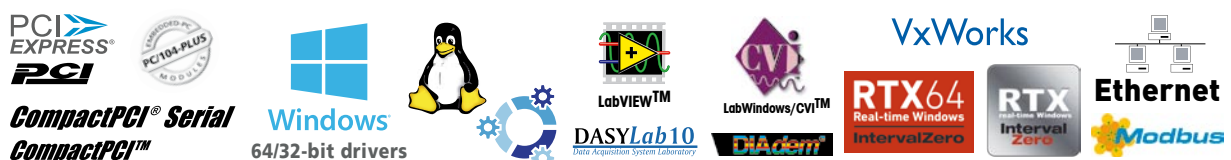
ADDIPACK driver concept

**Easy board administration
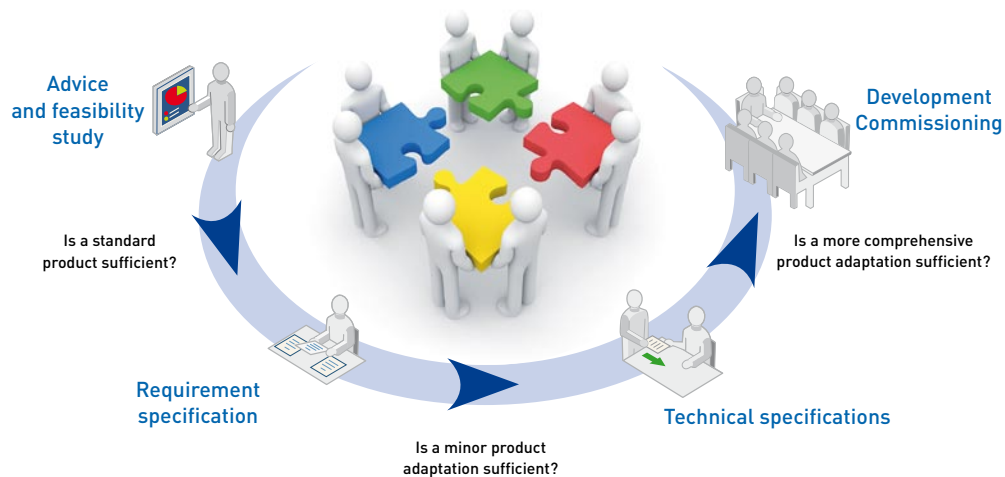- now available for 64-bit drivers**

For an easy administration of all boards inside the PC ADDI-DATA offers a convenient driver model that lists all functionalities of the integrated boards in one virtual board. This means that not boards but board functions are administrated – basically as a resource.

New boards can be easily integrated or exchanged.

PCI EXPRESS® PCI PC/104-PLUS
CompactPCI® Serial
CompactPCI™

Windows 64/32-bit drivers

LabVIEW™ LabWindows/CVI™ DIAdem VxWorks RTX64 Real-time Windows IntervalZero RTX real-time Windows Interval Zero Ethernet Modbus

DASYLab10 Data Acquisition System Laboratory

BESPOKE SOLUTIONS

Services for special demands

Advice
and feasibility
study

Development
Commissioning

Is a standard
product sufficient?

Is a more comprehensive
product adaptation sufficient?

Requirement
specification

Technical specifications

Is a minor product
adaptation sufficient?

In measurement, control and automation applications, standard components are normally used.
But there are some requirements which cannot be satisfied with standard components.
The question for you is whether product adaptations or new developments can be dealt with in-house.
Time pressure or resource planning must be factored into this process.
If in-house implementation is impossible, you will need a reliable partner who can offer you the
precise solution as part of his service. Just ask us! We will be glad to help you, from the most minor
adaptation to new product development.

Technical experts

From the very beginning, ADDI-DATA has been developing
high-quality solutions for PC-based or distributed applica-
tions. 30 years of experience and expertise speak for them-
selves.

With professional project management

We carry out adaptations to project templates or individual
developments in a focused and efficient way – and of course
comply strictly with the DIN EN ISO 9001:2008 standard.
That applies not only to the internal processes of
ADDI-DATA, but also to the project implementation with you.

i **Advice needed?**

Then just call us at
Phone: +49 7229 1847-0
or send an e-mail to:
info@addi-data.com

Examples

Adapting existing hardware:
Specific signal type such as
12 V instead of 24 V, enhance-
ment of low pass filter, etc.

Firmware to supplement
existing hardware: Digital
filter, calculation of average
values, data processing, etc.

Adaptation of software:
Drivers for specific operating
systems, adaptation of examples
for integration into an existing
application, etc.

Complete product develop-
ment: Interference-free PC
boards, distributed solutions,
complete systems, etc.

# YOUR PARTNER
FOR SECURED INVESTMENT

ADDI-DATA – Spirit of Excellence

For more than 30 years, ADDI-DATA has been a by-word for top-quality industrial measurement and automation systems. Our passion is to develop products that meet your expectations and to act as a reliable partner from the outset. Quality, adaptability, security of investment, reliability and a spirit of innovation are the ideas that drive us forward, so you can bring your projects to a successful conclusion.

You will find ADDI-DATA solutions worldwide in numerous industrial areas: automotive and metal industry, engine building industry, tailor-made machinery, aircraft and chemicals industry, etc. They are used for quality control, process control, signal switching, data acquisition, motion control or position acquisition.

MSX-*i*log
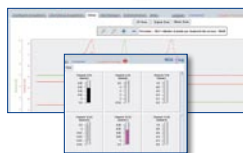
■ **Expert advice**
Do you have a project and need advice?
Then just call us at phone: +49 (0)7229 1847-0. You can also send your enquiry to us by e-mail or fax, or fill in a request form on our website (www.addi-data.com).

■ **Free loan period**
Test our products free of charge to make sure that you have chosen the correct one.

■ **Successful commissioning**
We will be glad to help you with commissioning, on site if necessary.

■ **Our quick service line**
Our development team will help you with its first-hand expertise and its ability to act quickly.

■ **Bespoke solutions**
Since it is not always possible to use standard products, we offer you bespoke solutions.
Our multifaceted services range from adapting a standard product to developing a completely new one.

■ **Here for you all over the world**
We deliver all over the world, and if it has to be done quickly, we even send goods by express to ensure on-time delivery.

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