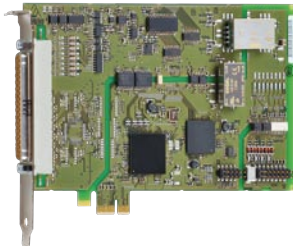


# PRECISE AND RELIABLE CONTROL TASKS



- High-precise acquisition for reliable control
- Several bus types possible
- For use in a harsh industrial environment

# PRECISE DATA ACQUISITION



## Fast processing of high data volume

With ADDI-DATA measurement boards you can acquire precisely numerous signal and sensor types in order to control the subsequent processes in a reliable way. The measurement boards are extremely interference-resistant and produced especially for the harsh industrial environment.

- DMA for more speed
- FPGA: Calculation of the measurement values directly onboard
- RTX real time drivers for time-critical applications with Windows
- Measurement boards for the following signal types: digital, counter, analog, temperature, pressure, vibrations, length, motion control, serial interfaces



## Time-critical applications

The Programmable Automation Controller system (PAC) MSX-Box, 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.

- Based on established standard technologies like PCI backplane or CompactPCI backplane
- Programmable, free programming tools
- Working with Linux operating system with RTAI extension
- No update obligations, no licence costs
- I/O PCI boards or CompactPCI boards from other producers can be used



## Measurement and control in the field

- Relieve your PLC and expand its range of functionality with useful measurement tasks close to the sensor or the machine: the intelligent Ethernet systems of the MSX-E series are perfect for this!
- Robust metal housings, degree of protection IP 65/IP 67
- Easy connection to PLCs and to the company network through Ethernet
- Integrated Modbus TCP/IP server – Modbus library in preparation
- High accuracy for precise control commands
- Onboard data calculation
- Synchronisation of several same or different Ethernet systems in  $\mu$ s range

**NEW! MSX-E3121 as a substitute for a small PLC or in addition to a PLC**  
Analog and digital I/O for measurement and control tasks in one device!



## Measurement and control with EtherCAT. ProfiNet, VARAN

The x-ARTS real time systems are I/O slave systems for EtherCAT, ProfiN and VARAN for measurement and control tasks.

- Highly precise inputs
- Able to measure more quickly and to buffer the values than the bus clock
- Start of the acquisition independent of the bus by using the 24 V trigger input
- Can be combined with external devices that is not connected to the bus

# RELIABLE CONTROL TASKS

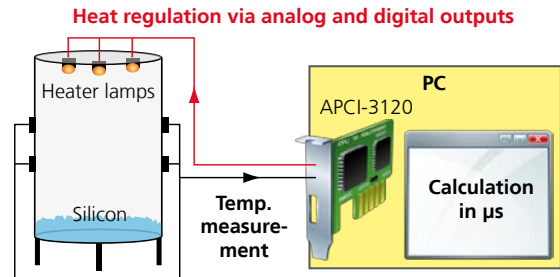
Application: Temperature regulation for wafer production

**Challenge**

- PC-based solution
- Acquisition cycle 1 ms
- FPGA technology for taking load off the external software (algorithm)

**Solution**

- Analog I/O board APCI-3120 for the PCI bus for temperature measurement and PWM regulation
- Satisfies all requirements: Speed, precision and long-term availability
- Numerous protective circuits for the use in an environment with interferences



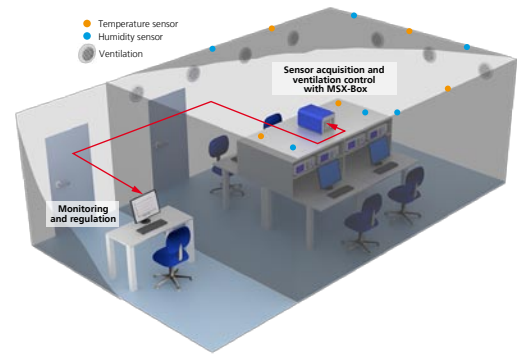
Application: Intelligent monitoring of temperature and air humidity in clean rooms, laboratories and calibration rooms

**Challenge**

- Monitoring of the rooms atmospheric environment in real time
- Ensure constant values

**Solution**

- Definition of reference values for the rooms temperature and air humidity
- Real-time PAC system MSX-Box with temperature measurement and analog input board for the acquisition of sensor data
- Digital output board APCI-2032 for ventilation control



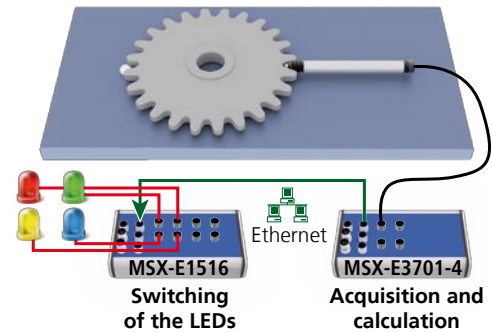
Application: Precise and error-free diameter detection of gear wheels

**Challenge**

- Automation / replacement of a manual test station
- Improve the measurement accuracy
- Avoid measurement errors

**Solution**

- Real-time Ethernet system MSX-Box with counter-, analog I/O boards and serial interfaces
- Onboard data calculation, time stamp
- Several sensor transmission protocols: CAN, serial, etc



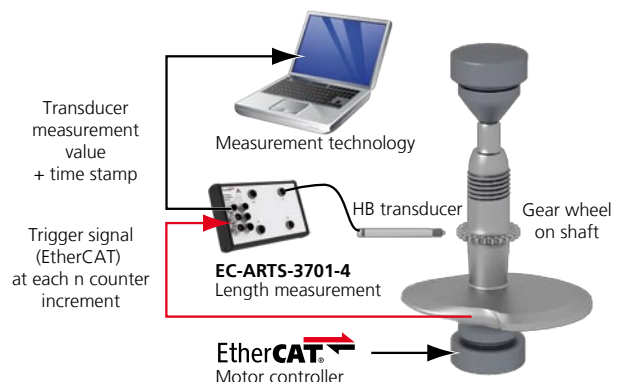
Application: Extension of an optical shaft measurement machine with a tactile measurement device

**Challenge**

- Clear assignment of the measured values to the axis position
- Autonomous data transmission to the measurement machine
- High precision and interference-resistance

**Solution**

- EtherCAT system for the connection of half-bridge transducers to an optical shaft measurement machine
- 24-bit high resolution and numerous protective circuits
- Data package for the measurement system with measured data incl. time stamp



# ADDI-DATA YOUR PARTNER

## Customized solutions



The best solution often is a customized one.

As a manufacturer, we can adapt our solutions to your requirements as closely as possible.

We would be pleased to advise you on the best solution for your applications and to perform the necessary adaptations for you. Just ask us!



### Advice needed?

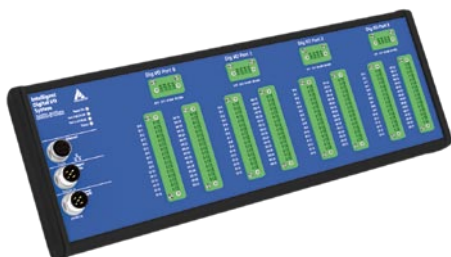
Just call us by phone +49 7229 1847-120 or send us an email to: [info@addi-data.com](mailto:info@addi-data.com).

## New products 2014



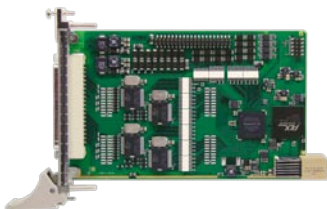
### Measurement and control with one device

- Ethernet system, IP 65, operating temperature -40 °C to +85 °C
- 6 analog inputs, 4 analog outputs, 32 or 64 digital I/O
- Inputs and outputs: current and voltage
- Modbus server
- 24 V digital trigger input



### Manages many digital I/O

- Ethernet system, IP 40
- 128 digital I/O, 24 V
- Spring terminals
- 24 V digital trigger input



### CompactPCI Serial boards

- Digital I/O, 24 V
- Counter, input frequency up to 10 MHz, programmable (FPGA)
- Analog I/O, DMA

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