ANDRAS SYSTEM

Wir finden den Weg

Modernising machines with ANDRAS-controls

Economical increase of production for RAPID machines

Open Automation Control

RAPID machines

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Economical increase of production
The extraordinary system compatibility of ANDRAS-CONTROLS allows to upgrade the ECB-technology of the 80's (19" rack systems) to modern processor power of today.

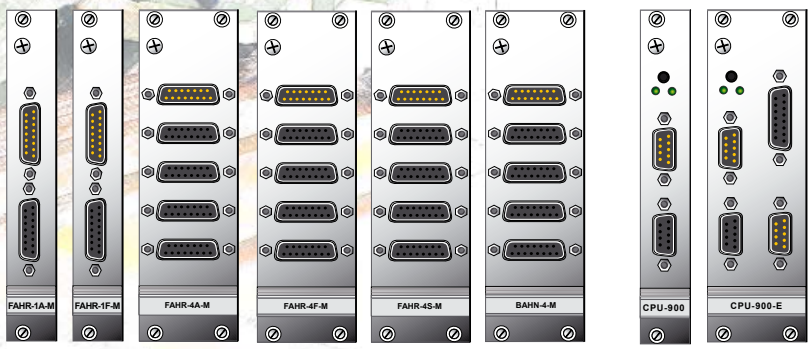
Typical configuration of an ECB-control of the 80's with 8 controlled axis (PosiStop).

This possibility has been achieved because **ANDRAS Steuerungsysteme GmbH** has carried on with the development of intelligent components which are fully compatible within function and connecting options.

Parallel to the new processor generation, the **CPU-900 series**, all of the axes drive cards of the **MOTION series**, consisting of the modules:

- **FAHR-1A-M**
- **FAHR-1F-M**
- **FAHR-4A-M**
- **FAHR-4F-M**
- **FAHR-4S-M**
- **BAHN-4-M**

have been equipped with a firmware allowing higher processing speed with existing programming and functionality of the machines.



Of course also a new and fully compatible user interface based on TFT technology has been introduced. This exchanges an existing terminal into a modern workstation.

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Up till today the good old floppy disk has been used for the data management. As an optional extra now an USB-port is additionally available allowing the use of memory sticks for any kind of data transfer.

USB-PORT

FLOPPY DRIVE

On top of that, of course, all existing options for the data transfer are still available.

The following example, the modernising of a written off RAPID machining centre, shows in simple steps which significant increase of production figures can be achieved by using the new control components..

Modernising of RAPID operating systems and hardware

What will be changed?

During the make over the following hardware components will be exchanged:

1. The operation terminal will be replaced by a new unit with TFT-screen, symbolic keyboard (no more different terminals for different languages), USB-port and BITBUS connectivity.

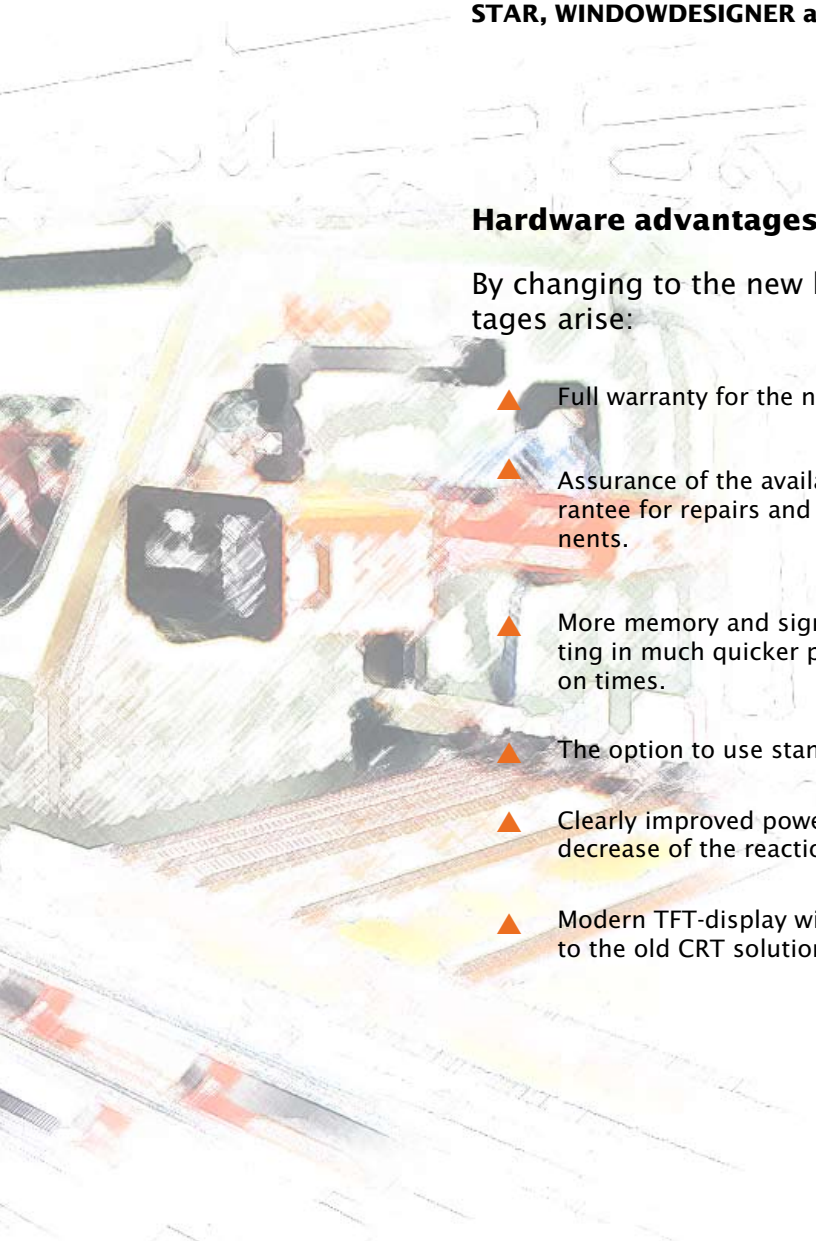
2. The existing CPU board will be replaced by the new CPU-900 with 4 MB of memory and significantly increased processor speed.

3. The axis drive boards will be replaced by boards of the new generation MOTION.

4. The existing emulation software E280 will be replaced by the new E900 software which can be used without problems on all WINDOWS platforms.

Existing data are being transferred into the new data structure by using conversion software. All existing data can be used by the new operating system without problems and only minor but strictly specified changes are required.

The big benefit for the end user is that no changes are necessary in his existing office data structures. All existing interfaces remain as they are and there are no changes required for any external software modules or programmes like WINSTAR, WINDOWDESIGNER and so on.



Hardware advantages

By changing to the new hardware the following advantages arise:

- Full warranty for the new hardware
- Assurance of the availability of spare parts; long term guarantee for repairs and availability of spares and all components.
- More memory and significant higher processor speed resulting in much quicker processing and reduction of calculation times.
- The option to use standard floppy disks as well a USB-stick.
- Clearly improved power of the axis drive cards with a huge decrease of the reaction times.
- Modern TFT-display with a much lower rate to fail compared to the old CRT solutions.

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Advantages Software

The changes of the operating system result in following advantages:

- Optimised structures allow quicker reaction times
- Parallel running processes avoiding relevant working processes being slowed down by i.e. online transfer of data.
- Improved diagnosis modules now allow to analyse faults without leaving the automatic mode. This means the possibility of monitoring cycles, I/Os and axis values without interrupting the automatic processing.
- A new and compact data backup (like a screen shot) enables the option to save data during running production into one file, resulting in better diagnosis options for service engineers and the system manufacturer
- Significant improved Z-axis optimisation; depending on the profile a higher number of operations are possible at the same time reducing the number of handling processes and so reducing the production time.
- Improved clamping logic, resulting in less clamping Processes, less production time and smoother handling of the profiles.
- Improved connectivity to PC-operating systems through the usage of USB-sticks, MS-DOS formatted disks and an emulation software running under WINDOWS.
- User friendly and highly accepted system change due to the fact of new improved functions but without leaving the „old“ well known system.

Reference

In 2007 ANDRAS Steuerungssysteme GmbH has modified 3 aluminium machining centres (type OPTIF2) to the new system for Hörmann Industrial Door Systems. The conversion only required a shut down of the machines for a couple of days.

The conversion resulted in a 17% increase of production, based on Hörmann's own comparison before and after the change and, as a side effect, much smoother profile handling due to a reduced number of clamping and handling processes.

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