SPEED

The VIPA Journal

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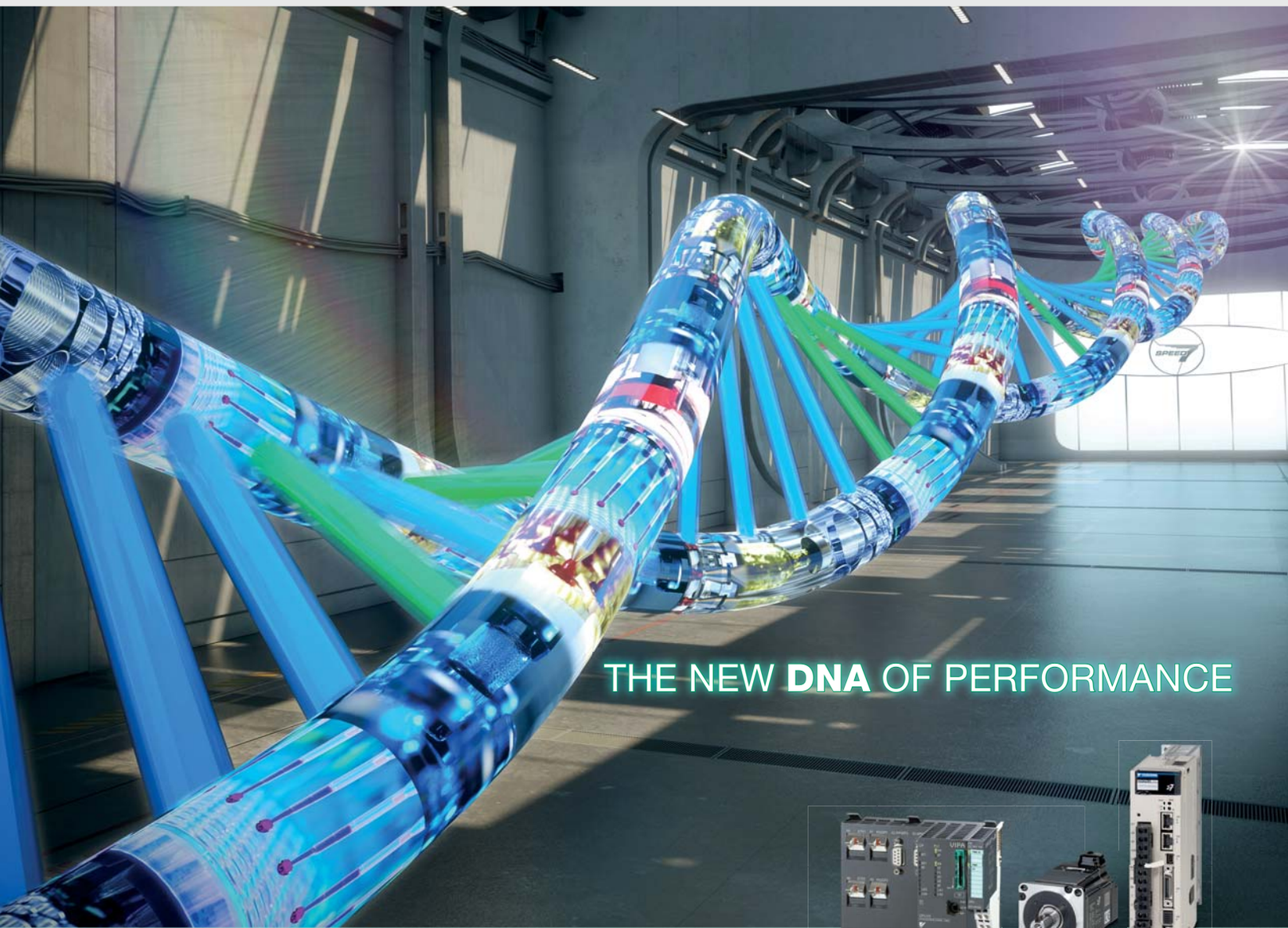

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Foreword

Dear SPEED readers,

I am very pleased, particularly now with the SPS/IPC/Drives trade fair still fresh in our minds, to present our new products. After our SLIO CPU concept – the free configurable CPU - could be established very successfully on the international markets, we have now extended this concept with “Motion Control functions” with the new SLIO CPU iMC7.

The integral and universal connection of our new Motion Control SLIO CPU iMC7, the VIPA engineering software SPEED7 Studio and the new YASKAWA drive Sigma-7 completes an attractive “easy-to-use” system package with which we certainly set standards.

The new iMC7 and the system package will be presented at this year`s SPS/IPC/Drives at both our booths in hall 7 (VIPA) and in hall 1 (YASKAWA). In this issue of the SPEED Journal you will find a detailed presentation of the most important features and synergies from which you as our customer will benefit.

As always, we again have some interesting VIPA applications from home and abroad in this issue, this time with the focus on the automotive industry.

It is well-known that, for VIPA employees, sport plays an important part in their leisure time. In this issue we report about the experience of an Austrian colleague at the cycle marathon in Carinthia.

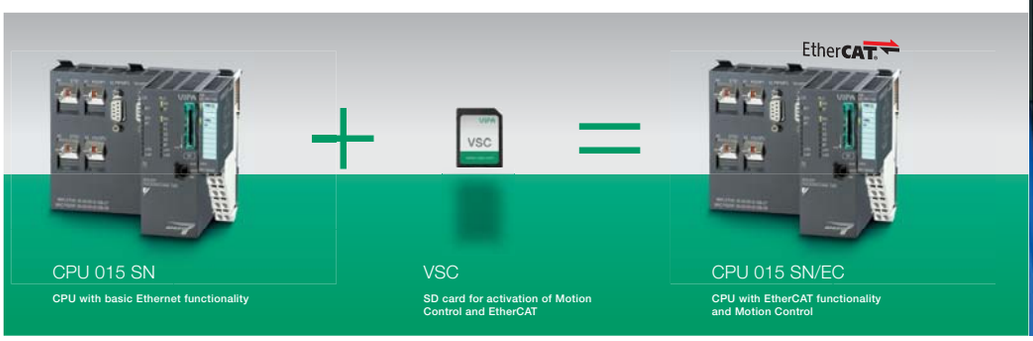
I am convinced that you will find the article selection from the VIPA/ YASKAWA world very interesting and enjoyable.

Yours Bob Linkenbach

The New DNA of Performance

The new SLIO CPU iMC7 together with SPEED7 Studio and Sigma-7

As in the middle of the 20th century science when made a great step forward by succeeding in deciphering the molecular structure of DNA, VIPA and YASKAWA regard it just as decisive to have laid the foundations for a new kind of automation technology. Motion Control functions find direct access into PLC control technology.



As a first new product of the joint development of VIPA and YASKAWA we are presenting the new SLIO CPU iMC7. Here the MC stands for the integration of Motion Control functions in combination with YASKAWA inverters and servo drives. The second essential distinguishing feature to the already existing SLIO CPUs is the communication capability via EtherCAT for communicating with the YASKAWA inverters and servo drives. In combination with the extended SPEED7 Studio (software) and the new servo drives series Sigma-7 of YASKAWA the Motion Control functions can now be very easily implemented in VIPA SPEED7 controllers.

Three products in the new SLIO CPU environment

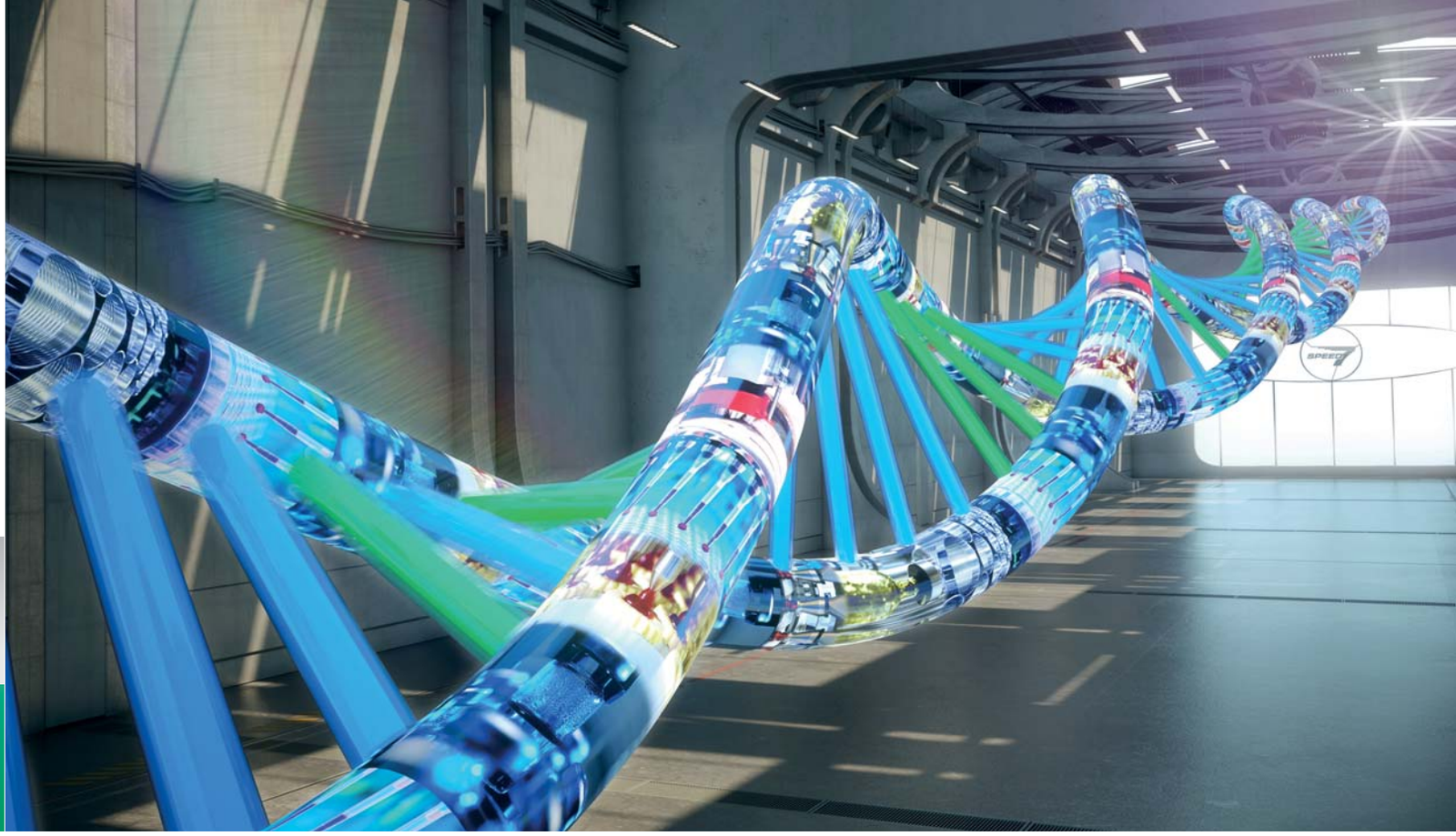
Overall, the product expansion includes three VIPA and YASKAWA products, namely the new SLIO CPU iMC7, the programming platform SPEED 7 Studio which has been extended by Motion Control functions, and the new YASKAWA servo drives series Sigma-7, which can communicate with the VIPA CPU iMC7 via EhterCAT. In this article the new SLIO CPU iMC7 will be described in more detail as well as the expansions in SPEED7 Studio and at the end some facts about Sigma-7.

First of all the new CPU iMC7 is based on existing standard functionalities of the CPU 015, namely PG/OP communication, function blocks, supported protocols of the Ethernet communication, and the configuration of the CPU via VSC. With the new CPU iMC7 only the variation Motion Control functionality and EtherCAT is configured by means of the VSC. Consequently, the technical data is defined by the product name CPU 015 NET + VSC.

The Motion Control functionality is a software solution. Most of the programming codes run on the SPEED7 core of the PLC7100DEV processor. An important criterion for the universal usability of the CPU iMC7 is that the design of the STEP 7 Motion Control function blocks has the same appearance as the PLCopen Motion function blocks. PLCopen defines a library of function blocks for Motion Control and includes Motion Control functionalities for single axes or axis groups, that is based on a PLCopen status system.

Fieldbus communication via EtherCAT

In the course of the joint product development it quickly became clear that EtherCAT would be implemented for the fieldbus communication. This was confirmed by the fact that there are already hardware solutions for the EtherCAT communication at VIPA as well as at YASKAWA and so practical experience is also available. Of course, the general advantages of this communication protocol are also taken into consideration when deciding for EtherCAT. The increasing importance of EtherCAT worldwide, the high availability of EtherCAT components, and the possibility of an easy and direct connection to the office world should also be mentioned here.



Expansion of the engineering tool SPEED7 Studio

The project structure of the VIPA engineering frame work SPEED7 Studio was extended by these functions, in order to completely use the Motion Control functions within a PLC controller. Moreover, additional data for the Motion Control management can be generated with this. The SPEED7 Studio supports the following main functions for Motion Control applications:

- Configuration of the field bus communication between the CPU iMC7, the drivers and the I/Os
- Setup of the CPU iMC7 and the local components
- Setup of the Motion Control application
- Programming of the user applications with functions blocks for Motion Control instructions
- Creation of Cam profiles

Additionally, SPEED7 Studio has now a catalog of YASKAWA drives that are suitable for EtherCAT communication. Here it is possible to add components by “drag and drop” to the fieldbus from the catalog. In the first step the YASKAWA servo and inverter families cover this.

The Motion Control setup is used to define axes in the Motion Control instructions, to allocate these axes to the servo drives and encoders and to adjust the axis parameter.

The cam profile editor allows the separation of complex motions into simple successive motion parts. These parts can be gently and smoothly merged by entering the transition conditions.

The ultimate experience - the YASKAWA Sigma-7 servo drive series

With the Sigma-7 series YASKAWA sets standards in drive technology with respect to diversity, precision and reliability.

The YASKAWA Sigma-7 servo drive series offers standard rotation motors of 50W up to 15kW as well as linear and rotation direct drives, linear sliders, and the matching “SERVOPACK” drive units. The wide range of drive systems covers all market requirements with regard to compact size, high dynamic, high efficiency, less maintenance, and outstanding reliability.

The most impressive feature of the Sigma-7 series is the positioning accuracy of up to 10nm with standard products and at the same time the shortest positioning time. The well-known YASKAWA auto tuning functions allow complete servo axis arrangement of an engine in less than two hours – compared with the usual eight hours in comparable engine solutions.

Special features of SERVOPACKs and servo motors

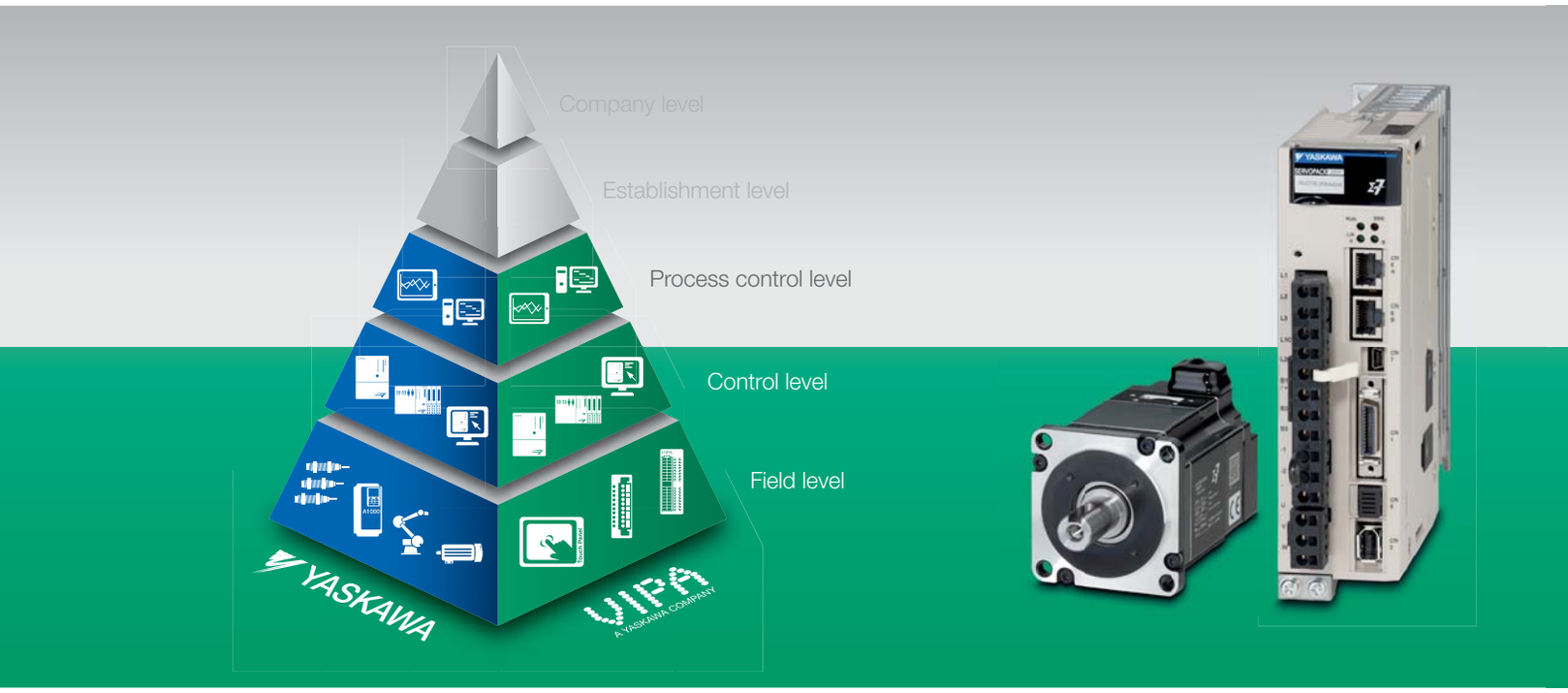
YASKAWA Sigma-7 servo drive solutions basically exist of servo motors and the servo amplifiers. Both components bring the required features for an optimal operation. See following table:

Sigma-7 SERVOPACK features:

- SIL 3 for STO, PL-e, CAT 3
- Speed frequency response 3,1 kHz
- One amplifier for Linear and Rotary Motors
- Feedback options
- Ripple compensation, vibration suppression
- Four different SERVOPACK models available: EtherCAT, MECHATROLINK-II, MECHATROLINK-III, Pulse-train reference with analog voltage

Sigma-7 Servomotoren features:

- 24-bit high resolution encoder installed
- High efficient, low heat generation
- Downsizing by 20%
- Flange compatible with Sigma-5
- Three motor models available: Low inertia SGM7A from 50 W to 7 kW, Medium inertia SGM7J from 50 W to 750 W, Medium inertia SGM7G from 300 W to 15 kW



Seven reasons for Sigma-7 servo drive solutions:

The advantages of the combination of Sigma-7 SERVOPACK and Sigma-7 servo motors can be summerized in seven short points as follows:

1. Comprehensive motor and SERVOPACK offer from 50W to 15kW, at linear motors peak force up to 7560N
2. Higher productivity and energy saving a.o. through improved cooling: at an ambient temperature of 0° to 55°, no additional cooling necessary
3. Integration of safety functions as STO in all Sigma-7 servo amplifiers
4. Improved motor efficiency reduces heat generation by about 20%
5. Very high precision for extremly precise positioning through 24-bit encoder - resolution of 16 Mio. impulses per revolutioin
6. Impressive system performance through the combination of highest precision and fast, smooth operation
7. Outstanding reliability in daily use shown by more than 8 Mio. servo systems in the field worldwide.

Take advantage of improved reliability of your machines in the future and resulting reduced service and maintenance costs. Less downtime of your installations is always a convincing reason, because who is not interested in avoiding unnecessary costs

Application examples

With the features described it is possible to set up machine controls similar to the following examples:

- Bag packer machine with single servo axis, inverter, HMI and decentral I/Os in smart architecture and high throughput of products (s. picture 4)
- Filling machine for liquids (e.g. pharma) with 6 up to 12 servo axes, flexible setup and high product throughput. (s. picture 5)

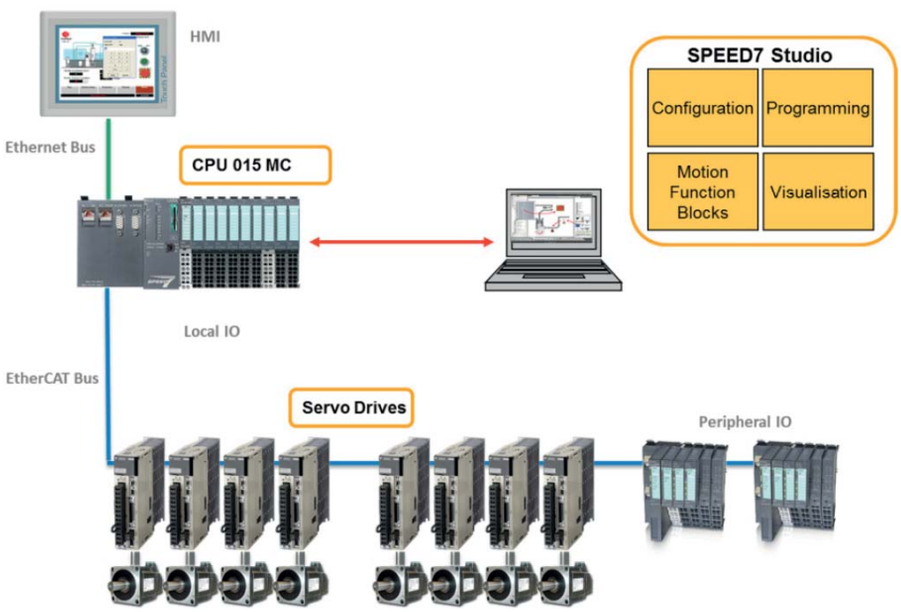
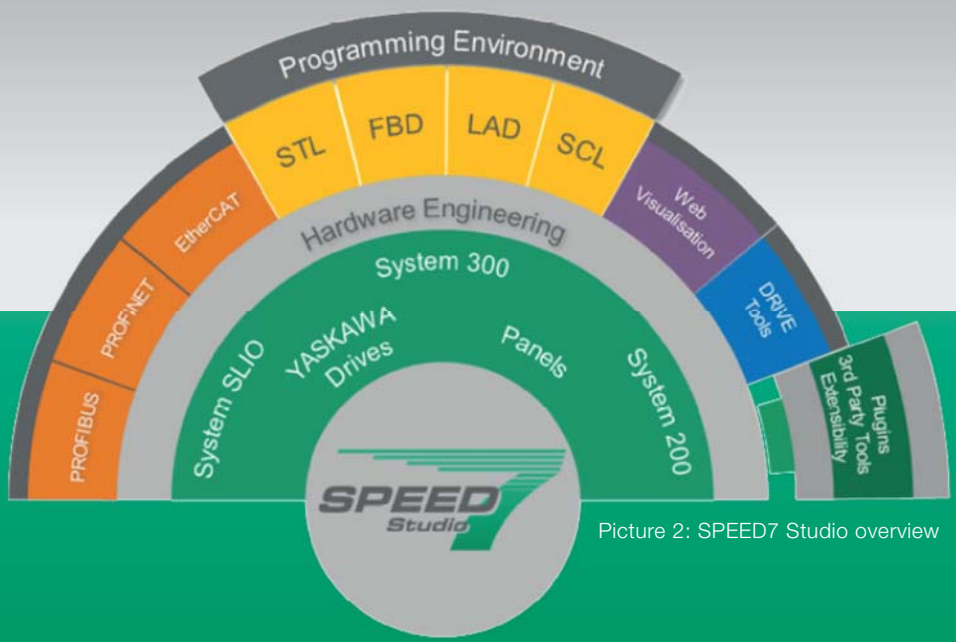


Figure 1: System overview



Picture 2: SPEED7 Studio overview

In short, the main objectives of the Motion Control functions of this project can be represented in the PLC world in this way:

- Reduced engineering with focus on one major tooll,
- One CPU for Motion Control and standard application requirements,
- SLIO as a highly flexible and modular system, that already has an EtherCAT functionality in the decentralized area
- Solutions from a single source, because EtherCAT is the communication version that supports VIPA as well as YASKAWA.

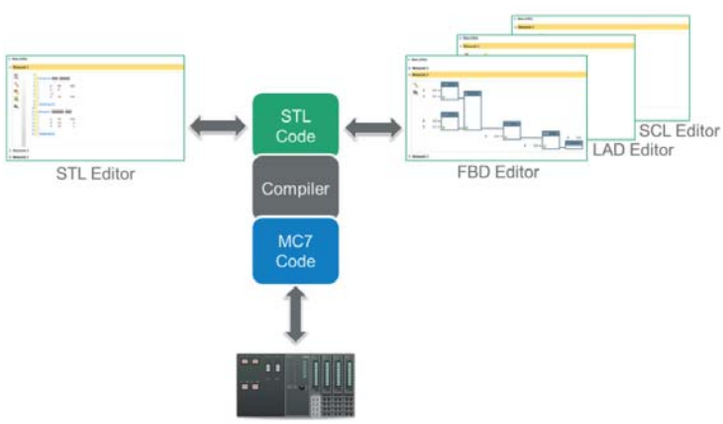


Figure 3: SPEED7 Studio programming editors

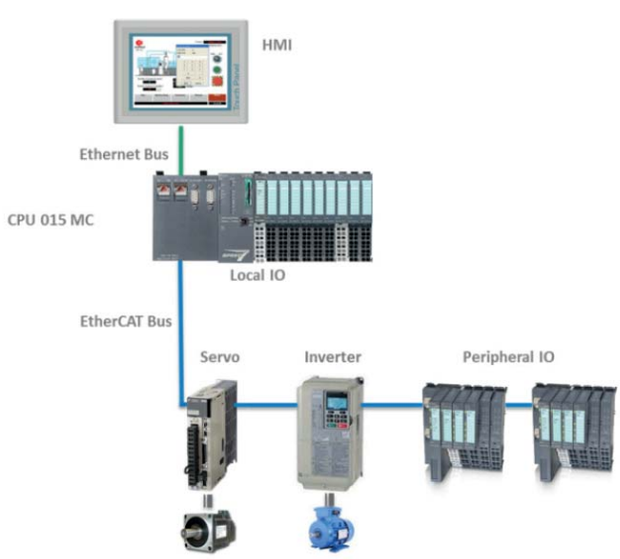


Figure 4: Bag packer machine (components)

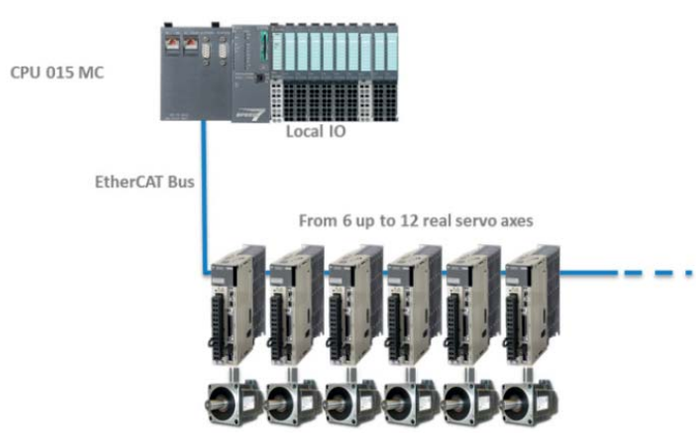


Figure 5: Filling machine for liquid pharma (components)

New productes

eco+ Panels

VIPA is extending its touch panel portfolio in the eco panels to other variants called eco+ Panels. Besides hardware updates in the 4,3“ and 7“ panels the operating system and the runtime equipment in all eco+ panels were updated.

Hardware updates in the 4,3“ and 7“ eco+ touch panels

The integrated processor was upgraded from ARM11 with 533MHz to CortexA8 with 667MHz. At the same time the available work memory was extended from 128MB to 256MB. This leads to a significant performance enhancement in these panels.

Software updates in all eco+ touch panels (4,3“ to 15“)

The previously pre-installed operating system Windows Embedded CE 6.0 Core has been replaced by the more powerful Windows Embedded CE 6.0 Professional, so that from now on Office Viewer can be used.

Movicon 11 Standard can now be used as pre-installed visualization runtime in the eco+ panels. This means that from now on the complete functions of the Movicon runtime are available for the user, such as for example 4096 I/O bytes and 4096 alarms, database communication, reports, SMS/mail notification and web server for 2 simultaneous clients. The software functions and the performance are going in the direction of more powerful professional panels. The easy and consistent handling remains unchanged in the eco+ panels too. The product range of the VIPA touch panels together with the existing eco und professional panels continues to be universal and scalable.

Even with these new products VIPA will once again demonstrated that we can respond quickly and flexibly to customer and market demands. ■

Foto: ©Ford

Production of the Ford C-MAX

Foto: ©Ford

Oliver Biwer, RESA Systems,
Mark Kohl, VIPA GmbH

Greenlights for car parts

Ford factory Saarlouis – Extension of the suspension track system with VIPA

Foto: ©Ford

There are not many brands that combine daily practicality and sportiness as strongly as Ford. The scope of automobiles ranges from the useful transit, the compact car, the family limousine right up to the motor sports. The Ford Capri was one of the first models which was produced at the location in Saarlouis, which was founded in1970. At that time the region was still dominated by mining and steel industry. Today the automobile industry is one of the most important industrial sectors – and this is mainly due to Ford. More than 13 million Ford models have been produced here up to now. So this factory is one of the most efficient and productive automobile factories in Europe.

Flexible production of up to five different models

The factory in Saarlouis is considered to be particularly flexible as up to five different models are produced per production line The individual sites are regularly examined very carefully at Ford in order to provide consistent efficiency. Therefore, new models are also regularly produced in Saarlouis –for example the soon the C-MAX, the C-MAX Compact and C-Max Grand versions. To adapt the production accordingly Ford uses the know-how of companies such as RESA System GmbH for example, specialists for automation engineering who develop and implement complete installations with control engineering, delivery systems and industrial robots according to customer requirements. Among others, an existing electrical suspension track system was affected by the upcoming type integration of the C-MAX versions C-MAX Compact and C-MAX Grand. In this area of the body-shell work many single parts that later form the body, are conveyed and transported to each production line via this system where the elements were clamped and welded, so that finally the complete body-shell, the so called body is measured and ready for further processing.

Powerful alternative sought after

The most difficult task was the implementation of an additional Ident system. So far, the production data has been written on data mediums of the suspension in the electrical suspension track so that the following processing stations could identify which type had to be welded next. After detailed testing together with Ford, it was decided to deploy a RF ident system on UHF basis which makes the single parts identifiable for the production line through a RFID data medium. Therefore the plant components, which are equipped with this system, require a PROFINET connection. But the existing plant components that should initially remain unaffected as possible, work via PROFIBUS. So a CPU was required that includes both interfaces.

A solution exactly suitable with VIPA components

Oliver Biwer, Key Account and project manager of RESA Systems found this in the controllers of the 300 series of VIPA. “We had already applied the products in other projects and other areas and were always very satisfied”, he said. Recently we equipped a large facility at SAS Automotive Systems Supplier Park of Ford together. „The STEP7 compatibility of the VIPA controllers particularly impressed us“, said Oliver Biwer. Therefore it was decided to deploy the CPU 315PN, which offers further advantages: all interfaces required, such as PROFIBUS, MPI, Ethernet and PROFINET, are already included in the VIPA CPU 315PN, whereas with other producers you have to buy them in addition to the CPUs. Also the memory is considerably larger so that a larger CPU is not required.

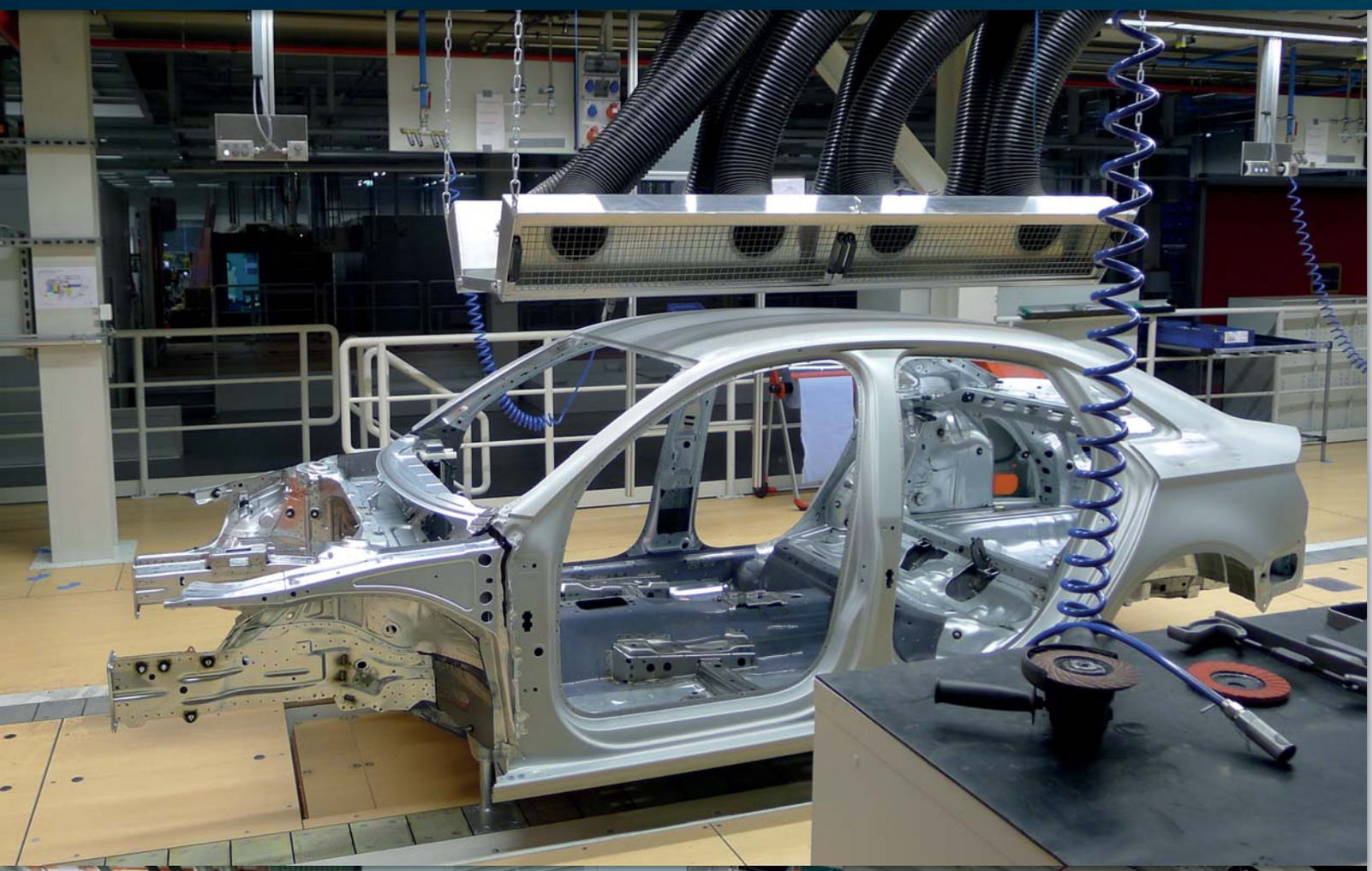
Four CPUs were bought as a pilot installation for the extension of the electrical suspension track and additional accessories as power supply and profile rails. The existing I/O cards and the cross-system communication via PROFIBUS FDL connection remained unchanged.

„Due to the performance of the CPUs in most of the cases the 300 series is sufficient, where before you had to use larger components“,

said Oliver Biwer. “Because of the conversion to the compact VIPA high performance devices the space reduction of 20%, which is required by the customers, can easily be complied with.

This project is definitely an important mile stone for upcoming joint projects at Ford in Saarlouis/Germany. ■


Audi-Werk Györ - Ungarn




Touch Panel

Foto: Audi, Ingolstadt

Good climate in the new AUDI factory Györ

Building automation with VIPA control technology

Since 1993 the AUDI HUNGARIA MOTOR Kft. has been developing and producing motors for AUDI AG and other corporations of the Volkswagen concern in Györ, Hungary, and in the past few years have produced more than 1.9 Mio. motors. Hence AUDI HUNGARIA MOTOR is the largest engine plant worldwide. The company added the serial production of the Audi A3 limousine in June 2013 and the new Audi A3 cabriolet followed in October. Both members of the A3 family are the first Audi types which are completely produced at the Hungarian location. For this, Audi established a new automobile factory with a complete production chain – from the pressing plant, car body construction, and paint spraying, right up to the assembly. In the new factory 125,000 cars will drive off the assembly line every year. With over 10,000 employees, Audi is one of the largest employers in the region.

VIPA controls parts of the building automation

Approximately 40% of the building automation of the new factory is equipped with VIPA controllers. Conception, process control engineering, and plant implementation are carried out by the company Prozesstechnik Kropf GmbH loctated in Oberkotzau/ Germany. Part of the control cubicle construction for the new Audi factory is carried out by HERMOS Schaltschrankbau from Mistelgau/Germany. Another fact about the dimension of the automation and control technology in the Györ factory is that, all in all, more than 200m of control cubicle length has been incorporated here. VIPA controllers are implemented for the energy distribution and the ventilation technology for the areas of car body construction, paint spray line, mounting and pressing plant. This also includes the air-conditioning, the control of the cold, cool and hot water supply, compressed air, and gas. An impressive fact about the performance of the ventilation system is that they move between 75,000m³/h and 1.2 Mio. m³/h.

Optimal solution with different VIPA systems

As central control modules the CPU 315-4NE12 for the PROFIBUS and Ethernet communication and the CPU 315-4PN12 for the PROFIBUS and PROFINET communication render their service. The decentralized communication takes place via PROFIBUS and Modbus protocols and via EnOcean. The hardware setup of the CPUs, the communication processors and slaves are completed with the VIPA 200V family, the communication processors and the slaves of the SLIO family and the respective matching digital and analog signal modules. For operating and monitoring of the process control engineering 10” Touch Panels TP610C are used.

The VIPA portfolio in operation is completed by PROFIBUS plugs with and without diagnosis LEDs and PROFIBUS-DP/MPI repeater.

Perfectly adjusted control components

There were many reasons for the selection of VIPA control components. With the integrated SPEED7 technology the 300S CPU family combines the classic compact 300S type with enormous speed advantages. In addition the traditionally large range of VIPA interfaces are available which make this system the fastest and most efficient control systems in the world. The system can be implemented universally by means of the general programmability with the STEP7 code and VIPA‘s own programming tools. Also the VIPA SLIO modules fitted perfectly into the control concept. There were further advantages such as the speed advantages of the SLIO modules by means of the very fast backplane bus with 48Mit/sec transmission rate and the extremely compact and space-saving design. The variety of the transmission protocols in the decentralized area support the worldwide deployment of the implemented control systems.

For the purpose of a complete solution for the control a components from single source VIPA Touch Panels with the pre-installed operation system and partly pre-installed runtime were deployed, and which were ready for use very quickly, so it was possible to save a lot of time here.

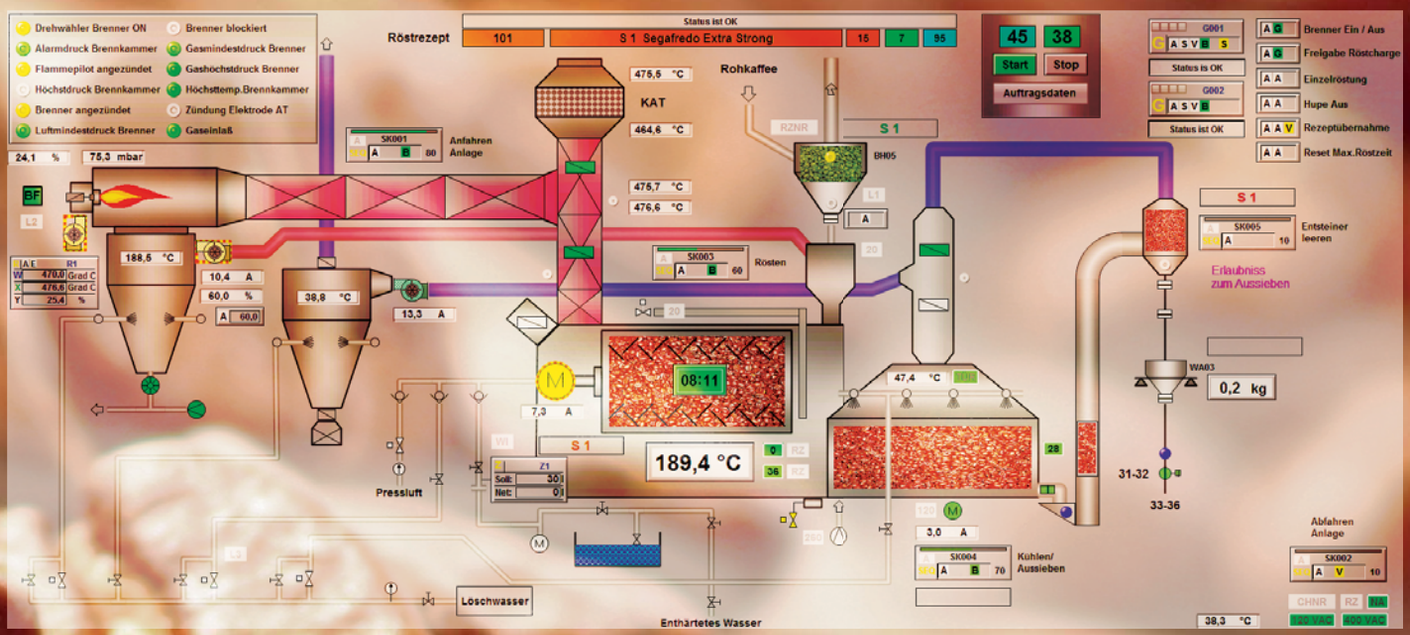
Summary

This example of a functional interaction of process control engineering and PLC control technology shows that the solution found also proves successful in the very demanding field of automotive production. ■

Coffee culture at its finest

At Segafredo the right coffee roast is decisive

It is a long way from the green coffee bean to the tasty beverage. Many processing steps are necessary and often it comes down to fractions of a second. All this can only be managed with a high performance controller, therefore predestinated for VIPA.



Precise temperature and time monitoring determine the roast procedure

The roast procedure is a science in itself. The longer you roast the coffee, the more tasty and digestible it becomes. But if it becomes too hot it burns. If the temperature is too low, it does not taste good and still contains too many substances that do not agree with us. Thus, in production it not only depends on the duration, but also on the perfect temperature during the entire process and fast cooling in order to halt the process when the desired result is reached. So a roaster is a high-tech plant full of control processes with numerous measured values.

The company NeuhausNeotec located in Ganderkesse/Bremen/Germany specializes in the development and setup of coffee factories and the special machines required such as grinders and roasters. The plants of Neuhaus Neotec are also able to detect variations of quality in the raw product. So they can counteract with temperature and air volume adjustments during the roasting process.

The software for these state of the art machines and plants are developed by the company XAPI in Speyer/Germany. XAPI has been in the coffee business for 25 years and was established in 1989, when computer technology found its way into the coffee industry, by Claus Siegler in Speyer. Segafredo Zanetti has been a customer for many years. The company, established in Bologna, is well-known for its premium coffee, which is served in the food service industry and Segafredo espresso shops.

Particular demands on the PLC controller

The XAPI team had already planned the modernization of the coffee factory for the location Salzburg. The mechanical systems were supplied and installed by NeuhausNeotec. Due to numerous complex processes a particularly powerful CPU was required which needed to have multiple interfaces. The SPEED7 CPU was chosen, not only because of the speed but also because of the numerous interfaces on board, such as Ethernet, PROFINET, PROFIBUS, MPI, the large memory and the compact design of the components.

Now the automation of the roaster in Salzburg was on the agenda. As the premium brands of Segafredo are roasted here the process was very demanding. The roasting process takes considerably more time and is divided in up into 15 levels. The environmental conditions are measured regularly to ensure the required temperature to bring out the maximum taste from each bean – and all this in fractions of a second. When the roasting degree is perfect the temperature is immediately reduced by adding water and cooling air. Depending on the type of coffee, the temperature curves differ minimally from each other. Also the basic products are not always the same so it has to be closely monitored and controlled during the process. The batch-oriented recording and archiving of the production data helps to find the perfect master roasting over a period of time and to take this as a basis for the reference curve.

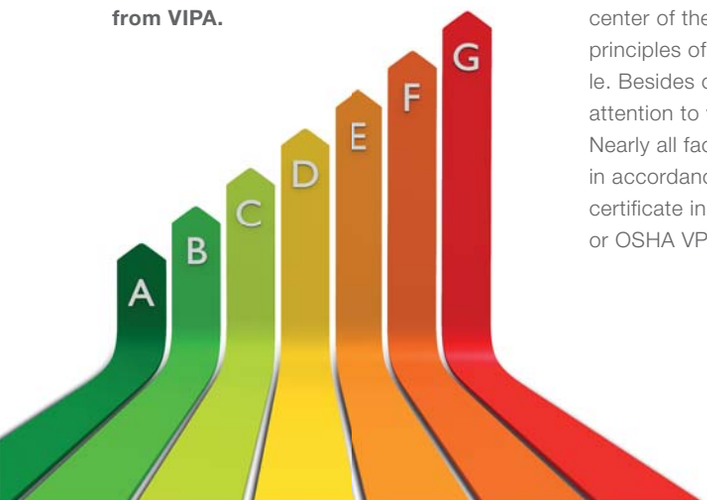
For this project it was important to have a particularly fast, reliable and powerful CPU, which can handle large amounts of data and which provides interfaces to handle not only the control processes, but also, to see the data remotely and be able to implement an alarm management.

Now it is possible to see all batches at a glance and to compare parameters such as temperatures, pressures, roasting times, batch weights or color values from anywhere via browser access to the web server and thus on the database to optimize the processes. ■

In the service of beauty

Higher energy efficiency at L`Oréal in Karlsruhe/Germany

The cosmetics group L`Oréal has defined environmental protection as an important corporate objective. This goal will not only be implemented in the production process but also in building automation. At their location in Karlsruhe the heating system has just been modernized – with savings and solutions from VIPA.



Accurate monitoring of the water and energy consumption

The name L`Oréal stands for cosmetics, and hair and skin care worldwide. For Germany and parts of Europe, the consumer brands, L`Oréal Paris and Garnier, are produced in Karlsruhe, the only German production center of the group. The high ethical principles of this global player are remarkable. Besides other aspects, L`Oréal pays attention to water and energy consumption. Nearly all factories have an emission permit in accordance with ISO 14001 and a safety certificate in accordance with OHSAS 18000 or OSHA VPP. Consequently, also in building technology, the company places a great deal of emphasis on sustainability and energy efficiency. The existing heating was replaced with district heating and a new controller. Because they had already managed several joint projects successfully, the company Khim Automation, from nearby Hambrücken, was also to manage the control and automation engineering at L'Oréal.

Specialists rely on PLC engineering

Khim has specialized in technical building automation and HKL, whereby the focus is on energy controlling, savings, and networked systems. As the conversion had to

Farschid Nikpour, VIPA GmbH,
Jochen Khim, CEO Khim Automation

L Oréal production in Vichy, Frankreich

be completed during operation - also at the weekends - one area after another was modernized according to the requirements of the production. So after 3 months the heating in the production was completely converted. There were several reasons for Khim to rely here on PLC engineering instead of on systems such as BACnet, KNX or LON which are usually used in building technology. PLC engineering can be found everywhere in industry and there are staff there who are very familiar with it. Spare parts are in house and the customer can mostly deal with faults or changes himself without any delay. In addition the STEP7 compatibility, the interfaces to PROFIBUS, and the performance capability of the CPU to process and reliably store large amounts of data, spoke for VIPA and their SPEED7 CPUs. All required interfaces are on board with VIPA CPUs as standard, and the capacity is sufficient to process the 90 parameters which accrue per control module in this project.

Two CPUs 315SN-NET control the entire energy distribution – together with decentralized SLIO modules

Two CPUs of the type 315-4NE12 Ethernet now control the right temperature of the entire building in Karlsruhe. 18 VIPA SLIO module units are connected decentralized over the entire factory on 4.5 kilometers of Profibus cable, strengthened by repeaters. They control the energy distribution on site and ensure that the return per consumption unit does not rise above the desired value - otherwise the amount will be throttled. The success of modernization has exceeded all expectations. Heating costs could be significantly reduced and thus the company‘s goal of sustainability further promoted. ■

Quick as lightning – clock rates in micro seconds!

The production of sensors at MTS with SPEED7 performance

Short cycle times are important when it comes to testing devices, not milliseconds, no - here calculations are in microseconds. Such applications are therefore frequently solved with special camera systems or oscillographs. There is also however another way. Many tasks can be elegantly and economically undertaken by a PLC. The only prerequisite is that it has to be fast! The VIPA SPEED7 CPUs are perfectly suitable here, as an example from the sensor production shows.

Monitoring of laser welding stations in maximum speed

MTS Automotive Sensors GmbH, located in Lüdenscheid, Westphalia, produces magneto-strictive sensors for the automobile industry. The whole sensor , which later is applied on the shock absorbers of a car for example, is no bigger than a ballpoint pen. Assembly has been taking place in Lüdenscheid for 13 years with a system that welds together two conductors with different cross-sections by laser. To evaluate the quality of the soldered joints immediately and to sort out defective parts the plant was equipped with test equipment. It monitors the brightness of the electric arc for each of the up to 13 solder joints during the welding process and can determine the quality of the solder joint from the calculated curve.

When the plant was set up sensor technology was chosen – the software for the testing was on a PC under DOS. This solution, however, was now getting on in years and so a solution was sought for to redefine the complete process monitoring of the laser welding station. Besides classical PC based solutions, the concept of Gersch SPS Technik GmbH from Hagen/Germany was deployed, which centered on a PLC and was thus particularly easy and cost effective to implement.

VIPA sales man Marco Roth with Matthias Gersch

SPEED7 CPU 317 for extremely high processing speed

With MTS Automotive Sensors a value was to be recorded every 25 micro seconds – no problem for the VIPA SPEED7 CPU of the 317 type that was supplemented by extremely fast analog inputs on the VIPA SPEED bus. “Only with this high speed backplane bus are these tasks solvable via PLC”, Matthias Gersch, CEO of Gersch SPS Technik GmbH, explained. 40 measured values per millisecond are not only recorded but also protocolled on a PC which is made possible by the integrated

Kristiaan Waumans, MTS

Ethernet interface of the CPU without additional hardware. Additionally, the last 1000 welding procedures are stored in the large work memory of the CPU, so that defective parts can be checked immediately for any changed parameters. “This allows us to understand in more detail what is happening during the welding process”, said Kristiaan Waumans who supervises the production plant and processes at MTS Automotive Sensors. “With this we can see, for example, exactly how the temperature of the work piece from a welding point changed to the next and which effects result from this. By using this information we have been able to reduce the error rate by 46%”, said Thomas Gudenau, CEO of MTS Automotive Sensors GmbH.

The centerpiece of the new solution is a 12“ touch panel which shows all measured values. The visualization was developed and programmed by Matthias Gersch together with MTS Automotive Sensors. “The VIPA CPUs are also programmable with Siemens STEP7, which is familiar to many electrical engineers”, he said.

His company has been using VIPA products for five years. “I never used to think that it was possible to implement such high speed applications with PLC technology, but it is with VIPA”, he said, summing up his experience.

VIPA International – applications

VIPA engineering supplies clean sewage water in Izmit /Turkey

Izmit, a city on the coast of the Sea of Marmara, operates a biological sewage plant for the purification of sewage water for its 300,000 residents in the district Kefken. At the implementation of the automation engineering our Turkish partner OTES worked very closely on this project with the system integrator SYM Kontrol. Mr. Ugur Demir realized this project including the visualization via a SCADA system. As VIPA meanwhile covers around 70% of the Turkish automation technology market in the field of sewage plants, OTES has a large source of extensive experience for projects of this type.

Control technology for extensive processes

In previous reports we have already described that conversions and modernizations of sewage plants are becoming more and more important, not only because of intensified environmental regulations but also due to energy and cost savings. The special features of biological waste water treatment plants are processes that are only environmentally and energy friendly when the individual parameters such as temperature, pressure, and the volume and composition of the materials used are adhered to with very tight tolerances. Manually controlled plants reach their limits very quickly. So the complex and extensive processes require precisely operating control systems that can only be realized with modern automation systems. Controlled operation between the major systems, the pumping stations, which are distributed throughout the entire ground, and the central and decentralized monitoring stations is covered by PLC technology. Besides the central and decentralized control units with the CPUs and the central and decentralized I/O modules, Touch Panels also belong to the complete automation system for the operation and monitoring of the entire plant.

VIPA SPEED7 technology as a solution

At the plant in Izmit, described above, three CPUs 314-6CG13 are deployed. These compact CPUs with integrated SPEED7 technology also have numerous digital and analog inputs and outputs besides the CPU component, so it was possible to save a significant amount of space in the control cabinet. In addition to short signal processing times, SPEED7 technology also allows for a flexible memory management. For larger memory requirements the already large memory capacity can easily be expanded by means of the VIPA Memory Configuration Card. ■

VIPA and YASKAWA international

Joint appearance at the trade fair in Utrecht, NL

At the "WORLD OF TECHNOLOGY & SCIENCE" in Utrecht, in the Netherlands, VIPA and YASKAWA presented themselves together for the very first time in their shared history. And this with great success!

The decision for a joint trade fair participation was made between the national companies VIPA NL and YASKAWA very quickly. And the target was clear - a clear message to the market, which:

- presents the synergies of both companies clearly,
- places the customer benefits in the foreground,
- indicates new and exciting product developments expected in the future.

The first concern -"How to bring together two different brands?" - effectively evaporated during the development of the booth. Although the YASKAWA company color is "blue" and that of VIPA "green", representing both companies clearly and harmonically – on the basis of "white" as the common company color - was indeed a success.

At a clearly structured booth, the uniqueness and distinctive features of both brands were presented to the many very interested visitors, but also the combined strength of both companies was demonstrated. The main focus of the exhibition teams of YASKAWA and VIPA was the public relations towards the exhibition visitors, thereby explaining the products and especially the synergies concerning the two companies.

All in all it was a great and successful trade fair and a favorable exhibition presentation in "YASKAWA-blue" and "VIPA-green". ■

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VIPA in Turkey

OTES, a high-tech company

VIPA has already been active in Turkey for 14 years. With OTES (official name: OTES Electronik San. ve Tic. Ltd.) VIPA has found a competent representative who brought the ideal conditions to conquer the Turkish automation market. Located on the outskirts of Istanbul, OTES is under the direction of Yildirim Acar today a leading provider of solutions for factory automation and components for the automation industry in Turkey.

Exhibition Istanbul 2014


Area Sales Manager S. Isinger with Yildirim Acar

As a national distributor for three important companies from the automation and electronics industry OTES has developed under the direction of Yildirim Acar and his team into one of the most important sales and service companies in Turkey. Part of the core business, with the largest share of sales, is the sale of VIPA control and automation solutions and components. The second pillar of OTES is the official representation for SMD placement machines of the Japanese producer and market leader FUJI. This is for OTES an important representation on the Turkish market just as the past five years the representation of the SwabianTrumpf, Germany`s largest manufacturer of laser technology.

With a total of eight sales and service engineers, who bring all the necessary technical expertise and more than 20 distributors and system integrators around the country, all industrial regions in Turkey are covered. The absolute proximity to customers is the priority combined with fast and effective service. These include a reasonably large stock for „just in time“ delivery, internal staff training as well as regularly scheduled days of technology and technical training courses for clients. These are carried out both in the rooms of OTES and on-site at the customer‘s. All relevant fields of products, whether automation solutions, HMI, SCADA, drives, or communication engineering, are covered here.

„Guideline for all action is also for OTES: Customer Satisfaction.“

The successful work of OTES for many years was honored at the VIPA International Sales Meeting 2014 with the award as distributor of the year.

Sascha Isinger, the Area Sales Manager responsible, said, “OTES has been our partner in Turkey since 2000. It is not often we have to do with such loyal, reliable, high-quality trained colleagues. The staff at OTES lives VIPA. In addition, OTES established their own training area where automation engineers of different areas are trained and coached. OTES is constantly evolving. We are pleased to count a partner like OTES as one of our family.


Picture: www.kaernten-radmarathon.at


Picture: www.kaernten-radmarathon.at


Picture: www.kaernten-radmarathon.at

VIPA sport

Up to over 2000 m: So fit is VIPA Austria

Power in business and sport

Power and endurance - the credo applies both to technology, as well as to sport. Günter Schweiger from the VIPA team Austria has been enthusiastic about cycling for a long time and gave his best at this year's Nockalm racing in Carinthia.

The VIPA representative for the states Styria and Carinthia completed the demanding distance of 106km with flying colors. Well equipped with a high-tech bike and of course the SPEED7 outfit this was no problem. Start and finish were at the Imperial Castle in Bad Kleinkirchheim. The distance profile had many challenges, such as up to 12.4% climb and two mountain disciplines. The highest point of the tour was the so called "Eisentalhöhe" (2042m).

"Such challenges inspire me again and again!" said Günter Schweiger, and added, „at the regular training rides I always have a goal in mind that is important to achieve."
More details about the distance and impressions of the southernmost state of Austria on www.kaernten-radmarathon.at and on facebook – „See you again in 2015!" ■

Text: VIPA Elektroniksysteme GmbH, Wien


Picture: www.kaernten-radmarathon.at


Picture: www.kaernten-radmarathon.at

We bring you up to speed!

(Speed control with YASKAWA frequency converters)

With the YASKAWA frequency converters J1000, V1000 and A1000 VIPA is offering you one of the most efficient frequency converter portfolios in the world. These high-performance converters set clear standards in terms of user friendliness in setup and operation. The preset user parameters shorten the setup time considerably! This saves you time and money – and of course nerves!

The advantages are clear: Only one supplier and one point of contact for sales, order processing, shipping, and service & support.

- Advanced power saving functions
- Preset user parameters
- Designed for 10 years of maintenance-free operation
- Worldwide certification standards CE, UL, cUL, RoHS, TÜV-approved

VIPA
A YASKAWA COMPANY

www.vipa.com