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Multifunctional controller platform for automation

- Multifunctional platform as a new type of device for Simatic Advanced Controllers – combines conventional control tasks with typical PC tasks
- Reusable high-level language applications are easily created with Eclipse or, model-based, with Matlab Simulink
- With just one item of hardware for less programming effort and a smaller space requirement
- The Advanced Controller portfolio has two new technology CPUs and handling functions for Motion Control tasks

Siemens has expanded its Simatic S7-1500 Advanced Controller portfolio for more challenging applications to include a new type of multifunctional platform that combines control and PC functions in a single device. Two new technology CPUs also widen the portfolio for midrange Motion Control tasks.

The CPU 1518(F)-4 PN/DP MFP multifunctional platform is a new type of device for Advanced Controllers that enables high-level language functions to be integrated and stand-alone applications to be easily created and reused. The multifunctional platform combines a typical controller with tasks that had previously been outsourced to a PC – such as model-based and high-level language programming and solutions with databases. Existing technological C/C++ algorithms can continue to be used, and the data exchange between PC and controller, which previously had to be programmed, has been simplified. Furthermore, the configuration has been standardized and the space requirement reduced, while at the same time the overall solution has been made more resilient on one item of hardware with a stable Simatic embedded operating system. The user programs controller-independent C/C++ applications, such as protocol converters and database applications, with standard commercial
programming tools, such as Eclipse. These now run as stand-alone C/C++ applications in parallel to the control program on the multifunctional platform. The additional PC hardware previously required has been eliminated. Users can now also use model-based development tools, such as Matlab Simulink, and transfer their complex functions into the new Simatic Advanced Controller CPU 1518(F)-4 PN/DP MFP. The new multifunctional platform can be used with TIA Portal V15 or higher.

The new technology CPU 1516T-3 PN/DP and fail-safe technology CPU 1516TF-3 PN/DP combine standard, safety, and Motion Control functionalities, such as gearing and camming, in one device. The new CPUs complement the already available range of Advanced Controllers. Midrange Motion Control tasks can be easily implemented in conjunction with the Sinamics V90 PN and S210 servo drive systems. The Motion Control functionalities of all Simatic S7-1500 technology CPUs have also been extended to include the control of 2D to 4D kinematics. This now makes additional handling applications possible, such as Pick & Place, Cartesian Portal, Delta-Picker and Scara robots.

**Background information:**
Siemens offers the right controller for an extremely wide range of automation requirements. The scalable Simatic range of controllers, comprising Basic, Advanced, Distributed and Software Controllers, all have the same range of functions. The S7-1200 Basic Controllers are used for compact automation solutions, and the S7-1500 Advanced Controllers for complex tasks, while the ET 200SP Distributed Controllers are suitable for distributed applications, and the Software Controllers for PC-based applications.
Siemens has expanded its Simatic S7-1500 Advanced Controller portfolio for more challenging applications to include a new type of multifunctional platform. The CPU 1518(F)-4 PN/DP MFP multifunctional platform enables high-level language functions to be integrated and stand-alone applications to be easily created and reused. The multifunctional platform combines a typical controller with tasks that had previously been outsourced to a PC.
The new technology CPU 1516T-3 PN/DP and fail-safe technology CPU 1516TF-3 PN/DP from Siemens combine standard, safety, and Motion Control functionalities, such as gearing and camming, in one device. Midrange Motion Control tasks can be easily implemented in conjunction with the Sinamics V90 PN and S210 servo drive systems. The Motion Control functionalities of all Simatic S7-1500 technology CPUs have also been extended to include the control of 2D to 4D kinematics.

You will find this press release and two press photos at www.siemens.com/press/PR2017110053DFEN

For further information, refer to www.siemens.com/s7-1500


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