

SIMATIC S7-mEC

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SIMATIC S7-mEC - the modular Embedded Controller

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Description

SIMATIC S7-mEC is a modular embedded controller system in S7-300 design with the current embedded PC processor technology and operating system.

It comprises the base model EC31 CPU and optionally available expansion modules EM (PC or PCI-104 interfaces). The modular embedded controller combines the advantages of the tried and trusted modular SIMATIC S7 controller with cutting-edge

PC technology in one new device.



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Area of application

The modular embedded controller is particularly suitable for applications in which both classical control and PC based data processing are of major importance. The most important applications of the S7-mEC are in special and series machine building, which apart from the control task also integrate additional automation tasks, e.g. HMI on one hardware platform.

At the same time you must not pass on the central expandability with standard SIMATIC I/O periphery. The S7-mEC is available in the following variants:

With pre-installed operating system Windows Embedded Standard as EC31 (including software development kit for your self-provided program)

Additionally with pre-installed Software Controller WinAC RTX (EC31-RTX)

And with supplementary installed HMI Software WinCC flexible (EC31-HMI/RTX)

If required a TÜV certified, fail-safe version for safety related applications (EC31-RTX F)



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Benefits

The modular embedded controller system provides the following special features:

The combination of modular S7-300 controllers and embedded PC technology offers more flexibility and openness for customer-specific variations to cover further new applications

Without any rotating components like a fan or hard disk, the S7-300 packaging system ensures a cutting-edge robust design

Configuration and programming can be performed with STEP 7 likewise as for the S7-300. This simplifies commissioning and start-up for the automation personnel

The modularity and scalability offer expansion options with central S7-300 I/O modules and PC interface modules

Due to the numerous connection options, the S7-mEC can be integrated into a complete solution perfectly without great effort

As the user, you can connect both data-processing and logistics systems and also integrate technological tasks

Connection with the PC world is simplified by easy integration of PC applications into the control and the performance and openness of today's PC technology can be utilized

Retentivity of certain data areas is ensured without the need of an uninterruptible power supply

The system is immune to viruses and maloperation thanks to pre-installed software

At first sight the S7-mEC can not be identified as PC which makes the system less vulnerable to manipulation

The controller system is also available as a TÜV-certified, fail-safe version for safety-oriented applications with the fail-safe software controller WinAC RTX F. WinAC RTX F fulfills the highest safety standards as well as fulfilling the relevant standard: EN 954-1 up to Cat. 4, IEC 62061 up to SIL 3 and EN ISO 13849-1 up to PL e

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Design and function

A SIMATIC S7-mEC solution consists of one Embedded Controller (EC 31) which can be extended centrally

on the one hand with standard S7-300 SM and other modules

and on the other hand with extension modules for additional PC interfaces (EM PC) and open PCI-104 interface (EM PCI-104)

Furthermore the SIMATIC S7-mEC provides:

Standard MS Windows embedded standard PC operating system and standard PC interfaces

Latest embedded PC technology

Openness in software and hardware (integration of standard Windows applications and standard PCI-104 cards)

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> EC 31 CPUs

> Expansion modules

All about SIMATIC S7-modular Embedded Controllers

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Technical Info

Support

Training

> Software PLC WinAC RTX F

More information on Safety Integrated

> Brochure "SIMATIC Safety Integrated for Factory Automation"

> Brochure "Safety Integrated for Process Automation"

> SIMATIC Safety Integrated

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