



More than **sensors + automation**



JUMO variTRON 500

Innovative solutions for your success



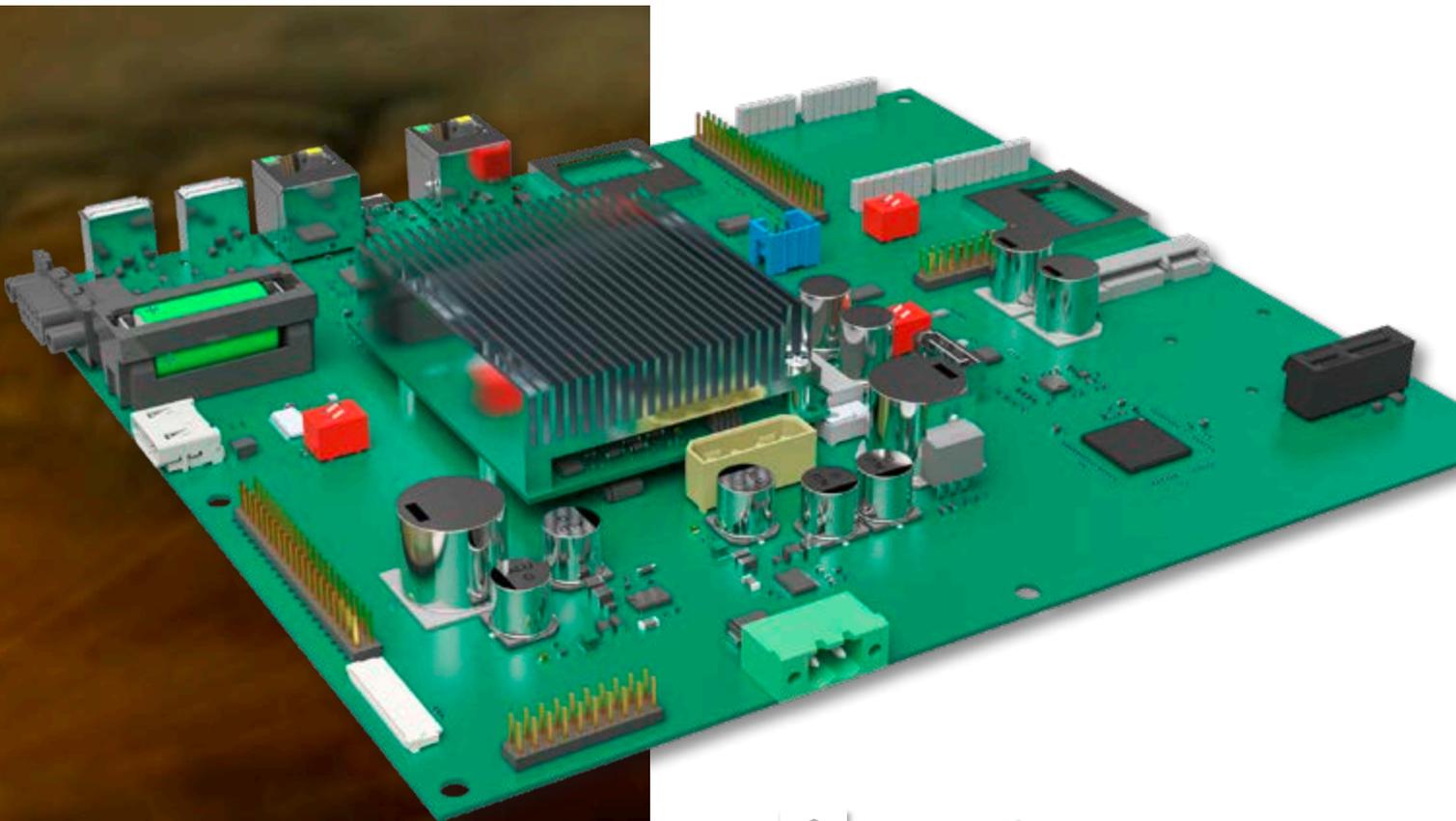
On to JUPITER!

JUMO products are entering the digital future with the new hardware and software platform

The platform approach brings numerous advantages when developing products and is already the standard approach in many industries today. During the development of the platform great importance was placed on the scalability of the hardware and software. The result is a modular, flexible, and above all sustainable hardware platform, combined with a modern software architecture.

The basis is a hardware platform with an 800 MHz processor which is used as a single, dual, or quad core variant depending on the application. The CPU module is pluggable and can be adapted to the requirements of a device via interfaces such as Ethernet, USB, PCIe, UART, SPI, I²C, and GPIOs. Higher performance or lower performance processors can be used depending on customer requirement. Based on this new platform, innovative operating concepts can now be implemented and state-of-the-art display technologies supported.





The advantages at a glance

- ▶ Modular system for maximum flexibility and adaptability
- ▶ High standards for Internet security and cryptography
- ▶ Maximum connectivity via Wi-Fi, Bluetooth
- ▶ TFT displays with intuitive operating concepts as well as multifunction control and animated image transitions
- ▶ High degree of scalability for performance, memory, and interfaces
- ▶ The integration of all important fieldbus systems via CODESYS V3.5 (such as Modbus RTU/TCP master and slave, PROFINET controller, EtherCAT master, and OPC UA server)
- ▶ Implementation of modern Node-RED applications
- ▶ Consistent structure of the software interfaces

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Central processing unit





The advantages at a glance

- ▶ High speed performance
- ▶ Flexible operating philosophy
- ▶ Modern communication interfaces (e.g. OPC UA and MQTT)
- ▶ Integration of various fieldbus systems such as PROFINET, EtherCAT, and Modbus TCP/RTU
- ▶ Many degrees of freedom in software and hardware
- ▶ Easy integration of new software functions via CODESYS PLC
- ▶ Easy adaptation of hardware inputs and outputs
- ▶ Support of a multi-plant principle
- ▶ Customized operation and visualization of up to 5 operator stations via CODESYS remote target visualization and up to 5 web panels via web visualization
- ▶ Up to 64 intelligent connection modules
- ▶ Panels in various formats (portrait or landscape, 4:3 or 16:9)
- ▶ Integrated JUMO web diagnostics
- ▶ Availability of function and visualization libraries

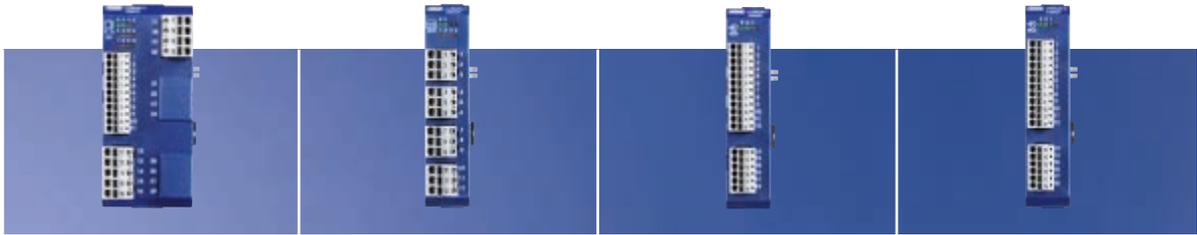
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Module overview



The proven controller as well as input and output modules of the JUMO mTRON T measuring, control, and automation system are available as module variants. For example: the analog input module with universal inputs for thermocouples, RTD temperature probes, and voltage or current standard signals. As a result the same hardware can be used to precisely record and digitize a highly diverse range of process variables. JUMO variTRON 500 enables simultaneous operation of up to 256 control loops so that it can

also be used for sophisticated processes. Through expansion slots the inputs and outputs of each controller module can be individually expanded and adapted. The control loops here operate fully independently, which means they do not require resources from the central processing unit. Thyristor power controllers can also be connected via EtherCAT. In addition, JUMO digiLine sensors for liquid analysis can be connected directly to the central processing unit.



Modules	Multichannel controller module	Relay module 4-channel	Analog input module 4-channel	Analog input module 8-channel
Data sheet	705010	705015	705020	705021
Features	<ul style="list-style-type: none"> - Up to 4 independently configurable PID control loops with a fast cycle time and proven control algorithms - Independent operation - Math and logic functions - Counter input up to 10 kHz 	<ul style="list-style-type: none"> - 4 relay outputs controlled via the system bus by digital signals - Changeover contact in each case (230 V/3 A) - Switching statuses are displayed with LEDs 	<ul style="list-style-type: none"> - 4 high-quality, configurable analog inputs for RTD temperature probes, resistance transmitters, thermocouples, current 0(4) to 20 mA, voltage 0(2) to 10 V - All inputs are galvanically isolated from each other - Customer-specific linearization possible - Limit value monitoring - Additional digital input 	<ul style="list-style-type: none"> - 8 high-quality analog inputs for RTD temperature probes Pt100, Pt500, Pt1000 in two-wire circuit - Limit value monitoring - Additional digital input



Modules	Analog output module	Digital input/output module	Thyristor power controller JUMO TYA 200 series
Data sheet	705025	705030	709061, 709062, 709063
Features	<ul style="list-style-type: none"> - 4 configurable analog outputs 0(4) to 20 mA or 0(2) to 10 V - Adjustable output behavior in case of malfunction 	<ul style="list-style-type: none"> - 12 digital inputs or outputs - Each channel can be configured as an input DC 0/24 V or output DC 24 V - Capacity per output: 500 mA - Switching statuses are displayed with LEDs 	<ul style="list-style-type: none"> - For one-phase and three-phase operation - Continuous load current up to 250 A, load voltage up to 500 V - Different circuit variants, load types and operating modes can be implemented



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