

**YASKAWA**

# VIPA 300S+

High-speed powered by SPEED7



# VIPA 300S+ - The system

300S+, powered by SPEED7, makes this system to one of the fastest and most efficient  $\mu$ Controller-based systems.



## **CPUs with SPEED7 technology**

impress our customers and not only by their outstanding speed. By using the SPEED7 bus the reaction and signal processing were again considerably optimized.

## **Our unique memory management**

allows memory adjustment by simply exchanging the MicroMemory-Card without needing to change the CPU. For the protection of your know-how our worldwide acknowledged Advanced KnowHow-Protect is available. The attractive selection of already integrated communication interfaces such as the integrated Ethernet/MPI and PtP interfaces as standard ensure comfort and flexibility in almost every situation.

## **Particularly useful**

You can also operate our 300S+ CPUs without an additional memory card. If required the integrated work memory - depending on the type of CPU - can be expanded individually up to 8MB with our MCC (MemoryConfigurationCard). The 300S+ CPU simply grows with your programming. All 300S+ CPUs are equipped with Ethernet for the PG-/OP communication as standard.

## **Our 300S+ compact CPUs**

with integrated SPEED7 technology and the I/O periphery directly on board, are particularly suitable for cost-conscious use. With their high-speed performance, the scalable memory and the outstanding communication our 300S+ can be used in almost all demanding applications.

## **Ready-to-use front plugs**

Suitable for the system VIPA 300S+ we additionally offer you ready-to-use front plugs. With them you not only save time but also a lot of money. With their different lengths you can save a lot of time during the installation of your system. They are available in a length of 2.5m up to 5m. Each wire is individually marked, so that no confusion can occur. Just test it right now and offer a set of ready-to-use front plugs with your next order.



SPEED bus

Standard-V bus

### SPEED bus



- For very fast applications there is the patented and unique SPEED bus available in some selected CPUs.
- A clear competitive advantage for you and your application.

### Interfaces



- Besides the MPI and PtP interface there is always of course an Ethernet-PG/OP interface available.
- This is standard with us and will always remain so.

### Memory management



- You can expand your work memory by simply plugging in a MCC without having to change your CPU.
- 300S+ grows with your plant. A flexibility which is very difficult to find anywhere else.

### Performance



- There are no limits in automation technology for you with the enormously high-performance SPEED7 chip.
- Performance, flexibility and communication friendliness.

### User friendly



- All 300S+ controllers are programmable via SPEED7 Studio or via tools of other manufacturers.
- With us you decide which engineering tool you want to deploy!

### Compatible



- Of course a mixed use of our modules and those of other manufacturers is also possible.
- This reduces your storage costs. Just think about it!

# VIPA 300S+ at a glance



## VIPA 300S+ Standard CPU

| Standard CPUs          | 314SE   | 314SB DPM | 315SB     | 315SN     | 315PN ECO | 315PN     | 317SE     | 317SN     | 317PN     |
|------------------------|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Load memory [kB]       | 1024  | 1024      | 4096      | 4096      | 1024      | 4096      | 8192      | 8192      | 8192      |
| Work memory [kB]       | 256-1024  | 512-1024  | 1024-4096 | 1024-4096 | 512-1024  | 1024-4096 | 4096-8192 | 4096-8192 | 4096-8192 |
| SPEED-BUS              | -   | -         | -         | -         | -         | -         | •         | •         | •         |
| RJ45 interface         | 1   | 1         | 1         | 2         | 2         | 2         | 1         | 2         | 2         |
| RS485 interface        | 1   | 1         | 1         | 2         | 2         | 2         | 1         | 2         | 2         |
| Serial & fieldbus      | MPI, ASCII, STX/ETX, 3964(R), USS Master, ModbusRTU |           |           |           |           |           |           |           |           |
| Profibus slave         | •   | •         | •         | •         | •         | •         | •         | •         | •         |
| Profibus master        | •   | •         | •         | •         | •         | •         | •         | •         | •         |
| PROFINET               | -   | -         | -         | -         | •         | •         | -         | -         | •         |
| max. extension modules | 32  | 32        | 32        | 32        | 32        | 32        | 32        | 32        | 32        |
| engineering tool       | SPEED7 Studio, SIMATIC Manager, TIA Portal          |           |           |           |           |           |           |           |           |





## VIPA 300S+ Compact CPU

| C Klasse               | 312SC   | 313SC       | 313SC DPM   | 314ST     | 314SC DPM   |
|------------------------|---|-------------|-------------|-----------|-------------|
| Load memory [kB]       | 1024  | 1024        | 1024        | 2048      | 2048        |
| Work memory [kB]       | 128-1024  | 256-1024    | 256-1024    | 512-2048  | 512-2048    |
| SPEED-BUS              | -   | -           | -           | •         | -           |
| RJ45 interface         | 1   | 1           | 1           | 1         | 1           |
| RS485 interface        | 1   | 1           | 1           | 1         | 1           |
| Serial & fieldbus      | MPI, ASCII, STX/ETX, 3964(R), USS Master, ModbusRTU |             |             |           |             |
| Profibus slave         | -   | -           | •           | •         | •           |
| Profibus master        | -   | -           | •           | •         | •           |
| PROFINET               | -   | -           | -           | -         | -           |
| onboard DI/DO/DIO      | 16 / 8 / -  | 24 / 16 / - | 16 / 16 / - | 8 / 8 / - | 24 / 16 / 8 |
| onboard AI/AO/Pt100    | - / - / -   | 4 / 2 / 1   | - / - / -   | 4 / 2 / 1 | 4 / 2 / 1   |
| Counter/PWM/Stepper    | 2 / 2 / 2   | 3 / 3 / 3   | 3 / 3 / 3   | 4 / - / 1 | 4 / 4 / 4   |
| max. extension modules | 8   | 8           | 8           | 32        | 8           |
| engineering tool       | SPEED7 Studio, SIMATIC Manager, TIA Portal          |             |             |           |             |



# VIPA 300S+ modules



Standard bus modules

| Digital Input  | 8x | 16x | 32x |
|--|----|-----|-----|
| DC 24 V  | -  | •   | •   |
| AC 120/230   | -  | •   | -   |
| Digital Output   | 8x | 16x | 32x |
| DC 24 V, 2 A   | •  | •   | -   |
| DC 24 V, 0.5 A   | -  | •   | •   |
| DC 24 V, 0.5 A (Manual operation)                                | -  | •   | -   |
| Relay<br>DC 30 V, 0.5 A / AC 230 V, 0.5 A                        | -  | •   | -   |
| AC 120/230 V   | •  | -   | -   |
| Digital In-/Output   | 8x | 16x | 32x |
| 16x DIO (1 A), parameterizable                                   | -  | •   | -   |
| 8x DI, 8x DO (1 A)   | -  | •   | -   |
| 16x DI, 16x DO (1 A)   | -  | -   | •   |
| Analog Input   | 2x | 8x  |     |
| Voltage, Current, Resistance,<br>Resistance thermometer (13 Bit) | -  | •   |     |
| Voltage, Current, Resistance,<br>Resistance thermometer (12 Bit) | •  | •   |     |
| Analog Output  | 2x | 4x  |     |
| Voltage, Current   | •  | •   |     |
| Analog In-/Output  |    |     | 6x  |
| 4x AI, 2x AO, Resistance, Voltage                                |    |     | •   |
| CPs  |    |     |     |
| RS232, PtP   |    | •   |     |
| RS422/485, PtP   |    | •   |     |
| Fieldbus module   Slave  |    |     |     |
| PROFIBUS (RS485)   |    | •   |     |
| Actor/sensor interfaces  |    |     |     |
| AS-i master  |    | •   |     |



SPEED bus modules

| Digital Input                  | 8x | 16x |
|--------------------------------|----|-----|
| DC 24 V                        | -  | •   |
| Digital Output                 | 8x | 16x |
| DC 24 V, 0.5 A                 | -  | •   |
| Digital In-/Output             | 8x | 16x |
| 16x DIO                        | -  | •   |
| Analog Input                   | 8x | 16x |
| Current, (Osc & FIFO function) | •  | -   |
| Voltage, (Osc & FIFO function) | •  | -   |
| CPs                            |    |     |
| 2x RS422/485, PtP              |    | •   |
| Ethernet CP                    |    | •   |
| Fieldbus module   Master       |    |     |
| CANopen                        |    | •   |
| PROFIBUS                       |    | •   |
| INTERBUS                       |    | •   |
| INTERBUS 2x RS422              |    | •   |

# SPEED7 gives the edge



*Chips FROM the assembly line*



*Chips FOR the assembly line*

And what gives you the leading edge?  
Speed, SPEED7, to be rather!

The SPEED7 technology offers developers a kit for a high-performance top automation system on an open STEP7 architecture that can be developed within a very short time.

#### **SPEED7 is our technology platform**

- SPEED7 is the basis of all existing and future systems.
- The SPEED7 technology is fully in our hand and ensures sustainability and guarantees that all our products are perfectly matched to each other also in the future.
- The SPEED7 chip gives you the highest performance, the most flexible communication and an intelligent memory management.

#### **SPEED7 is therefore...**

- ... a flexible automation platform
- ... one of the fastest STEP7 PLC processors worldwide!
- ... a guarantee for maximum speed and highest clock rates
- ... an upgrade of existing systems to the latest level

Don't you have this chip already  
in one of your products?



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