



*The new formula for speed.*



# **THE FASTEST**

**PLC\* in the world**

*\*Programmable with STEP®7 from Siemens*



**VIPA®**  
art of automation



### CPU 313SC - SPEED7-Technology

DC 24V, 64kByte, expandable up to 512kByte work memory (50% program/50% data), MPI, MMC slot, real-time clock; **Interface:** PtP RS485, potential separated, ASCII, STX/ETX, 3964R, Modbus master, USS master, Ethernet interface for PG/OP communication; **Periphery:** DI 24xDC 24V (16 alarm capable), counter 3x32Bit (AB), up to 30kHz, DO 16xDC 24V, 0,5A, 3xPWM/3xstepper, AI 4x12Bit, U, I, 1x12Bit, RTD, AO 2x12Bit, U, I; *Order-No.: VIPA 313-5BF03*

### CPU 314SC/DPM - SPEED7-Technology

DC 24V, 128kByte, expandable up to 1MByte work memory (50% program/50% data), MPI, MMC slot, real-time clock  
**Interface:** Profibus-DP master, 12MBaud, up to 125 slaves/PtP RS485, potential separated, ASCII, STX/ETX, 3964R, Modbus master, USS master, Ethernet interface for PG/OP communication, RJ45;  
**Periphery:** DI 24xDC 24V (16 alarm capable), counter 4x32Bit (AB), up to 60kHz, DIO 8xDC 24V (DO 0,5A), DO 16xDC 24V, 0,5A, 4xPWM/4xstepper, AI 4x12Bit, U, I, 1x12Bit, RTD, AO 2x12Bit, U, I; *Order-No.: VIPA 314-6CG03*



### CPU 314ST/DPM - SPEED7-Technology

DC 24V, 512kByte, expandable up to 2MByte work memory (50% program/50% data), MP<sup>2</sup>, MMC slot, real-timeclock, SPEED-Bus; **Interface:** Profibus-DP master, 12MBaud, up to 125 slaves/PtP RS485, potential separated, ASCII, STX/ETX, 3964R, Modbus master, USS master, Ethernet interface for PG/OP communication, RJ45  
**Periphery:** DI 8xDC 24V (alarm capable), counter 4x32Bit (AB), up to 100kHz, DIO 8xDC 24V (DO 0,5A), AI 4x12Bit, U, I, 1x12Bit, RTD, AO 2x12Bit, U, I; *Order-No.: VIPA 314-6CF01*



### CPU 315SB/DPM - SPEED7-Technology

DC 24V, 1MByte, expandable up to 2MByte work memory (50% program/50% data), MP<sup>2</sup>, MMC slot, real-time clock; **Interface:** Profibus-DP master, 12MBaud, up to 125 slaves/PtP RS485, potential separated, ASCII, STX/ETX, 3964R, Modbus master, USS master, Ethernet interface for PG/OP communication; *Order-No.: VIPA 315-2AG10*

### CPU 315SN/NET - SPEED7-Technology

DC 24V, 1MByte, expandable up to 2MByte work memory (50% program/50% data), MP<sup>2</sup>, MMC slot, real-time clock; **Interface:** Profibus-DP master, 12MBaud, up to 125 slaves/PtP RS485, potential separated, ASCII, STX/ETX, 3964R, Modbus master, USS master, Ethernet interface for PG/OP communication, Ethernet-CP 343 Lean, S7 communication, RFC1006, H1, TCP/IP, UDP, up to 8 connections; *Order-No.: VIPA 315-4NE11*



### CPU 317SE/DPM - SPEED7-Technology

DC 24V, 2MByte, expandable up to 8MByte work memory (50% program/50% data), MPI, MMC slot, real-time clock, SPEED-Bus  
**Interface:** Profibus-DP master, 12MBaud, up to 125 slaves/PtP RS485, potential separated, ASCII, STX/ETX, 3964R, Modbus master, USS master, Ethernet interface for PG/OP communication; *Order-No.: VIPA 317-2AJ12*

### CPU 317SN/NET - SPEED7-Technology

DC 24V, 2MByte, expandable up to 8MByte work memory (50% program/50% data), MPI, MMC slot, real-time clock, SPEED-Bus;  
**Interface:** Profibus-DP master, 12MBaud, up to 125 slaves/PtP RS485, potential separated, ASCII, STX/ETX, 3964R, Modbus master, USS master, Ethernet interface for PG/OP communication, Ethernet-CP 343, S7 communication, RFC1006, H1, TCP/IP, UDP, up to 16 connections; *Order-No.: VIPA 317-4NE12*



### CPU 515S/DPM - SPEED7-Technology

external DC 24V power supply, 1MByte, expandable up to 2MByte work memory (50% program/50% data), MP<sup>2</sup>, MMC slot, real-time clock; **Interface:** Profibus-DP master, 12MBaud, up to 125 slaves, PCI-Ethernet-Interface for PG/OP communication, incl. SW860R OPC server (SW860R please order separately); *Order-No.: VIPA 515-2AJ00*

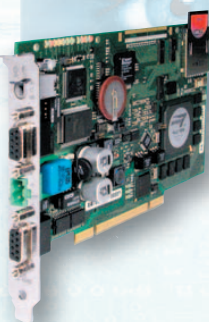
### CPU 517S/DPM - SPEED7-Technology

external DC 24V power supply, 2MByte, expandable up to 8MByte work memory (50% program/50% data), MP<sup>2</sup>, MMC slot, real-time clock; **Interface:** Profibus-DP master, 12MBaud, up to 125 slaves, PCI-Ethernet interface for PG/OP communication, incl. SW860R OPC server (SW860R please order separately); *Order-No.: VIPA 517-2AJ00*

### CPU 517S/NET - SPEED7-Technology

external DC 24V power supply, 2MByte, expandable up to 8MByte work memory (50% program/50% data), MP<sup>2</sup>, MMC slot, real-time clock; **Interface:** Profibus-DP master, 12MBaud, up to 125 slaves, PCI-Ethernet interface for PG/OP communication incl. SW860R OPC server (SW860R please order separately)

**2. Slot:** Ethernet-CP 543, S7 communication, RFC1006, H1, TCP/IP, UDP, up to 16 connections; *Order-No.: VIPA 517-4NE00*





## Performance

Very fast processing and cycle times - up to 50.000 instructions per ms increases the output of machinery and manufacturing plants.

## Design

Known and well-established design, similar to the S7-300 from Siemens.

## Standard-Bus-System

Due to standard bus system it is possible to mix VIPA and Siemens components.

## SPEED7-Bus-System

The High SPEED-Bus is designed for extremely fast applications. You can use special high-performance VIPA modules such as AIO, DIO, Fieldbus-modules, Communication-modules etc.

## Programming language

Programmable with STEP<sup>®</sup>7 from Siemens or WinPLC7 from VIPA GmbH.

## Interfaces

Ethernet, MP21 and Profibus-DP Master, PtP serial RS485 interface and integrated CP 343/543 Ethernet.

## Standard MMC Card

The MMC card is used for back up, storage program and data, also for running the CPU (for running of the CPU the MMC is not obligatory).

## Memory Management

Via MCC card it is possible to increase the work memory of the CPU up to 8MByte without changing the hardware.

## Stock cost

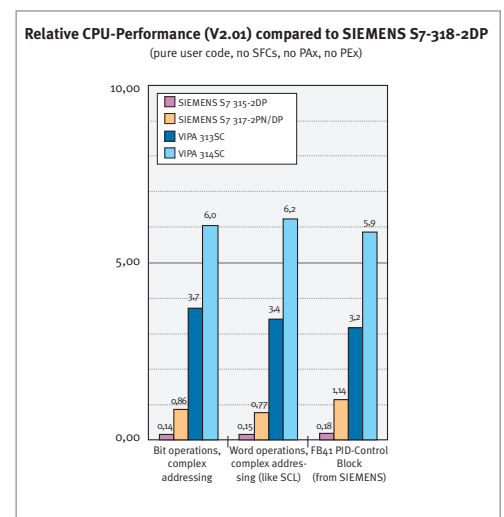
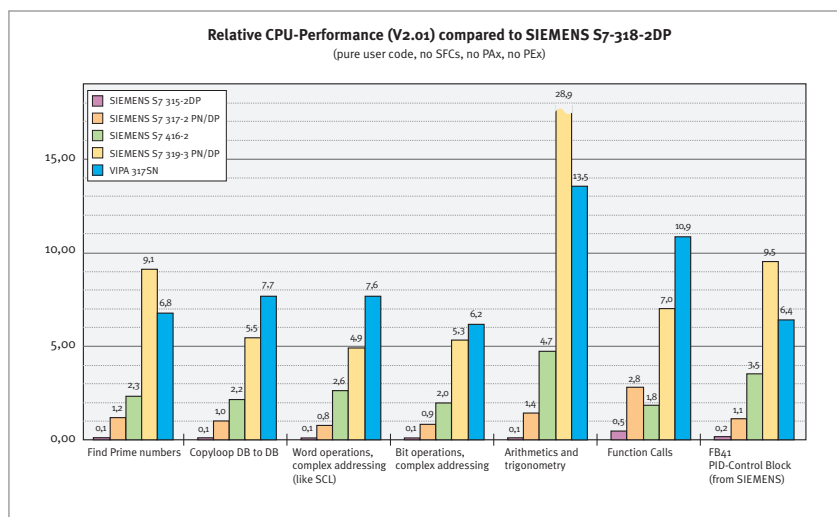
Using SPEED7 technology your stock of different CPU types reduces to one or two designs only.

## Availability

The SPEED7 technology is available world-wide. More than 55 VIPA branch offices offer service and support.



## Relative speed in % in comparison with Siemens PLC S7-318-2-DP as references



## SPEED-Bus-Module:

### Fieldbus master modules

- **Profibus-DP master:** 12MBaud, up to 125 slaves
- **INTERBUS master:** 12KBaud, up to 128 slaves
- **CANopen master:** 1MBaud, up to 126 slaves
- More on request

### Ethernet communication

- **CP343S:** Fast internal Dual Port RAM communication, S7 communication, RFC10069, H1, TCP/IP, UDP, 16 engineering connections, 32 PG/OP connections

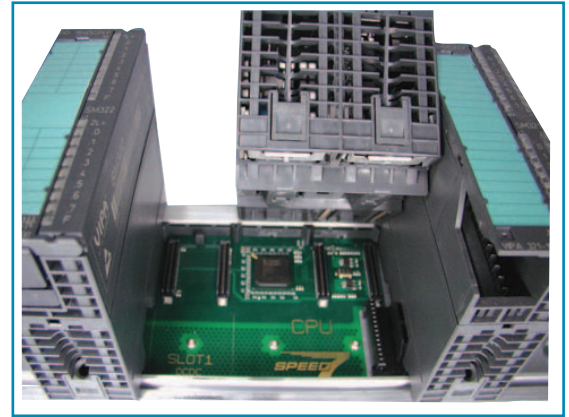
### Digital in-/output modules

- **Digital in:** DI 16xDC 24V, 2,56µs ... 8oms, parameterizable
- **Digital out:** DO 16xDC 24V, 0,5A, 100kHz
- **Digital in/out:** DIO 16xDC 24V (DO 0,5A), DI 2,56µs ... 8oms, parameterizable, DO 100kHz

### Analog input modules

- **Analog in:** AI 8x16Bit, ±20mA (alarm), 100ms parameterizable\*
- **Analog in:** AI 8x16Bit, ±10mA (alarm), 100ms parameterizable\*

\* On request: 32kByte cache memory per channel to Trigger.



**Picture**

Left: Highspeed-modules placed onto the SPEED-Bus from VIPA  
 Middle: SPEED7-CPU  
 Right: Standard bus modules from VIPA or Siemens

**NEW**

**NEW**

**NEW**

CPU	313SC	314SC/DPM	314ST/DPM	315SB/DPM 315SN/NET	317SE/DPM 317SN/NET	515S/DPM 517S/DPM 517S/NET
Work memory (50% program / 50% data)	64kB - 512kB	128kB - 1MB	512kB - 2MB	1MB - 2MB	2MB - 8MB	1MB-2MB/ 2MB-8MB
Processing time (BIT, Word, Fix/Floatingpoint in Nanoseconds*)	21/125	11/63	13/75	13/75	10/58	13/75
Number range: FB, FC DB		2048 4096			8191 8191	2048 4096
Bit memory / Counter / Timer		8192Byte / 512 / 512			16K/2K/2K	8192Byte / 512 / 512
Lokal data loc.	512Byte per prio-level	8192Byte total (per prio-level configurable)				
Total address space I/O	8192 / 8192Byte					
Process image I/O	128 / 128Byte	2048 / 2048Byte			8192/8192Byte	2048/2048Byte
MPI	12MBit		1,5MBit		12MBit	1,5MBit
Fieldbus: Profibus-DP master integrated	--	✓	✓	✓ / ✓	✓ / ✓	✓ / ✓ / ✓
Ethernet interface integrated	✓	✓	✓	✓ / ✓	✓ / ✓	✓ / ✓ / ✓
PtP/Profibus-DP-Master (switchable)	--	✓	✓	✓ / ✓	✓ / ✓	-- / -- / --
VIPA SPEED-Bus	--	--	✓	-- / --	✓ / ✓	-- / -- / --
Ethernet-CP 343/543 integrated	--	--	--	-- / ✓	-- / ✓	-- / -- / ✓
DI / DO / DIO`s	24 / 16 / -	24 / 16 / 8	8 / - / 8	--	--	--
AI / AO / Pt100	4 / 2 / 1	4 / 2 / 1	4 / 2 / 1	--	--	--
Counter / PWM or Stepper (switchable)	3 / 3 / 3	4 / 4 / 4	4 / - / -	--	--	--
Dimensions (WxHxD) in mm	120x125x130	120x125x130	80x125x130	40x125x130/ 80x125x130	80x125x130	174x106 (PCI)

\* 1ns = 0,001µsec



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