



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), MP²I, 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), MP²I, 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), MP²I, 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), MP²I, 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*

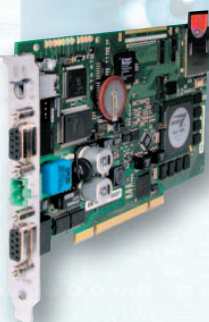
CPU 517S/DPM - SPEED7-Technology

external DC 24V power supply, 2MByte, expandable up to 8MByte work memory (50% program/50% data), MP²I, 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), MP²I, 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[®]7 from Siemens or WinPLC7 from VIPA GmbH.

Interfaces

Ethernet, MP2I 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

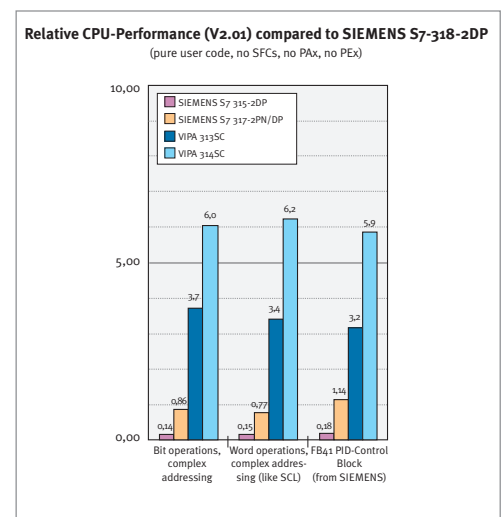
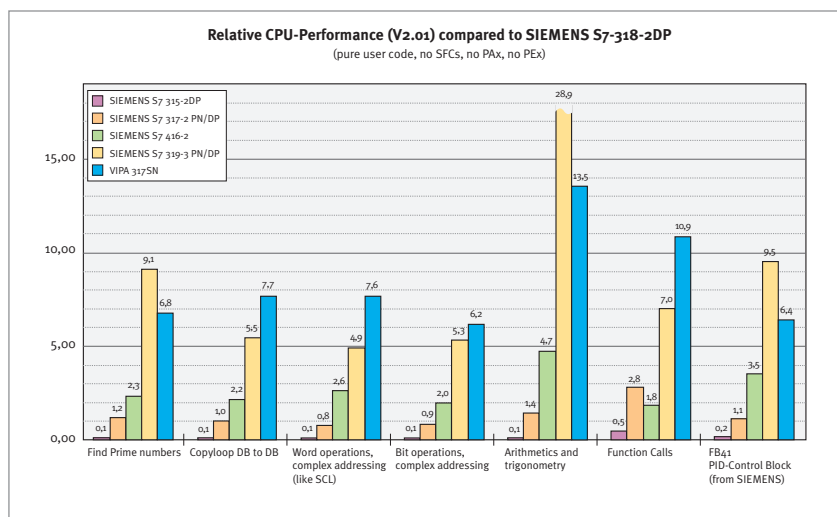
Using SPEED7 technology your stock of different CPU types reduces to one or two designs only.

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

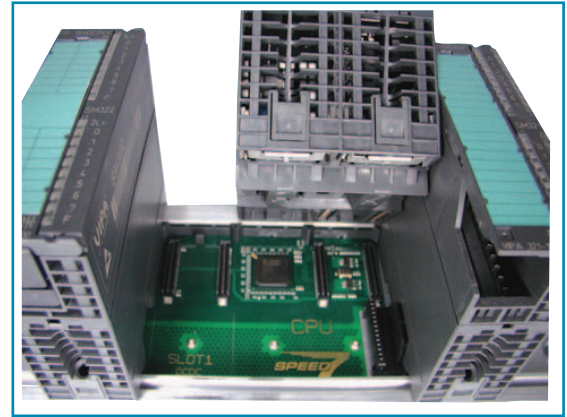
Digital in-/output modules

- **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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