The fastest Hard-PLC worldwide with integrated Ethernet-CP 343

The new SPEED7-CPU from VIPA is worldwide the fastest automation set of its kind and self-evident it is programmable with STEP7 from Siemens. This CPU is created for time-critical applications and fulfils at the same time the demands for increasing memory capacity. The memory could be dynamicly adapted additionally to the demands of the plant/application every time, without the need of exchanging the existing hardware. Thereby the number of the needed CPU types - which the customer has to insert in all applications - reduces to one.

There is a integrated High-Speed-Ethernet-CP 343 with RFC1006, S7-Communication, H1, TCP/IP, Modubus master, USS master and UDP available. This CP is projectable with NetPro up to 16 connections; with FB55 IP_Config up to 64 connections (depends on CPU version).

General informations of SPEED7 technology

The CPU with SPEED7 technology is the first PLC which is configurable via MMC (Memory Configuration Card) for a large memory area. Of course, the functions of the previous VIPA MMC, beside the scaling of the memory, are still available – e. g. as a external data memory for scources and programs as well as for the firmware updates. The standard MMC card could be used for storing of programs and data during for the running of the CPU. For the operating of the CPUs the memory card is not necessary.

Profibus is available as integrated fieldbus interface. Furthermore the MPI interface with 12Mbaud is included.

In addition the SPEED7-CPUs possess an integrated Ethernet-interface which offer convenient programming via network to the user.

Peripherals can be connected in two ways:

1. Serial connection as usual on the right side via S7-300-Standard Backplane Bus, at which all S7-300-I/O-modules as well as partly communication processors and function modules like counters are to be operated.

2. The special feature of CPUs 314ST/317 is the parallel connection via VIPA Highspeed parallel bus on the left side of the CPU, which offers the possibility to use special fast peripherals. For the Highspeed parallel bus VIPA is offering digital in-/ outputs, fast analog inputs, FAST Profibus-DP, INTERBUS-Master as well CAN-Interface (see relating list of VIPA), Ethernet CP 343.

With the integrated Master for Profibus-DP, the Ethernet-Interface and the MPI-Interface VIPA is supporting all important interfaces in one system.

Technical Data:

CPUs:	Multi-processor architecture, equipped with SPEED7-Chip PLC 7001 of profichip GmbH
Language:	STEP7 from Siemens, adjustable as 300- or 400- mode
Memory:	CPU 314ST/315SB with 512kB to 2MByte configurable in steps to 128, 256 and 512kByte or CPU 317NET with 2MByte configurable in steps to 4 and 8 MByte, 50% program und 50% data, no external MMC as load memory necessary

Peripheral interface: Double bus architecture

1. Serial bus compatible to S7-300 from Siemens with up to 32 modules in one line. Structure of several lines with in each case 8 modules

2. VIPA CPU 314ST/317Sx Highspeed Parallel Bus, 32Bit,
16 slots per 64kByte address capacity. Data transfer rate > 40 MByte per second, interrupt-capable

Times:

Commands: Bit-operations, from 10ns
Word-operations, from 10ns
Fixed point arithmetic, from 10ns
Floating point operations, from 40ns

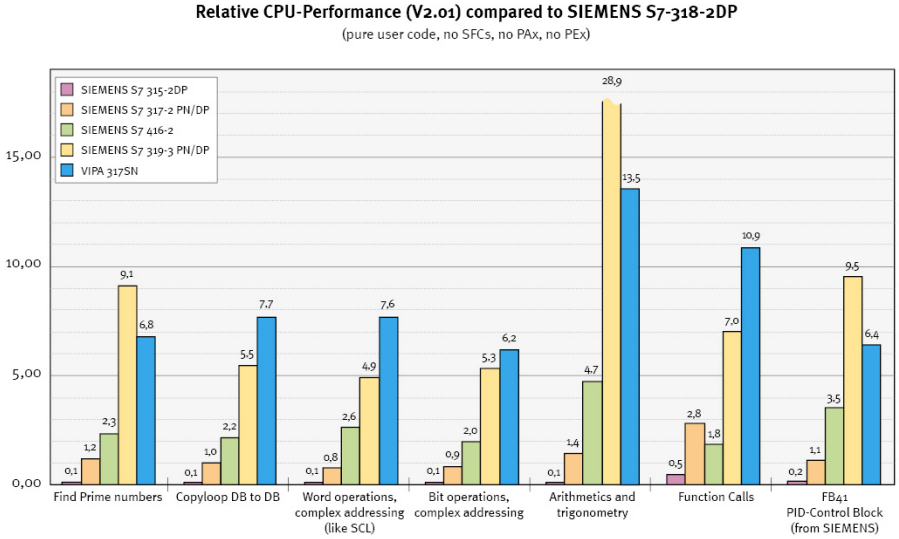
Cycle: Standard cycle from 100µs (open-circuit operation)
User programme-runtime: 100k instructions in command-mix. typ. 1,8ms

Cycle mode adjustable:

1. Classic LSB-Mode (reading, executing, writing), Default
2. Fast-Parallel-Mode, B+SL-Mode (executing, writing + reading)

Interrupt:	Prcess alarm response time from 100µs
Alert:	Highspeed alert OB 29 for 500µs, OB 28 for 250µs! runtime OBs + alter should be ≤ 50% of total performance
Interfaces	Basis CPU
Interface 1:	DSUB-9: MPI up to 12MBaud; up to 32 connections or changeable to PtP RS485 (ASCII, STX/ETX, 3964R, Modbus master/slave, USS)
Interface 2:	DSUB-9: Profibus-DP (master/slave) up to 12MBaud up to 126 slaves or changeable to PtP RS485 (ASCII, STX/ETX, 3964R, Modbus master/slave, USS)
Interface 3:	Ethernet-Slot for PG-communication RJ45
Interface 4:	Ethernet CP 343, RJ45, S7-Communication, RFC1006, H1, TCP/IP, UDP, up to 64 connections

Relative CPU performance in % compared to Siemens S7-318-2-DP as reference



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