300S

The high speed control system powered by SPEED7

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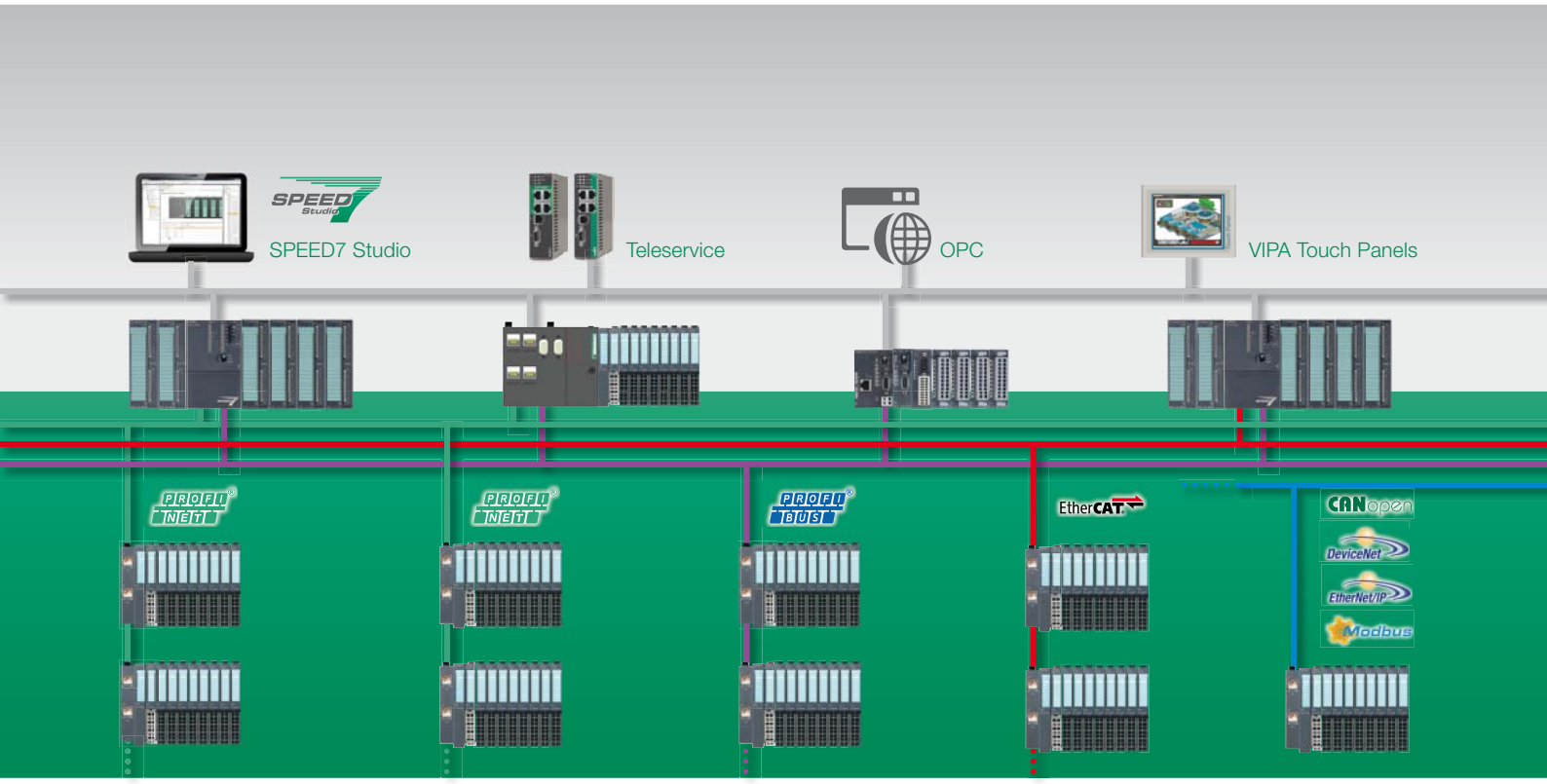
300S at a glance



300S, powered by SPEED7, makes this system one of the fastest and most powerful µ controller based systems worldwide, programmable with SPEED7 Studio from VIPA.

The CPUs with SPEED7 technology
are not only impressive because of their outstanding speed. Reaction and signal processing are optimized by the use of SPEED7 buses.

The unique MemoryManagement
(memory expansion concept) from VIPA enables memory adjustment by simply exchanging the MicroMemory-Card without changing the CPU. Our worldwide renowned Advanced Know-How-Protect is available to protect your know how. The attractive range of integrated communication interfaces, as the standardly integrated Ethernet, MPI and PtP interfaces for example, ensure your comfort and flexibility in almost any situation.

Particularly useful
The operation of our 300S CPUs is also possible without additional memory card. If necessary the integrated work memory can be expanded up to 8MB with the VIPA MMC – MemoryConfigurationCard - depending on the type of CPU. The 300S CPU increases with your programming. All 300S CPUs are equipped with Ethernet for PG/OP communication as standard.

Our 300S-COMPACT-CPUs,
with integrated SPEED7 technology and I/O periphery directly on board, are particularly suitable for cost sensitive applications. With its high speed performance, the scalable memory and the extraordinary communication possibilities our 300S is suitable for almost any demanding application.

Each 300S is custom-made

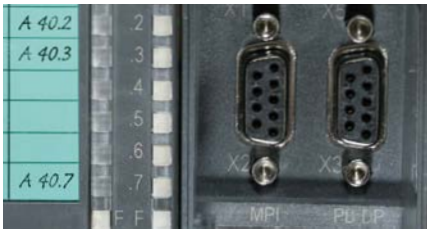
VIPA SPEED-Bus

Standard-V-Bus

SPEED-Bus

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

Interfaces



- Besides the MPI and PtP interface, an Ethernet-PG/OP interface is, of course, always available.
- With us this is standard and it will remain so.

Memory management

- Expand your work memory by inserting a VIPA MCC without changing the CPU.
- 300S increases with your system. A flexibility which you can't not find anywhere else.

Performance

- Because of the enormously powerful SPEED7 chip there are hardly any limits for you in automation technology.
- Powerful, flexible and very communicative.

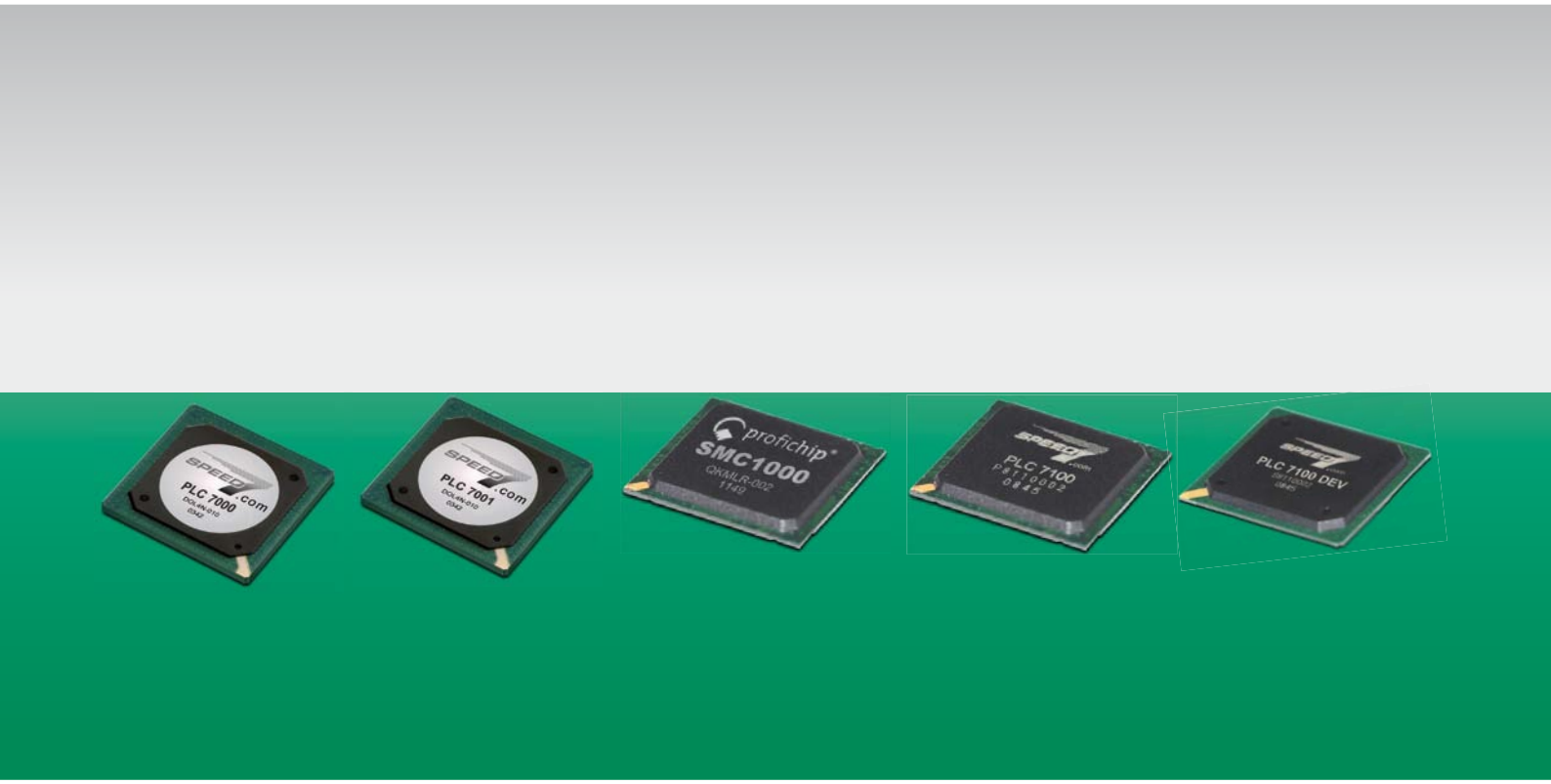
User friendly

- All 300S are programmable via SPEED7 Studio from VIPA or via tools of other manufacturers.
- With VIPA you decide which engineering tool you want to apply!

Compatible

- The mixture of VIPA modules with modules of other manufacturers is of course possible.
- This also minimizes your warehousing costs. Just think about it!

SPEED7 ensures your lead



And what ensures your lead?
SPEED, **SPEED7**- to be exact!

The SPEED7 technology offers developers a kit that creates a high performance high-end automation system on an open STEP7 architecture within the shortest time.

SPEED7 is the technology platform from VIPA

- SPEED7 forms the basis of all existing and future systems.
- The SPEED7 technology is completely in the hands of VIPA and ensures sustainability. This guarantees that all VIPA products are, and will continue to be, perfectly coordinated with each other.
- The SPEED7 chip guarantees you the highest performance, the most flexible communication and an intelligent memory management.

Therefore SPEED7 is...

- ... a flexible automation platform.
- ... one of the fastest STEP7 PLC processors of the world!
- ... a guarantee for maximum speed and highest clock rates.
- ... an upgrade of existing installations to the most modern level

Isn't this chip already being applied in one of your products?

300S – The system

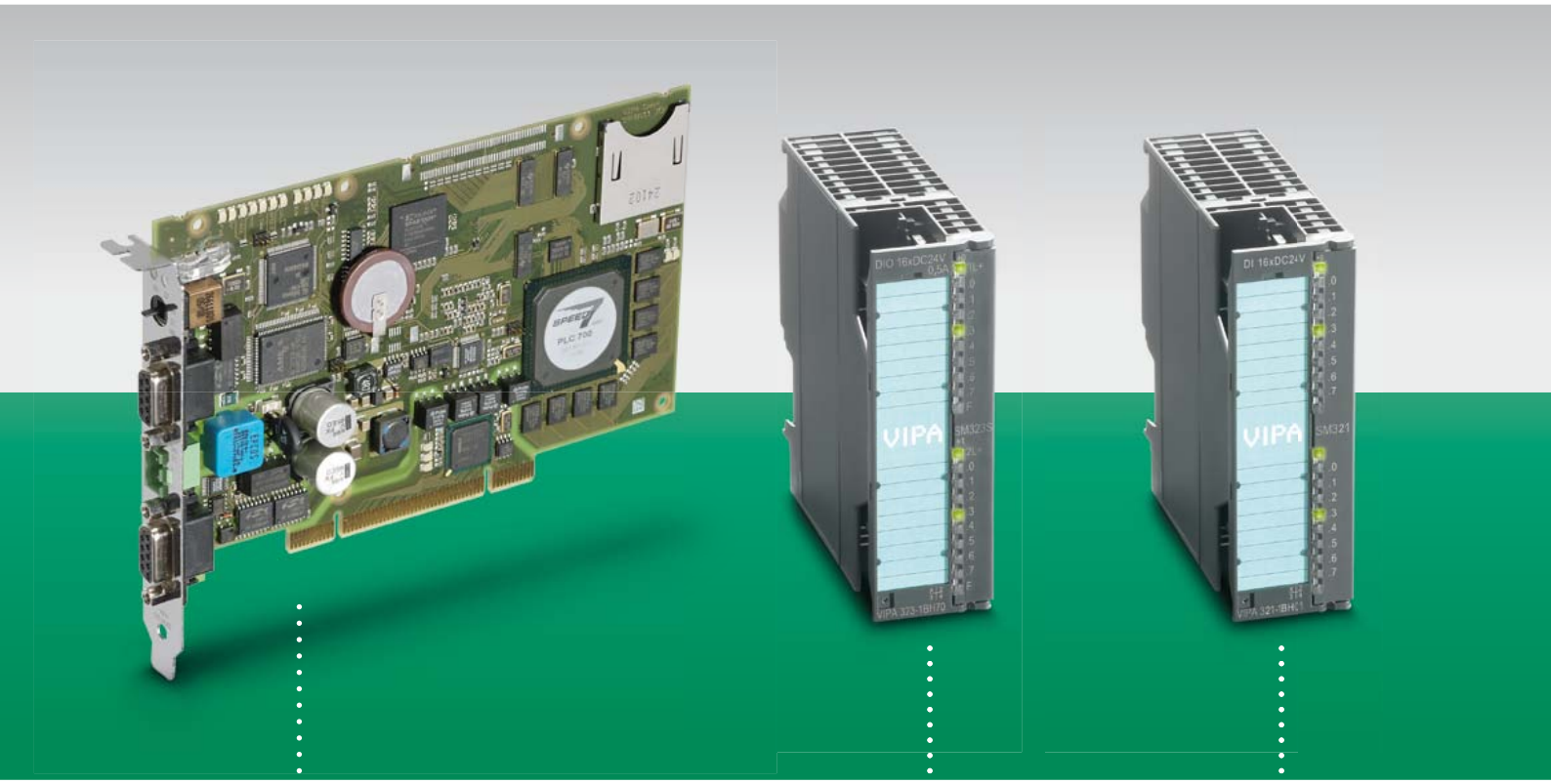
300S standard PLC

Standard-CPUs	314SB/DPM	314SE/DPS	315SB/DPM	317SE/DPM	315SN/NET	317SN/NET	315SN/PN ECO	315SN/PN	317SN/PN	315SN/EC	317SN/EC
Work memory from	256 kB	128 kB	1.024 kB	2.048 kB	1.024 kB	2.048 kB	512 kB	1.024 kB	2.048 kB	1.024 kB	2.048 kB
Work memory up to	512 kB	512 kB	2.048 kB	8.192 kB	2.048 kB	8.192 kB	512 kB	2.048 kB	8.192 kB	2.048 kB	8.192 kB
Loadmemory	512 kB	512 kB	2.048 kB	8.192 kB	2.048 kB	8.192 kB	512 kB	2.048 kB	8.192 kB	2.048 kB	8.192 kB
SPEED-BUS	-	-	-	•	-	•	-	-	•	-	•
Ethernet PG/OP Interface	•	•	•	•	•	•	•	•	•	•	•
Integrated Ethernet-CP	-	-	-	-	•	•	•	•	•	•	•
PROFINET	-	-	-	-	-	-	•	•	•	-	-
PROFINET I/O Devices max.	-	-	-	-	-	-	128	128	128	-	-
PROFINET Realtime Class	-	-	-	-	-	-	2 (RT)	2 (RT)	2 (RT)	-	-
PROFINET Shared Device Control	-	-	-	-	-	-	•	•	•	-	-
PROFINET Cycletime min.	-	-	-	-	-	-	1 ms	1 ms	1 ms	-	-
EtherCAT	-	-	-	-	-	-	-	-	-	•	•
EtherCAT Slaves max.	-	-	-	-	-	-	-	-	-	128	512
EtherCAT Distributed Clocks	-	-	-	-	-	-	-	-	-	•	•
EtherCAT Hotplug	-	-	-	-	-	-	-	-	-	•	•
EtherCAT bus cycle time min.	-	-	-	-	-	-	-	-	-	500 µs	500 µs
Interface 1	MPI	MPI	MPI	MPI	MPI	MPI	MPI	MPI	MPI	MPI	MPI
Interface 2	DP Master, DP Slave, PtP	DP Slave, PtP	DP Master, DP Slave, PtP	DP Master, DP Slave, PtP	DP Master, DP Slave, PtP	DP Master, DP Slave, PtP	PtP	DP Master, DP Slave, PtP	DP Master, DP Slave, PtP	DP Master, DP Slave, PtP	DP Master, DP Slave, PtP
DI / DO / DIOs	- / - / -	- / - / -	- / - / -	- / - / -	- / - / -	- / - / -	- / - / -	- / - / -	- / - / -	- / - / -	- / - / -
AI / AO / Pt100	- / - / -	- / - / -	- / - / -	- / - / -	- / - / -	- / - / -	- / - / -	- / - / -	- / - / -	- / - / -	- / - / -
Counter / PWM / Frequency measurement	- / - / -	- / - / -	- / - / -	- / - / -	- / - / -	- / - / -	- / - / -	- / - / -	- / - / -	- / - / -	- / - / -

300S compact PLC

C-Class	312SC	313SC	313SC/DPM	314ST/DPM	314SC/DPM
Work memory from	64 kB	128 kB	128 kB	512 kB	256 kB
Work memory up to	512 kB	512 kB	512 kB	2.048 kB	1.024 kB
Loadmemory	512 kB	512 kB	512 kB	2.048 kB	1.024 kB
SPEED-BUS	-	-	-	•	-
Ethernet PG/OP Interface	•	•	•	•	•
Integrated Ethernet-CP	-	-	-	-	-
PROFINET	-	-	-	-	-
PROFINET I/O Devices max.	-	-	-	-	-
PROFINET Realtime Class	-	-	-	-	-
PROFINET Shared Device Control	-	-	-	-	-
PROFINET Cycletime min.	-	-	-	-	-
EtherCAT	-	-	-	-	-
EtherCAT Slaves max.	-	-	-	-	-
EtherCAT Distributed Clocks	-	-	-	-	-
EtherCAT Hotplug	-	-	-	-	-
EtherCAT Buszykluszeit min.	-	-	-	-	-
Interface 1	MPI	MPI	MPI	MPI	MPI
Interface 2	PtP	PtP	DP Master, DP Slave, PtP	DP Master, DP Slave, PtP	DP Master, DP Slave, PtP
DI / DO / DIOs	16 / 8 / -	24 / 16 / -	16 / 16 / -	8 / 8 / -	24 / 16 / 8
AI / AO / Pt100	- / - / -	4 / 2 / 1	- / - / -	4 / 2 / 1	4 / 2 / 1
Counter / PWM / Frequency measurement	2 / 2 / 2	3 / 3 / 3	3 / 3 / 3	4 / - / -	4 / 4 / 4

PROFIBUS®
PROFINET®
EtherCAT®
CANopen
ASi INTERFACE
Modbus
INTERBUS



500S Slot PLC



Slot-CPUs	515S/DPM	517S/DPM	517S/NET
Workmemory from	1.024 kB	2.048 kB	2.048 kB
Workmemory up to	2.048 kB	8.192 kB	8.192 kB
Loadmemory	2.048 kB	8.192 kB	8.192 kB
SPEED-BUS	-	-	-
Ethernet PG/OP Interface (PCI)	•	•	•
Integrated Ethernet-CP	-	-	•
PROFINET	-	-	-
PROFINET I/O Devices max.	-	-	-
PROFINET Realtime Class	-	-	-
PROFINET Shared Device Control	-	-	-
PROFINET Cycletime min.	-	-	-
EtherCAT	-	-	-
EtherCAT Slaves max.	-	-	-
EtherCAT Distributed Clocks	-	-	-
EtherCAT Hotplug	-	-	-
EtherCAT Buszykluszeit min.	-	-	-
Interface 1	MPI	MPI	MPI
Interface 2	DP Master, DP Slave, PtP	DP Master, DP Slave, PtP	DP Master, DP Slave, PtP
DI / DO / DIOs	- / - / -	- / - / -	- / - / -
AI / AO / Pt100	- / - / -	- / - / -	- / - / -
Counter / PWM / Frequency measurement	- / - / -	- / - / -	- / - / -

SPEED bus modules

Digital Input	8x	16x
DC 24 V	-	•
AC 120/230		
Digital Output	**8x**	**16x**
DC 24 V, 2 A		
DC 24 V, 0.5 A	-	•
DC 24 V, 0.5 A (Manual operation)		
Relay DC 30 V, 0.5 A / AC 230 V, 0.5 A		
AC 120/230 V		
Digital In-/Output	**8x**	**16x**
16x DIO	-	•
8x DI, 8x DO (1 A)		
16x DI, 16x DO (1 A)		
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	•

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 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, Resistance thermometer (13 Bit)	-	•	
Voltage, Current, Resistance, 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	•

SPEED7 Studio

Hardware configuration

- Simplified hardware configuration
- Clever Drag & Drop function
- Intelligent input help by means of tooltips
- Photo-realistic representation of the modules used

Networking

- Networking via PROFIBUS, PROFINET, EtherCAT and standard Ethernet
- The topology display remains the same regardless of the bus protocol.
- The networking configuration is fast and easy to realize by means of the device template.

Programming

- The hand tools of the SPEED7 Studios are STL, FBD and LAD
- Diagnosis is possible by means of module status and monitoring chart – even with history and trend graph.
- Different color designs, hierarchical levels & clear allocation

Visualization

- Web and vector based visualization
- Easy and locally independent access via panel, laptop, smart phone and tablet PC
- Seamless integration of your project variables for use in the visualization

Notes

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