PROFIBUS-DP-Slave Controller ASIC

VPC3+ C

profichip®

automation in silicon
Profichip’s VPC3+C is a communication chip with 8 Bit Microprocessor interface for intelligent Profibus slave applications.

**Features:**
- Pin and function compatible with SPC3 from Siemens
- Supporting PROFIBUS DP-VO, DP-V1 & DP-V2 protocol (DxB + IsoM)
- 4 KByte communication RAM
- Configurable 8-Bit µController interface
- 5V or 3.3V supply voltage, 5V tolerant inputs
- Low power consumption
- Software Stack (incl. new I&M functions) and Evaluation-Kit
- Package PQFP44 (RoHS compliant)

**NEW**
- Support of Clock-Synchronisation (DP-V2)
- 20% Reduced Power Consumption at 5V
The VPC3+C handles the message and address identification, the data security sequences and the protocol processing for Profibus-DP. In addition the acyclic communication and alarm messages, described in DPV1 extension, are supported. Furthermore the slave-to-slave communication Data eXchange Broadcast (DXB), Clock Synchronization and the Isochronous Mode (IsoM), described in DPV2 extension, are also provided.

Automatic recognition and support of data transmission rates up to 12 Mbit/s, the integration of the complete Profibus-DP protocol, 4 KByte communication RAM and the configurable processor interface are features to create high-performance Profibus slave applications. The device can be operated with either 3.3V or 5V single supply voltage. For 3.3V operation the inputs are 5V tolerant.

VPC3+C is pin-compatible to SPC3. Therefore VPC3+C can replace them in existing applications without any restrictions or SW-modifications.
The team of profichip GmbH is developing industrial communication and control ASICs since 1998. Besides the ASICs for PLC-systems' internal communication, the first Profibus Slave Controller VPC3+ was released in 1999. After this successful launch, profichip extended the range of compatible Profibus Slave ASICs by the Lean Slave VPCLS in 2000. Since then, profichip continuously improves available Profibus features in their ASICs. Another evidence for the innovative power of profichip was the realization of the Speed7 PLC7000 - the first High Performance PLC in silicon. Programmable in Step7 language, Speed7 marks a substantial progress in the evolution of PLC.

profichip's philosophy exceeds ordinary developing and distribution of ASICs by translating visions into silicon solutions for customer requirements. profichip creates the missing link. The result is automation in silicon.