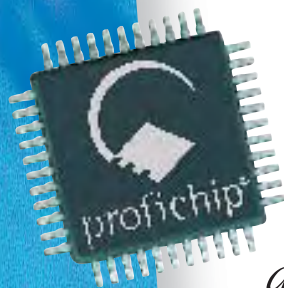


# VPC<sub>3</sub>+C

## PRODUCT INFORMATION



PROFIBUS-DP-VO/-V1/-V2 Slave Controller ASIC

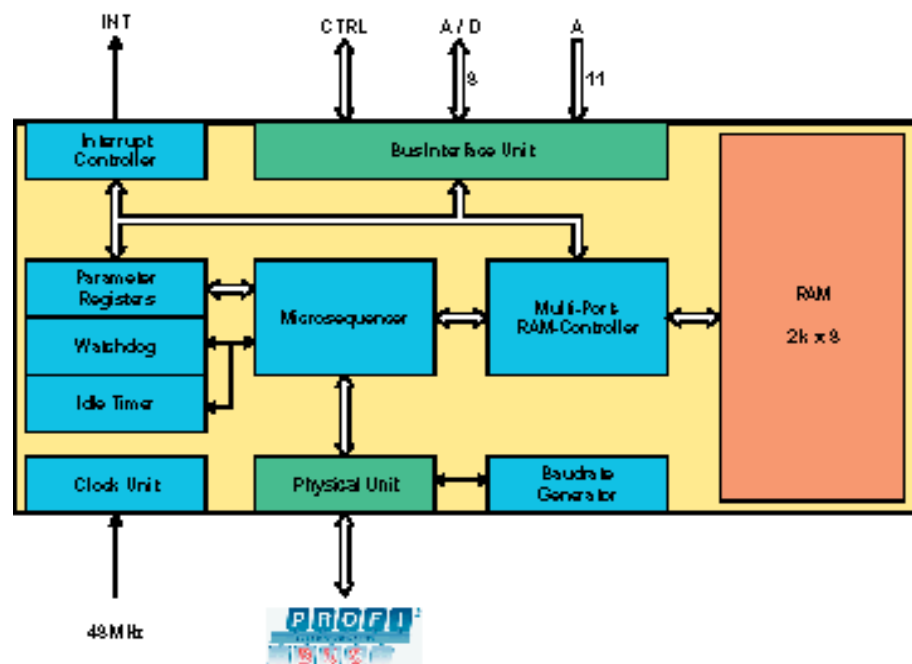


*automation in silicon*

 profichip<sup>®</sup>  
The Clever Alternative

# General Description

Profichip's VPC3+C is a communication chip with 8 Bit Microprocessor interface for intelligent Profibus slave applications. It's an enhancement of the VPC3+B in terms of protocol functions and power consumption.



## Features:

- Upgrade of VPC3+B, pin and function compatible supporting PROFIBUS DP-V0, DP-V1 & DP-V2 protocol
- 4 KB communication RAM
- 5V or 3,3V supply voltage, 5V tolerant inputs
- low current consumption (<90mA/5V, <45mA/3,3V)
- lead-free design available
- PNO certified customer applications
- Package PQFP44

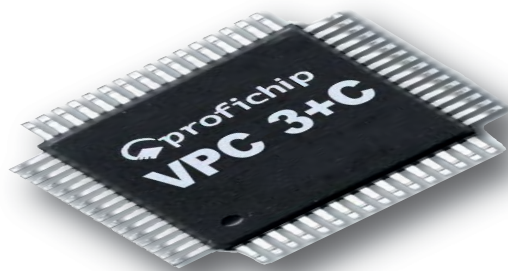
The VPC3+C handles the message and address identification, the data security sequences and the protocol processing for Profibus-DP. In addition the acyclic communication and alarm messages, described in DPV1 extension, are supported. Furthermore the slave-to-slave communication Data eXchange Broadcast (DXB) 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 VPC3+/3+B. Therefore VPC3+C, can replace them in existing applications without any restrictions or SW-modifications.

As there are also simple devices in the automation engineering area, such as switches or sensors, which do not require a microcontroller for data preprocessing, profichip offers a Profibus-DP\* Slave ASIC with 32 direct input/output bits. The VPCLS handles the entire data traffic independently. No additional microprocessor or firmware is necessary. The VPCLS is compatible to existing chips.

• = Lean S



#### More Information / Orders:

Tel: +49 9132 744.210

Fax: +49 9132 744.204

sales@profichip.com

www.profichip.com

This document is preliminary and subject to technical changes without prior notice.



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(R)\* language, Speed7 marks a substantial progress in the evolution of PLC.

profichip's philosophy exceeds the 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.

\*= SIEMENS



**profichip GmbH**  
Einsteinstr. 6  
D-91074 Herzogenaurach  
Germany  
Tel.: +49.9132.744 200  
Fax.: +49.9132.744 204  
E-Mail: [sales@profichip.com](mailto:sales@profichip.com)  
[www.profichip.com](http://www.profichip.com)

November 2004