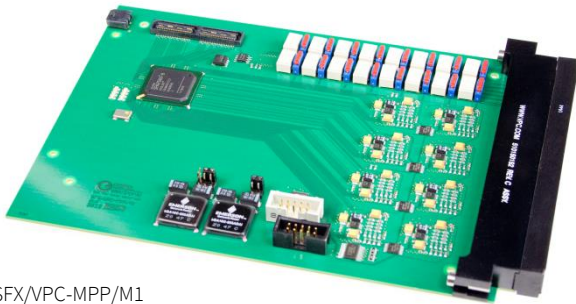# Datasheet

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SFX/VPC-MPP/M1
VPC-Solution: SCANFLEX® MPP module

Art.-No.: RPD-720

SFX/VPC-MPP/M1

Key Facts:

· SCANFLEX® MPP Module (Multi-Purpose Port) with 128 channels
· Compact solution for test system integration
· Virginia Panel (VPC) interface connector
· Extendable with other VPC-solutions (TAP transceiver, power management etc.)
· **Usage only** in combination with TAP transceiver SFX/VPC-TAP16/M1

VPC Product Line Description:

In general the Gang Test Module Kit belongs to the SCANFLEX product line and provides a complete solution for the parallel test or programming of up to 16 units with one system controller. It consists of three interconnected module types – a TAP transceiver (TAP16), a multipurpose parallel I/O unit (MPP) and a power management unit (PWR16). For easy system integration, all modules feature an on-board Mass Interconnect Interface from Virginia Panel and are controlled by a central controller. With multiple SYSTEM CASCON™ setups hardware is scalable so that production systems can be configured to N sites.

The Gang Test Module Kit supports all technologies for Embedded System Access (ESA). In addition to boundary scan, these are Processor Emulation and Chip embedded Instruments. These methods enable the execution of design validations, hardware debugging, production tests such as dynamic and functional tests as well as programming of MCU, Flash and PLD without probe and nail utilization (non-intrusive).

The Gang Test Module Kit was specifically developed for so called Gang applications. This method means the parallel test or programming of several units. The new kits help users to configure their individual Gang testers, consequently to significantly increase production throughput and benefit from all ESA technology advantages in mass production. Various test and programming strategies based on the ESA platform SYSTEM CASCON can be freely combined.

Particularly advantageous is the on-board Mass Interconnect Interface from VPC, because it represents a standardized test fixture solution.

Product Description:

The SFX/VPC-MPP/M1 enables 128 generic I/Os for up to 16 sites in parallel mode. These MPP-I/Os are replacing the PIP signals of conventional transceivers and can be controlled independently in direction. The MPP module can only be used in combination with

SFX/VPC-TAP16/M1 in a specified slot distance and enables the power control circuitry for TAP transceiver.

Each site can be individually programmed in many parameters (voltages, pulse width, direction …). The MPP module is part of the SCANFLEX line which is software controlled by SYSTEM CASCON and can be freely combined with other SCANFLEX products.

Technical Parameters:

Functional	
Purposes	Usage as Generic I/Os, PIP replacement and control lines in the AFPG (FLASH)
Combinations with VPC series	SFX/VPC-TAP16/M1 (mandatory), SFX/VPC-PWR16/M1
Product features	Self test, PwrCtrl circuitry for SFX/VPC-TAP16/M1

Configuration	
MPP-channels/Groups	128 / 16 (8*Master + 8*Shadow; each group contains 8 MPP channels)
Possible configurations: Number of UUTs → max. assignable MPP	up to 16 UUTs → 1 group (8 channels) per UUT up to 8 UUTs → 2 groups (16 channels) per UUT up to 4 UUTs → 4 groups (32 channels) per UUT up to 2 UUTs → 8 groups (64 channels) per UUT
Input/output configuration	Signals are separately switchable in direction; thus, every individual signal may be input, output or bidirectional

Electrical	
Operating voltage/current	5.0V / 2A
Signal voltage level on digital I/Os	1.8V – 4.5V (per master and shadow group software programmable)
Digital I/O driver strength	6mA @ 0.9V; 12mA @ 1.8V; 16mA @ 2.5V; 24mA @ 3.3V
Digital I/O Inline resistor	22R
Selectable pulse width	30ns - 2560ns

Mechanical	
Digital I/O interface	192-pin VPC connector, type 510150152
TAP interface	Samtec connector for connection to SFX/VPC-TAP16/M1 module
Power supply	2-pin male connector of type 43650-0200 from Molex or Screw jack of type CTB3051/2BK from CAMDEN
Module dimensions (L x W x H):	205mm x 142mm x 20mm (8.07" x 5.59" x 0.79")
Slot distance with connected SFX/VPC-TAP16/M1	17.65mm

Software	
Min. CASCON release	4.6.3
Min. HW driver version (SFX/VPC-TAP16/M1)	3.55
Min. controller version (SFX/VPC-TAP16/M1)	2.55

Environment	
Storage temperature	-10 - 80°C
Operating temperature	0 - 35°C
Relative storage humidity, not condensing	10 - 90%
Relative operating humidity, not condensing	20 - 85%

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GOEPEL electronics is a worldwide leading vendor of innovative electronic and optical test and inspection systems, being the market leader for professional JTAG/Boundary Scan solutions for Embedded System Access (ESA). A network of branch offices, distributors and service partners ensures the global availability of the products as well as the support of the more than 8,000 system installations. GOEPEL electronics has continuously been ISO9001 certified since 1996 and has been honoured with TOP-JOB and TOP-100 awards for being one of the best medium-sized companies in Germany. GOEPEL electronic's products won several awards in recent years and are used by the leading companies in telecommunication, automotive, space and avionics, industrial controls, medical technology, and other industries. Further information about the company and its products can be found on the internet at www.goepel.com.