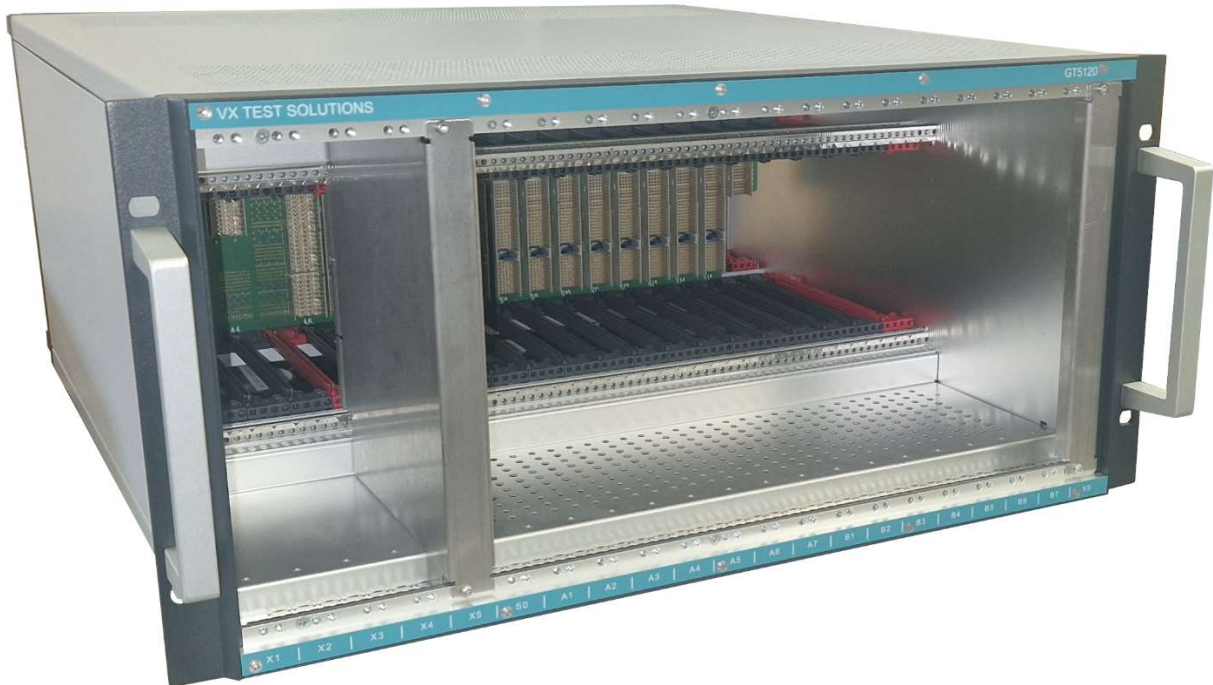


GT5120

modular basic system for in-circuit and functional test



Technical data sheet

Features

- Compact 19 inch PXI / PXIexpress base unit
- In-Circuit-Test | Functional Test | Boundary Scan
- 21 slots for measuring and switching modules
- Parallel test and combined test
- Optional control via cPCI serial embedded controller or external computer
- Analog measurement and control bus
- High availability and serviceability
- Extensive system self-test

GT5120

modular basic system for in-circuit and functional test

Functional description

The compact 19" basic system *GT5120* enables the realization of powerful in-circuit test and functional test systems based on established industry standards (cPCI | PXI | PXIe | LAN | USB). Together with the eight-lines analog measurement bus and the potential-free measurement and switching modules, these form the hardware basis of the VXTS technology. The system can be individually equipped with switching and measuring modules. The *GT5120* can be configured for testing large test specimens with a maximum of 2080 test points. In addition, a parallel test with up to 2x 800 test points can be realized.

A high-performance embedded controller with CompactPCI serial interface, Windows 11 operating system and a quad-core XEON® processor can be plugged into slot S1 at the rear. Alternatively, a link module can be used for communication with an external computer.

A PCIe link module can be used in slot S2 to cascade several *GT5120* test systems. This allows a massive parallel test to be performed with several *GT5120*.

System functionalities required in the future can be easily added at a later date. Dynamic, cost-effective and modular adaptation to the changing requirements of the entire system is therefore easily possible.

The integrated analog measurement bus avoids rigid and inflexible wiring between measurement and switching modules. Measurement connections are flexibly configured via software. Parallel testing is possible by dividing the measurement bus into two independent segments.

The signals from standard measuring and switching modules according to cPCI/PXI/PXIe are brought to the robust and high-quality connectors of the system interface via cables or circuit boards.

The SCC system card is integrated into slot S0 on the front via PXIe. The SCC offers the user helpful additional functions for application development and adapter control.

In combination with the VXTS software GTS, efficient creation and execution of test programs is possible.

The integrated self-testing capability increases availability and allows a detailed system diagnosis down to component level.

GT5120

modular basic system for in-circuit and functional test

Schematic View

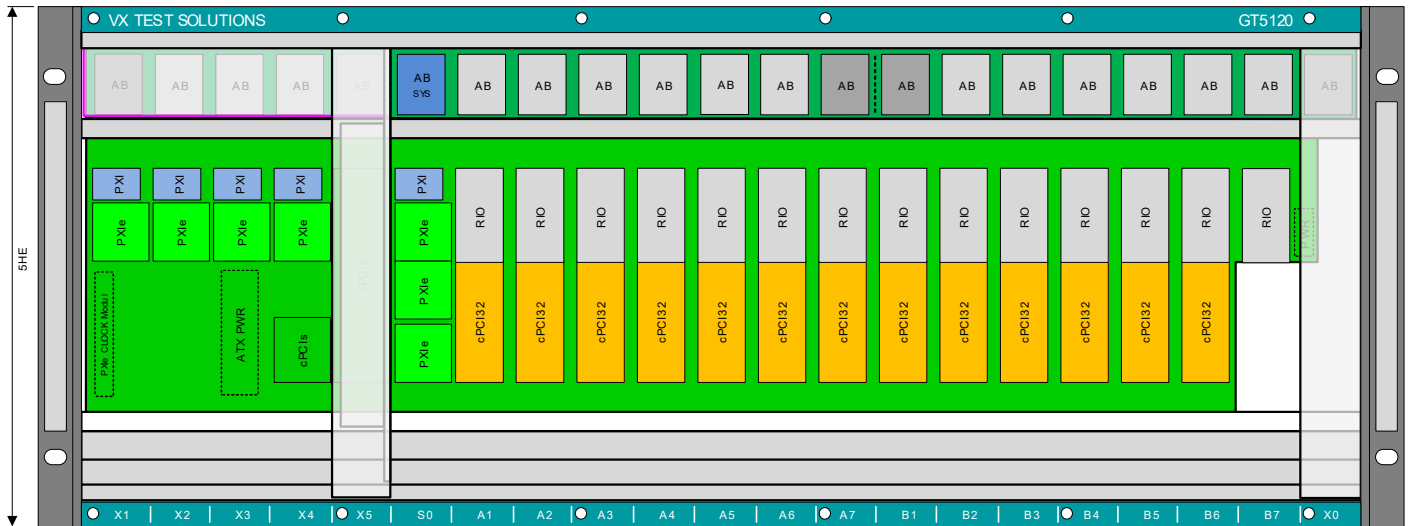


Figure 1: Schematic view front

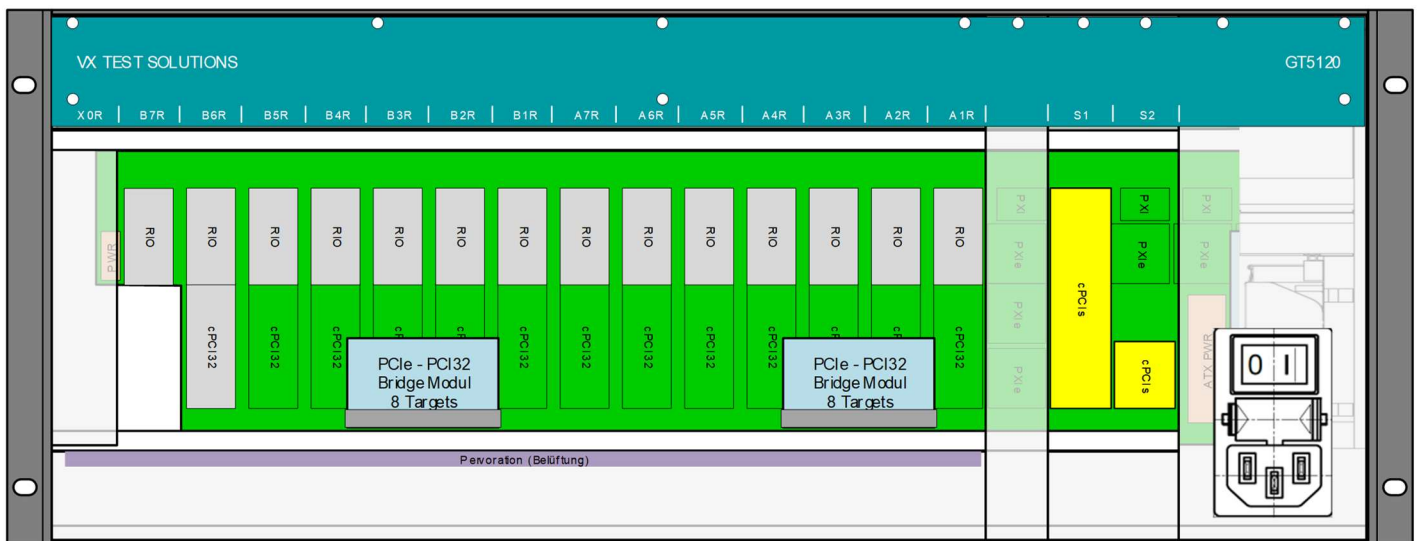


Figure 2: Schematic view back

GT5120

modular basic system for in-circuit and functional test

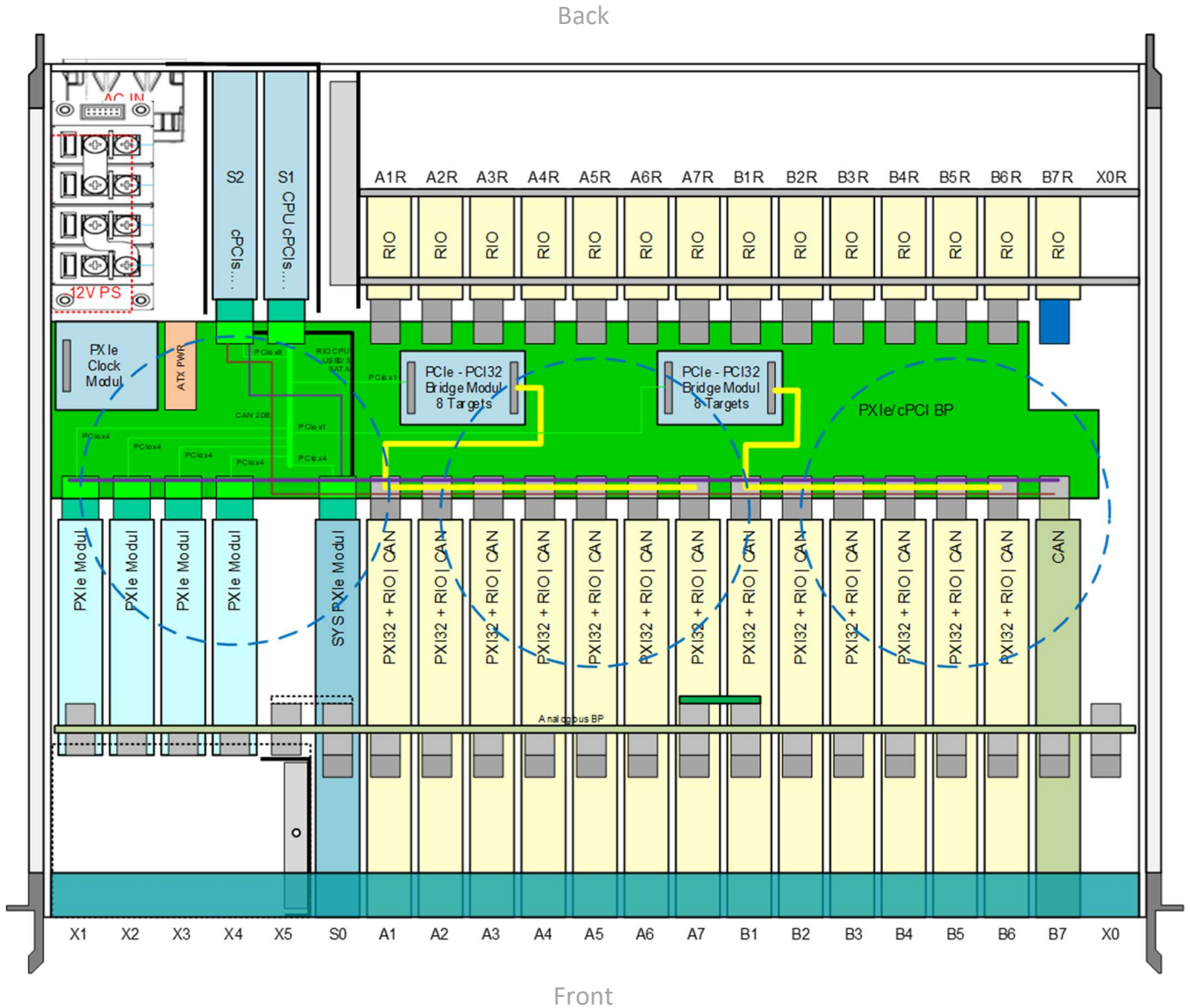


Figure 3: Schematic view top

GT5120

modular basic system for in-circuit and functional test

Embedded Controller

The compact GT5120 can be equipped with a powerful embedded controller ISC-6. This is plugged into slot S1 at the rear and offers a CompactPCI serial interface. The ISC-6 offers, among other things, the following:

- CompactPCI serial Interface
- Quadcore XEON® processor
- Windows 11 operating system
- Up to 32GB DDR4
- Up to 2 SSDs
- 3x Display Port
- 4x USB3
- 2x GbE
- 4x PCIe
- 2x USB2
- 4x SATA / PCIe
- HD Audio
- UART



Figure 4: embedded Controller ISC-6

The individual processor cores can be assigned individually via the GTS software, which improves efficiency, especially in a parallel test.

External computer

As an alternative to the embedded controller, the GT5120 can also be operated with an external computer.

For this purpose, a link module (e.g. SX-9 HOWL from EKF) can be integrated in slot S1. Depending on the link module used, the connection to the host is established via copper or fiber optic cable.

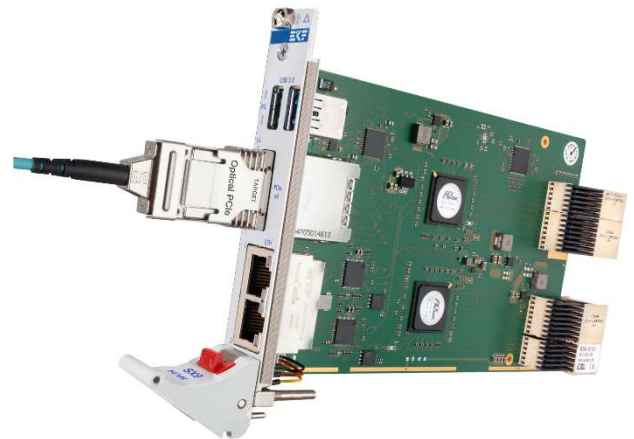


Figure 5: SX-9 HOWL Target Link Modul

GT5120

modular basic system for in-circuit and functional test

System module - SCC

The SCC system card has a PXIexpress interface and is plugged into slot S0 on the front of the GT5120.

The SCC offers the user the following additional functions:

- 2x voltages (+5V and +24V, e.g. fixture supply)
- 16x floating digital Ins
- 16x floating digital Outs
- 2x USB
- 1x Ethernet
- 1x JTAG – Interface

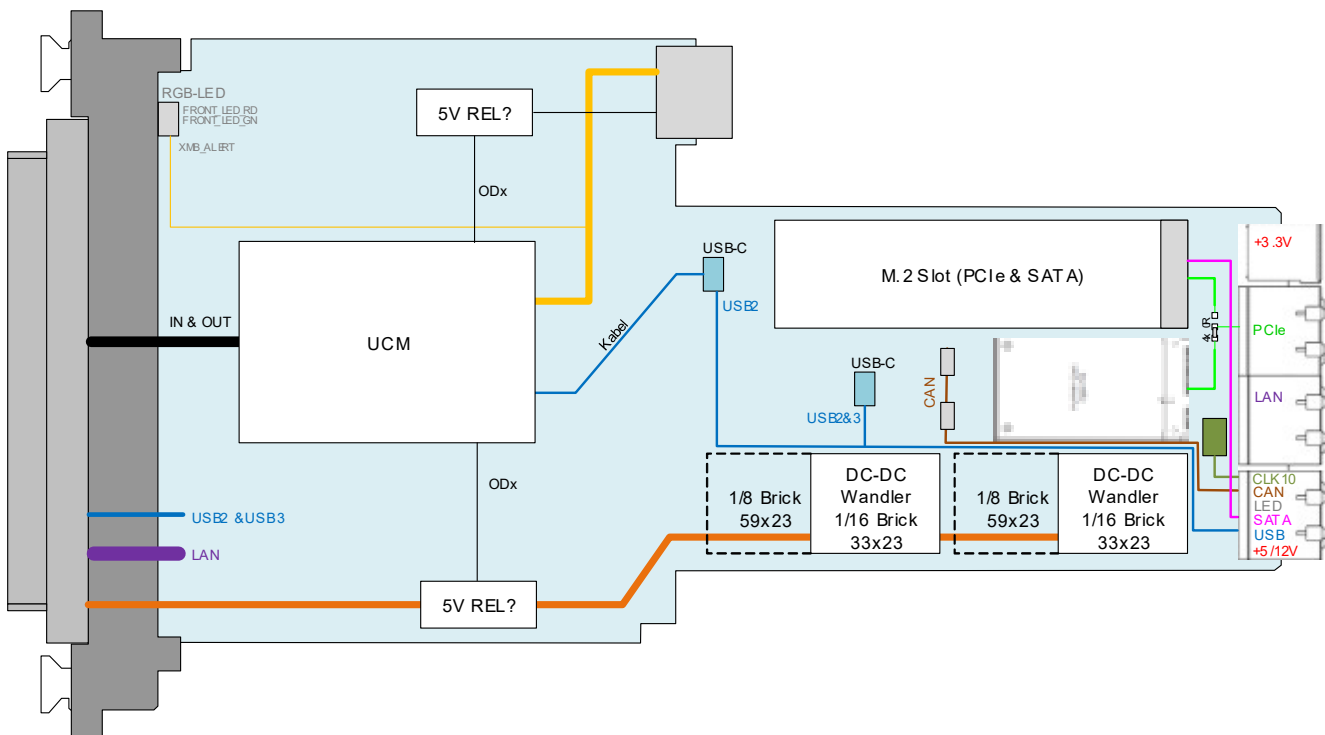


Figure 6: Schematic SCC

GT5120

modular basic system for in-circuit and functional test

Technical data

Control backplane (PXI)		
Bus systems	CompactPCI/PXI	32-Bit, 33Mhz
	PXIe	PCIe Gen.2, 1Lane, 5GBit
	R&S CAN	2.0b, 1MBit
Slots	S0 (System module SCC)	PXIe
	X1...X4	PXIe
	A1...7, B1...6	R&S CAN cPCI32
	B7	R&S CAN
	X0 + X5	System
Analog bus backplane (XMB)		
Bus systems	VXTS XMB control bus	Parallel, Serial, supply
	Analog bus (AB)	8 lines, max. 125V, max. 1A
	Shielded bus (SB)	2 line pairs, max. 60V, max. 2A
Slots	A1...A7, X1 + X2	VXTS XMB
	A7, B1	BCM bridge module (segment A-B)
	B1...B7, X3 + X4	VXTS XMB
System module SCC		
Slot	S0	Access to XMB
Supply voltages	VF1, fixed voltage, Sensing	+5V, at 20 Watt, <3%
	VF2, fixed voltage, Sensing	+24V, max. 30 Watt, <5%
Fixture control	Floating digital Outputs	16, max. 30V, max. 0,5A
	Floating digital Inputs	16, +2.5...30V, max. 5mA
Interfaces	USB	2x
	Ethernet	1x
	JTAG	1x

GT5120

modular basic system for in-circuit and functional test

Technical data

General data		
Basic system	Dimension (WxHxD)	19" wide, 5 HU high, 60 cm deep
	Weight (Chassis)	12,4 kg
	Certifications	CE, DIN EN61010-1

Order information

Designation	Consisting of	Order number
GT5120	GT5000 Chassis	20-0249-01
	System module SCC	20-0254-01
	Embedded Controller ISC-6	20-0238-01