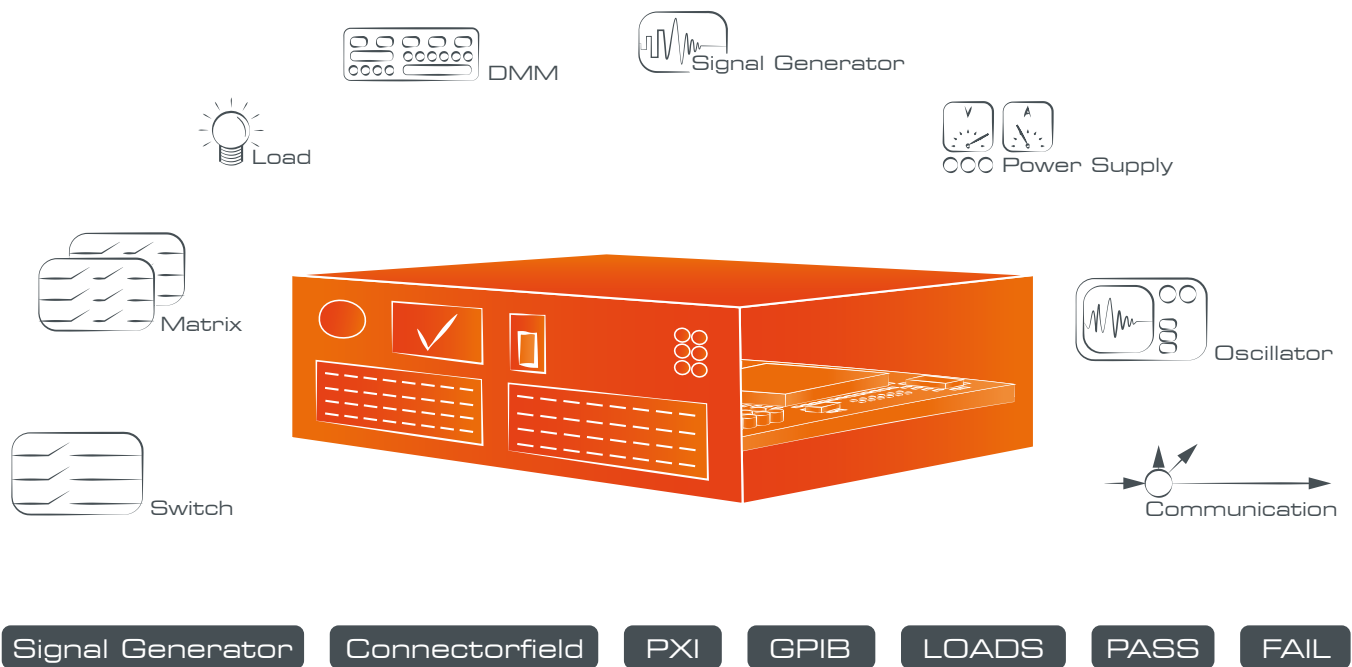




Industrial Function Test · Technology

Customised solutions
from single to End-of-Line test systems



- customised solutions
- end-of-line test systems
- in-line test systems
- stand-alone test systems
- PXI test systems
- interfaces: Ethernet, USB, I2C etc.
- modular measurement technology
- modular loads
- open system architecture
- digital function test
- analogue function test
- wiring test





Configuration can be changed as required

- function testing of any electronic products required, such as programmable logic controllers, temperature sensors, heating control units, etc.
- function testing systems tailored to customer requirements
- solutions for small quantities
- solutions for system integration in mass production

Batch testing · End-of-Line example

| | |
|--------------------|--|
| rack system | 19" with 20HU, ventilation |
| power distribution | NV230V oder NV400 |
| power supply | 4-way modular, max. 400 W |
| | module 35V/1.5A |
| | module 20V/2.5A |
| load rack | system demand control for up to 48 loads |
| | load modules on request |

PXI rack

18 slots: MXI express, DMM PXI 4070, signal switch PXI 3118 (matrix), signal switch PXI 3132 (32 single relay), power switch PXI 3116 (16 power relay)

transfer interface

ODU-MAC connector system

monitor

20"

system computer

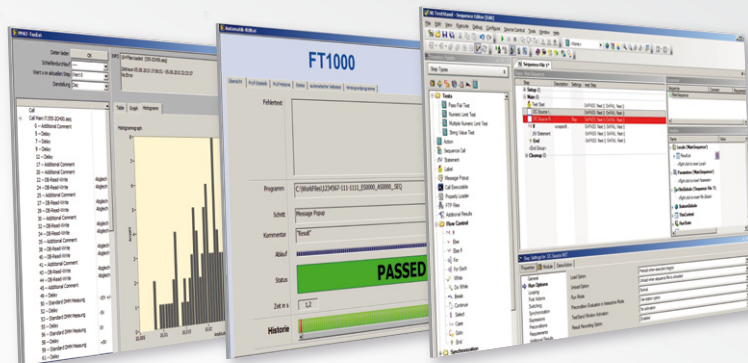
Simatic IPC

system software

Progress 2

Software

- standard software from National Instruments TestStand
- step types for the graphical input of parameters
- debugging of test sequences
- test log, HTML-based
- connection to the statistics tool



statistics tool for function test

system interface in test mode

sequence interface for TestStand from National Instruments

Main application: function test for printed circuit boards without a housing

- use in small-batch production
- transfer interface occupied with 850 signals
- all individual signals are present at transfer interface
- test software for TestStand from National Instruments



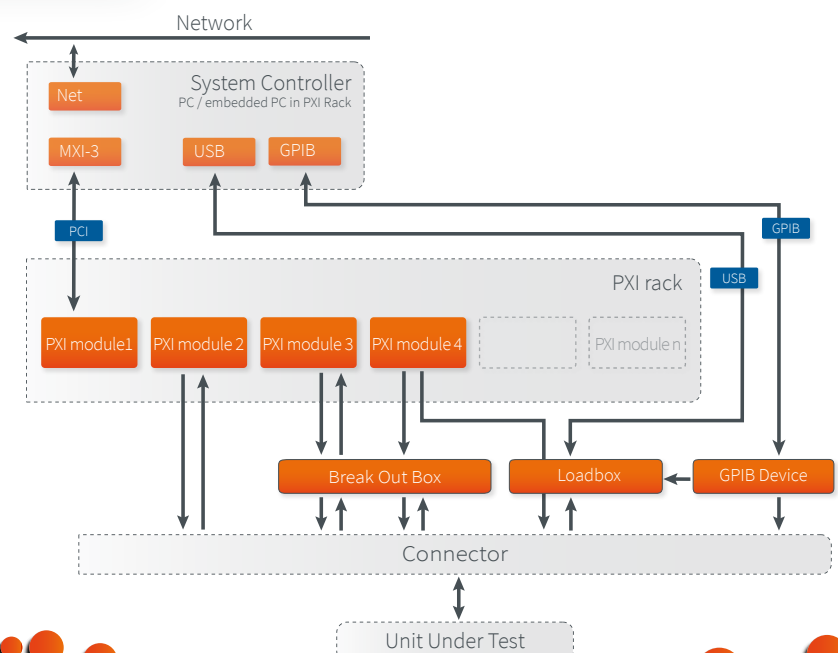
Configuration for manual testing example

| | |
|--------------------|--|
| cabinet system | 19", ventilation |
| power distribution | NV230V |
| power supply | 8 separate power supply units |
| waveform generator | Keysight 33210A |
| PXI rack | 18 slots: various relay boards, PXI DMM, 16 ch. comparator, 16 ch. analogue output, PXI FPGA, PXI JTAG controller from GÖPEL electronic, PXI CAN 2 ch. |

| | |
|---------------------|-------------------------------------|
| USB interfaces | 8 |
| ethernet interfaces | 4 |
| serial interfaces | 4 |
| signal measurement | 2 ch. oscilloscope |
| transfer interface | 10 pylon blocks |
| monitor | 20", on panning arm |
| system computer | JenTech |
| system software | TestStand from National Instruments |

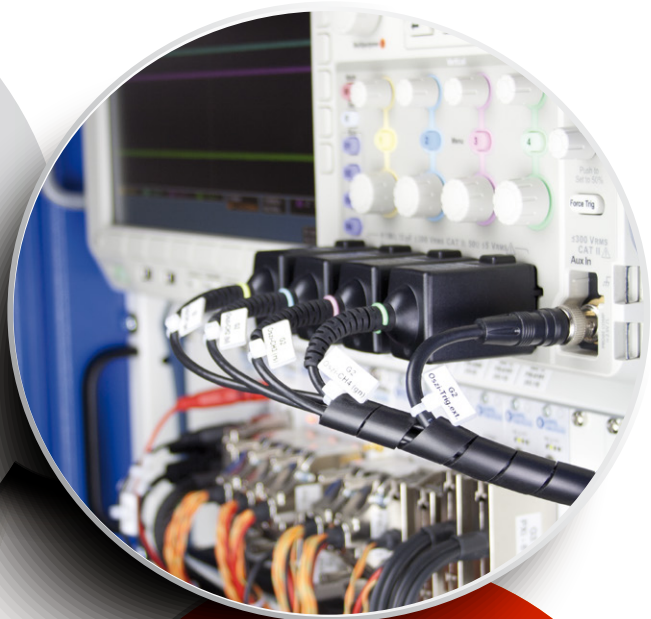
Technology

- use of standardised hardware and software
- modular set-up of hardware and software
- use of standardised connectors in the transfer interfaces
- 19" system structure
- systems can be extended as desired



Custom configuration
for your test solution!

Modular construction system for
hardware and software



Hardware

- the core of the system is a PXI rack
- it includes all the necessary hardware modules which are available in PXI format
- other stand-alone units in 19" format can be integrated

The software is the test sequencer PROGRESS2 from GÖPEL electronic

- based on TestStand from National Instruments
- modularity of the software thanks to LabVIEW macros or step types in the test sequencer software
- external software modules can be easily integrated into the system software

Open concept

- PXI hardware core can be extended using any PXI components
- external components with bus systems, such as USB, Ethernet, GPIB, etc., can be integrated

• Made in Germany