

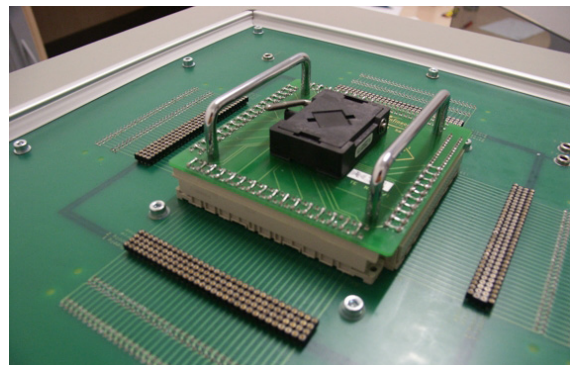
The Pin Tester is used to perform a sequences of tests on a device under test (DUT) or on a batch of DUTs. In the software, test pattern can be defined, modified and run. The test pattern as a whole consists of sequences, describing test with its parameters, pingroups information and analysis rules which are stored in the test plan.

These tests support the identification of electrical parameters, the failure analysis and the design process.



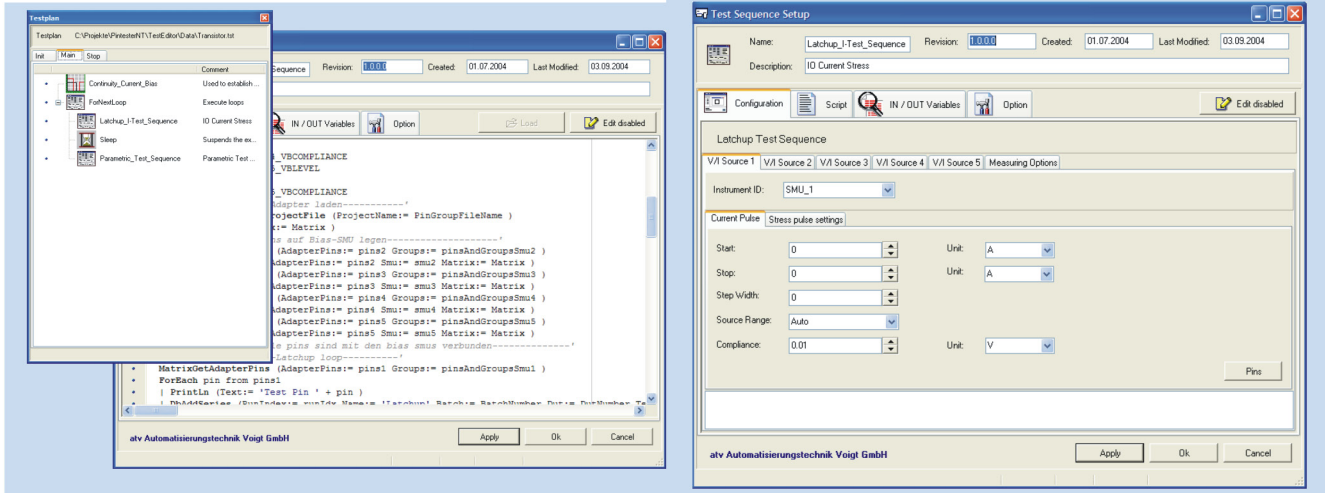
- Various tests e.g. LatchUp, Curve Tracing and IDDQ
- Interactively built / edit test and execution sequences
- Switch matrix provides automatic switching for a high pin test instrumentation (e.g. 512 x 6 matrix)
- Optional Pulse Generator
- Parametric tests that are easily configured via a friendly graphical user interface
- Digital vectoring for preconditioning devices
- Creates graphs from measured and calculated data, provides export functions for graphs and analysis

- Automatically execute tests and associated operations (switch matrix connections, prober movements, etc.) Including:
  - a single test for one selected device
  - test sequences for multiple devices
  - the test sequences of an entire project plan
- A variety of parameter to configure forcing and measurement functions, sweeps, test timings, data filtering and data analysis

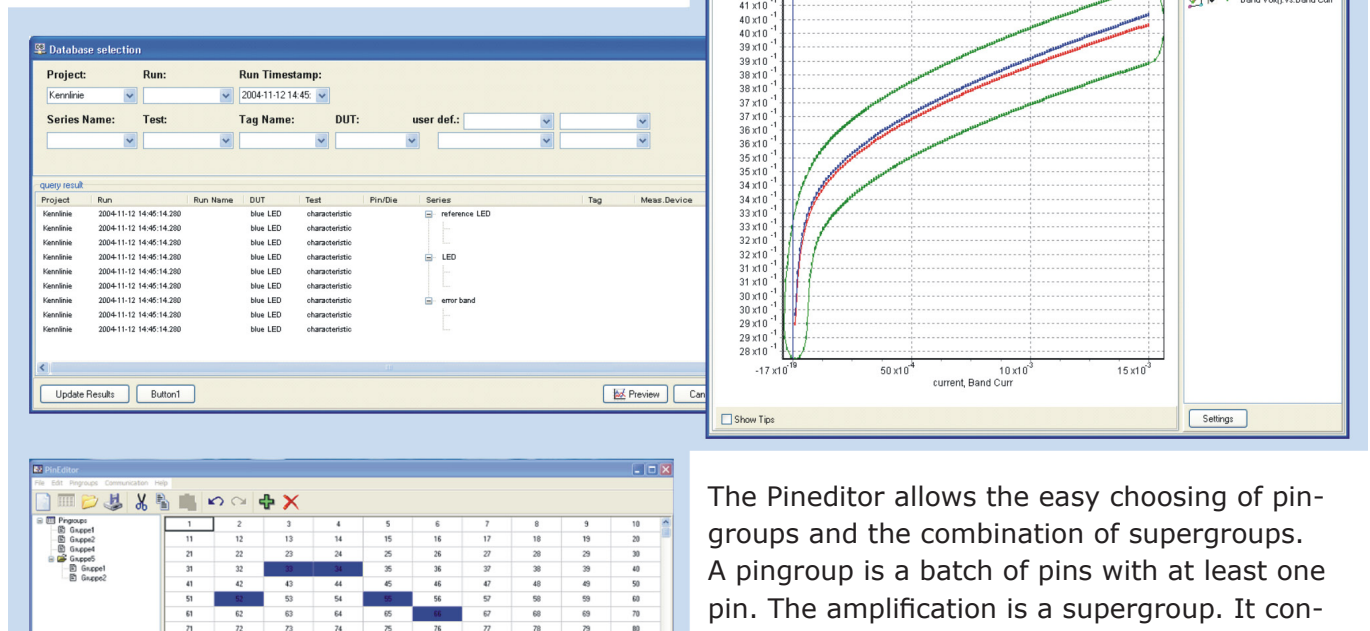


# PinTester - Software

The Software is based on Windows XP/2000 Technology and has a graphical user interface. Its a comfortable way to configure and analyse the measurements. The measured data can be shown as a graphic or in a table. The Software supports Microsoft Excel compatible data export format.



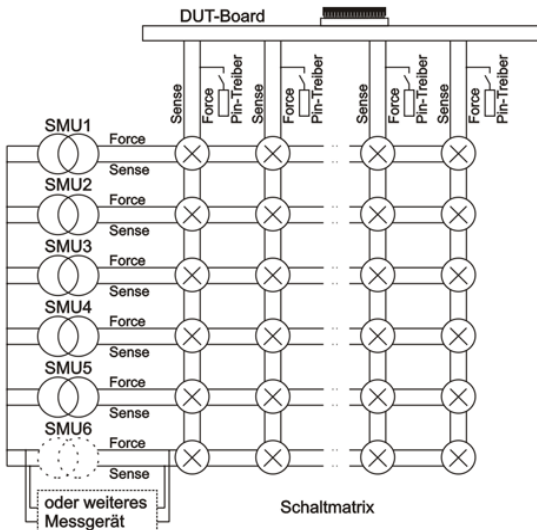
Sequences of tests are defined by the user. The sequences run automatically. The configuration of single tests is done in separate windows. Tests are added to a sequence via Drag and Drop. Due to its modular design the software can be expanded to support customer specific tests.



The Pineditor allows the easy choosing of pin-groups and the combination of supergroups. A pingroup is a batch of pins with at least one pin. The amplification is a supergroup. It consists of all pins of a pingroup. Before starting the selection of pins and pingroups it is necessary to load an adapterfile. Adapterfiles are files which assign the pins of the testhead to the pins of the testadapter.

# PinTester - Hardware

The configuration of the Testsystem consists of separate SMU (Source Measure Unit) at a Switching matrix. With this matrix every crosspoint between Pins and SMU can be opened and closed optionally. The configuration is free scalable in the numbers of pins as well as the numbers of SMU.



- 4-wire system structure (Force-Sense)
- Build-up with Keithley® Switching components 7002-HD and Matrix-cards
- Modular configuration of the matrix for eased maintenance and upgrading
- Access to Switching matrix via script language



- Sources on basis Keithley® Sourcemeter 2612 (Dual-Channel-System)
- 4-quadrants-operation (usage as source or drain)
- Measurement of voltage and current for each measuring point
- Voltage / Current limiting adjustable
- Triggerlink controller to synchronize the analog sources and to provide external digital I/O

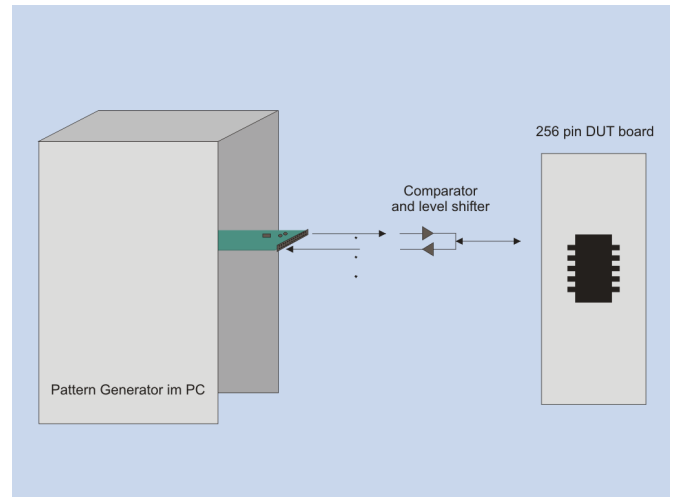
- Driver library for external equipment (LCR-Meter, Oszilloscope, Multimeter...)
- Customised testheads
- ZIF (Zero Insertion Force) Testhead for high Pin instrumentation (>512)
- Verifier compatible adapter available



# PinTester - Digital Signal Pattern

The Digital Signal Pattern Generator is comprised of two components: High-Speed I/O-PC plug-in board (Spectrum MI.7021) and Pindriver cards for signal conditioning. Levels and frequency of signal conditioning with the Pindriver card are variably adjustable. 32 channels are provided on every Pindriver whereby each channel can be configured individually as input or output. The pattern design and evaluation take place by means of the PatternEditor software module

- Automatic Vectoring with adjustable levels (low and high potential)
- Digital signals available at all pins
- Level can be selected to any voltage in range 0 to 10V
- 16MB-Memory on Pattern generator
- Pattern editor for defined sequences
- Up to 1 MHz Input/Output speed for vectors
- Simultaneous read back capability of all pins, threshold voltage adjustable



- Graphical Editor for setting and evaluation of Pattern sequences
- Controllable Pattern output via script language

