

# Keysight TS-5040 Functional Test System

The perfect base for your turnkey solutions

Data Sheet



If you haven't used a Keysight Technologies functional test system for your turnkey application, you should because of these benefits:

- Easily expandable to fit many application needs
- Scalable - Just enough to full featured
- High uptime and MTBF guarantees low cost of ownership
- World class repeatability & reproducibility
- Short repair / exchange cycle
- CE compliant and EMC prequalified

Your customer desires test time reduction, low maintenance cost, ability to ramp quickly, better supportability and the lowest cost of test. Shouldn't you?

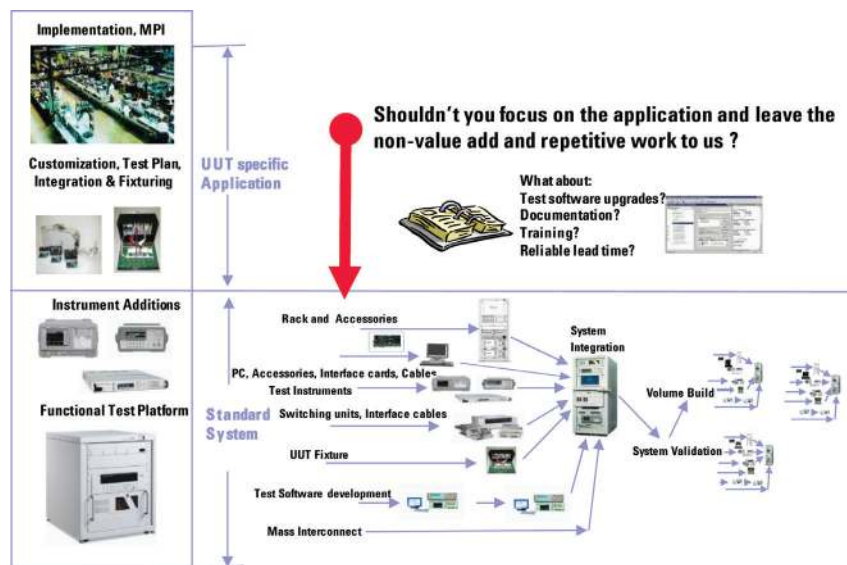


Figure 1. Scalability of the Keysight functional test system means users can have the flexibility to customize solutions to meet their needs.

## TS-5040 Entry System

- 0.75 m rack and crating
- E3858A power distribution unit
- Rack fan
- IO panel
- TS-5400 family controller includes 1024 MB RAM, DVD-RW, floppy drive, keyboard, mouse, Windows XP
- Test Exec SL software
- 34980A switch measure unit including DMM
- Upgrade options



Figure 2. The TS-5040 base system comes with all the basic necessities in any functional test solution. Completely scalable, Keysight has an impressive and comprehensive list of upgrade options.

## TS-5040 Options / Upgrades

34980A plug-in modules	Family of multiplexers, matrices, RF modules, digital IO, D/A, breadboard
Switch load unit (SLU)	Family of load cards
N6700 modular power supply	Family of modules
Rack height	0.75 m, 2 m
<b>Custom upgrades; standard interface to DUT cables</b>	

The TS-5040 currently supports many types of Keysight equipment. Skippy commands can also be used to interface with other 3rd party instruments or new handlers can be written easily to meet your needs.

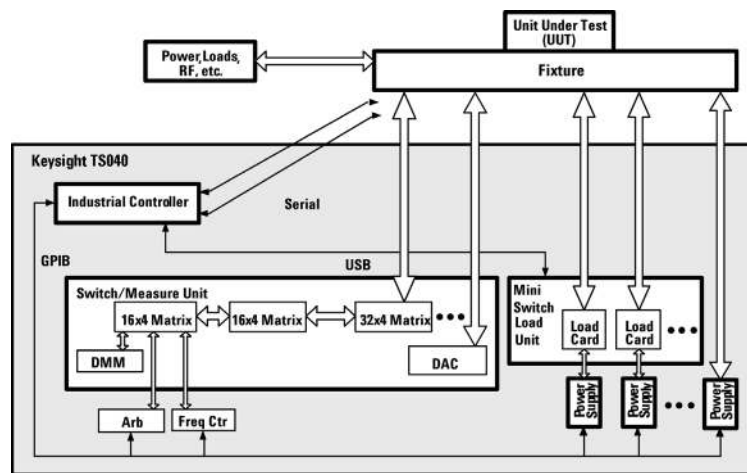


Figure 3. Typical system block diagram.

## Mini Switch Load Unit (SLU)

- Configurable. The only standalone configurable load boxes available in the market. Available in 6 slots or 21 slots.
- Switch any DUT pin to any load at any time. Control any channel in any load card. Switch to the right load at any time to the right power supply or GND at any time. All this with software!
- Scalable and you're in control. Choose from a variety of load cards ranging from 8 to 48 channels per card and from 2.5 A to 30 A.
- Additional matrices; 32x4 instrumentation matrices are also available to allow you to measure at any channel at any time.



Figure 4. Illustration of 21 slot and 6 slot SLU

## No More Custom Load Circuits

Save money from avoiding one-time design, fabrication and assembly of custom load circuits with this affordable switch load box.

### Single-load loadcards

- E6175A: 8-channel, single-load
- E6176A: 16-channel, single-load
- E6177A: 24-channel, single-load
- E6178B: 8-channel, single-load

### Dual-load loadcards

- N9377A: 16-channel, dual-load
- N9379A: 48-channel, dual-load
- Quad-Load Loadcard
- N9378A: 24-channel, quad-load

For more information about SLU and load cards search for "multi-channel load card" at: [www.keysight.com](http://www.keysight.com)

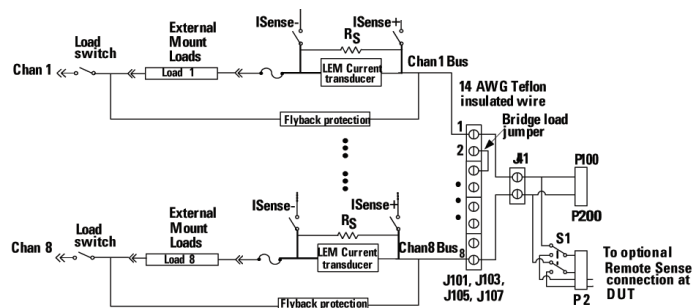


Figure 5. Circuit diagram of MSD SLU load card

## Test Exec SL 6

Environment which allows to focus on UUT specific application.

- Standard test sequencer with focus to re-use existing code
- Complete topology (system hardware and wiring) defined and known to the software, which allows very efficient program development and documentation test debug tools
- Test time optimization tools
- Throughput multiplier for Multi-UUT testing
- Customizable, open-source operator Interfaces
- Comprehensive code and sequence libraries
- Standard documentation and training

Test Exec SL supports all message based instruments on the following interfaces : LAN; USB; GPIB; serial; Firewire-VXI

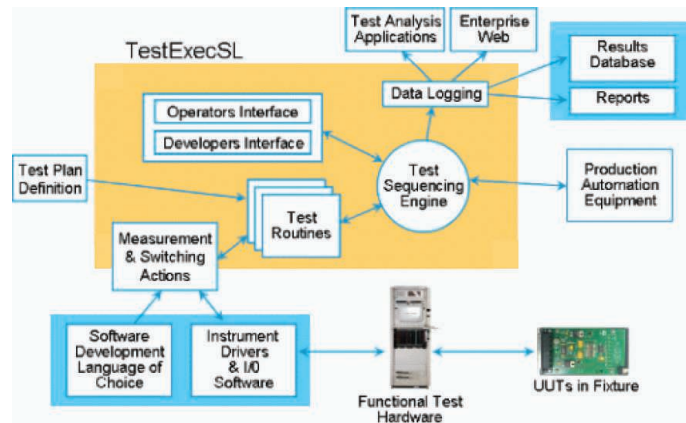


Figure 6. Typical environment of TxSL 6

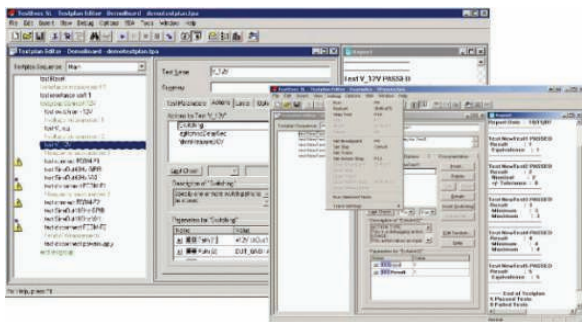


Figure 7. Test sequencer and debug

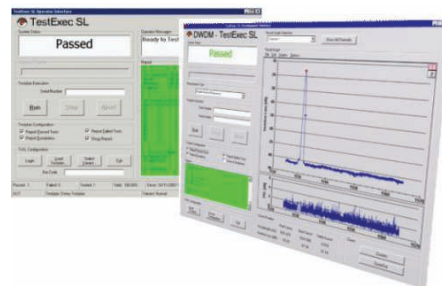


Figure 8. Typical environment of TxSL 6

## TxSL Action Implementation Languages

- .NET (VB, C#)
- C / C++
- VB (Visual Basic)
- Any other language capable of building DLLs
- VBA (Visual Basic for applications, built in!)
- Keysight VEE
- NI Lab VIEW

Safety	IEC 61010-1 (1990)+A2: 1995/E61010-1: 1995 CSA C22.2 #1010.1 (1992) UL 3111
EMC	CISPR 11: 1990/EN55011 1991: Group1, Class A EN50082-1:1992 IEC 61000-4-2: 1995/:4kV CD IEC 61000-4-3: 1995/:3V/m IEC 61000-4-4: 1995/:1kV power line

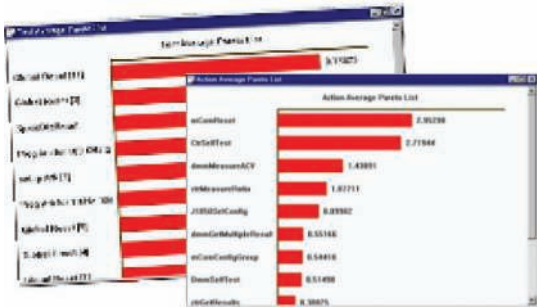


Figure 9. Throughput optimization tools

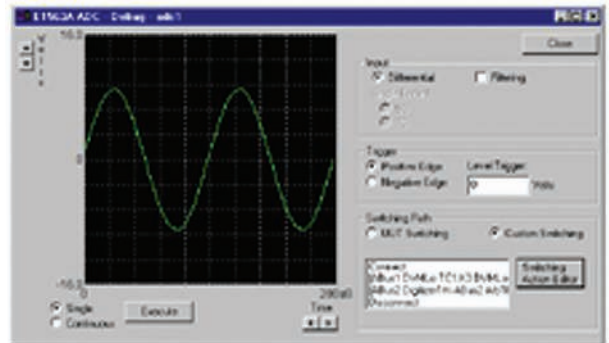


Figure 10. Graphical tools

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