BiBench systems — innovative lightweight test-bench solutions
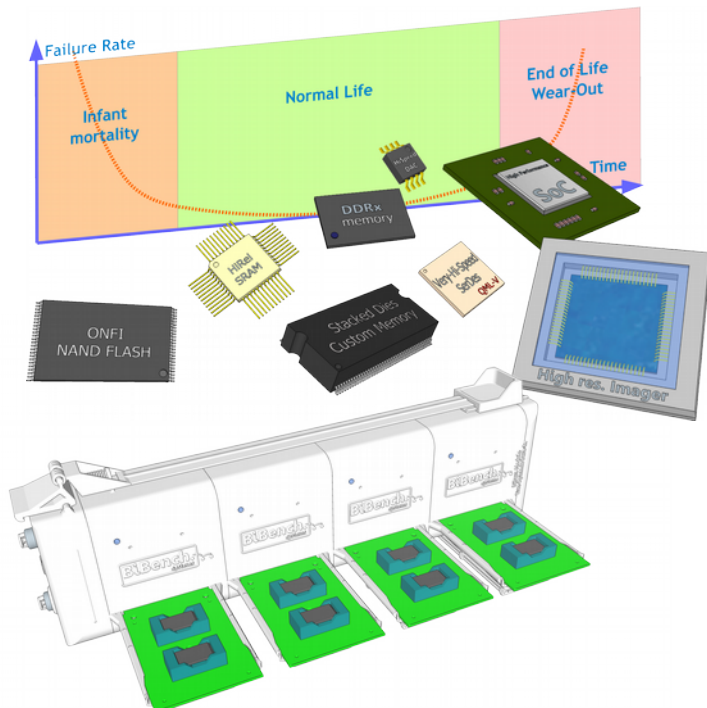
BIBURN : TRUE DYNAMIC BURN-IN / LIFE-TEST SOLUTION

→ Testing high speed / complex components under actual operating conditions


✔ **System usable at high or low temperature for high-end component functional tests.**

✔ **Nominal operation qualification under stress!**

✔ **True dynamic aging solution for DDRx, High Capicity Nand Flash, High Res Image Sensor, etc. Available now!**

✔ **Designed to be used in your existing oven thanks to the patented « air-cooled » system : no equipment change!**

✔ **Easy to use: "on-desk" comfortable component installation. Easy to handle system with in-oven latch and automatic connection.**

✔ **Reconfigurable, reusable for different component types and different developments.**

BiBurn benefits?

This approach originated in the space field for several reasons:

✔ Many of existing component tests activate only an extremely limited surface of the die (e.g. DDR-Sdram) and do not stress the sensitive parts of components (e.g. Flashs / floating gate).

✔ Some recent components, such as FPGA, SoC, etc ... , may present fault trees whose intricacies follow their own complexity. BiBurn systems helps you address this issue by allowing test under real conditions.

✔ Nowadays the life expectancy for a commercial component (smart-phone, computer...) is less than 4 or 5 years against 10 years formerly. Using these components for reliable applications therefore requires deeper tests. Keep cool : our systems are there for that !

✔ Highly qualitative tests compared to static burn-in or pseudo-dynamic testing: brings more failure modes with more objective results for better Go/NoGo sorting.

✔ Optimized test time:
  ○ For flawed component, no parametric test required ...
  ○ Independent test slots: partial batches possible, the stop of a faulty component has no influence on others ...
  ○ Defective component are instantly detected: replace and restart position with no dead time.

✔ Reliable system, recognized in the space field.

Evolution of Burn-in / Life-Test conditions
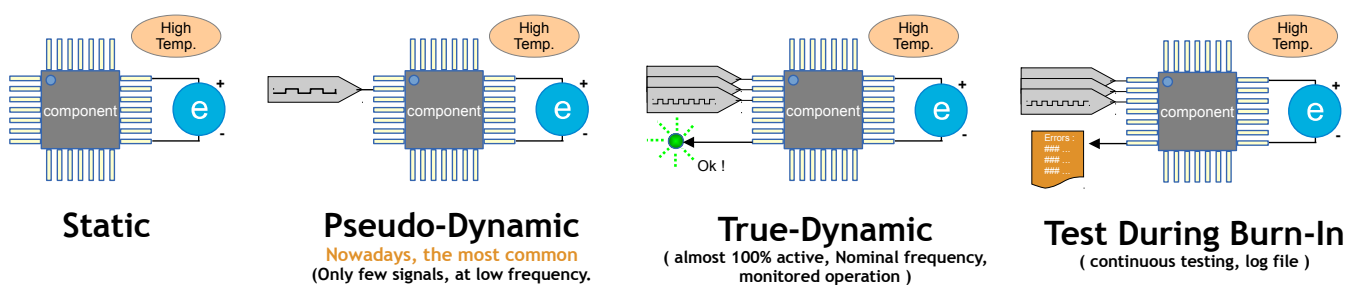
Static

Pseudo-Dynamic
Nowadays, the most common
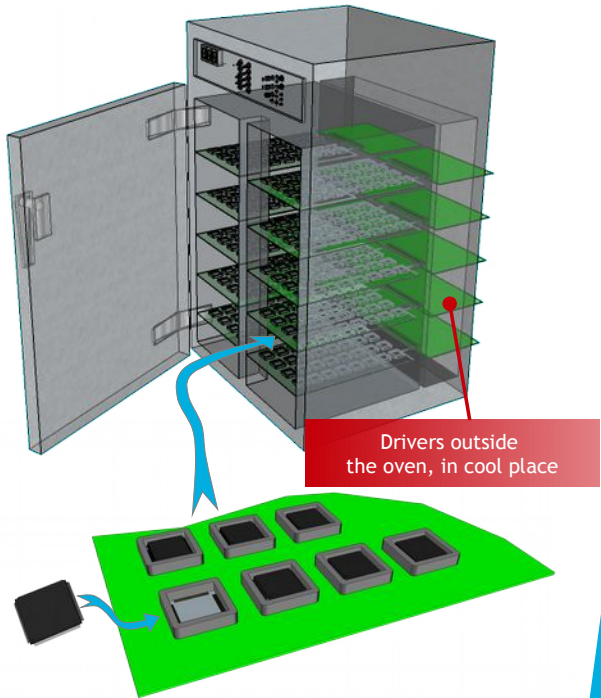(Only few signals, at low frequency. Poor or no monitoring.)

True-Dynamic
(almost 100% active, Nominal frequency, monitored operation)

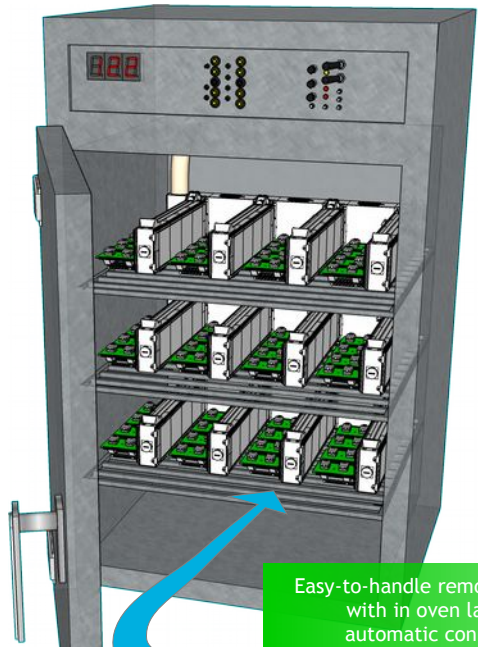**Test During Burn-In**
(continuous testing, log file)

BiBench Expertise

Drivers outside
the oven, in cool place

Easy-to-handle removable system
with in oven latch and
automatic connection.

→ Centralized power supplies far away → poor bandwith
→ Driver too far → no high speed
→ Not enough connections/component = parallelization
→ No individual temperature monitoring

→ In oven, nearby driver protected from thermal stress
   thanks to an innovative housing (patented)
→ One or small count of DUT per Driver
→ Close and performing programmable power supplies
   (high di/dt)
→ High I/O count & matched impedance (if necessary)
→ Local, accurate temperature & current monitoring
→ Versatile, reprogrammable, reusable, reasonable
   recurring cost, reasonable NRE cost for new project

→ Targeted components :
High-speed /complex component such as
DDR-X Memory,High Capacity Flash,
Image Sensor,SERDES,ASIC etc...

High or Low
temperature

Mild
temperature
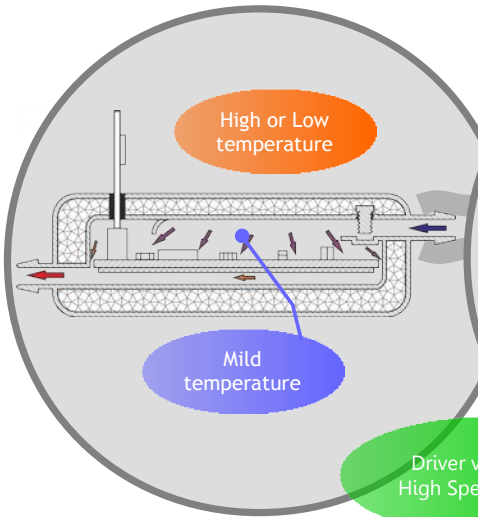
Driver very close :
High Speed possible

BiBench systems ...

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