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**BiTS**

Burn-in & Test Strategies Workshop

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Hilton Phoenix / Mesa Hotel
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# Archive – Poster Shaul Lupo

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## HVM Solution for System Validation Board with OEM Socket
### Shaul Lupo – Intel Israel

## Background

- OEM sockets used on system validation boards have low # of insertion/removal cycles compared to HVM socket (~1K VS. 100K)

- Existing HVM socket cannot be directly used on the validation board due to offset of contacts in the OEM socket (package foot-print and PCB foot-print do not match)

Package footprint　　　　　PCB footprint
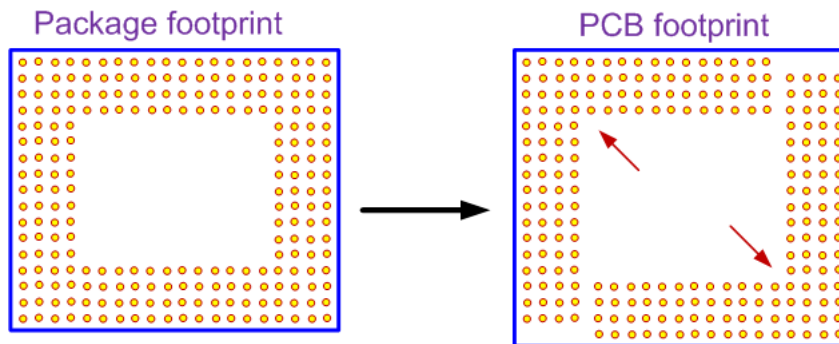


- In order to use HVM socket on system validation boards, user needs to remove the OEM socket from the board using reflow process
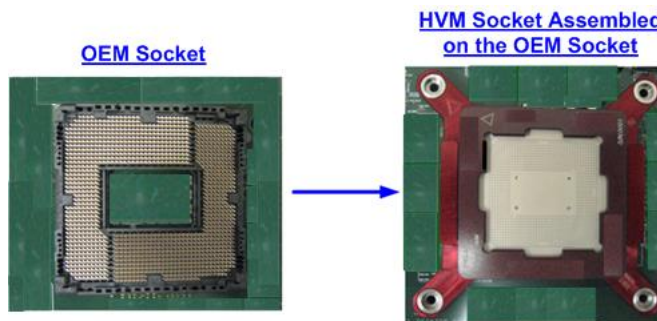
- This process is time consuming and also causes HVM socket connectivity and reliability issues due to solder residue on the pads

HVM = High Volume Manufacturing

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# Solution

- Use existing HVM socket with an additional PCB interposer placed directly on the OEM socket



**OEM Socket**

**HVM Socket Assembled on the OEM Socket**

# Stack up



**Locking mechanism**

**HVM socket**

**PCB interposer**

**HVM socket – Support plate**

**OEM socket**

**System validation board**

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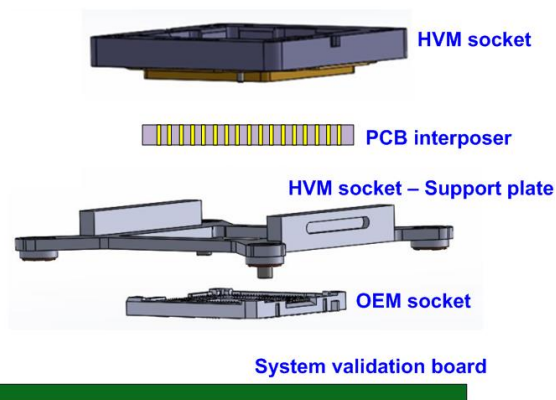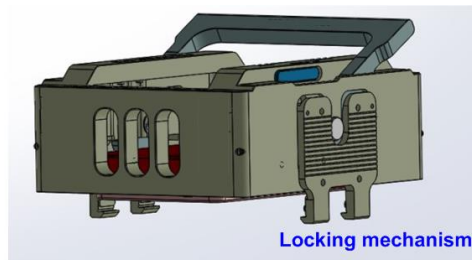
## Advantages:

- Increase # of insertion/removal cycles significantly without any system validation board modifications

- This concept can be applied for boards with different footprints where package and PCB foot-prints do not match

- Provides flexibility to the user. User can use either OEM or HVM socket without any board rework

- Robust connection of the HVM socket Vs. assembling it on the PCB directly

- Allows reuse of existing HVM locking mechanism without designing new hardware

## Current Status:

- This solution has been proven to work in real validation/test application

## Next steps:

- Understand impact of additional height (interposer + pogo-pin contact) on signal integrity

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