FATcat II

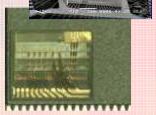
The FATcat II was designed with the Semiconductor Failure Analysis lab in mind, focusing on laser-based:

- **Laser Decapsulation**
  - **Multiple Laser Wavelengths Available**
    - **Infrared**
    - **Green**
    - **Ultraviolet**
    - **Deep Ultraviolet**
      - **femtosecond**

- **Cross-Sectioning**
- **Material Characterization**

Laser Decapsulation

The FATcat II was designed to provide today's Failure Analysis labs with a tool that can perform critical processes on a multiple device profile without damaging areas of interest:

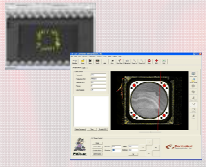


- **Layer by layer Decapsulation of Multi-stacked Die**
  - **Remove Mold Compound to Top Die**
  - **Remove Top Die…**
- **Bond Wire / Bond Pad Protection during Decapsulation**
  - **Lasers can damage bond wires, so ConSemi has developed a bond wire protection cleanup pass.**
  - **Wires, Pads and Die are protected while decapsulating to the area of interest**
- **C-SAM®, X-Ray and other means of direct navigation to the defect or area of interest.**
- **Full, Partial and Drill modes of Decapsulation**
- **Safer than full chemical Decapsulation**
- **Lower cost per sample**
- **On-board Laser Marking option**

Full

Partial

Drill



Cross-sectioning

The FATcat II is designed to also perform a navigation driven cross-sectioning process to within 20µm of the operators input. Utilizing the FATcat II to perform cross-sectioning eliminates the need to prepare samples in acrylic overnight:

- **Precise enough to dissect solder balls**
- **C-SAM®, X-Ray and other means of direct navigation to the defect or area of interest.**
- **Direct Component removal from boards**

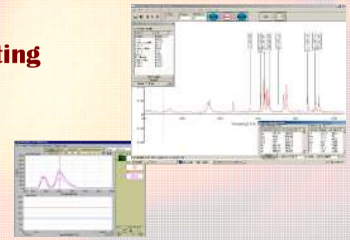
- **Lower cost of operation**
  - **No Tool wear**
  - **No Consumables**
  - **No Preparation Time / Materials**

- **Cross-section through most materials**

Material Characterization

The FATcat II utilizes an integrated L.I.B.S (laser induced breakdown system) system and Alpha Spectrometry to provide an overview of materials, similar to the EDX process. The Alpha Spectrometer uses up to seven bandwidths to process the light plum generated during the L.I.B.S. process, and is so accurate it can detect strains of a virus:

- **Element level analysis**
- **Full detailed graphic reporting**
- **Comparative data analysis**



ConSemi, LLC

Semiconductor Systems Group