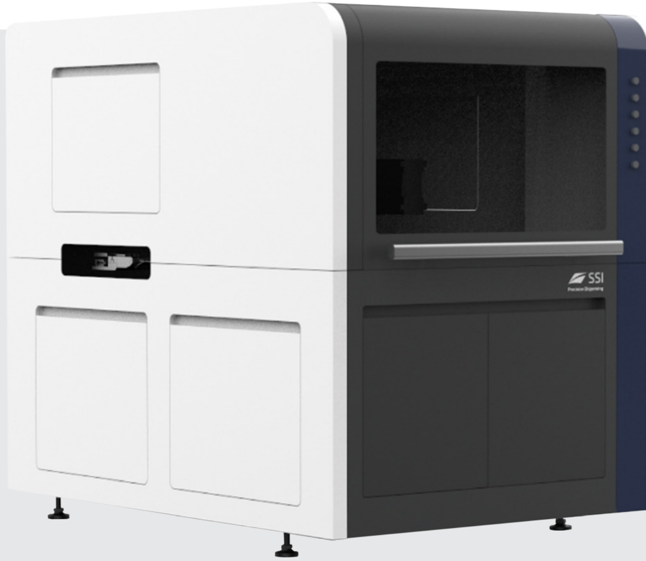
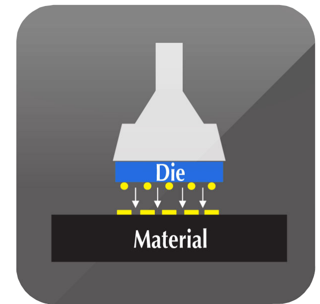
Model HDB
High speed precision dispensing bonder
高速精密塗膠黏晶機



Semiconductor packaging is becoming more and more complicated and critical. Recently customers are reporting problems happening to the existing die bonding technology. Problems are mainly related to out of date dispensing technology and software capabilities, which include slow dispensing speed, inaccurate dispensing and overflow. Problems also happens to attachment alignment because alignment mark is covered by the adhesive after dispensing.

半導體封裝的趨勢是愈趨複雜及困難，目的在縮小封裝體積並達到高速運算的要求，這也造成先進封裝黏晶的新挑戰及問題。客戶抱怨由於晶片變小及密度變高，膠水塗佈的品質及速度問題連帶造成黏晶機的整體效率及品質問題。膠水塗佈的問題則包括塗佈速度太慢及膠水塗佈量不精確造成的黏著度不足及導電或散熱的機能有問題，或者造成膠水溢流的問題。有些問題則發生在塗膠後晶片對位的記號被膠水蓋住而形成晶片對位的問題。

Model HDB is a totally new concept and solution for high speed precision dispensing, die bonding and die attach process. Model HDB is a modular design, which offers the complete flexibility of integrating appropriate dispensing and bonding technologies to satisfy the specific application requirement for dispensing, bonding and attachment. SSI has the most advanced dispensing technology in the world, which is capable to handle any dispensing requirement with extremely high speed and high precision including flux, silver epoxy, solder paste, thermo paste and etc with piezo jetting technology. Model HDB also offers advanced bonding capabilities with the bonding accuracy between 3um and 20 micron and the bonding force between 1-100 Newton. Because Model HHB is a patented modular design platform, the machine is able to integrate various dispensing and bonding modules to achieve the best performance in accuracy and throughput.



Model HDB是一個根據完全新概念設計的黏晶機，目的在提供一個新的黏晶技術方案解決因塗膠造成的黏晶問題。Model HDB不但具備最先進的高速高精度塗膠及黏晶的整合技術，而且是唯一具有專利的模組化設計的黏晶及塗膠平台，SSI可以根據客戶製程需求規劃及整合恰當規格及數量的塗膠及黏晶工作站，並組合成一個最有效率及品質的黏晶工作平台。

由於SSI 擁有自行開發的運動控制、影像處理、影像演算法、控制電路設計、嵌入式韌體、極精密硬體機構設計及模擬能力，SSI 不但塗佈技術領先世界, 對任何精密塗佈的應用擁有幾十年的經驗，對半導體塗佈的銀膠、錫膏、flux、散熱膏都有完整的對應方案，對目前黏晶機遭遇的各種塗佈的問題皆能迎刃而解，同時Model HDB的黏晶bonding能力具備3-20um的bonding精度，能依據客戶的bonding要求規劃恰當的bonding精度平台，Model HDB也提供die attach或die bonding需要的可調整的bonding force能力，bonding force可調範圍介於1-100牛頓。

Model HDB獨特的模組化專利更能依據客戶製程的需求規劃不同規格及數量的塗膠及黏晶bonding平台以達到製程最佳的品質及產出效率。

Model HDB Specifications 規格 :

- 可容納產品寬度(軌道寬度): 180mm
- 可工作單一Cell寬度: 50mm
- 最高速度: 500 ~ 1000 mm/sec
- 最大加速度: 0.25 ~ 1.5G
- 設備重現精度: ±10 ~ 1 um
- Bond Force: 1 ~ 100N
- Bonding精度: ±20 ~ 3um

Modular integration according to the process requirement 依據製程模組化整合適合客戶製程的平台。