



Building on the successful iStack[™] platform, the iStack[™] Series machines are engineered with new capabilities and enhanced features to meet the challenges and redefine the way of die bonding.









The **iStack[™] S+** is designed for high-end epoxy and film die attach applications with process flexibility to support both the memory and image applications. Its enhanced process features include the face-down process, In-Situ UV and bond force detection mechanism, delivering productivity improvement and performance.





Optional In-Situ and Post-Bond UV Curing

iStack S+ also supports customers' requirements on automation. It could also be integrated (iStack[™] *INT*) as part of K&S' CIS in-line solution.







Die Dimensions Size: 0.5 - 25 mm Thickness: \geq 15 µm (thin die kit option)

Substrate Dimensions

Length: 120 - 300 mm (90 mm option) Width: 29 - 120 mm Thickness: 0.08 - 0.8 mm Up to 2 mm with open rail

Source Wafer Diameter 6". 8" and 12"

Accuracy (3σ)

X / Y Position: DAF: 6* - 10 µm (*high accuracy mode) Epoxy: 10 - 15 µm Pre-Flux: 10 - 12 µm Theta: DAF / Pre-Flux: 50 - 150 mdeg (die size > 2 mm) Epoxy: 150 mdeg (die size > 2 mm)

Productivity ≥9K uph @ 50 ms place time with 100% PPI

Process Capability

Bond Force: 0.5 - 25 N (50 N option) Bond Rotation: 360° Bond Tool Heating: Up to 200°C (higher temperature on request) Pre- / Bond- / Post-Heating: Up to 200°C / 250°C / 200°C

Footprint (W x D x H in mm) 2165 x 1280 x 1995 (with input / output & HEPA)



Die Dimensions Size: 0.8 - 15 mm Thickness: ≥ 15 µm (thin die kit option)

Substrate Dimensions Effective Area: 6", 8" and 12"

Source Wafer Diameter 6". 8" and 12"

Productivity

Process Capability

(50 N option)

Bond Force: 0.5 - 25 N

Bond Rotation: 360°

5K uph - High accuracy mode

Up to 9K uph - Standard mode @ 50 ms place time with 100% PPI

Bond Tool Heating: Up to 200°C

Bond Chuck Heating: Up to 150°C

Accuracy (3σ) X / Y Position: 5 μ m (*high accuracy mode) Theta: 50 mdeg (die size > 2 mm)



Footprint (W x D x H in mm) 2100 x 1930 x 1995 (with input / output & HEPA)

iStack S+ / W+ Features & Options

- High Accuracy kit (5 μm) • Thin Substrate handling kit (< 100 µm) Mapping Functions (Substrate / Wafer)
- Wafer / Substrate contamination removal kit



Pick (Thin Die with Force Control)



Transfer (Alignment prior to bonding



Die Placement with PPI (Wafer Level Die Attach)







With an emerging trend in attaching thinner die and substrates, the iStack[™] W+ offers a solution for wafer level die attach.

Example of Package-on-Package (PoP) with wire bonding and vertical wire bonding

- OHT / AGV kit
- SMEMA kit
- UV (In-Situ / Post-Bond)
- Tool Contamination monitoring kit



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