



ASSEMBLY

Overview

The Technology Hub at NextFlex bridges the gap between research and volume manufacturing with an end-to-end manufacturing process. Unique capabilities in assembly are highlighted below:

Surface Mount Technology (SMT)

Universal Fuzion: Pick and place of passive components.

- Substrates up to 500 x 500mm²
- Minimum component size: 0201 (0.6 x 0.3mm²)
- Components can be picked from:
 - Tape & reel
 - Waffle pack
- Up to 120 component feeders
- Up to 140 different nozzles
- Throughput: up to 8400 CPH

Die Bonding

Besi Datacon 2200evo

- Die attach (pads up)
- Flip-Chip bonding
- Packaged components (WLCSP)
- Components can be picked from:
 - Wafer
 - Waffle Pack
 - Gel Pack
- Integrated Musashi Super Sigma II module: precision pressure/time adhesive dispenser

Capabilities:

- Substrates up to 200 x 300mm²
- Placement accuracy $\pm 10\mu\text{m}$ – 3 sigmas
- Forces up to 10kg
- In-situ curing
 - Heated stage up to 150°
 - Heated bond head up to 350°C
- Multi-chip module (MCM)
- Die thickness down to 20um (ultra-thin die)

Finetech Fineplacer Pico-145 manual Flip-Chip bonder



- Flip-Chip bonding
- Packaged components (WLCSP)
- Components can be picked from:
 - Waffle Pack
 - Gel Pack

Capabilities:

- Substrates up to 100 x 100mm²
- Placement accuracy $\pm 5\mu\text{m}$
- Bonding force: 20g up to 10kg
- In-situ curing
 - Heated stage up to 400°
 - Heated bond head up to 400°C

systemECH DDP (Direct-Die-Placement)

- Flip-Chip bonding
- Packaged components (WLCSP)
- Components can be picked from:
 - Waffle Pack
 - Gel Pack

Capabilities:

- Substrates up to 250 x 250mm²
- Component sizes: 0.05 x 0.05mm² up to 10 x 10mm²
- Component thickness: 500nm up to 250 μm
- Placement accuracy $\pm 2\mu\text{m}$
- Bonding force up to 1.3kg
- In-situ curing up to 190°C

Dispense: Adhesive, Underfill, Encapsulation

Nordson Asymtek DispenseMate D-585

- Work area (substrate size): 400mm x 400mm
- Nordson Asymtek jetting head: DispenseJet DJ-9500
- Vermes jetting head: MDS3280

For more information, contact NextFlex at info@nextflex.us.