

## WIRE BONDING SERVICES

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Wire bonding is a key manufacturing process for microelectronics and MEMS sensor products. The core wire bonding capabilities and expertise at SMART Microsystems support process development, testing, and manufacturing of sub-assemblies designed by our customers. Wire bonding processes are flexible and robust, allowing our customers to quickly realize a microelectronic package assembly solution for their products. For additional information you can visit our website, or you can call or send us an email to discuss your wire bonding needs.

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### FINE GAUGE WIRE/RIBBON BONDING

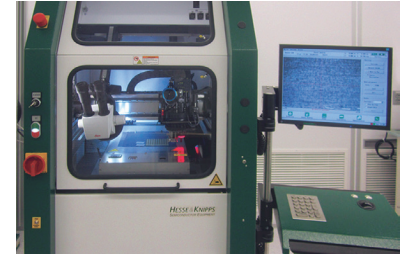
- Wire diameters: 17.5µm to 50µm (0.7 to 2.0 mil)
  - Ribbon: 6x35µm to 25x250µm (0.25x1.4 mil to 1x10 mil)
  - Wire and ribbon materials: aluminum, gold
  - Fine pitch is available
  - Bond area: 305mm x 410mm (12.3" x 16.14")
  - Accuracy: 1µm at 3 sigma
  - Speed: up to 6 wires/second
  - Loop Length: 70 µm up to 20 mm, depending on wire diameter
  - Various loop form functions:
    - Constant wire length
    - Constant loop height
    - Individual loop shapes
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### HEAVY GAUGE WIRE/RIBBON BONDING

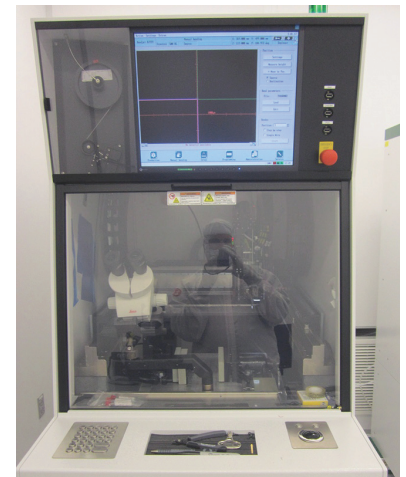
- Wire diameters: 100µm to 500µm (4 to 20 mil)
  - Ribbon: 0.075x0.75mm to 0.4mm x 2mm (3x30 mil to 16x80 mil)
  - Wire and ribbon materials: aluminum
  - Bond area: 300mm x 500mm (13.8" x 19.7")
  - Accuracy: 2µm at 3 sigma
  - Speed: up to 3 wires/sec
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### GOLD BALL BONDING

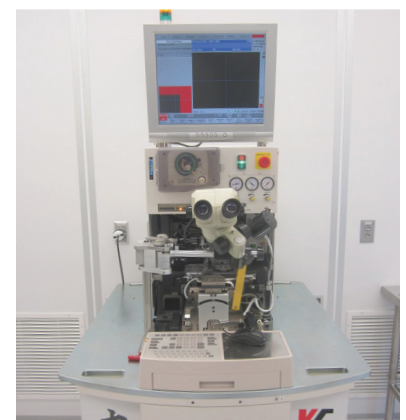
- Wire diameters: 15 to 50µm (0.6 to 2.0 mil)
  - Wire materials: gold
  - Fine pitch capability: 40µm
  - Minimum loop height: 100µm (standard and worked loops)
  - Bond area: 56mm x 80mm
  - Accuracy: +/- 2.0µm
  - Speed: up to 15 bonds/second including programmable looping
  - Looping capability: standard and worked (BGA1-BGA3, Spider, J Wire, CSB)
  - Stand-off Stitch bond (SSB) capable
  - Stud bumping
  - Wire material: gold
  - Speed: Up to 30 bumps/second including programmable smoothing
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*Hesse Mechatronics  
Fine Gauge Wedge Bonder*



*Hesse Mechatronics  
Heavy Gauge Wedge Bonder*



*K&S IConn Gold Ball Bonder*