iBond5000Dual

*The **iBond5000** series integrates the proven K&S manual wire bonder mechanical design with an advanced graphical user interface.*

*The **iBond5000** Wire Bonder series is based on the proven K&S 4500 Series, the market leader for nearly a decade.*

*The **iBond5000** series includes 3 basic models: Wedge, Ball and Dual. The basic machine has a TFT touch screen control interface and has the ability to attach an analog panel for those that prefer working with analog knobs.*

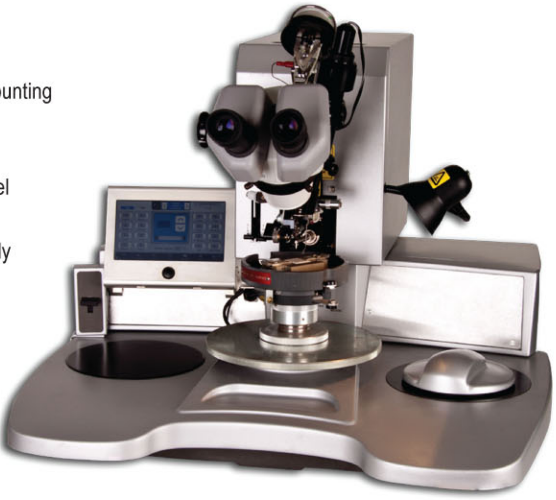
*The **iBond5000** main control board is based on a Cortex A9 Dual-core CPU that runs at a speed of 1GHz.The operating system is Windows CE-based and the system is controlled using a 7" 600X800 TFT touch screen.*

The system enables the user to save and load profiles, but it also comes with factory preconfigured profiles for ease of use.

The **iBond5000-Dual** is an advanced ball/wedge bonder used for process development, production, research or added manufacturing support. The iBond5000 provides the high yield and excellent repeatability needed for every wedge bonding application including: Optoelectronic Modules, Hybrids/MCMs, Microwave Products, Discrete Devices/Lasers, Chip-on-Boards, Leads, Sensors, High Power Devices and much more.

Features

- 7" TFT Touch Screen Management
- Cortex A9 Dual-Core CPU-based hardware system
- Windows CE-based management software
- USB connectivity - External Mouse, Keyboard, Disk on Key
- Load/Store wire bonding profiles, Disk on Key backup
- 800MB Capacity
- K&S Bonding profiles internal library
- On-Line Manual
- Optional Analog Pots Kit
- Internal Tools database
- Semi-Automatic/Manual mode with 'Z' option
- Wedge-wedge and ball-wedge bonding on the same machine
- Fast change over by operator with no tools
- Bonding mode changed by automatic switch
- Patented plunger moving arm
- Special K&S proprietary transducer for proper bond tool mounting
- Ball bonding capillary mounts with split clamp
- Wedge bonding tool mounts with setscrew
- 90˚ deep access wedge bonding with 12.5 mm 'Z' axis travel
- Ball bonding with 12.5 mm 'Z' axis travel
- Special K&S proprietary swing arm EFO/Drag Arm assembly
- High-end Negative EFO with missing ball detection
- Phase Locked Loop (PLL) Ultrasonic Generator
- High-Q 60kHz Ultrasonic Transducer, optional 120KHz
- 2 Channel Independent Bonding Parameters
- Built-in Digital Work Stage Temperature
- Variety of wires: Gold, Copper (Wedge, Ball) Aluminum, Ribbon (Au or Al) for Wedge.
- Bonding Types: Tab, Stitch, Ribbon, Bumping, Ball bonding, Coining, Security bonds
- Advanced Wedge Automatic wire Re-Feed
- Chessman/Mouse & Manual 'Z' convertible right or Left
- RoHS Compliant



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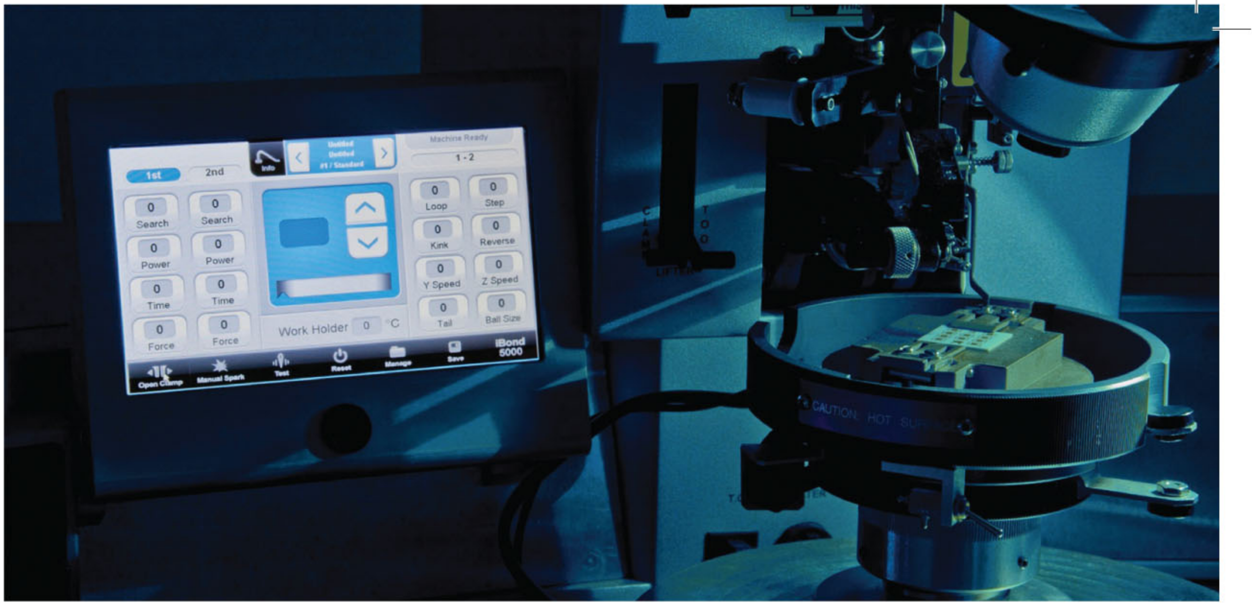

iBond5000-Dual
Technical Specifications

- Ball-wedge and wedge-wedge bonding capability

- Wire feed angle 90°, vertical feed/ wedge 30°, 45°

- Gold wire diameter
  - Ball bonding and wedge bonding
    - 0.7 mil to 3.0 mil diameter
    - 17 micron to 75 micron diameter
  - Copper Wire
    - 0.7 mil to 2 mil
    - 17 micron to 50 micron

- Gold ribbon
  - Wedge bonding
    - Up to 1 x 10 mil
    - Up to 25 x 250 micron

- Aluminum wire diameter
  - Wedge bonding
    - 0.8 mil to 3.0 mil diameter
    - 20 micron to 75 micron diameter

- Spool size
  - Ball bonding 2” x 1” double flange spool
  - Wedge bonding
    - 2” x 1” double flange spool
    - 1/2” spool (type TS-1)
    - 2” x 1” spool holder for ribbon

- Bonding tool specification
  - Wedge bonding wedge length
    - 0.750”
    - 0.828”

  - Ball bonding capillary lengths
    - 0.375”
    - 0.437”
    - 0.625”

Machine Specifications

XY Table

- Bonding Area
  135 mm x 135 mm (5.3” x 5.3”)

- Throat Depth
  143 mm (5.6”)

- Gross Table Motion
  140 mm (5.5”)

- Fine Table Motion
  14 mm (0.55”)

- Mouse Ratio 6:1 (Choose Mouse Type)
  - Left side mouse with right side manual ‘Z’ lever.
    - Recommend optional ‘Portable Dials Kit’
    - Locates critical dials on right side
    - For operator comfort (Search 1st, Search 2nd, Loop and Tail)
    - Right side mouse with left side manual ‘Z’ lever
    - Right side mouse with integrated manual ‘Z’ lever

- Motorized Y
  - Step back up to 4 mm (160 mil)
  - Reverse up to 0.25 mm (10 mil)
  - Kink height up to 0.5 mm (20 mil)

- Z Axis Control
  DC Servo with closed loop tachometer feedback

- Z Axis Travel
  - 0.500” (12.5 mm) ‘Z’ travel
  - Increased travel range
  - Full range of control with the ‘Z’ motor

- Ultrasonic System
  - High-Q 60kHz K&S transducer
  - Phase Lock Loop self-tuning ultrasonic generator

Parameters

- Low Ultrasonic Power
  1.3 watts

- High Ultrasonic Power
  2.5 watts

- Bond Time (Selectable range)
  - 10-100 milliseconds
  - 10-1000 milliseconds

- Bond Force (Static force adjust)
  - 10-250 grams (requires added weights >80 grams)
  - No springs
  - Bond Force Coil Range -
  - Added 3-80 grams (depends on Force parameter setting)
  - Separate 1st bond and 2nd bond parameters
  - No springs

- Wire Termination
  - Clamp Tear, adjustable ‘Tear’ parameter and ‘Tail’ parameter
  - Wire tail feed
  - Programmable clamp motion for wedge bonding
  - Programmable tail pull for ball bonding

- Temperature Controller
  - Built-in
  - Range up to 250°C, +/- 5°C

Facility Requirements

- Electrical: 100 – 240 V, 50 / 60Hz
- Dimensions: 680 mm (27”) Wx 700 mm (27.5”) D x 530 mm (21”) H
- Weight: Shipping: 55 kg (122 lb), Net: 31 kg (69 lb)

Options and Accessories

Single-Point TAB Kit w/Programmable Z Axis

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For sales, service and
manufacturing locations, visit:

www.kns.com

08/12

RoHS
Compliant