iBond5000Dual

The **iBond5000-Dual** is an advanced ball/wedge bonder used for process development, production, research or added manufacturing support, 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
- MPP Bonding profiles internal library
- On-Line Manual
- Analog Pots Kit Optional
- Internal Tools database
- Semi Automatic/Manual mode with Z option
- Wedge-wedge and ball-wedge bonding on the same machine
  - Fast changeover by operator with no tools
  - Bonding mode changed by automatic switch
- Patented plunger moving arm
- Special proprietary transducer for proper bond tool mounting
- Ball bonding capillary mounts with split clamp
  - Wedge bonding tool mounts with set screw
  - 90-degree deep access wedge bonding with 12.5 mm ‘Z’ axis travel
- Ball bonding with 12.5 mm ‘Z’ axis travel
- Special proprietary swing arm EFO/ Drag Arm assembly
- High-end Negative EFO with missing ball detection
- PLL Ultrasonic Generator
- High Q 60kHz Ultrasonic Transducer
- 2 Channel Independent Bonding Parameters
- Semi-Auto and Manual Z Bonding Modes
- 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 Compliance

*The MPP **iBond5000** series integrates the MWB mechanical design with an advanced graphic user interface.*

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

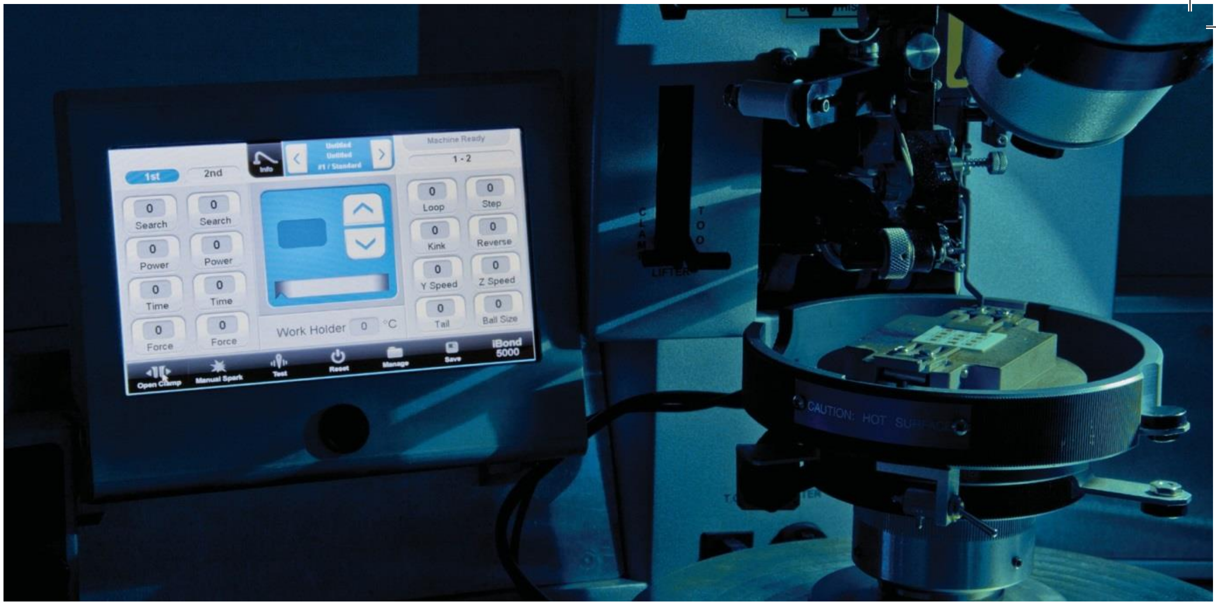
*The MPP **iBond5000** series includes 3 basic models, Wedge, Ball and Dual. The basic machine has a TFT touch screen control interface and has the ability to attach an analog panel for those that prefer working with analog knobs.*

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

The system enables you, the user, to save and load profiles; it comes with factory preconfigured profiles to ease usage

Micro Point Pro

iBond5000



iBond5000-Dual
Technical Specifications

- Ball-wedge and wedge-wedge bonding capability

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

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

  - 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
  - Stepback 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 MPP transducer
  - Phase Lock Loop self-tuning ultrasonic generator

Parameters

- Low Ultrasonic Power
  1.3 watts

- High Ultrasonic Power
  3.0 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 o C, +/- 5 oC

Facility Requirements

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

Sample
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Options and Accessories
Single-Point TAB Kit w/Programmable Z Axis

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