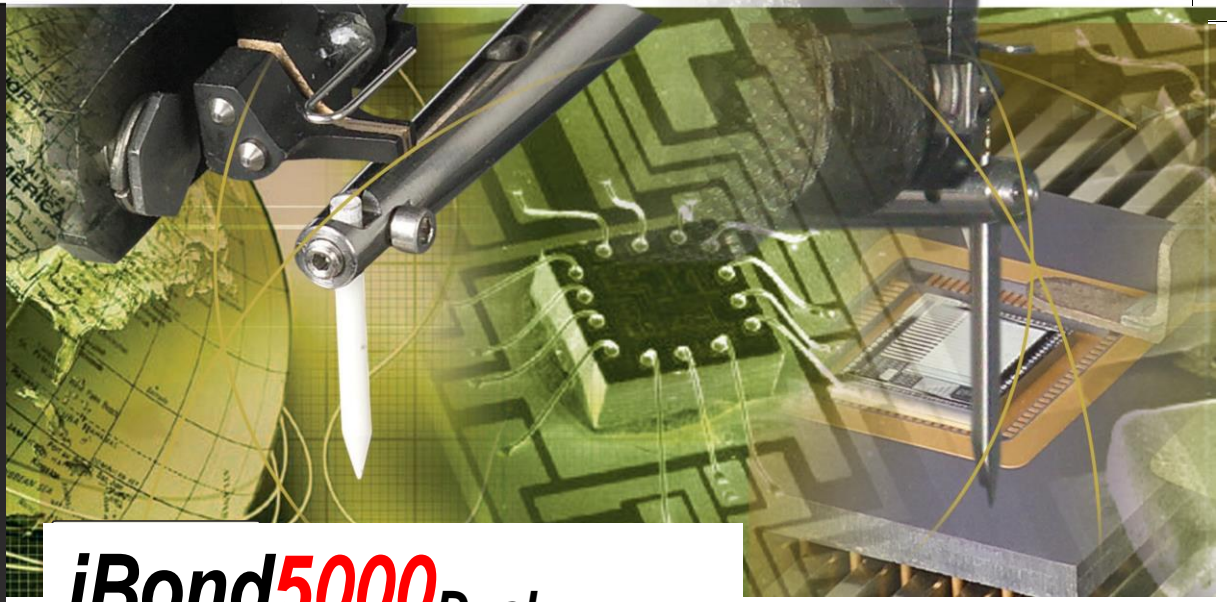


# iBond5000



## iBond5000 Dual

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.

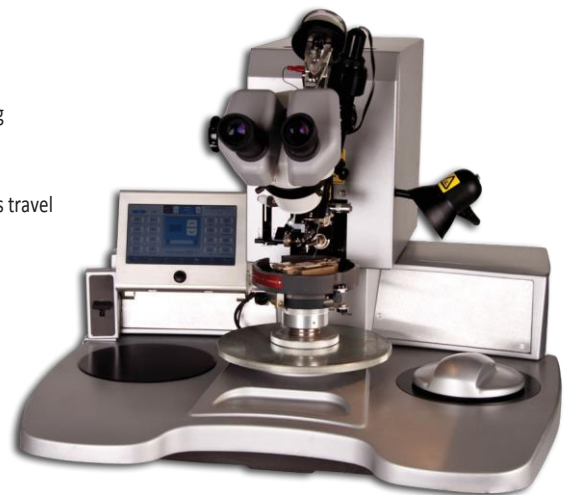
MPP iBond5000 main control board is based on Cortex A9 Dual core CPU that runs at a speed of 1GHz, the operation system is Windows CE based and the system is controlled using a 7" 600X800 TFT touch screen.

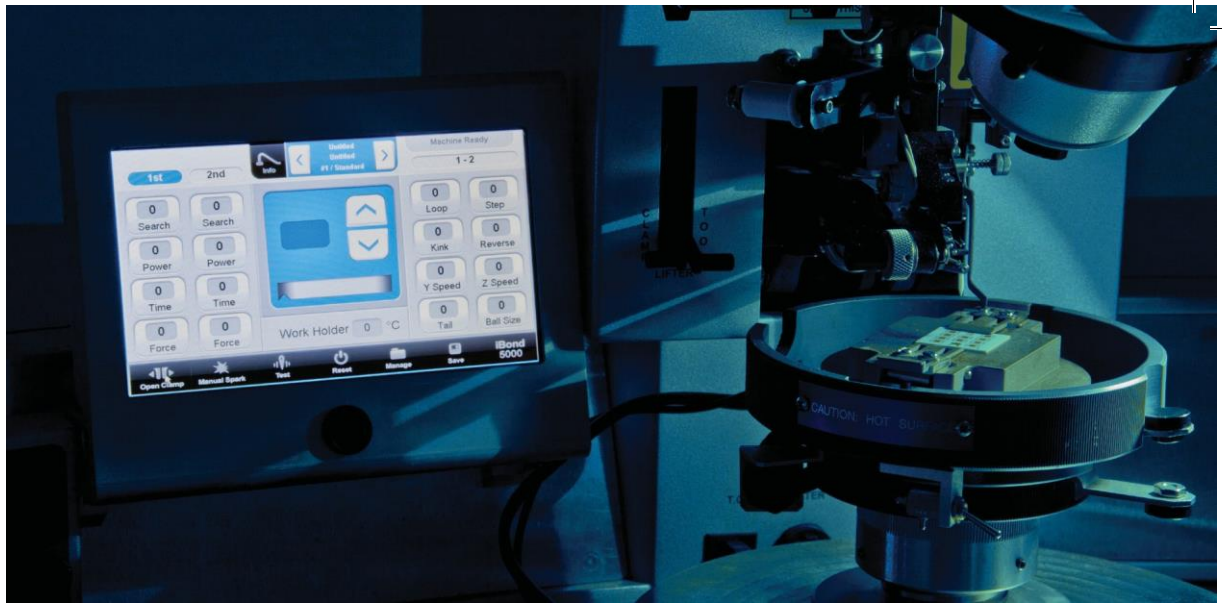
The system enables you, the user, to save and load profiles; it comes with factory preconfigured profiles to ease usage

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, optional 120KHz
- 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





## **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)



For more information please visit us at  
[www.mpptools.com](http://www.mpptools.com)

For any assistance please contact us at  
[mwb@mpptools.com](mailto:mwb@mpptools.com)

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