University of Arkansas • High Density Electronics Center

WIRE BONDING SERVICES

Wire bonding is that final crucial step in electrically connecting the active die to its corresponding package whether for small-signal or high-power applications. HiDEC has the tooling available for most wire bonding needs.

K&S 4700 hybrid bonder: The K&S 4700 provides the same functionality as the K&S 4523's fine wire aluminum and gold wedge-wedge bonding. In addition, the tool can be configured for gold ball and gold ball bumping.

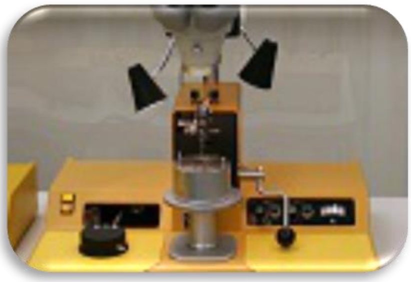
1. Wire diameters: 18µm to 75µm*
2. Ribbon: 25µm x 250µm*
3. Bond material: Aluminum and gold
4. Heated work holder: Yes
5. Bond area: 134mm x 134mm
6. Bond force: Up to 156cN
7. Transducer frequency: 60kHz
8. Charge: $20/hour (academic)

K&S 4523 gold wire bonder: The K&S 4523 provides fine wire aluminum and gold wedge-wedge bonding. The two units in operation both have heating stations for gold bond placement

1. Wire diameters: 18µm to 75µm*
2. Ribbon: 25µm x 250µm*
3. Bond material: Aluminum and gold
4. Heated work holder: Yes
5. Bond area: 134mm x 134mm
6. Bond force: Up to 156cN
7. Transducer frequency: 60kHz
8. Charge: $20/hour (academic)

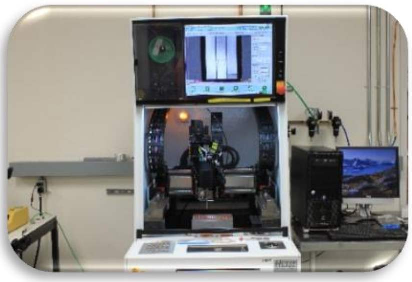
Orthodyne 5/12mil wire bonder: This tool provides manual aluminum heavy wire bonding for power module development.

1. Wire diameters: 125µm to 500µm*
2. Heated work holder: No
3. Bond area: 134mm x 134mm
4. Charge: $20/hour (academic)



Hesse BJ 935 heavy wire bonder: The automated bonder provides heavy wire bonding for power module development.

1. Wire diameters: 100µm to 500µm*
2. Ribbon: 75µm x 75µm to 300µm x 2mm*
3. Bond material: Aluminum and copper*
4. Bond area: 254mm x 244mm
5. Bond force: Up to 1400cN
6. Transducer frequency: 60kHz
7. Charge: $60/hour (academic)

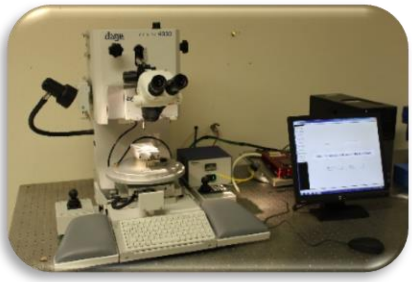


WIRE BOND SERVICES

The items listed here include peripherals closely related to the operation of the die attach process that users may find beneficial.

Diener electronic PICO 5: A plasma ash chamber tool plumbed with oxygen (O_2) to selectively remove organics then argon (Ar) to remove any oxide created during the oxidation run. Generally, a three-minute oxygen clean then a five-minute argon clean is used prior to a solder reflow or wire bond process.

1. Work size: 125mm x 300mm
2. Power: 150W
3. Charge: $10/hour (academic)



Nordson Dage 4000 Multipurpose Bond tester: The tool can perform pull and shear stress testing. The 4000 bond tester can be configured as a simple wire pull tester and upgraded to provide ball shear, die shear, bump pull, vectored-pull, or tweezer pull tests.

1. Work size: Vice jaw adapter (12mm to 120mm)
2. Heated work holder: Up to 400°C
3. Wire pull module: 1Kg
4. Die shear module: 100Kg
5. Charge: $20/hour (academic)