

Delta Group Electronics San Diego Equipment List

| Equipment Type | Brand | Model | Key Features |
|---|---------------------------------|--|--|
| Solder Paste application | Europlacer | EP710 | 2D paste inspection. See note below under Europlacer Pick-and-Place. Wet and dry stencil cleaning |
| | Manual Stencil Printer (qty: 2) | 4500R Precision Manual Stencil Printer | |
| | MPM | SPM (Qty: 2) | |
| Solder Paste Inspection | Europlacer | EP710 | Integrated 2D paste inspection using CAD files |
| Stencil / board wash | Electrovert | Aquastorm | Closed-Loop DI system for boards--use in-line stencil cleaner on Screen printer |
| SMT Pick and Place | Europlacer | Inneo 2 | The Europlacer line (SMT Pick-and-Place equipment and screen printer) is the platform to continue expanding for the future, and models what is used at our NM facility. The intention is ultimately to replace the other SMT equipment (currently has the capacity to do so), and expand with additional Europlacer lines. |
| Smt Conveyors | Promation | mult. | Auto inline board feeding |
| | Philips | Emerald | |
| | Philips | Topaz | |
| | MyData | My12 | Dedicated for quick-turn |
| Reflow Oven | Electrovert | OmniES-7-zone | Have a 10-zone oven in Capital plan for this year |
| | Electrovert | Omniflo-7-zone | Have a 10-zone oven in Capital plan for this year |
| | Electrovert | 5-zone | Used primarily for prototyping and legacy boards |
| Automated Optical Inspection | Yestech | FX940 Ultra-3D AOI/SPI System | We perform AOI on 100% of boards. Large board capacity |
| | Yestech | F1 | We perform AOI on 100% of boards |
| X-Ray Inspection | Glenbrook | 70-T | We perform 100% X-ray inspection on BGA's, QFD's and LGA's |
| Selective Solder | Air-Vac | PCBRM15 | |
| Wave Solder | Speedline | Vectra ES2 | |
| Through Hole Component Placement | Hepco | (Qty: 3) | Axial Component Forming Machine |
| BGA Repair / replacement | PDR | IRE3G | "Gold" IR system, with 5 micron placement accuracy, vacuum placement system, and 5" X 5" Boost heater array |
| | Sniper | II-SMD-1000 | For BGA repair. Hot air system for mass heating. |
| Conformal coating removal | Comco | CTR201 ESD Control ProCenter | Blasting tool for precise and effective conformal coating removal, including Parylene |

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| Conformal coating | Binks | Spray booth | Booth is used for AR, but can do Polyurethane for rework. Have specified and will be acquiring a selective/automated coating system that can employ multiple coating materials. We also do other kinds of adhesive/potting onsite, both for structural reinforcement and moisture impermeability |
| Thermal Chambers | Thermotron (qty:3) | | |
| | Blue M | TPS | For baking processes |
| | Quincy Lab | Model 40 | For baking out Moisture-Sensitive devices and desiccant |
| Vibe Table | Ling | V830 355-T | With Ling SPAK Amplifier/Controller |
| Press fit equipment | Various manual presses and associated die | | mostly used for connector installation, such as e.g. Erni connectors |
| Flying Probe Test | SPEA | 4050 S2 | With Leonardo Software, fixtureless in circuit testing |
| | | | |
| Other Equipment | | | |
| Evaporative Humidifier | Essick Air Products (qty:2) | 831 000 | Humidity control |
| Freezer | Accucold | EL11LT | Epoxy/chemical storage |
| Refrigerators | Multiple (qty:2 lead /qty:2 lead-free) | Multiple | Solder paste storage |
| Microscopes | Sciencscope(qty:>20) | ELZ-BD-B2 | magnification 6.7x-45x |
| Microscope | Sciencscope | CC-HDMI-CD2 | 1080p (1920 x 1080) Image Capture |
| Oscilloscopes | Tektronix | Various (5) | |
| Meters | Numerous meters | | |
| Power Supplies | Tektronic (8) | Various | |
| Power Supplies | Xantrex | XDC 60-100V | |
| Spectrum Analyzer | Agilent | E4402B | |
| Communications Analyzer | Fireberd | 6000A | |
| | | | |
| Other Board Assembly equipment | | | |
| Ionic Contamination Tester | Aqueous Technologies | Zero Ion | Ionic Contamination Tester |
| | Plato | SP 600-TP | Component pre-tinning |
| | FKN Systek | K3000L | PCB Depaneling System |
| | FKN Systek | K7000 | PCB Depaneling System |
| Cable/Harnessing Assembly | Schleuniger | PF200 | Automated Wire Feeder |
| | Schleuniger | PS9500 | Automated Wire Stripper |
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| | Crimping equipment | Various | For larger quantities, can employ DGEI's Texas facility, which focuses only on cable assemblies as our "center of excellence". They have overmolding equipment as well, which is beneficial in creating proprietary connectors, and can eliminate traditional potting and lead times associated to environmental connectors (industry is pushing out lead times for environmental connectors) |
| Cable/Harness Testing | Cirrus | CH+ | Test point scanner and wiring analyzer |
| Marking/Labeling | ProPen | P3000 | Identification Etching System |
| | Brady | BBP81 | Label maker |
| | Brady | 300MVP | Label maker |