

## ***Facilities Equipment List***

### **Drill/Fabrication**

Hitachi Drilling Machine 6 spindle (2)  
ESI 5200 UV Yag Laser Drill  
Dynamotion Drilling Machine 6 spindle  
Dynamotion Smart Drill 1 spindle  
ATI / Dynamotion pinless router 4 spindle  
ATI pinless router 2 spindle  
Targa Dynamic runout system  
Bevelmate beveler  
Invincible vacuum system (3)  
Trudrill Checkmate programmer  
Accuscore Model 150 V-Score

### **Engineering**

Frontline Genesis 2000 CAM Software  
Polar Impedance Calculation Software  
Mania/Barco SilverWriter Photoplotter  
Mania/Barco C40 (backup) Photoplotter  
Dupont Rapid Access Film Developer  
Secure FTP access  
BaconSoft JTS bar-code tracking system

### **Film Department**

Precision Art Imager II glass exposure tool  
Technilith diazo film developer  
Olec optical film punch  
Olec (2) Hole Film Punch  
MTH Corporation Filmguard Laminator

### **Inner Layers**

Olec Accuprint AP30-5000 Power Plus Exposure Unit  
Olec Accuprint AP30-8000 Super Eight Exposure Unit  
Olec Snap Lock Glass Tool  
Olec Accumeter UV Radiometer & Probe (2)  
Electostatics Ion Transport Model HM-800  
C.A. Picard Pneumatic Material Punch  
Shiplely Automatic Laminator 1600-SPC  
Morton Hi Tac Cleaner 24

### **Inspection/Test/QC**

Barco Argos Automatic Optical Inspection (AOI) system  
Mania Titan T8000 AOI system  
Mania Autom8tor AOI system  
Barco UCAM Workstation  
Microcraft EMMA ELH6146 flying probe tester (2)  
Microcraft error verification station  
Everett Charles 9090 double sided electrical tester  
Polar CITS5000S controlled impedance (TDR) test system  
Tektronix TDR sampling scope  
Veeco 5100L X-ray Fluorescence (XRF) plating thickness gage  
Zero-Ion ionic contamination test system  
Struers automatic cross section polisher  
Cemco programmable solder float analysis system  
NUARC light tables (3)  
Mantis visual inspection scope  
Pin-gauge systems, hand gauges and hand held 60x scopes  
Reicher Micro Star 100x-400x cross-section microscope  
Marseco Blue Boy washer/dryer  
CMI (hole wall) digital eddy-current plating thickness gage  
IGI Electrical Test CAM Station  
HATS (Highly Accelerated Thermal Shock) Tester  
APS Gold Flow benchtop reflow oven (Pb Free capable)

### **Multilayer**

Lauffer - 4 lite - vacuum press  
Lauffer - 4 lite - cool down press  
Lauffer - auto load / unload shuttle  
Lauffer - computer control center  
Lauffer - layup station  
Lauffer - Depinning / destacking station  
Lauffer - auto carrier plate storage station  
Lauffer - Auto conveyer system  
Wabash 2 lite electric press  
Wabash 2 lite cool down press  
Lange hydraulic lift - double level  
Proheco oven  
20 ton chiller unit

## ***Facilities Equipment List***

### **Outer Layers**

Olec Accutray AT30 Double Drawer Auto-align  
Hi-res exposure unit  
Dynachem Model 300 Laminator  
Western Magnum Model XRL240 Laminator  
Teknek tack roller system  
ASI 750 Developer  
Precision Quincy Drying Oven

### **Plating**

Complete chemical analysis laboratory  
SPC software  
Spectronics 20 - Spectrophotometer  
Acid Copper Tanks - 3  
Via Fill Copper Tank  
Tin Plating Tank  
Electroless copper plating line  
Permanganate etchback line  
Advanced Chemill thin core etcher  
Advanced Chemill thin core resist stripper  
CHEMCUT double brush scrubber  
CHEMCUT double brush deburrer  
Advanced Chemill Tin stripper  
Drying Ovens - Precision Quincy (1) Grieve (1)  
ARGUS vertical hot air level system  
ARGUS precleaner  
ARGUS post cleaner  
Marseco high pressure rinser  
Laminate Microetch  
Buck Scientific Atomic Absorption  
CVS  
Electroless Nickel / Immersion Gold plating line  
Deep Nickel/Gold line  
Silver line  
OSP line  
CHEMCUT Alternate Oxide line  
CHEMCUT GSK168 Acid Cleaner

### **Screening**

Circuit Automation DP1500 vertical screen printer  
NUARC Ultra Plus Exposure unit  
UV curing unit  
Grieve precision digital controlled oven  
C-Sun Tack dry oven  
Teknek tack roller system  
Easy-Flo recirculating screen washing system  
Cugher squeegee sharpener  
Olec Accutray AT30 Auto-align Hi-res exposure unit  
Circuit Automation TC-120 tunnel oven  
Precision Quincy digital controlled ovens (2)  
Wise Solderstar developer (micro-via capable)  
Cugher Futura-2 Automatic screen printer  
Circuit Automation DPVDM Vacuum Chamber

### **Waste Treatment**

MEMTEK waste treatment unit  
TMC dry film stripper recovery unit  
Gold ionic exchange units  
Automated wastewater sampling unit (refrigerated)  
MEMTEK Copper plate out unit  
Hayward S-240 high rate recirculating unit  
Silver recovery unit