

EQUIPMENT & TOOLS IN NEXTFLEX TECHNOLOGY HUB

Printing, Deposition, Ablation & Characterization

COMPANY NAME	MODEL #	DESCRIPTION	PROCESS CAPABILITY
Optomec	Aerosol Jet 5X	Digital Printing on 3D Surfaces	5 Axes of Motion, Down to 5 µm Features
IDS	Nanojet	Aerosol Printer	High Resolution Aerosol Printing <<35 µm Resolution on 3 Motion Axes
nScript	3Dn-500	Multifunction FHE Tool	Printing, PnP, Micromachining, and 3D Printing
Komori	PEPIO F6	Offset Gravure Press for Fine Feature Printing	Development of Alternate Process for Fine Line (10 µm) Printing
HMI	MSP-9156C	Screen Print Conductor/Solder (500 mm x 500 mm Frame)	Automatic Flood/Squeegee Bar, High Resolution Vision System
SUSS	PiXDRO IP410	Digital Print Dispensing Units 1 and 2	Digital Printing with Wide Array of Print Heads for Fine Line
Fujifilm - Dimatix	DMP-2850	Tabletop Inkjet Printing	Printing Down to 100 µm, Developing Narrower Print Traces
ChemCubed	ElectroUV3D	UV LED Flatbed Inkjet Printer	Fine Detail Deposition of Conductive Liquids
Voltera	Nova	Extrusion Print Tool	Rapid Prototyping Print Tool
Space Foundry	Printer: 74.3.3 Printhead: #135.3	Plasma-Jet Deposition System	Dry Print Process Tailors Ink Material Properties In-Situ, Improved Adhesion
SMIT	FLEx	PECVD Deposition of Thin Films	Deposit Insulating Films for Multilayer Applications
Yield Engineering Systems	YES-R1	Plasma Asher	Multi-Gas Plasma Wafer Cleaning
ESI	LodeStone	Laser Ablation, Via Drilling, Dicing	Laser Via Drilling and Precision Laser Micromachining
LPKF	Protolaser R4	Laser Ablation, Via Drilling, Dicing	Laser Via Drilling and Precision Laser Micromachining
Keyence	VK-X200K	Confocal Laser Scanning Microscope for Nano-Scale Inspection	3D Confocal Microscope for Surface Inspection Display Resolution 1 nm
ScanCAD International	ScanINSPECT	High Precision Flat Bed Scanner	Screen/Stencil/Image Inspection
Anton Paar	MCR302	Rheometer	Characterization of Printable Materials
ramé-hart	250-U4	Goniometer/Tensiometer	Contact Angle Measurement
Flacktek	DAC 800.2 VAC LR	Speed Mixer	Laboratory Mixing System
Print Head Doctor	PHD11	Automated Ink Jet Head Cleaner	Recovery of Solvent, UV and Water-Based Print Heads
Rhinotech	HP2536	High Pressure Print Screen Washer	Automated Washer with Traveling, Two-Headed Rotating Spray Wand

Curing

COMPANY NAME	MODEL #	DESCRIPTION	PROCESS CAPABILITY
BTU International	PYRAMAX 100N	Thermal Cure Conveyor Oven (8 Zone)	Cure Film Substrates up to 350°C with Nitrogen
TestEquity	FS4-1	Forced Air Oven	Maximum Temperature of 250°C
TPS - Blue-M	DCC-256-C	Convection Oven for Thermal Cure	Maximum Temperature of 200°C, Nitrogen Blanketing Available
Yamato	DX602C	Forced Air Oven	Curing of Medical Device Components
PulseForge	Invent 30	Photonic Curing and Soldering	Sintering, Soldering, Drying of Inks, Solder Pastes, Plastics, Crystals on PET, Polyimide, Paper or Textiles
Heraeus	DRS6-210	UV Cure Conveyor	2 1300M UV Lamp and Conveyor, Speed 1-21 fpm
Uvitron International	Sunray 400 SM	UV Flood Cure Lamp	100MW/sq cm Power, 320–390 nm Wavelength
adphos	Mini Lab 230V/25A	IR Cure Conveyor	5.5kW Power on 10" x 12" Substrate

Assembly

COMPANY NAME	MODEL #	DESCRIPTION	PROCESS CAPABILITY
Besi Datacon	2200 evo	Die Bonder and PnP with Flipchip	Die Bonding to Substrates (from Wafer/Gelpak or Tray), +/- 10 µm Accuracy
Universal Instruments Corp.	Fuzion 1-30	Pick and Place	PnP Tool from Tape/Tray/Wafer Feeder
Universal Instruments Corp.	HSWF	High-Speed Wafer Feeder	52 Thin Wafer Handling, Eject, Flip Processing
FineTech	FINEPLACER pico ma	Manual Die Bonder	Manual Multi-Purpose Bonder; Heated Stage and Tool; 5µm Placement Accuracy
NSW	S400M	Dual Head Jet Dispenser	Jet-Dispense Two Adhesives Simultaneously Using Two Vermes MDS-3280 Jet Dispensers
K&S	ATPremier Plus	Gold Stud Bumper	Wafer Level Stud Bumping and Wire Bonding; Bond Placement Accuracy of 3.5 µm @ 3 Sigma
ProLam	PL-1200	Heated Roll Laminator - 12" Wide	Adjustable Temperature, Speed and Nip Pressure
Digital Knight	DK20SP	Laminator/Swing-Away Press	16 X 20" Area, Max. Temperature 315°C

Test & Automation

COMPANY NAME	MODEL #	DESCRIPTION	PROCESS CAPABILITY
Fanuc	SR-3iA	Robotic Arm	Precision Placement and Assembly
NextFlex/Stäubli	TX2-60	6-axis Robotic Arm with Tool Changer	Multi-Function Robotic FHE Tool Incl. High Resolution Keyence Vision System, Print Heads and More
Resource Engineering, Inc.	N/A	Large 5-axis Motion Machine	Precise Multi-Modal and Conformal Printing on Large Parts
TestEquity	115	Temperature Chamber (Environmental Testing)	Temperature 23°C to 175°C
TestEquity	1007H	Temperature Humidity Chamber 1 and 2 (Environmental Testing)	Temperature -73°C to +175°C Rel. Humidity 10% to 98%
Cincinnati Sub-Zero	ZPHS-8	Temperature Humidity Chamber (Environmental Testing)	Rapid Cycling, Temperature -73°C to +190°C Rel. Humidity 10% to 98%
Q-Lab	Xe-3-B	Xenon Test Chamber for Sunlight Exposure	Multiple Irradiance Ranges, Various Filters Available
Micromanipulator	450PM-A	Probe Station	Probe Circuit/Component Test Points
Yuasa	CS Std Size Flex Tester	Endurance Tester	Tension-Free Folding
Yuasa	DX-ST ST1500100-ST	Cycling Stretch Tester Units 1 and 2	Mechanical Cyclic Testing of FHE Circuits
Jovil Manufacturing Co.	3FDF	Fatigue-Ductility Flex Testing	Flexural Fatigue Life at Various Bend Radii
Nordson Dage	4000 PLUS	Shear Tester	Bond Strength Testing up to 5kg

Post-Processing

COMPANY NAME	MODEL #	DESCRIPTION	PROCESS CAPABILITY
SalvisLab	VC-20	Vacuum Oven	Vacuum, Nitrogen Purge, Maximum Temperature of 200°C
ThermoFisher Scientific	176L Gravity	Gravity Convection Oven	Large Volume Curing, Maximum Temperature of 250°C
Cole Parmer	OVV-400-53-120	Programmable Vacuum Oven	Vacuum, Nitrogen Purge, Maximum Temperature of 200°C
Elegoo	Saturn	MSLA Resin 3D Printer	Rapid Prototype of High-Resolution Tooling
Prusa	MK3S	Extrusion 3D Printer	Rapid Prototype of Mounts & Fixturing
Nicomatic	10025-MO	Connector Crimping Tool	Crimps up to 24 Connectors at 2.54 mm Pitch
Dabpress	20-Ton	7" x 7" Dual Heated Press Machine	Conformal Film Lamination of up to 12 Devices
Omtech	K40+	40 Watt CO2 Laser Cutter	Processing of Medical Adhesives and Encapsulant Films
UVitron	Porta-Ray	600 Watt Portable UV Flood Cure Unit	Curing of UV-Based Encapsulants

For more information about the equipment in the NextFlex Technology Hub, contact Art Wall, NextFlex Director of Fab Operations, at 408-797-2260 or awall@nextflex.us

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