

	Equipment/Tool	Tool Purpose	Tool Owner	Tool Maint	Process Owner	Tool Trainer	Qualified Trainers	Notes
Deposition								
	ALD							
	Cambridge Fiji F200	Conformal layer deposition of atomically thin films	Charles	Charles	Charles	Charles	Brian	
	Evaporation							
	CHA SEL600	Electron beam evaporation of various thin film materials	Brian B	Kevin	Brian B	Brian B		Pending Installation
	Denton SJ20C	Electron beam evaporation of various thin film materials	Brian B	Kevin	Brian B	Brian B	Steve	
	Chemical Vapor deposition							
	Oxford Plasmalab 80 PECVD	Plasma deposition of SiO ₂ , SiN, and amorphous Si	Steve	Charles	Steve	Steve	Brian B	
	Parylene							
	SCS PDS 2010	Conformal room temperature parylene C bicompatible insulator deposition	Tony	Kevin	Tony	Tony	Brian B	
	Sputter							
	Denton Discovery 18	Sputter deposition of ceramic, metallic, and insulator thin films	Brian B	Kevin	Brian B	Brian B	Steve	
	Denton Discovery 635	Multilayer reactive sputter deposition of ceramic, metallic, and insulator thin films	Steve	Charles	Steve	Steve	Brian B	
	TMV Super	Sputter deposition of precious metal thin films (Au, Pt, Ir) and adhesion layers (Ti, Cr, Si, Al)	Brian B	Kevin	Brian B	Brian B	Charles	
	Electroplating							
	Cu Station	Electroplating of copper films	Brian B	Brian B	Brian B	Brian B		
	Ni Station	Electroplating of nickel films	Brian B	Brian B	Brian B	Brian B		
Furnaces								
	Furnaces							
	CTR Nitride		Tony	Charles	Tony	Tony		
	CTR LTO		Tony	Charles	Tony	Tony		
	CTR Poly		Tony	Charles	Tony	Tony		
	CTR TEOS		Tony	Charles	Tony	Tony		
	LPCVD		Tony	Charles	Tony	Tony		
	Tystar w/d oxidation		Tony	Charles				Pending Installation
	Atmospheric							
	ProTemp Clean Ox		Tony	Charles				Pending Installation
	ProTemp Wet/Dry Ox		Tony	Charles	Tony	Tony		

	Box							
	Blue-M		Steve	Kevin	Steve	Steve	Brian	
	Lithography							
	Pattern Generation							
	CAD Work Station	Design device and mask layouts	Brian B	Ryan	Brian B	Brian B	Steve	
	Heidelberg MicroPG 101	Create photomasks down to 2.5 um linewidth	Brian B	Steve	Brian B	Brian B	Steve	
	Heidelberg MicroPG 101-2-0.9um	Create photomasks down to 900 nm linewidth	Brian B	Steve	Brian B	Brian B	Steve	
	Heidelberg MicroPG 101-2-2.5um	Create photomasks down to 2.5 um linewidth	Brian B	Steve	Brian B	Brian B	Steve	
	Aligners							
	EV 420 Backside Aligner		Brian B	Kevin	Brian B	Brian B	Steve	
	OAI 200 1		Brian B	Kevin	Brian B	Brian B	Steve	
	OAI 200 2		Brian B	Kevin	Brian B	Brian B	Steve	
	OAI 800 Backside Aligner		Brian B	Kevin	Brian B	Brian B	Steve	
	Suss MA1006		Brian B	Kevin	Brian B	Brian B	Steve	
	Vapor Prime							
	YES HMDS1		Steve	Kevin	Steve	Steve	Brian B	
	YES LP-111		Steve	Kevin	Steve	Steve	Brian B	
	Spinners							
	APT Polos		Brian B	Brian B	Brian B	Brian B	Steve	
	CEE 100		Brian B	Brian B	Brian B	Brian B	Steve	
	CEE 200X 1800 Spinner		Brian B	Brian B	Brian B	Brian B	Steve	
	CEE 200X 9260 Spinner		Brian B	Brian B	Brian B	Brian B	Steve	
	CEE 200XD Develop Spinner		Brian B	Brian B	Brian B	Brian B	Steve	
	Headway EC101		Brian B	Brian B	Brian B	Brian B	Steve	
	Hotplates							
	EMS 1000 1		Brian B	Brian B	Brian B	Brian B	Steve	
	EMS 1000 2		Brian B	Brian B	Brian B	Brian B	Steve	
	EMS 1000 3		Brian B	Brian B	Brian B	Brian B	Steve	
	PR8 1		Brian B	Brian B	Brian B	Brian B	Steve	
	PR8 2		Brian B	Brian B	Brian B	Brian B	Steve	
	PR8 3		Brian B	Brian B	Brian B	Brian B	Steve	
	PR8 4		Brian B	Brian B	Brian B	Brian B	Steve	
	Ovens							
	Allwin 610 RTP/RTA		Steve	Charles	Steve	Steve	Brian	
	Binder FD53-UL		Steve	Kevin	Steve	Steve	Brian	
	Blue-M 1		Steve	Kevin	Steve	Steve	Brian	
	Blue-M 2		Steve	Kevin	Steve	Steve	Brian	
	Blue-M 3		Steve	Kevin	Steve	Steve	Brian	
	Blue-M 4		Steve	Kevin	Steve	Steve	Brian	
	Memmert Glass 250		Steve	Kevin	Steve	Steve	Brian	
	Memmert N2 300		Steve	Kevin	Steve	Steve	Brian	
	Etching							

	DRIE							
	Oxford 100 ICP	Cryo and Bosch DRIE, RIE	Steve	Charles	Steve	Steve	Brian	
	STS ICP ASE	Bosch DRIE, anti footing on oxide	Steve	Charles	Steve	Steve	Brian	
	RIE Plasma Etch							
	Oxford Plasmalab 80	General RIE	Steve	Charles	Steve	Steve	Brian	
	Technics PE 11-A	O2 RIE and plasma ash	Charles	Charles	Steve	Steve	Charles, Brian	
	XACTIX X2 XeF2	Selective silicon isotropic etching	Steve	Charles	Steve	Steve	Brian	
	PlasmaTherm SLR ICP etcher #1	Metal RIE etch using Cl2	Steve	Charles	Steve	Steve		Pending Installation
	PlasmaTherm SLR ICP etcher #2	Selective SiO2 and SiN RIE etch	Steve	Charles	Steve	Steve		Pending Installation
	Packaging							
	Dicing							
	Disco DAD3320	Wafer dicing	Charles	Charles	Charles	Charles	Brian	
	Disco DAD641	Wafer dicing	Charles	Charles	Charles	Charles	Brian	
	UV Tape Release UVM-102W	Release UV tape from wafer post dicing	Charles	Charles	Charles	Charles	Brian	
	Laser Ablation							
	Laser Mark 4000 Nd-YAG	Patterning	Charles	Charles	Charles	Charles		
	Optec Micromaster KrF	Patterning	Charles	Charles	Charles	Charles		
	Micro Welding							
	LaserStar 1900	Microwelding of small metal parts	Charles	Charles	Charles	Charles		
	Electro Discharge Machining							
	Viteris Tech Micro Wire EDM	3D Micro band saw for conductive samples	Charles	Charles	Charles	Charles	Brian	
	Wafer Bonding							
	EVG 520 IS	Anodic, fusion, eutectic, polyer wafer to wafer bonder	Charles	Charles	Brian	Brian	Charles	
	Wire bonding							
	MEI Wedge	Wire bonding chip to package	Charles	Charles	Charles	Charles		
	CMP							
	Strasbaugh 6EC	Chemical mechanical polishing of thin films	Charles	Charles	Charles	Charles		
	Microfluidics							
	Laser Patterning							
	Universal Laser PLS6150D (CO2)		Kevin	Kevin	Kevin	Kevin	Steve, Charles, B	Pending Installation
	Excimer Micromachining Laser		Kevin	Kevin	Kevin	Kevin	Steve, Charles, B	Pending Installation
	Spin Casting							
	CEE 200X PDMS Spinner		Brian B	Steve	Brian B	Brian B	Steve	

	Plasma Surface Activation							
	Enercon Dyne-A-Mite		Steve	Steve	Steve	Steve	Brian B	
	March Plasmod Barrel O ₂ RIE		Steve	Steve	Steve	Steve	Brian B	Pending Installation
	Bonding							
	Hot Lamination Press		Steve	Steve	Steve	Steve	Brian B	
	PDMS Aligner/Bonder		Brian B	Brian B	Brian B	Brian B	Steve	
	PDMS Curing							
	Vacuum oven VWR 1410 uF lab		Brian B	Brian B	Brian B	Brian B	Steve	
	UV Cure							
	Omniculture 1000		Steve	Brian B	Steve	Steve	Brian B	
	Test Measure Inspect							
	Microscopes & metrology tools							
	Keyence VHX-5000 3D		Brian B	Brian B	Brian B	Brian B		
	JEOL 5910 inspection SEM		Randy	Randy	Randy	Randy		
	Leo SEM		Brian B	Charles	Brian B	Brian B	Charles	
	Tencor P-10/P20		Brian B	Charles	Brian B	Brian B	Steve	
	Tencor Flexus		Brian B	Charles	Brian B	Brian B		
	Device Electrical Characterization							
	Keysight 404A Mixed Signal Oscilloscope		Brian B	Brian B	Brian B	Brian B		
	Keysight E5061B Network Analyzer		Brian B	Brian B	Brian B	Brian B		
	Benches and Hoods							
	Spin Rise Dryers							
	Semitoool ST-260	Rinse and dry wafers and masks	Steve	Steve	Steve	Steve	Tony, Brian	
	Semitoool ST-870 C1	Rinse and dry wafers	Steve	Steve	Steve	Steve	Tony, Brian	
	Semitoool ST-870 D1	Rinse and dry wafers post diffusion clean	Tony	Steve	Tony	Tony	Steve, Brian	
	Dry Benches							
	Bold Vent Deck SS		Steve	Steve	Steve	Steve	Tony, Brian	
	Fume Hood 1		Steve	Steve	Steve	Steve	Tony, Brian	
	Fume Hood 2		Steve	Steve	Steve	Steve	Tony, Brian	
	Solvent Hood 1		Steve	Steve	Steve	Steve	Tony, Brian	
	Solvent Hood 2		Steve	Steve	Steve	Steve	Tony, Brian	
	Wet Benches							
	Bold sn 1975 Etch		Steve	Steve	Steve	Steve	Tony, Brian	
	Bold sn 1976 Litho		Steve	Steve	Steve	Steve	Tony, Brian	
	Bold sn 1982 Diff-cln		Tony	Steve	Tony	Tony	Steve, Brian	
	Bold sn1974 Etch		Steve	Steve	Steve	Steve	Tony, Brian	
	Gold Etch Station	Wet etch gold films	Steve	Steve	Steve	Steve	Tony, Brian	
	Wafab sn 14821 General		Steve	Steve	Steve	Steve	Tony, Brian	

	Glassware Washer							
	Bosch D1	Wash and clean lab glassware	Steve	Charles	Tony	Tony	Tony, Steve	
	Surface Analysis Lab							
	Fischione plasma Cleaner		Brian V	all				
	JEOL JEM 2800 S/TEM		Brian V	all				
	Bruker Icon		Brian V	all				
	CMM		Randy	all				
	Ellipsometer		Brian V	all				
	Helios db FIB		Randy	all				
	XPS		Paulo	Brian V				
	XRF		Paulo	all				
	Zygo		Brian V	all				
	Sample Prep Area							
	Allied M-Prep3 1		Paulo	all				
	Allied M-Prep3 2		Paulo	all				
	Allied M-Prep3 3		Paulo	all				
	Allied Techcut 4		Paulo	all				
	Allied TECHPREP 10-1000		Paulo	all				
	Centrifuge, Fisher Scientific 225A		Randy	all				
	Desktop Sputterer, Denton Vacuum Desk V		Randy	all				
	Digital Sonifier, Branson 250		Randy	all				
	Laser Cutter		Randy	all				
	Multiscale Correlative Microscopy		Randy	all				
	PECS Precision Etching Coating System, Gatan 691		Randy	all				
	PIPS Precision Ion Polishing System, Gatan 682		Randy	all				
	Polyvar microscopes		Randy	all				
	SEM Mill, Fischione 1060		Randy	all				