

ASAP-1® IPS

DIGITAL MILL, DECAPSULATOR & POLISHER

ASAP-1® IPS is a digital sample preparation system for the decapsulation, thinning and polishing of die, package, module and wafer-level devices. The new 2nd generation ASAP-1® IPS adds a suite of key feature upgrades.

Drawing on ULTRA TEC's market knowledge and long-standing leadership in electronic device sample preparation, IPS is 'device-centric' – designed to surpass the non-destructive, high yield and survivability needs of labs needing to analyze micro-electronic components.

Machine vision cameras provide an unique ALWAYS-LIVE image of the device under test, along with key navigational and process controls. Auto head lift and lower, and optional fluid control system improves the user experience.

IPS' Touch Screen OS has been re-designed to control all aspects of the sample preparation process.

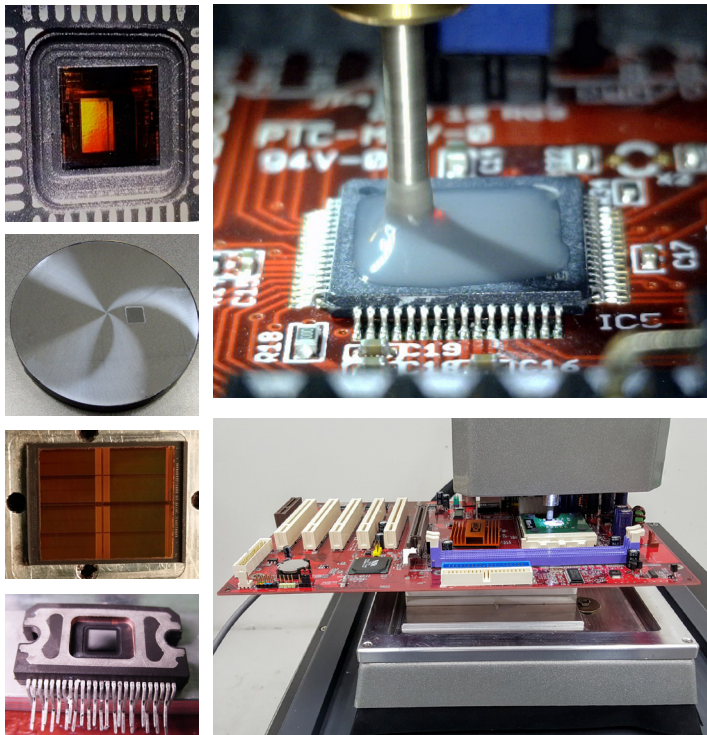


KEY FEATURES INCLUDE:

- Accurately decaps, thins & polishes
- Deep sub-micron control in X, Y and Z axes
- For die, package, wafer, and board-level devices
- Full 100 x 100 mm max. stage area

NEW AND UPGRADED FOR 2024 MODEL

- Live Process Video from 2 UHD cameras
- Large touchscreen with physical joystick & encoders
- Keyboard and Mouse control
- Expanded choice of tool bits
- Fluid control system
- Stage illumination
- Image optimization, metrology and zoom
- Auto-tilt stage
- Auto head lift and lower



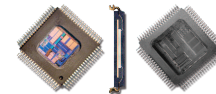
***An Expanded Toolkit for the
Sample Prep of ICs...***



CORE SYSTEM SPECIFICATIONS

Feature	Specification
Z-Vertical Direction Precision	0.04 microns (40 nanometers) minimum step-size
Table Precision (X & Y Travel)	0.2 microns (200 nanometers) minimum step-size
Table Travel Amplitude	100mm x 100mm (max.)
Polishing Method	Patented ASAP-1® Float-down head, with Z-lock, enhanced with electronic sensors and tool patterns (ASAP-1® Classic, ASAP-1® X, ASAP-1® Swap, Serpentine, User-defined X-Y, Spiral, Frame, and Relief)
Sample Tilt Control	Automated 2-circle tilt control (+/- 5 degrees)
Force Control	1000 grams (max) with 1gram precision. Overall accuracy +/- 10 grams
Video	Realtime 10.1inch (255mm) touchscreen monitor, overlaid with stage and process variables. HDMI Video-Out for (optional) external monitor. 4.25inch (108mm) secondary touchscreen
Programming Input Method	Touchscreen, joystick and 3 physical rotary encoders. Optional wireless keyboard and mouse. File load/save to flash drive. Remote programming
Core Software Features	Drop-down menu interface for File handling, Cam Select, zoom, and image enhancement, Overlays, Tool Diameter, Pattern Select, Force Control, timers, LED Illumination, Set-points, Touch-off. Additional purchased options unlock menus for RST, 3D controls, thermal, end-point
Process Camera	Two 4K UHD Cameras provide real-time video at 45 degrees to tool/surface interface - front and side
Power Requirements	Universal: 100-120VAC; 200-240VAC (Single Phase). Power Consumption: 300 Watts Maximum in use
Footprint	19 inches (480mm) Width x 27.5 inches (698 mm) Depth x 27 Inches (685mm) Height
Weight	200lbs (91 kg)

ORDERING INFORMATION



Code	Item	Description
6760.7	ASAP-1® IPS (2024 Model)	DIGITAL Selected Area Preparation System , (100-240V, 50/60Hz). Includes: X-Y table, tool spindle drive with sub-micron Z-resolution, +5/-5 degree automated tilt-table, integrated real-time machine vision, min 10-inch touchscreen lcd monitor, set of 2mm and 3mm tools, 6389.1 Force Feedback module. Two 4K UHD Cameras (Process)
6394.3	3D Module - Curvature & Mesh	System software upgrade to add processing and compensation for sample surface curvature with adaptive mesh overlay
6686.1	Heat & Cool Thermal Relaxation	Hardware and Software Upgrade to add thermal relaxation capability. Touch-Panel screen controls. Peltier-based heating plate, Chiller unit. Includes cables, and two mounting plates. Hot Plate Mode
6675.1	Machine Vision Monitor	24-inch (min) monitor machine vision upgrade for improved In Situ view of polishing tip/sample surface interface, includes stand (VESA mount)
6677.1	Fluid Control System (FCS)	Auto dispense and collect system for polishing fluids and abrasives. Three input lines
6682.1	Thermal Acclimation Plate	Adds ability to allow inlet fluid from FCS to reach required process temperature
6687.1	Target Camera	4K UHD Camera provides top-down X-Y positional targeting
6688.1	Overlay Software	Adds overlay capability for imported image to be overlaid on live target cam view. Imported image can be from x-ray, C-SAM, design, or saved image
6692.1	NIR Stage Illumination	NIR LEDs to enhance imaging of device with system cameras
6368.1	Capacitive/Resistive End-Point Module	Hardware and Software Upgrade to add end-pointing for enhancement of decapsulation performance

Polishing Technologies, Helping Your Lab to Shine...

ULTRA TEC is proud to operate a continuous product improvement program. Product specifications and appearance are subject to modification without prior notification.

Note: ASAP-1® is a Registered Trademark. Portions of the Technology are covered under US and related Worldwide patents - 6,630,369; 6,781,232; 7,066,788; 9,157,935 & 6,245,586. More patents are pending. All other trademarks remain with original trademark holders.

2024 Edition



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