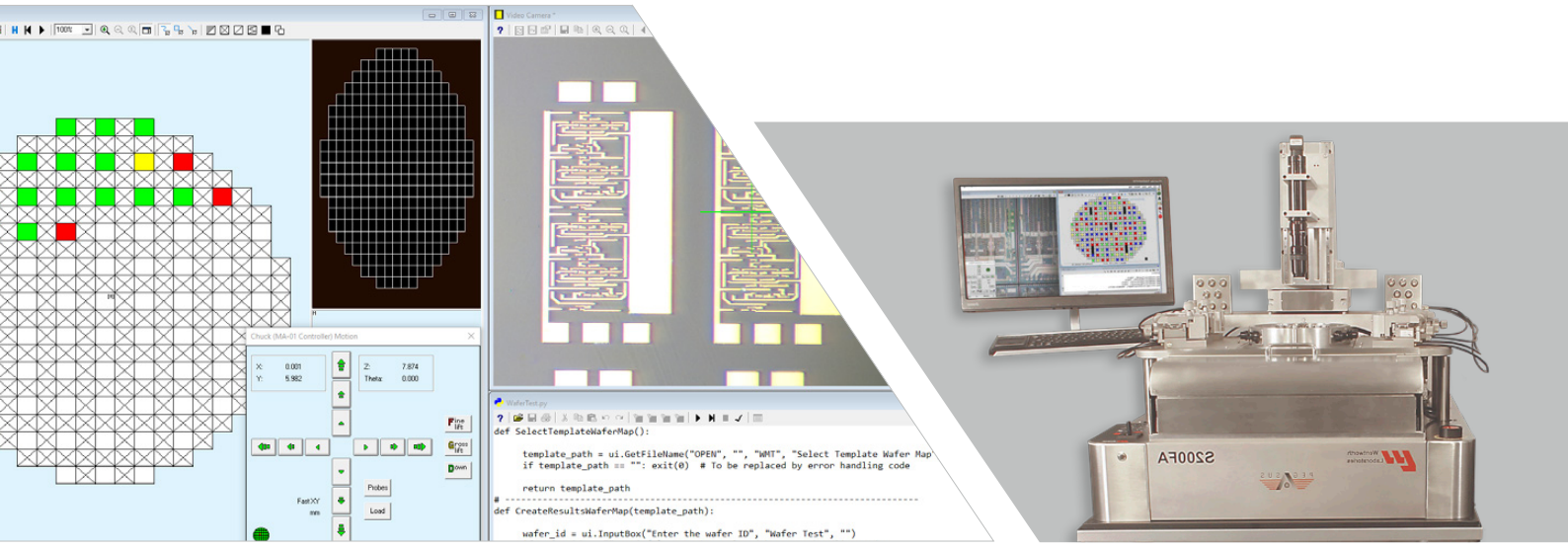
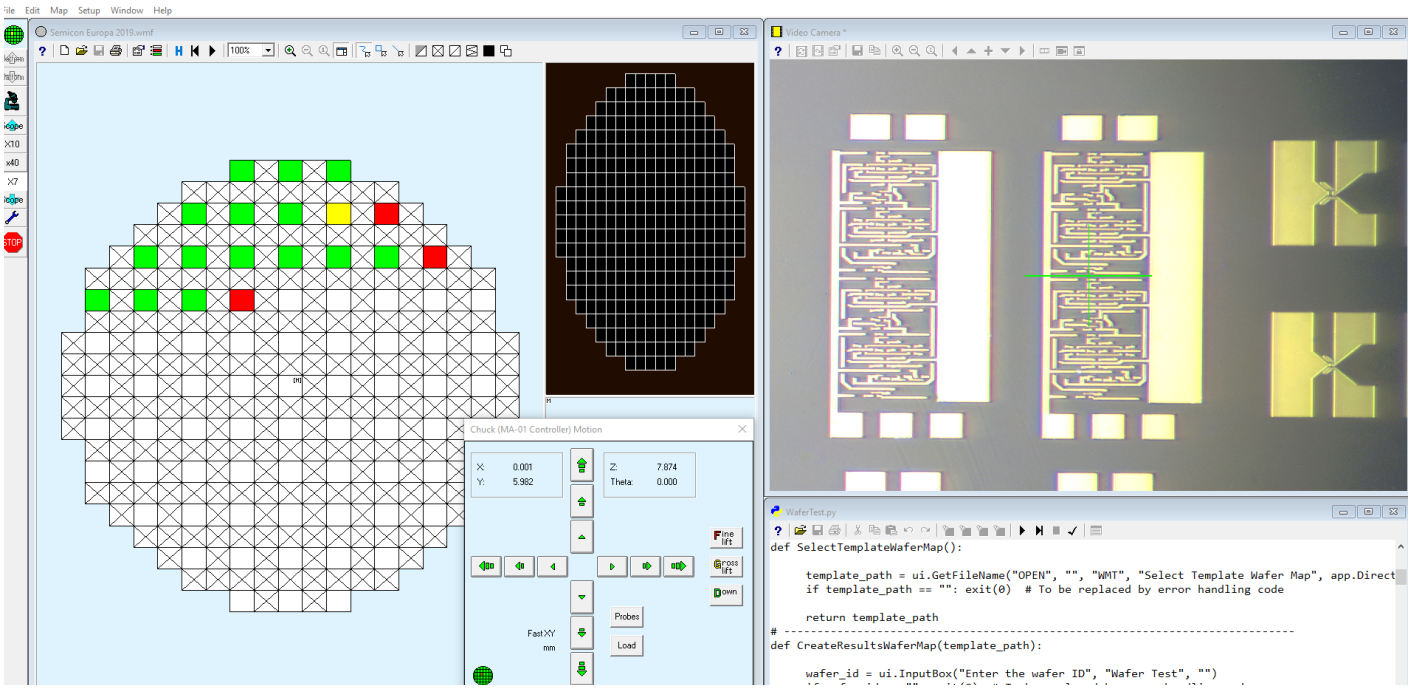
Wentworth Laboratories

PROBER ACCESSORIES:

LabMaster™ FA & Wafer Map Editor



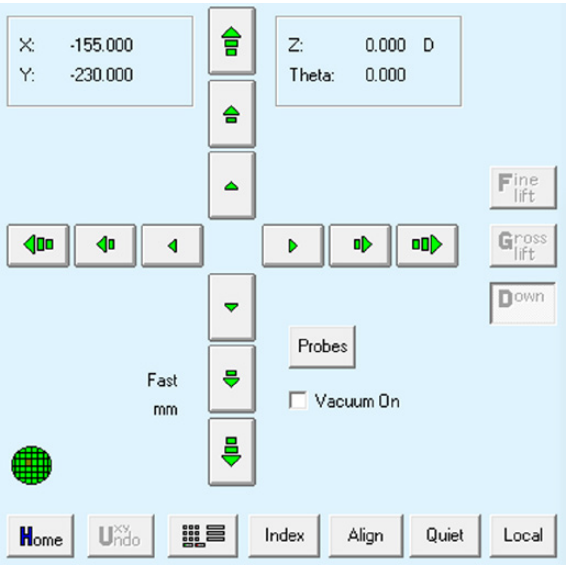
LabMaster™ FA



ENHANCED PROBER CONTROL SOFTWARE

LabMaster™ control software for the Pegasus™ series probers, is used on hundreds of probe stations world-wide. The software has been designed with an intuitive graphical user interface to enable part time users to operate the prober with ease, while advanced utilities permit the experienced user to design sophisticated test routines.

LabMaster™ is intended to interface or control the entire probe station environment. By reducing user training, more time is spent testing, thus maximising the return of investment of capital expenditure.



Chuck Motion

KEY FEATURES

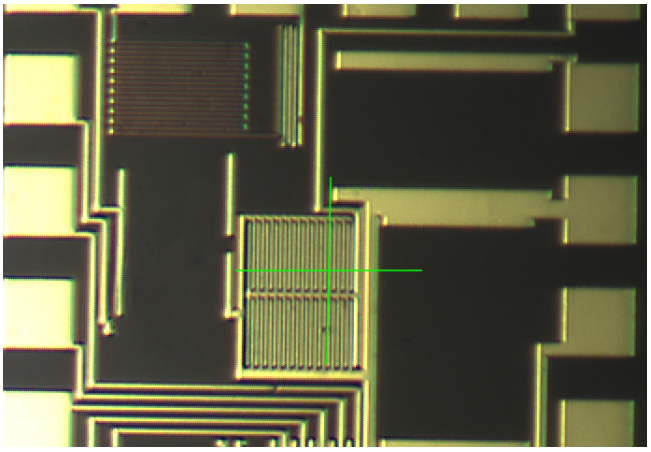
- Windows 10 compatible.
- Interactive graphical interface to centralize realtime monitoring and test setup of the probing environment.
  - Multiple simultaneous video views
  - In-video click & shoot device movement
  - Auto-sizing of LabMaster™ windows
- Toolbar allows simple add-ons to your probing environment.
- Integration of industry standard third party ancillaries.
- Touchscreen control support.
- Automation capability for advanced users includes LabMaster™ Python scripting module.
- Simple wafer map set-up tool.
- Probe-Trax links CAPs (computer assisted probes) and optics together for unified movement around your DUT.
- Temperature compensation – adjusts step sizes to offset X/Y drift due to temperature variable. Can be manual set or driving from temperature chuck system.

VIDEO CAPABILITIES

The LabMaster™ video window displays real-time video from the optics attached to the microscope and supports multiple camera inputs.

Any image shown in the LabMaster™ video window can be saved to disk in a variety of image formats, or copied to the Windows clipboard for pasting into other Windows applications.

The LabMaster™ *click & shoot* feature uses simple video calibration sequence, enabling the user to click on die features and drive them to the centre of the viewing area.



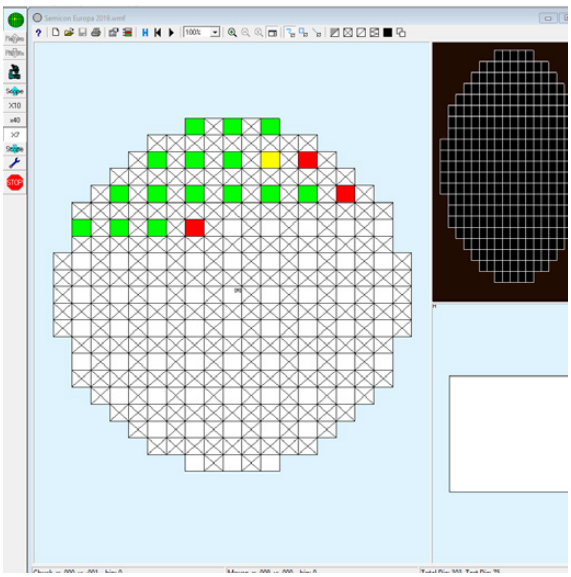
LabMaster ™ Video Window

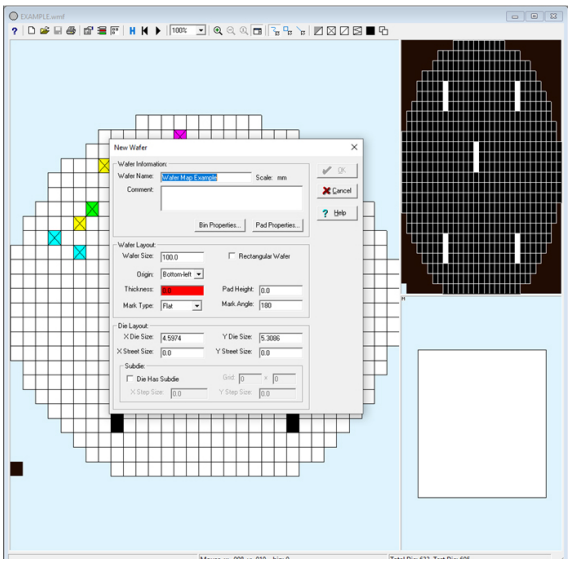
WAFER MAPPING

LabMaster™ wafer map module is a powerful failure analysis tool that can be used for device navigation and positioning, and for displaying and storing die-binning information.

By using the wafer map window for device navigation and movement, the user can quickly position the chuck to any die on the wafer.

Wafer maps can be stored locally at the prober or exported as a simple text file (SINF - comma separated value) for easy transfer. They can either be imported or created using our simple set-up dialog window.





DEVICE TOOLBAR

The device toolbar in LabMaster™ enables quick selection of the various devices within the probing environment.

Probe station devices – for example stage, platform, microscope mounts and automated probes – as well as ancillary devices such as lasers, optics or temperature systems, can be activated and controlled via the LabMaster™ solution.

ENHANCEMENT OPTIONS

PATTERN RECOGNITION

LabMaster™ has the option to use pattern recognition elements for a range of applications. Utilizing either in-situ optics or a fixed lens system, we can apply machine vision to achieve a range of different operator objectives including:

- ✔ **Simple 2-point theta alignment**
  This options allows operators to place wafers onto the chuck surface, instructing the vision system to drive to known alignment marks and carry out a simpe 2-point alignment.
- ✔ **OCR/wafer ID auto logging**
  LabMaster™ recognises a wide rage of industry standard ID methods for recording results against either batch or individual wafer IDs. 1D, 2D, QR codes or character recognition options are available.
- ✔ **Individual die alignment**
  The LabMaster™ PR module has the capability to create an 'on-the-fly' wafer map, ensuring that no matter how small your probing geometries, we can still put probe to pad. This can be achieved via pre-scanning of the wafer area and building the wafer map or in-line adjustments.

TESTER INTEGRATION MODULES

Process, Quality and FA engineers are often required to manage and drive multiple systems to provide the results needed. Their focus needs to be on knowledge of the process, device under test and desired results.

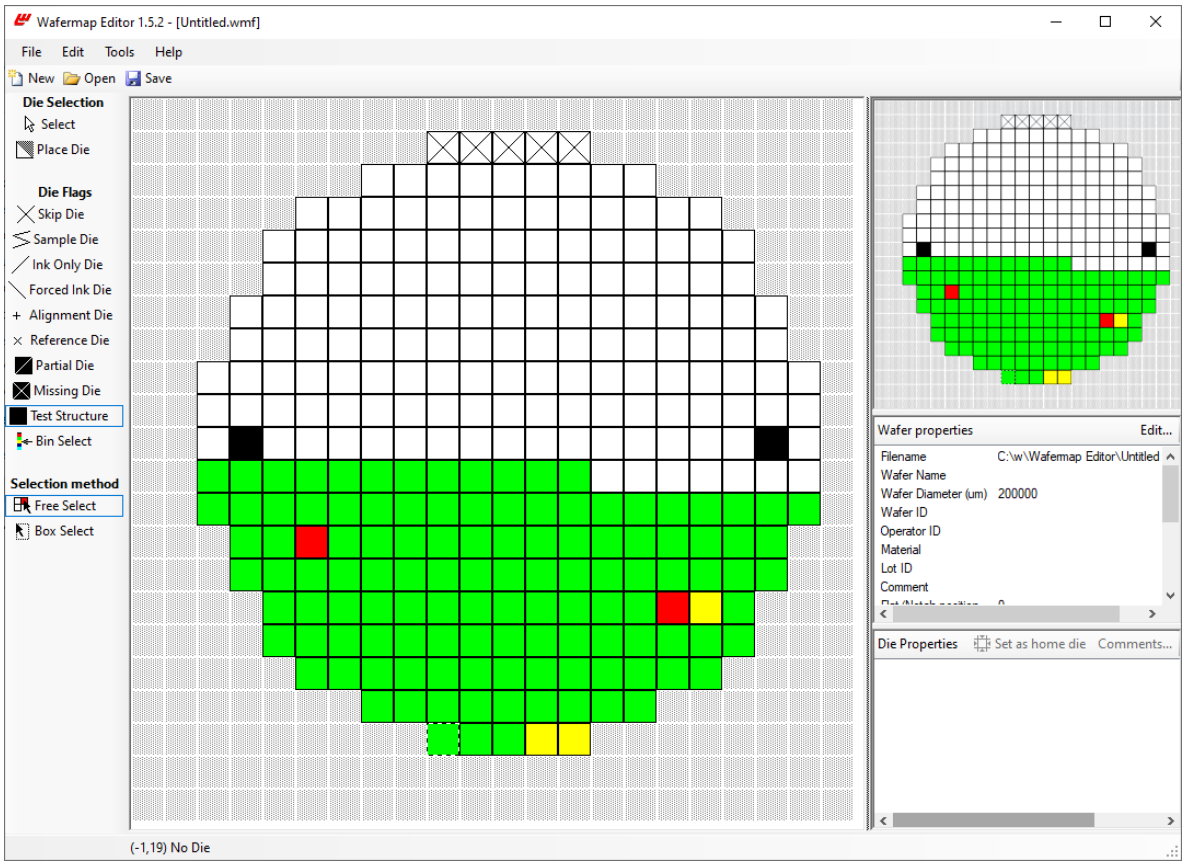
The challenges of operating, programming and managing a wide range of test equipment, data processing software as well as the probe station, can cause issues. Making the control of these elements integrated and easy to use, is a big step forward to enable engineers to focus on the task at hand.

LABMASTER™ WAFER MAP EDITOR

The Wentworth Laboratories' wafer map editor is an off line editor/viewer for LabMaster™ compatible wafer map files and wafer map file templates.

It allows for wafer map templates to be created and modified prior to being used for wafer testing.

Wafer results files can also be viewed in this application and used to generate further template files.



Wafer Map Editor

ABOUT US

A LEADING AUTHORITY IN FLEXIBLE PROBING SOLUTIONS SINCE 1967

Wentworth Laboratories is a leader in performance wafer probe stations and advanced cantilever probe cards. In close association with our customers, we play a pivotal role in the conception and development of cost-effective, productivity-enhancing wafer probing solutions for the semiconductor device test market. Our ability to craft customised and integrated wafer test solutions, with meticulous project communication and post-project monitoring, is second to none.

Our standard cantilever products accommodate blade and epoxy technology for a range of applications such as memory, RF and logic probe cards. Engineered solutions offer an impressive array of cantilever products for high voltage, extreme high and low temperatures and an unprecedented portfolio of bespoke products. We also offer design services for high speed, digital, analogue, mixed signal and memory applications.

Our global team supports probe card and wafer probing projects with sophisticated design, proven technology, experienced applications and technical support. Wentworth wafer prober products have been selected for many leading-edge wafer test applications across the semiconductor technology landscape, culminating in such products as hand-held devices, video game stations, PCs and medical diagnostic equipment, amongst others. As award-winning wafer test industry innovators, we are skilled in delivering wafer probers and cantilever probe card solutions that enable our customers to maximise their productivity and reduce cost.

The company was founded in 1967, has global representation and manufactures two major product lines. In our UK facilities, we manufacture wafer probers and cantilever probe cards whilst in the US, we manufacture cantilever probe cards and needle holder assemblies.

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