

(Preliminary)

IM-Align™

Products are getting smaller and smaller every day and requiring ALIGNMENT in manufacturing processes more than ever!!

IM-Align is an integrated aligner platform software developed by Innovation Matrix that combines motion and vision, and is controlled using a single Windows-based application programming interface (API) for vision guided alignment functions.

It is a basic application platform software with the flexibility of mixing various types of stages, motion controllers and vision systems.



IM Align utilizes a menu system and multi-window interface for setup and running of alignment applications without computer programming knowledge.

Features

- Non-Contacting alignment with machine vision
- High Precision measurement with sub-pixel gray processing
- Eliminate time consuming system design and construction work with IM platform software
- Easy to Use System
 - External Signal IN (Alignment START)
 - External Signal OUT (Done)
 - Menu Driven Camera Calibration Setup
- User friendly GUI menu, vision processing and status windows
- Multi user privilege levels for secure maintenance of the system
- Automatic Data Logging for certification purpose and/or SPC analysis.
- Hardware Independent Solution
 - Provide flexibility and highest efficiency
- Integrated Vision Guidance and Motion Control
 - PC Solution
 - Non-PC Solution (Standalone Motion Controller)
- Customer provides own Application Process Knowledge

- Unique SAT (Show and Train) teaching:
 - Creates standard product inspection criteria by “showing” and “training” the parts thereby eliminating the need for specific manufacturing tolerances or descriptive inspection criteria
- Shift Management:
 - Identify files in the production lot
 - Identify operators for each shift
 - Contains all measurement statistics logged per shift
- Real-time communication to the host computer and peer devices
- Easy product parameter management database
- Rich peripheral options library
- Supports a wide variety of CCD cameras

IM Align Application Platform is ideal for screen printing, wafer fabrication, Semiconductor chip bonding, LCD glass bonding, LCD, PCB drilling, MEMS and other high precision applications. IM Align can significantly increase your new product manufacturing ramp up, and improve your product quality and help identify manufacturing issues.

Available Options

- Control Panel
 - For industrial operator-machine interfacing, an optional control panel can be connected to the PC's I/O modules to interface with the QCMaster menu system.
- Barcode reader
- XY-theta Stage
- Lighting Control Unit
- SPC – Statistical Process Control for process analysis and improvement
- Digital I/O
- Analog I/O

Camera Options

Wide range of camera interfacing selections:

- RS170
- Firewire – IEEE1394
- Ethernet
- USB

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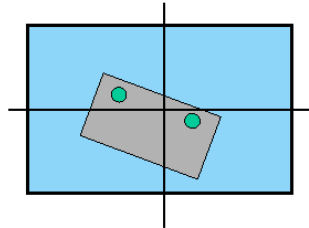
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 Email: sales@innovation-matrix.com

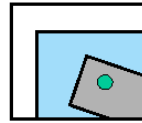
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Simple Alignment

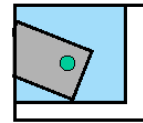
2. Alignment Execution



Capture LEFT Mark

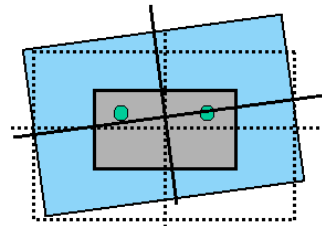
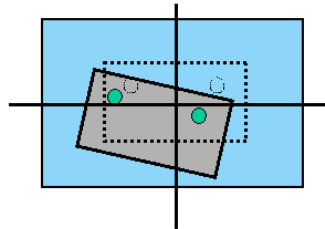


Capture RIGHT Mark



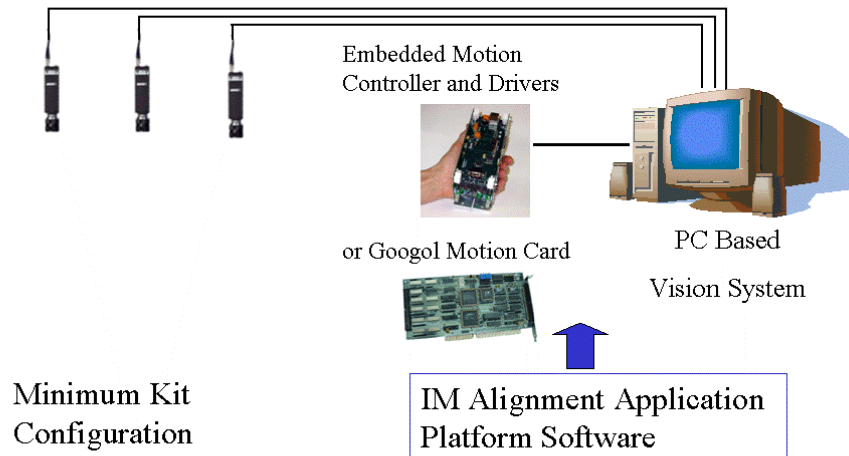
Images during Alignment

3. Position Guidance



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Minimum Kit



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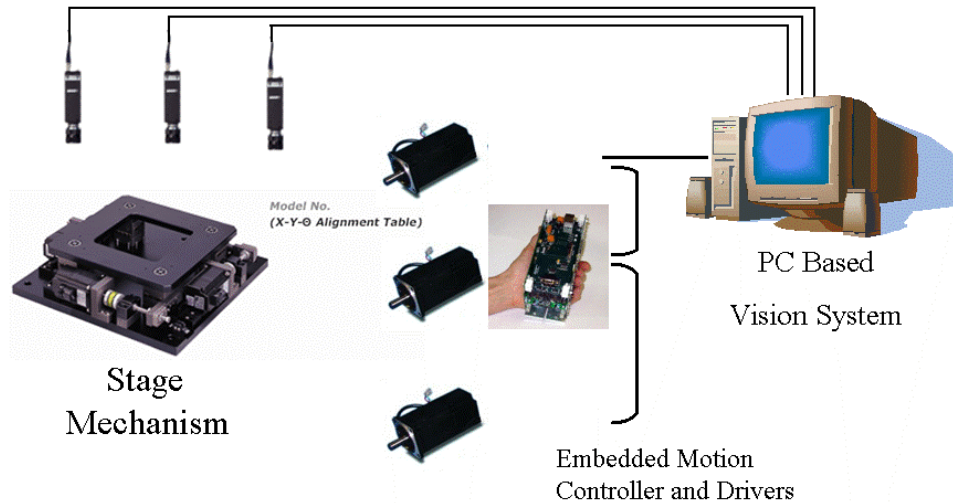
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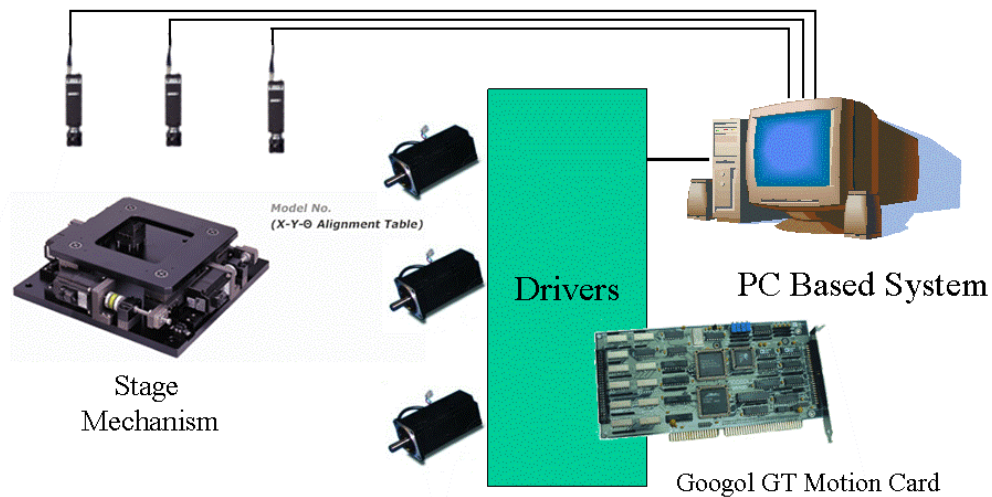
Full Kit - Standalone Motion Configuration



Full Kit Configuration—
with a Stage/Motors

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Full Kit - PC Based Configuration



Full Kit Configuration—
with a Stage/Motors/Drivers

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