Product Specification

Automated Part Handling

"The MIDAS automated part handler provides us with the speed, effeciency, and reliability our MLCC inspection process demands. "

Part Handling Capabilities

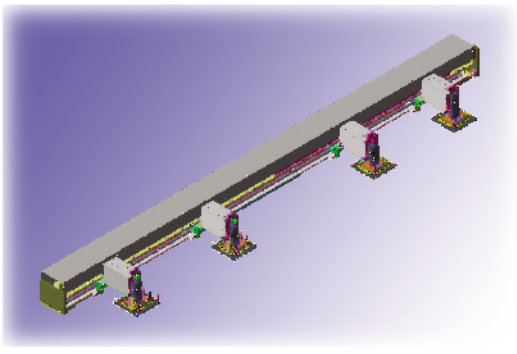
In today's hypercompetitive markets, successful yield management mandates achieving higher throughput and lower cycle times without increasing labor costs. For MLCC (multilayer co-fired ceramic) part inspection, manufacturers simply cannot afford to rely on manual part handling, which introduces human inefficiencies, part defects, and increases the cost of production. Integrated part handling solutions for automated optical inspection (AOI) systems provide production efficiencies that quickly translate into profits.

Complete Part Inspection and Handling Process Module

The MIDAS Vision Solution

Capable of moving parts through inspection with unprecedented precision and speed, MIDAS automated part handlers reduce both labor cost and material waste by providing hands-free part handling and inspection.

During the inspection process, multiple pickup heads equipped with intelligent sensors detect the presence and orientation of a part and move it along a gantry. After inspection, the system places a part according to its pass or fail disposition. A wide variety of available options include delivery and storages magazines, part marking printers, part cleaners, and special pickup head configurations, which all adapt easily to specific process requirements.



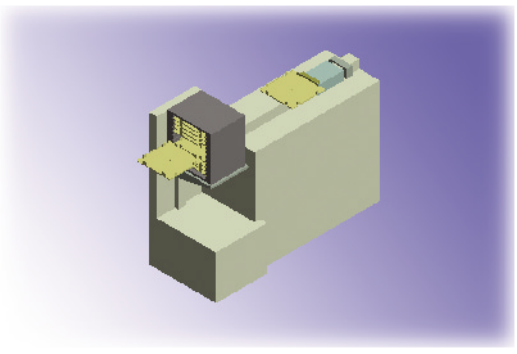
Gantry Module in a 4 Pickup Head Configuration

Proven Design, Adaptable, and Reliable

MIDAS Vision Systems Inc. has designed and implemented dozens of these modular systems to meet the demands of high capacity manufacturers. Whether operating as an island of automation or as a totally integrated process module, these systems can operate 24/7 with minimal operator interaction.

No matter which handling technique a facility is using, (walking beam, conveyor, edge grip, suction, etc.) the MIDAS development team can quickly tailor a handling solution that integrates seamlessly with the current production process.

Modular components, low power requirements, and a fully developed motion control platform make these systems easy to configure, operate, and maintain.



Magazine Elevator and Part Placement Module

MIDAS VISION

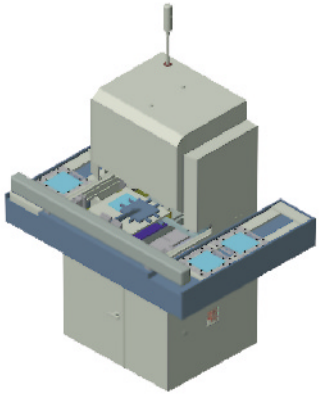
System Specifications

Inspection

Application	Multi-layer ceramic, flex, wafer, thick film, photo masters
Inspection rate	As fast as 400 parts per hour
Part size	Up to 30.5 cm (12 in.)

Utilities

Power	120 VAC 15A (220 VAC 7.5 A)
Pnuematics	Filtered, compressed air
Vacuum	Varies according to application and options



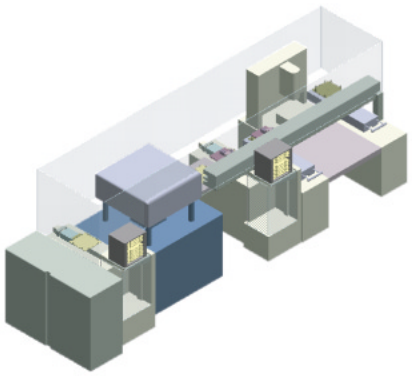
Inspection system with integrated handler

Handling

Lot stacking	Application specific magazine and/or trays
Gantry motion	X axis: brush-less linear motors; Z axis: pneumatic
Elevator(s)	Z axis; motor driven ballscrew
Part placement	Y axis; pneumatic
Sensors	part presence, part orientation, spacer presence, vacuum, etc.
User interface	LCD touch screen
System status	Load, unload, system interrupts, system interlock, etc.

Options

Part cleaners	Vacuum, compressed air, or other
Part marking	Ribbon or inkjet printers, laser marking
Network interface	Ethernet LAN for use with custom process control programs
Static control	Forced ionized air
Enclosures	Filtered, mini clean room environments
Repair station	Locates defects for repair via inspection data coordinates



Inline inspection for punch processing

Miscellaneous

All part handling systems conform to the following industry standards:

SMEMA, interface protocol

SEMATech S2/S8, safety and ergonomics

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