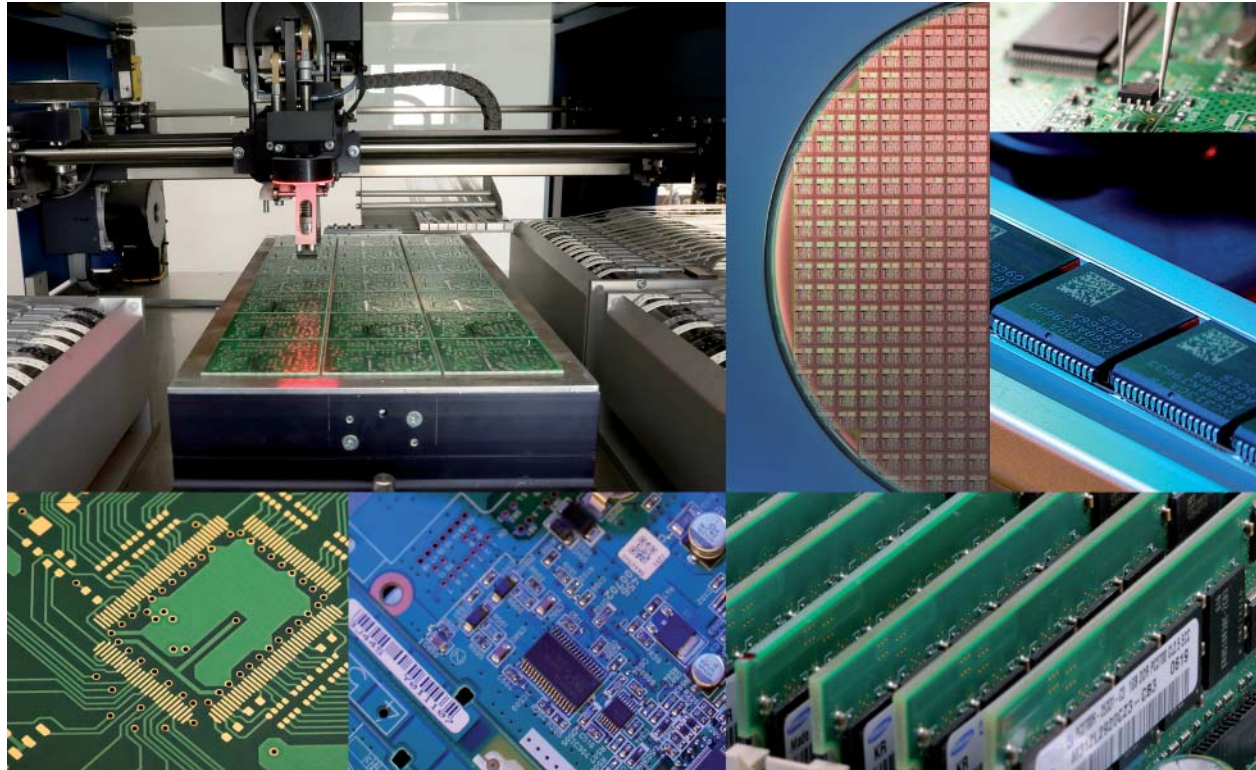


# ELECTRONICS SOLUTIONS

Track, Trace & Control



## MICROSCAN<sup>®</sup>

Precision Data Acquisition  
and Control Solutions



## Track, Trace and Control

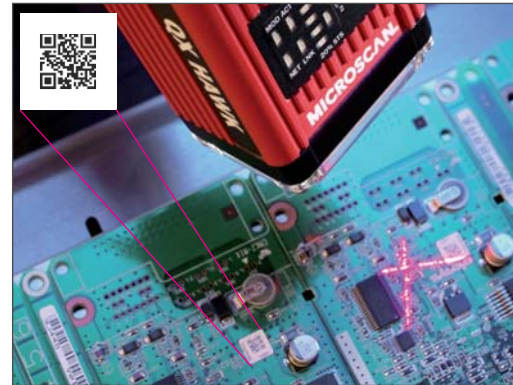
Industry leaders within electronics and semiconductor manufacturing need to enable lean manufacturing, assure quality, and optimize efficient use of resources. Microscan's barcode and machine vision products are commonly used throughout automated electronics assemblies to monitor, track, and trace critical data to ensure quality while maximizing productivity.



### Experts in Electronics Applications:

- High speed 1D/2D symbol reading
- Decoding of challenging, high density codes
- Compact sizes and wide fields of view
- Broad range of products
- Laser scanner and imager configurations
- Multiple resolutions, auto focus and other options
- High quality optics and specialized designs
- Long term product availability
- Extensive customization capabilities
- Worldwide presence and support
- 25+ years of solutions expertise

## Barcode Traceability



Use 1D/2D barcodes for identification, traceability and tracking:

- Lot level traceability
- Time/date stamping
- WIP tracking
- Component level traceability
- Reject and test tracking
- Recall management

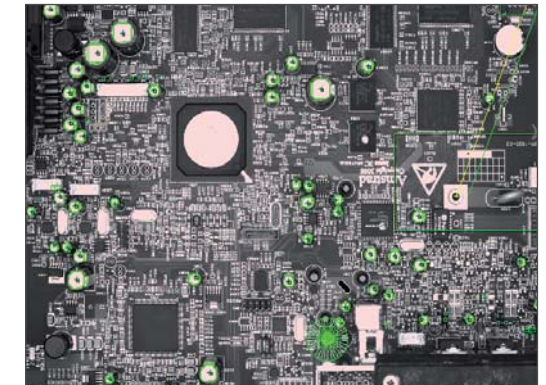
## OCR/OCV Verification



Use human readable text for product serialization or to verify component identification:

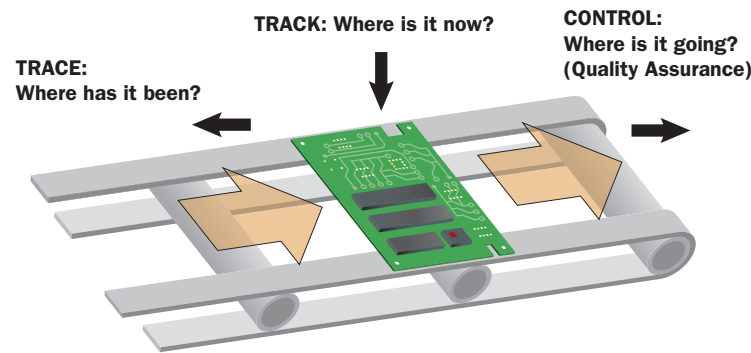
- Optical Character Recognition (OCR)
- Optical Character Verification (OCV)
- Component traceability
- Packaging lot level traceability
- Verification of proper sequence
- Verification of print quality and correctness

## Product Inspection



Use machine vision to ensure quality through inspection, identification, measurement and guidance:

- Label presence/position
- Component presence/position
- Component polarity
- Adhesive bead/dot inspection
- Completeness check
- Reject identification
- Counterfeit prevention



### TRACK (Present)

Auto ID and machine vision are used to track parts that are work-in-process, or "WIP".

### TRACE (Past)

Traceability is the ability to recreate or "trace" the manufacturing steps, processes, or location of a part before it becomes a completed assembly.

### CONTROL (Future)

Control is used to decide what step or future process a part must undergo, or to ensure quality and verify packaging.

### RECEIVING



#### APPLICATIONS

- Inventory control
- Quality inspection
- Receiving confirmation
- WIP tracking
- Unique ID verification

*TRACK: Track materials entering facility and materials usage*

*TRACE: Confirm material matches order*

*CONTROL: Inspection of vendor-supplied product*

### MARKING & KITTING



#### APPLICATIONS

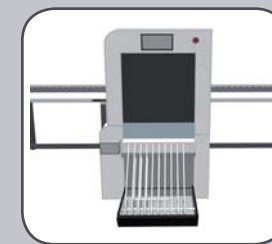
- Code/mark verification
- Confirming BOM
- Correct component verification
- Material verification
- WIP tracking

*TRACK: Track proper lot quantities, flow of components, WIP visibility*

*TRACE: Initiate life cycle of parts through marking unique ID*

*CONTROL: Ensure quality control, pass/fail inspections*

### PICK & PLACE



#### APPLICATIONS

- PCB assembly number verification
- Robotic guidance
- Inventory backflushing
- Date/time stamping
- Component/reel verification on machines

*TRACK: Track which components are placed on each board*

*TRACE: BOM traceability of components to work orders*

*CONTROL: Ensure absence/presence and correct component placement*

### INSPECTION



#### APPLICATIONS

- Verify quality at check-points
- ICT date/time stamping
- Receiving confirmation
- OCR/OCV verification
- Dimensional testing
- Cosmetic screening

*TRACK: Provide pass/fail visibility of boards for quality testing and yield outputs*

*TRACE: Unit level validation of confirmed test*

*CONTROL: Matching proper inspection to PCB assembly*

### FINAL ASSEMBLY



#### APPLICATIONS

- Dimensional testing
- Lot tracking and verification
- Case/pallet ID matching
- Finished goods conversion
- OCR/OCV verification

*TRACK: Real-time visibility from line level output to total facility production output*

*TRACE: BOM relationships of assembled product*

*CONTROL: Verification of proper installation, cosmetic inspection, functional testing*

### FINAL PACK/SHIPPING



#### APPLICATIONS

- Sortation and routing
- Packing list verification
- Outbound documentation
- WIP tracking
- OCR/OCV verification

*TRACK: Overall plant productivity of all lines*

*TRACE: Providing full product genealogy and traceability report*

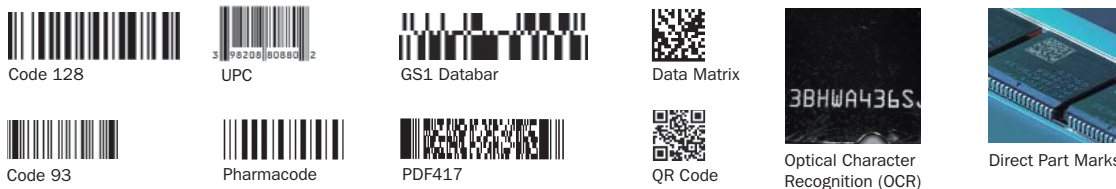
*CONTROL: Match pallet to case code; verify/match customers orders to shipments*

# COMPANY & PRODUCTS

Microscan is a manufacturer and global provider of track, trace, and control solutions to top electronics and SMT companies. Our barcode and machine vision products help companies around the world to drive down cost and waste, automate critical manufacturing processes, and increase yields through precision data acquisition. As an ISO 9001 certified company recognized for quality leadership, Microscan is known and trusted by customers worldwide as a provider of quality, high precision products.

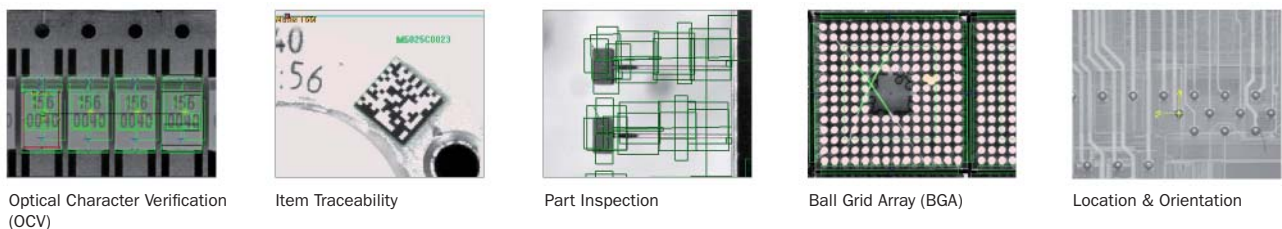
## AUTO ID Barcode Readers & Verifiers

■ Microscan offers fast, reliable barcode readers for all standard linear barcodes and 2D symbols. Features include small size, high speed reading, wide field of view, symbol reconstruction, and aggressive decoding technology.



## MACHINE VISION Software, Hardware & Lighting

■ Microscan holds one of the world's most robust patent portfolios for machine vision technology. Our products include machine vision software, smart cameras, and lighting for applications such as identification, inspection, and measurement.



# MICROSCAN®

Precision Data Acquisition  
and Control Solutions

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