



EQUIPMENT & ACCESSORIES

@ C L E A N R O O M

DOU YEE
E N T E R P R I S E S

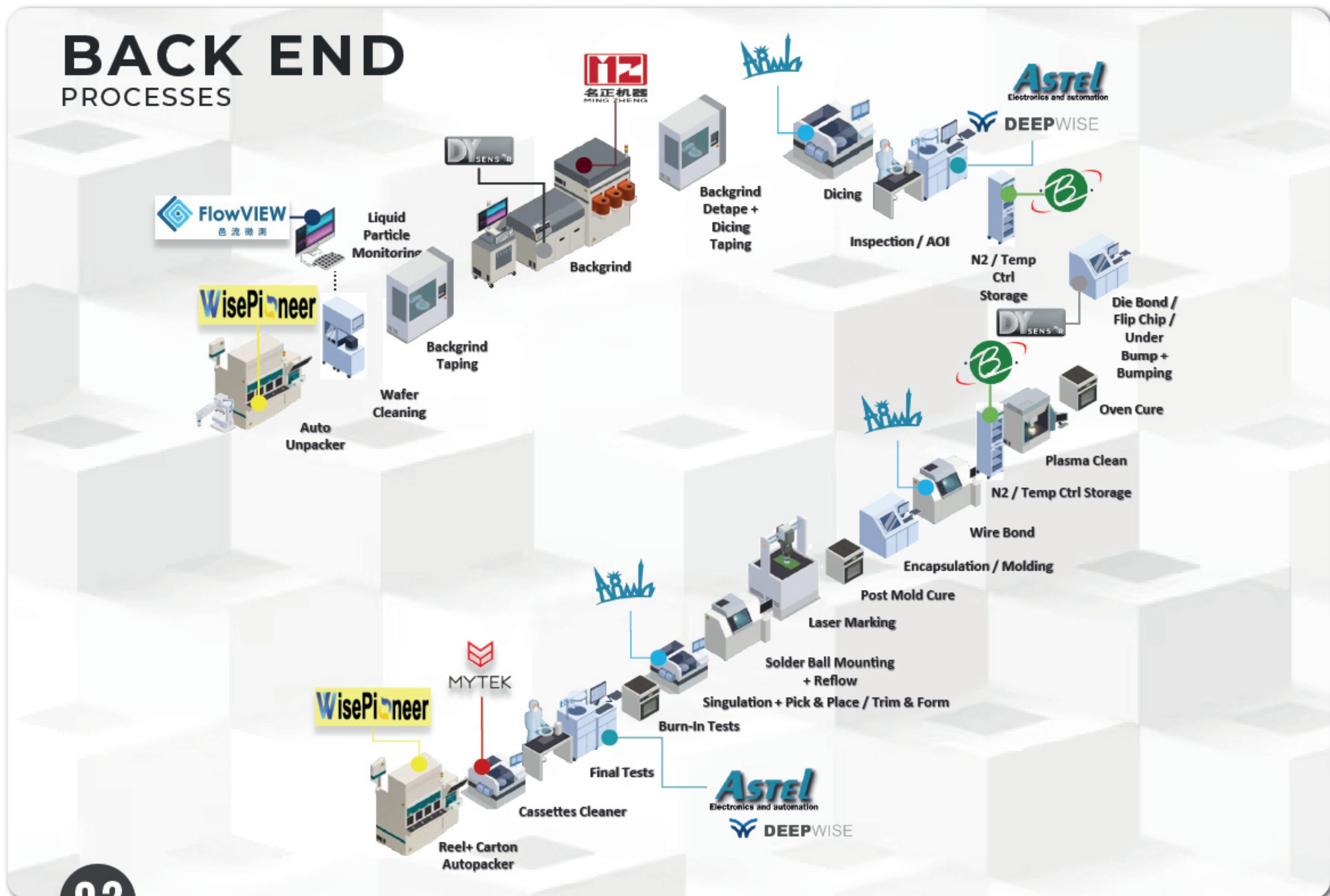
FRONT END

PROCESSES



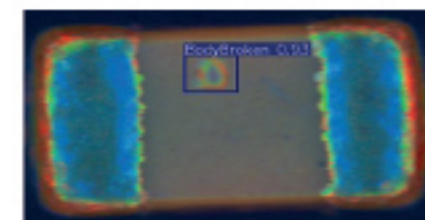
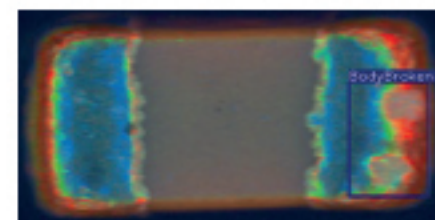
BACK END

PROCESSES

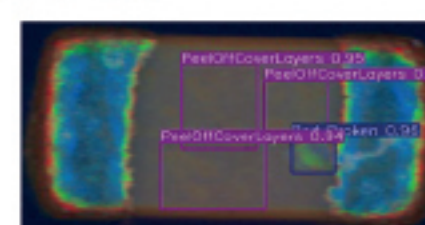
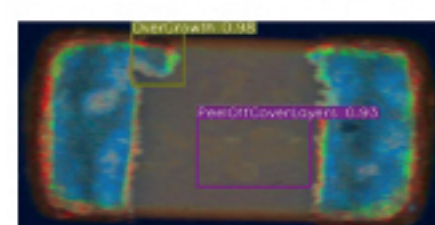


ELEVATE QUALITY CONTROL WITH A.I. DRIVEN AOI SYSTEMS PRECISE, ROBUST, LIGHTNING-FAST ADVANCED ALGORITHMS

A.I. AOI INSPECTION SYSTEMS



Broken Body



Overgrowth

Peeling

Intelligent 10/6/4/2 Sides Components Defects Inspection Equipment

- High Speed Surface Defects Detection
- Throughput >10K Per Minute with >99% Accuracy
- Includes AI Training Module
- Automatic Sorting into Good or Reject Components
- Suitable For IC Chips, SMT Components

ADC

Intelligent Automatic Defect Classification (ADC) System



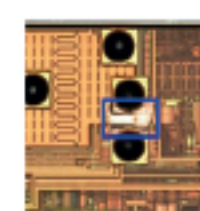
- Easy Integration with Any AOI Equipment
- Wide Applications – Not limited to Semicon, OLED, TFT, PCB
- Instant and Accurate Defects Classification
- Includes Training & Predictive Modelling
- Real Time Tracking
- Improves Yield & Reduces F.A. Costs
- Industry 4.0 Ready



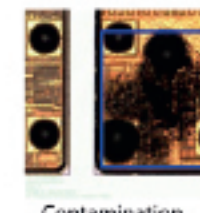
Shear defect



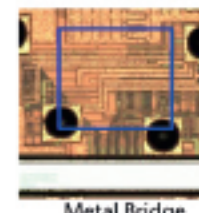
FM



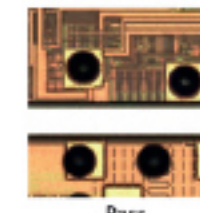
Metal Residue



Contamination



Metal Bridge



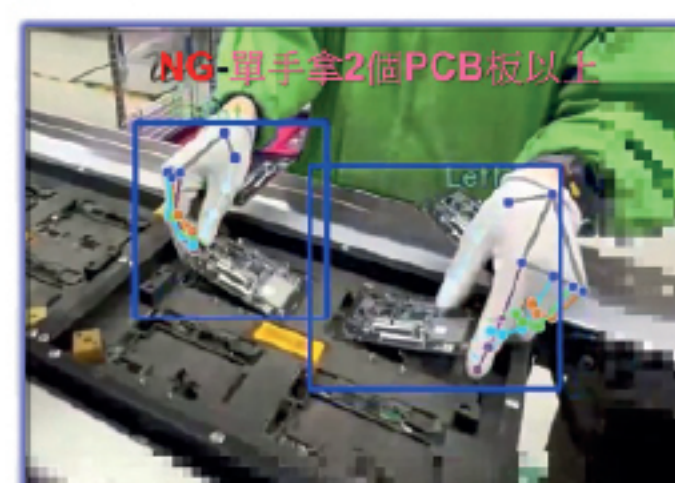
Pass

A.I. Product Assembly SOP Error Detection Solution

- Ensures Personnel Comply with SOP Steps
- Fully Automatic, Instant Detection and Correction
- Efficient, Immediate Error Elimination, Reduce Defects
- Ensure High Performance Product Assembly Lines



偵測到 Step 3 動作



NG-頭手拿2個PCB板以上

MAXIMIZED YIELD STARTS WITH DEFECT-FREE PHOTO MASKS THE ULTIMATE SOLUTIONS TO MASK DEFECTS DETECTION

PHOTOMASK AOI INSPECTION SYSTEMS



UNICORN-760 SERIES

- For Wafer Photolithography
- Defects Detection Layers: Pellicle, Glass
- Detection Speed 3 Minutes / Unit
- Cleanliness Class 10
- AMHS Enabled (Option)
- AI Automatic Defect Classification

UC-760



UC-820

UNICORN-820 SERIES

- For PhotoMask Manufacturing
- Defects Detection Layer: Chrome
- Detection Speed 15~40 Minutes / Unit
- Mask Types: Blank / ADI / AEI / ASI
- Mask Bubble, Particles, Scratches Detection
- Data Manager System (Option)

UNICORN-840 SERIES

- For PhotoMask Manufacturing
- Defects Detection Layer: Fixed Pattern, Inner Frame, Pellicle
- Detection Speed 45~60 Minutes / Unit
- Cleanliness Class 1
- High Precision Pin-Hole Detection
- Special Algorithm to determine particle location on or below film layers
- Measures Height / concave-convex film patterns of Pellicles and generate 3D Display

UC-840



UC-840 Pro

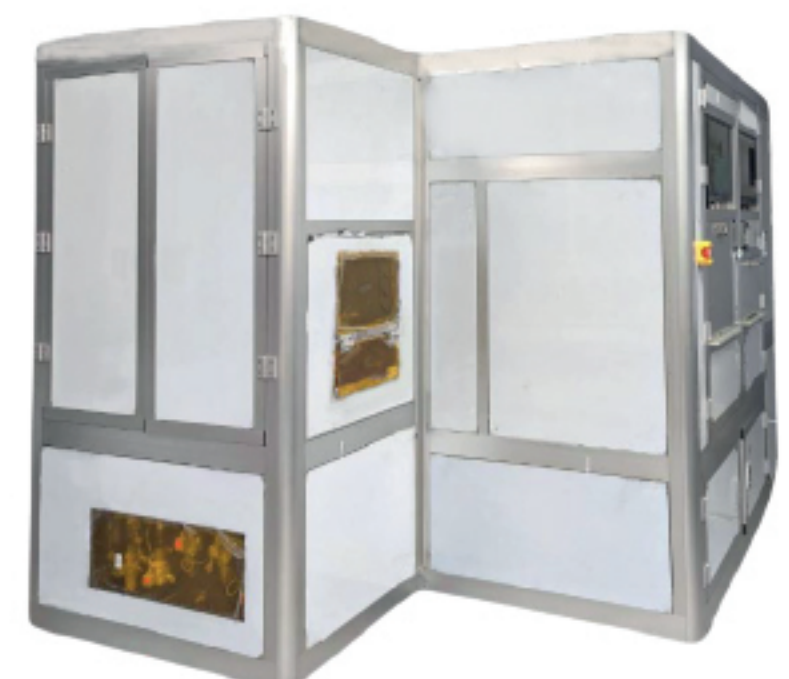
UNICORN-840 PRO SERIES

- For PhotoMask Manufacturing
- Defects Detection Layer: Fixed Pattern, Pattern, Pellicle, Metal, Inner Frame or Sidewall
- Cleanliness Class 1
- Through EUV Pellicle Particle Inspection
- Special Algorithm to determine particle location on or under membrane

UNICORN-620 SERIES

- For PCB Manufacturing
- Defects Detection Layer: Chrome, Pellicle, Glass
- Detection Speed: 12 Minutes / Unit
- Cleanliness Class 100
- Barcode Reader
- Universal PhotoMask Box or Cassette for USIHO Feed
- SECS/GEM

UC-620



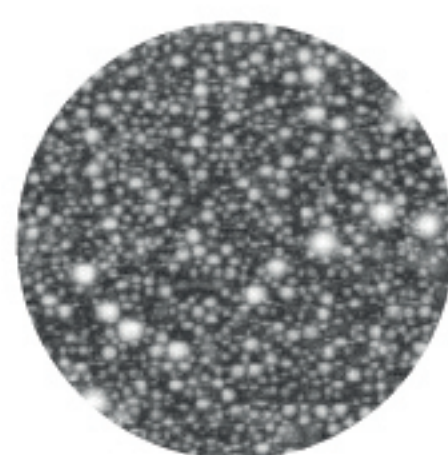
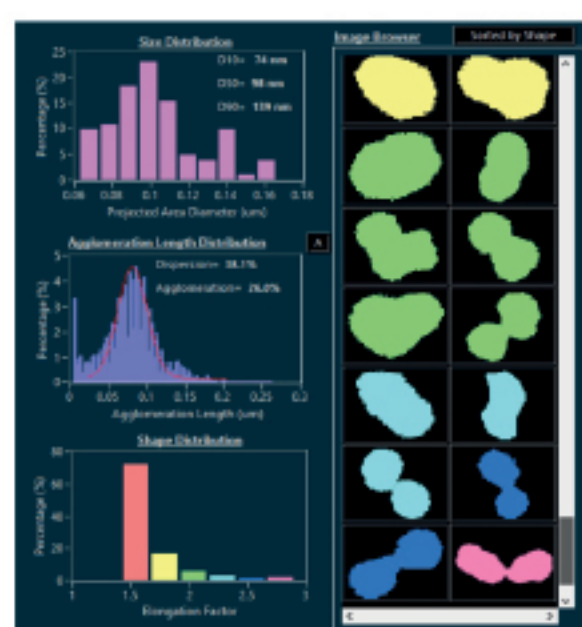
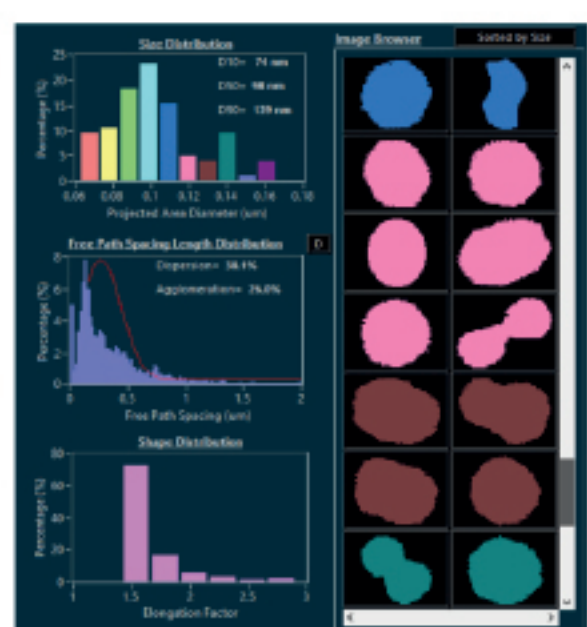
REVOLUTIONARY REAL-TIME LIQUIDS NANOVISION THE TECHNOLOGY THAT UNLOCKS TOMORROW'S SECRETS TODAY

LIQUID PARTICLE IMAGER & COUNTER

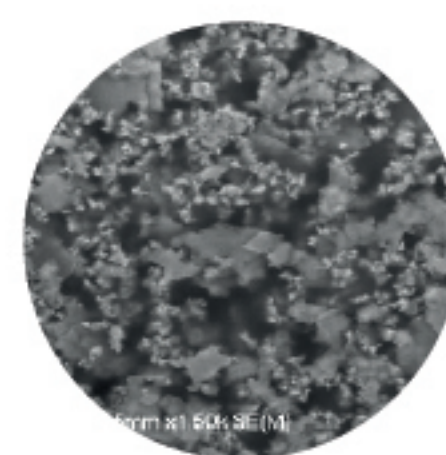


Lab Starter Kit With Analysis Software

- Failure / Manufacturing / Material Analysis
- Compatible with EDX / TEM / SEM
- Captures Particle Images In Liquid State
- Auto-Generated Graph Reports
 - Particle Size & Shape Recognition & Count
 - Detectable Size $\geq 7\text{nm}$

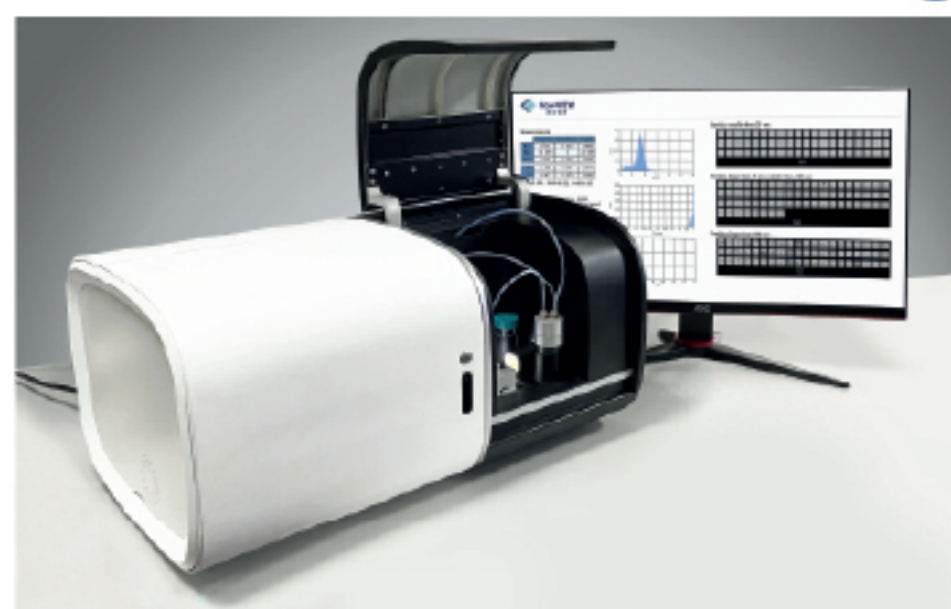


CMP SiO₂ Slurry



Conducting Silver Paste

Off-Line AI Particle Imager



In-Line AI Particle Imager

AI Imager Particle Counter

- Deep Learning AI Mass Particle Imaging Morphological Features Classification.
- Auto-Generated Graph Reports with particle count / size / roundness / length
- Particle, bubble, gel-like particle identification from **10nm to 400um**

Multi-Channel Liquid Particle Counter

- In-Line Smart Early Warning System
- Use with Main Processing Equipment for CMP, Wet Etch and other Applications
- Automated Detection of Particles range 100nm~100um in Incoming Process Chemicals



WAFER BATCH TRANSFER SYSTEMS THE MOST RELIABLE WAY TO TRANSFER YOUR WAFERS

WAFER BATCH TRANSFER & SORT EQUIPMENT



Gemini 2 With Aligner

- Wafer Batch Transfer 6 Inch / 8 Inch
Cassette To Cassette
- Single Port
- Notch / Flat Aligner
- Secs/Gem Available



Gemini Standalone



Gemini SECS/GEM

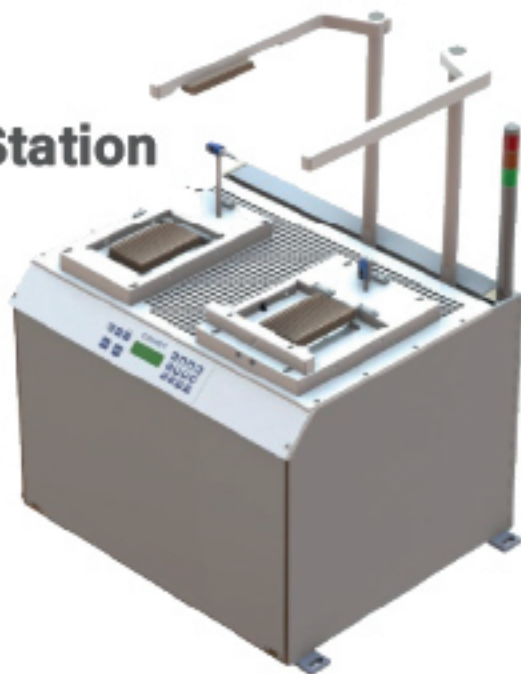
Comet Mono-Station

- 3" ~ 8" wafer batch transfer: 25+25 to 50
- Split transfer: 25 to 13+12



COMET Mono-Station

COMET 2-Station



COMET 2-Station

- 3" ~ 12" Wafers 13 To 13 / 25 To 25
- Split / Merge 13+12 To 25, 13 To 25 Odd / Even (and Reverse)
- Flip 180° / Pitch Change
- Notch / Flat Aligner

Comet 3-Station

- 3" ~ 8" Wafers 25 to 25 / 25+25 to 50 / 12+13 To 50 Split / Merge
- Flip 180°
- Notch / Flat Aligner



COMET 3-Station



Pitch Change



180° Flip



COMET 4-Station

Comet 4-Station

- 3" ~ 8" Wafers 25/25 To 25/25 Batch Transfer
- Wafer Mapping

WAFER BATCH TRANSFER SYSTEMS THE MOST RELIABLE WAY TO TRANSFER YOUR WAFERS

WAFER BATCH TRANSFER & SORT EQUIPMENT



Comet Substrate

- 25 To 25 Batch Transfer
- Suitable For Glass And Other Substrates
- Panel Level Packaging, CMOS Image Sensors, MicroLED

COMET Substrate

COMET Vertical Sorter

- 3" ~ 8" Wafers Single Or Batch Transfer
- Dummy Wafer Load / Unload For Spin Dryer

COMET CVS



Wafer ID Reader

- Notch / Flat Aligner
- COGNEX 1742 OCR – Wafer Front & Back Reading
- 3" ~ 8" Wafers

Wafer ID Reader

TableTop Sorter

- Single 6 Inch / 8 Inch Horizontal Sorting
- 2 Load Ports With Automatic Mapping
- Notch / Flat Aligner



TableTop Sorter



150 / 200MM Sorter



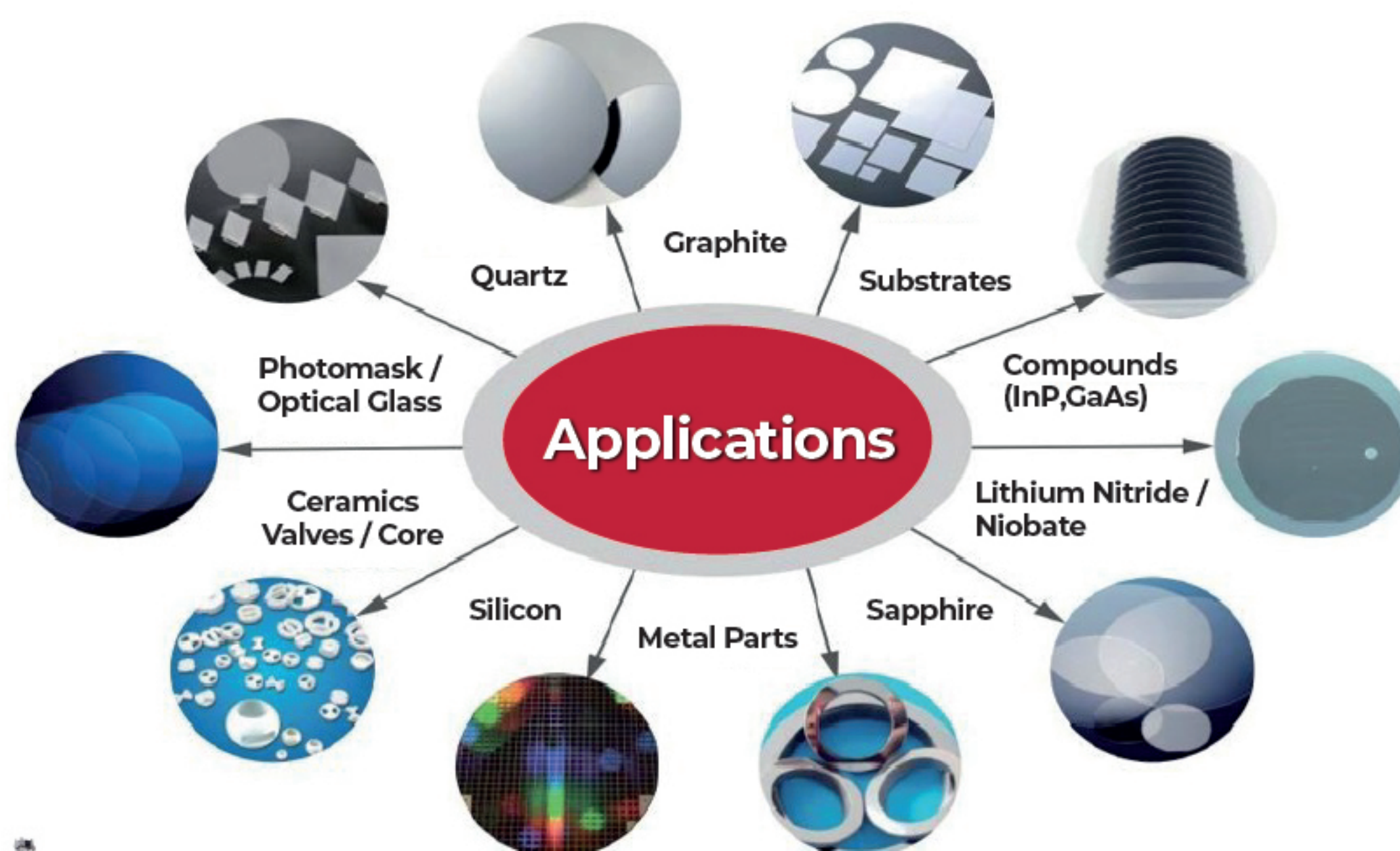
300MM Sorter

Comet Sorters OCR

- 6 / 8 Inch Or 12 Inch
- 2 / 3 / 4 Load Ports
- Optical Aligner & OCR System
- Automatic Wafer Mapping
- Pre-programmed Or Customized Recipes
- High Throughput

WAFER THINNING & SURFACE FINISHING EQUIPMENT UNLEASH PERFECTION WITH UNMATCHED POWER!

ULTRA HIGH PRECISION WAFER GRINDER / POLISHER



6B / 6.4B Double-Side Grinder Polisher

- Processing Pressure: 50N ~ 800N
- Electrical Input: 3-Phase, 380V, 50Hz, 30A
- 3 Motors
- CDA: 0.5 ~ 0.6MPa, 75NL/Min
- DI Water: 15MPa, 20L/Min



9B / 9.6B Double-Side Grinder Polisher

- Processing Pressure: 50N ~ 1500N
- Electrical Input: 3-Phase, 380V, 50Hz, 30A
- 3 / 4 Motors
- CDA: 0.5 ~ 0.6MPa, 75NL/Min
- DI Water: 15MPa, 20L/Min



13B / 13.9B Double-Side Grinder Polisher

- Processing Pressure: 120N ~ 3500N
- Electrical Input: 3-Phase, 380V, 50Hz, 50A
- 3 / 4 Motors
- CDA: 0.6MPa, 90NL/Min

WAFER THINNING & SURFACE FINISHING EQUIPMENT UNLEASH PERFECTION WITH UMATCHED POWER!

ULTRA HIGH PRECISION WAFER GRINDER / POLISHER



16B Double-Side Grinder Polisher

- Processing Pressure: 120N~ 3500N
- Electrical Input: 3-Phase, 380V, 50Hz, 50A
- 4 Motors
- CDA: ≥ 0.6 MPa, 90NL/Min

18B / 20B / 21B / 22B Double-Side Grinder Polisher

- Processing Pressure: 150N ~ 8000N
- Electrical Input: 3-Phase, 380V, 50Hz, 100A
- 3 Motors
- CDA: 0.5 ~ 0.6MPa, 90NL/Min



28B / 30B / 32B Double-Side Grinder Polisher

- Processing Pressure: 900N ~ 15,000N
- Electrical Input: 3-Phase, 380V, 50Hz, 200A
- 4 Motors
- CDA: 0.5 ~ 0.6MPa, 90NL/Min

40B Double-Side Grinder Polisher

- Processing Pressure: 900N ~ 20,000N
- Electrical Input: 3-Phase, 380V, 50Hz, 300A
- 4 Motors
- CDA: 0.6MPa, 90NL/Min



WAFER THINNING & SURFACE FINISHING EQUIPMENT UNLEASH PERFECTION WITH UNMATCHED POWER!

ULTRA HIGH PRECISION WAFER GRINDER / POLISHER



ES32B / 36B Single-Side Polisher

- Processing Pressure: 3500N (Max.)
- Electrical Input: 3-Phase, 380V, 50Hz, 50A
- 4 Motors
- CDA: 0.6MPa
- D.I. Water: 80kPa

ES50B Single-Side Polisher

- Processing Pressure: 150N (Min.)
- Electrical Input: 3-Phase, 380V, 50Hz, 100A
- 3 Motors
- CDA: 0.6MPa, 75NL/Min



ES50BC Single-Side Copper Polisher

- Processing Pressure: 900N (Min.)
- Electrical Input: 3-Phase, 380V, 50Hz, 200A
- 4 Motors
- CDA: 0.6MPa, 90NL/Min

FAB AUTOMATION EQUIPMENT. THE PERFECT WAY TO INCREASE EFFICIENCY AND REDUCE COSTS.

FAB WAREHOUSE AUTOMATION SOLUTIONS

WisePioneer
Shuz Tung Machinery Industrial Co., Ltd.

Wafer Carrier Warehouse Automation System

Applicable for varies wafer shippers:
FOUP/FOSB(12")/Coin Stack/HWS/POD(8")/Reel/Jedec Tray

Features

- AGV performs inbound and outbound tasks between CPU, Stocker E-rack, and shipping dock according Information Control System.
- Bar Code/RFID material-account comparison to accurately grasp the capacity utilization rate

Automatic FOUP / FOSB / HWS
Packing / Unpacking Equipment



Wafer Carrier Packing & Unpacking System

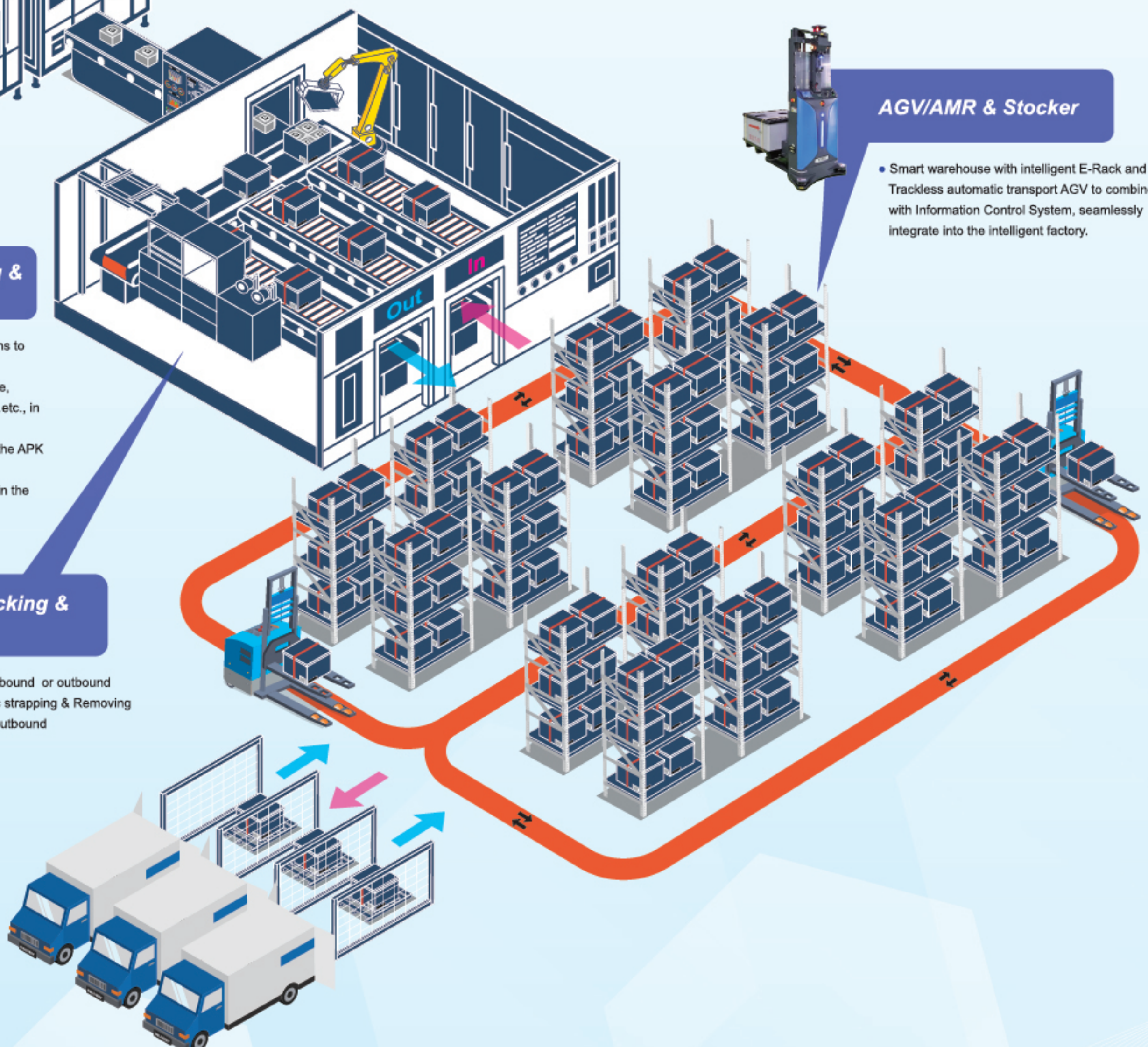
- RFID/Info Pad removes/Attach functions to save the cost
- Module Parameter setting: Sealing time, temperature, vacuum extracting time...etc., in the APK system.
- N2 Purge to ensure product quality in the APK system.
- Waste Bags and Desiccant Recycling in the UPK system.

Container(Hi-Box) Packing & Unpacking System

- RFID identification to detect product inbound or outbound
- Container PP bundling strap automatic strapping & Removing
- Container Load cell weighting before outbound

AGV/AMR & Stocker

- Smart warehouse with intelligent E-Rack and Trackless automatic transport AGV to combine with Information Control System, seamlessly integrate into the intelligent factory.



FAB AUTOMATION EQUIPMENT. THE PERFECT WAY TO INCREASE EFFICIENCY AND REDUCE COSTS.

OTHER AUTOMATION SOLUTIONS

WisePioneer
Shuz Tung Machinery Industrial Co., Ltd.

Fully Automatic Packing / Unpacking Equipment

- Suitable for Semiconductor Wafer Packaging
- Automatic Labelling, HIC Card & Desiccant Placements
- SECS/GEM Communications
- SEMI Compliant



FOUP / FOSB Autopacker



Double Bag FOUP / FOSB Autopacker



IC Tray Autopacker



FOUP / FOSB Auto Unpacker



Tape & Reel Autopacker



HWS Autopacker



Carton Box Autopacker

FAB AUTOMATION EQUIPMENT THE PERFECT WAY TO INCREASE EFFICIENCY AND REDUCE COSTS.

INSPECTION SOLUTIONS

WisePioneer
Shuz Tung Machinery Industrial Co., Ltd.

Automatic AOI Equipment

- Suitable for Semiconductor Wafer / Peripherals Inspection
- SECS/GEM Communications
- SEMI Compliant



FOUP / FOSB AOI



Laser Groove Profiling Equipment

Fully Automatic Ring Frame Tape Remover Cleaner

- Tape UV Cure, Remove & Dispose
- Ring Frame Cleaning
- Ring Frame Inspection
- 8 Inch & 12 Inch

Ring Frame Tape Removal / Cleaning Equipment



Wafer Optical Microscope Equipment

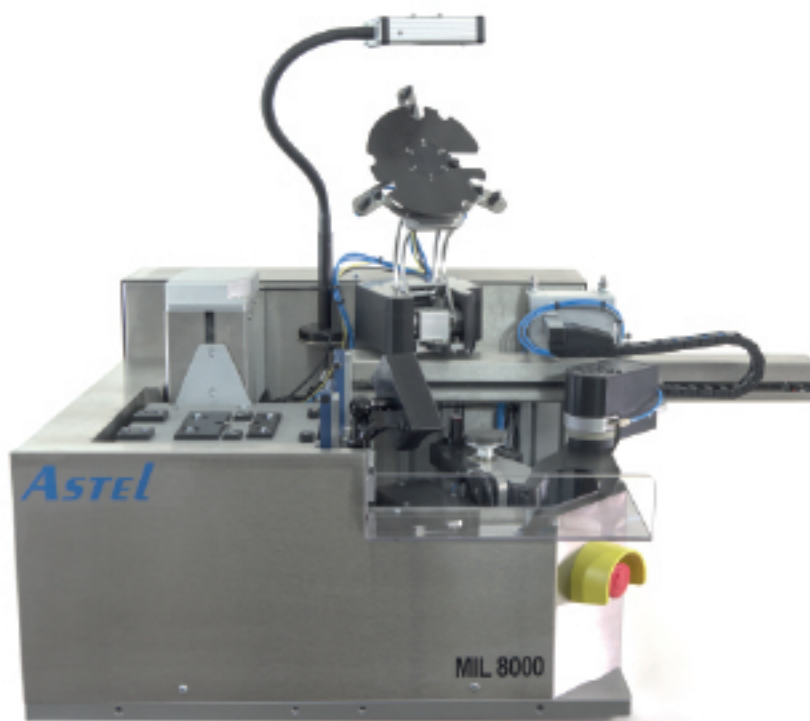


Wafer Macro Defect AOI



WAFER HANDLING & INSPECTION SYSTEMS ADVANCED TECHNOLOGIES WITH SMALL FOOTPRINT

WAFER HANDLING & INSPECTION SYSTEMS



MIL8000 Wafer Inspection System

- Wafer Front & Back Macro Inspection
- Up To 8 Inch Wafers
- Contactless Handling
- Suitable For Thin Wafers

MIL12000 Wafer Loader Inspection System

- FOSB / FOUP Handling
- 12 Inch Wafers
- Automatic Wafer Mapping, Cross Slot & Wafer Protrusion Detection

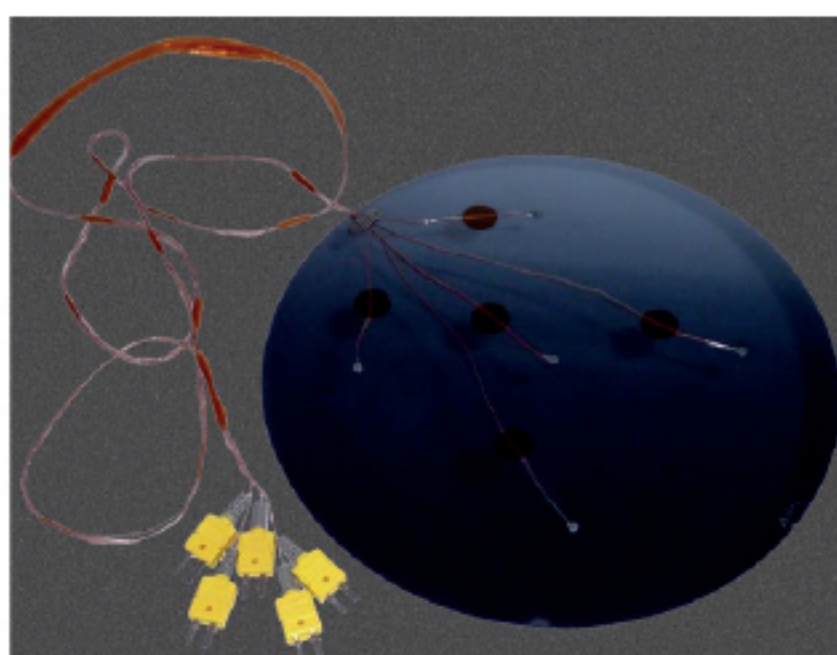
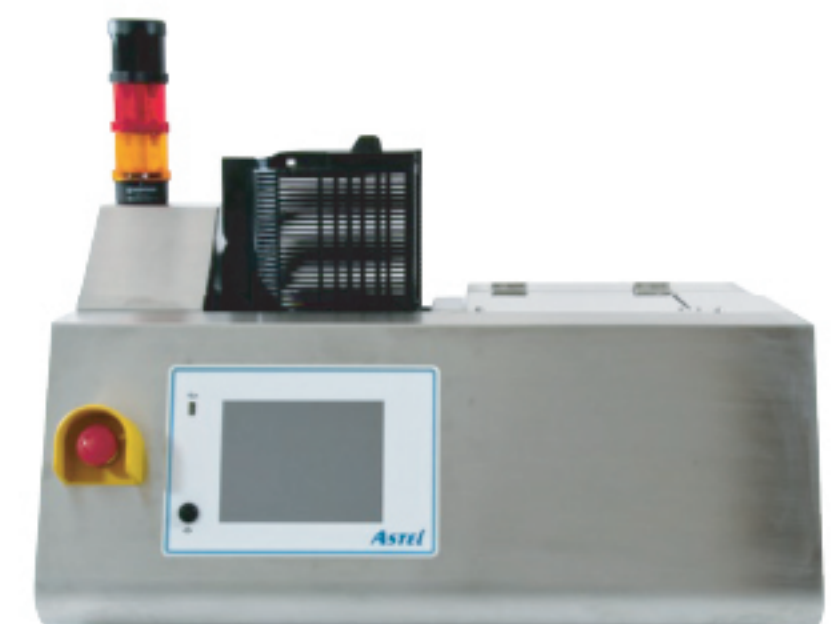


FML8000 Ring Frame Wafer Loader

- Micro Inspection Of 6 / 8 Inch Dicing Frame Wafers

SUE8000 UV Wafer Eraser

- EEPROM Memory Eraser
- Can be modified for Tape Curing or UVO Cleaning



THERMOCOUPLE (TC) PROBE WAFERS

- Available in 6, 8 or 12-inch wafer
- Probe Locations can be customized
- Test Temperatures up to 1,100°C
- Data Loggers sold separately
- Used for hot plate, oven or other thermal equipment tests where temperature control is critical.

CASSETTE & JIGS CLEANING SYSTEM ONE WASH PER DAY KEEPS THE CONTAMINATION AWAY

WAFER CASSETTE CLEANING SYSTEMS



MYFC-S500 FOUNDRY / FOSB Cleaning System

- Semi-Automatic
- Hot DI Water Wash & Hot CDA / N2 / IR Dry
- 8 x FOUNDRY / FOSB or 32 x 8 Inch Cassettes Per 30 min Cycle
- Customizable For Lead Frame Cassettes And Others
- Mixed Configuration Possible With Interchangeable Baskets
- Up to ISO Class 5

MYFC-550 FOUNDRY / FOSB Cleaning System

- Fully Automatic
- 6-Axis Robot
- Wash / Dry Chamber
- ESD, Humidity & Contamination Control
- Up to ISO Class 2



MYFC-1500 FOUNDRY / FOSB Cleaning System

- Fully Automatic
- 6-Axis Robot
- 20 min Cleaning Cycle
- ESD, Humidity & Contamination Control
- Up to ISO Class 2

THERMAL FURNACE FOR DEPOSITION AND DIFFUSION SIMPLE SOLUTIONS FOR COMPLEX PROCESSES

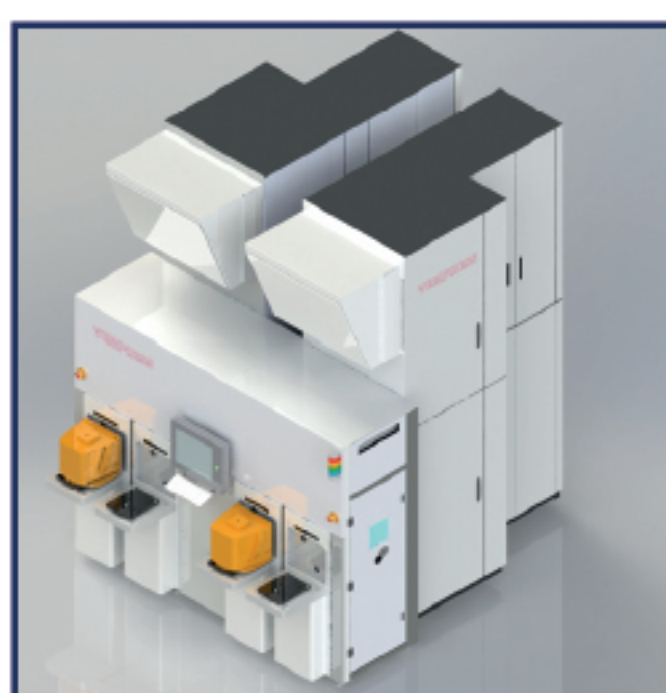
WAFERS BATCH THERMAL DIFFUSION & DEPOSITION EQUIPMENT



Vertical Furnaces



Single Tube
Vertical Furnace



Multiple Tube
Vertical Furnace

VS Series

- 150 / 200 / 300MM
- Max. Temp: 1,150°C
- Up to 75 Wafers Per Batch

Horizontal Furnaces



TS Series V

- 150 / 200 / 300MM
- Max. Temp: 1,300°C
- Up to 4 Tubes / 200 Wafers Per Batch

Processes



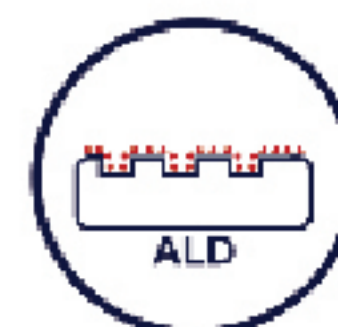
Diffusion

- Wet Oxidation
- Dry Oxidation
- Annealing
- H₂ Annealing
- Sintering
- Alloy
- POCl₃ & BBr₃



LPCVD

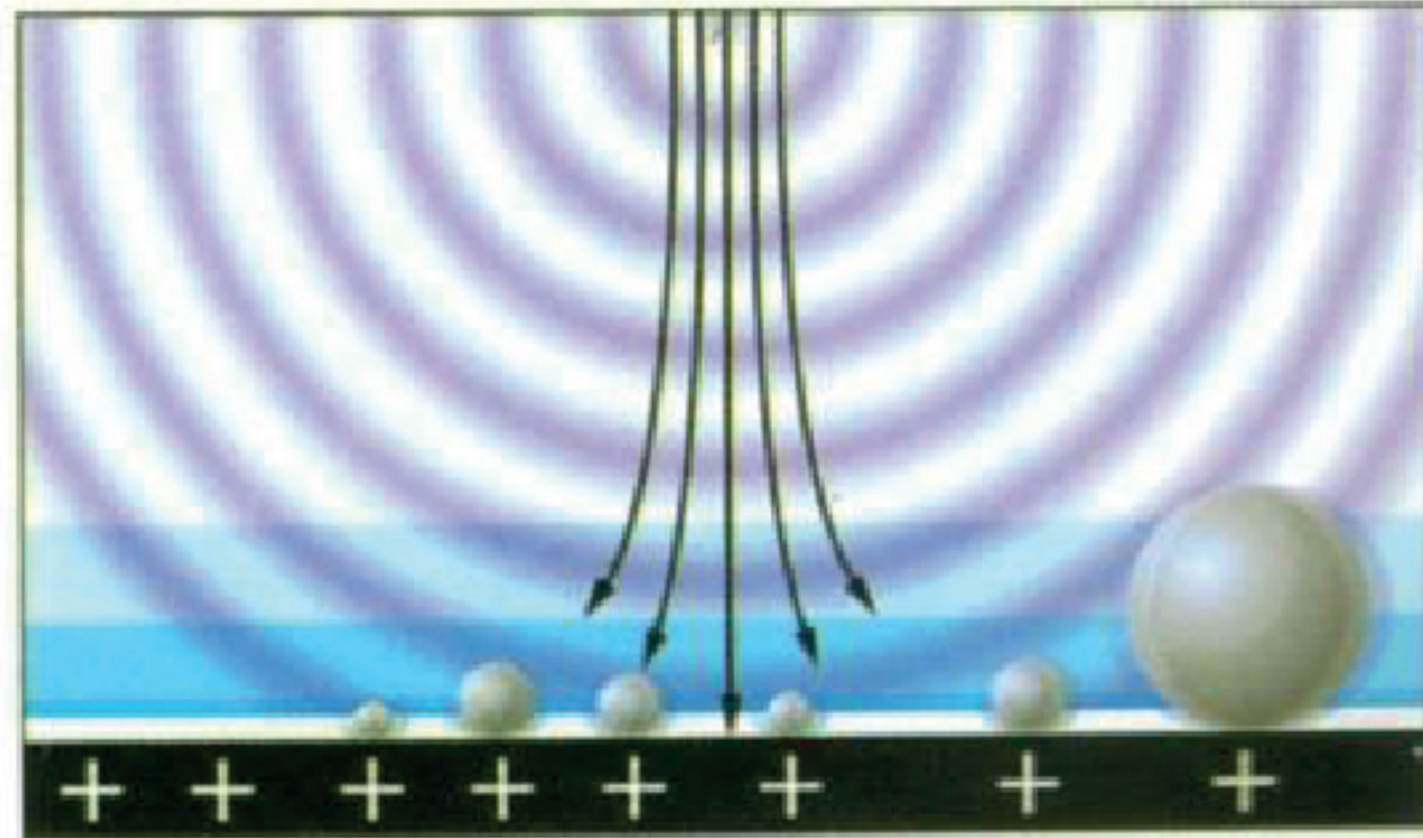
- Poly (Flat / Ramped)
- Doped Poly
- Nitride / Low Loss Nitride
- Low Stress Nitride
- TEOS (Undoped / Doped)
- HTO- Undoped / Doped LTO
- SIPOS



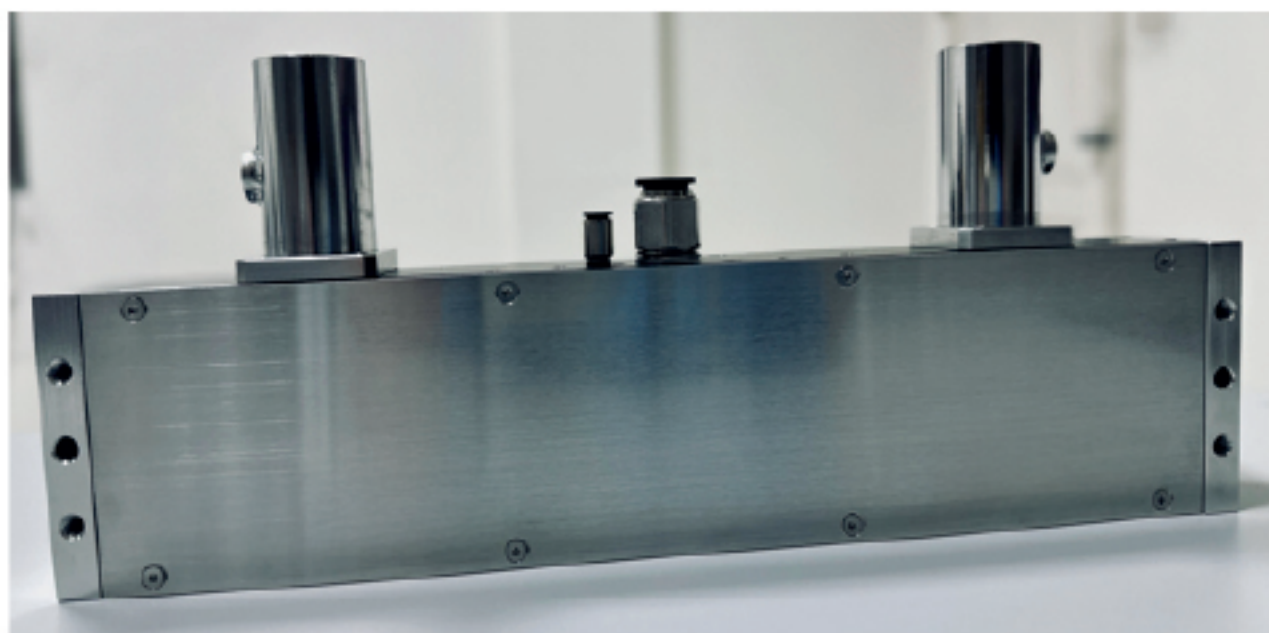
Others

- ALD (Al₂O₃)
- PI Curing
- PEALD
- PECVD
- GaN Diffusion

DRY ULTRASONIC CLEANING TECHNOLOGY NO CHEMICALS, NO HASSLE



The principle of our Patented Ultrasonic Clean Technology is to use the vibration energy generated by ultrasound to break through the boundary layer that binds the particles to the substrate's surface, which are then separated from the substrate and removed through the exhaust ports on both sides.



Dry Ultrasonic Cleaning Module

- Easy to Integrate as a Module into Various Semicon / SMT Equipment
- Low Operations and Maintenance Costs
- Customizable Size to Suit wide spectrum of Applications
- High Cleaning Speed with Particle Removal Efficiency

<u>Application Cases</u>	Before Clean	Dry Ultrasonic Cleaning	After Clean
1. SiO₂ at 3mm GAP on VR/AR Sensor			
2. SiO₂ at 2mm GAP on Wafer (Semiconductor Package)			
3. SiO₂ at 2.5 mm GAP on Lead Frame (Semiconductor Package)			
4. SiO₂ at 2mm GAP on POGO pin (Semiconductor CoWoS)			

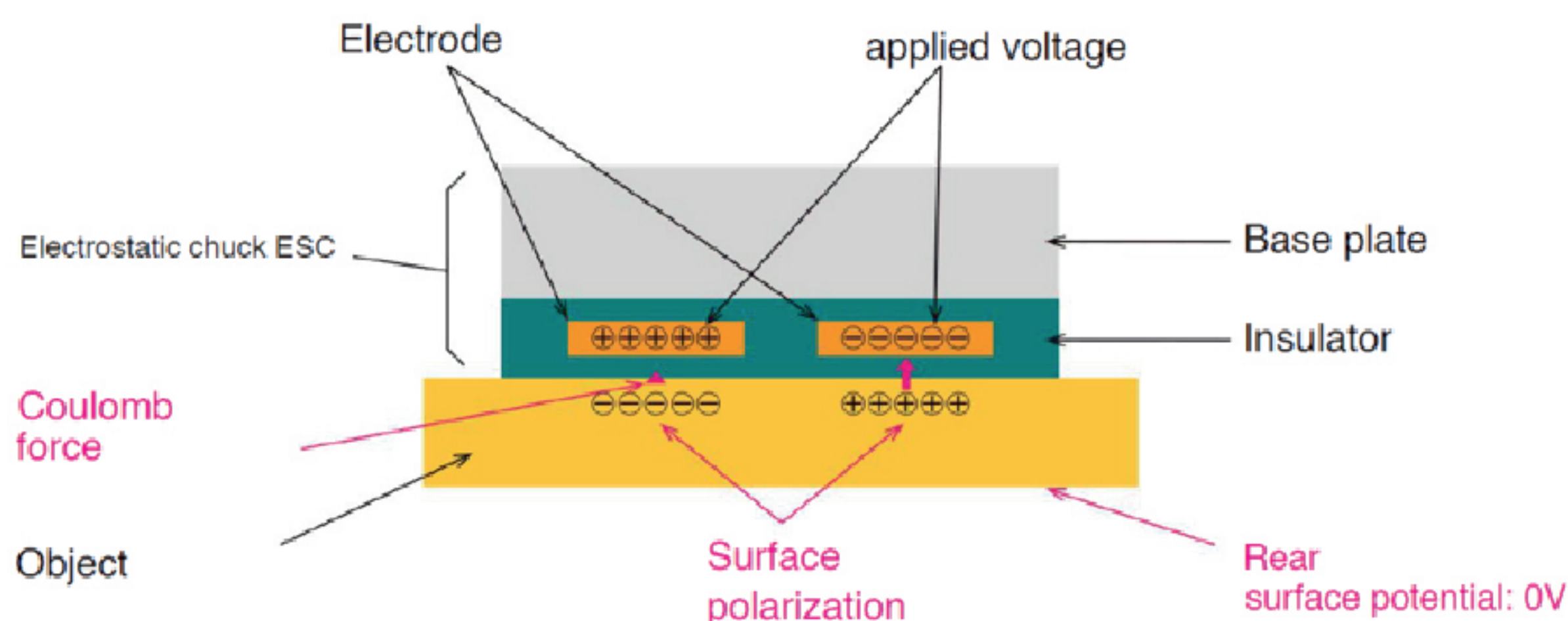
ELECTROSTATIC ADSORPTION TECHNOLOGY ELIMINATE USE OF ADHESIVES FOR TEMPORARY WAFER BONDING & DEBONDING

Conductive E-Support Carrier Products



The Conductive E-Support Carrier Products are tools that attracts a workpiece by using the Coulomb Force generated between the workpiece and an electrode and adheres the workpiece with a uniform force, ideal for temporarily bonding of delicate and fragile objects. This allows the tool to handle a wide spectrum of Ultra-thin materials that are either conductive, semi-conductive or insulative.

It can maintain adsorption without continuous power after it is energized once and do not create Static discharge that may damage the wafers.

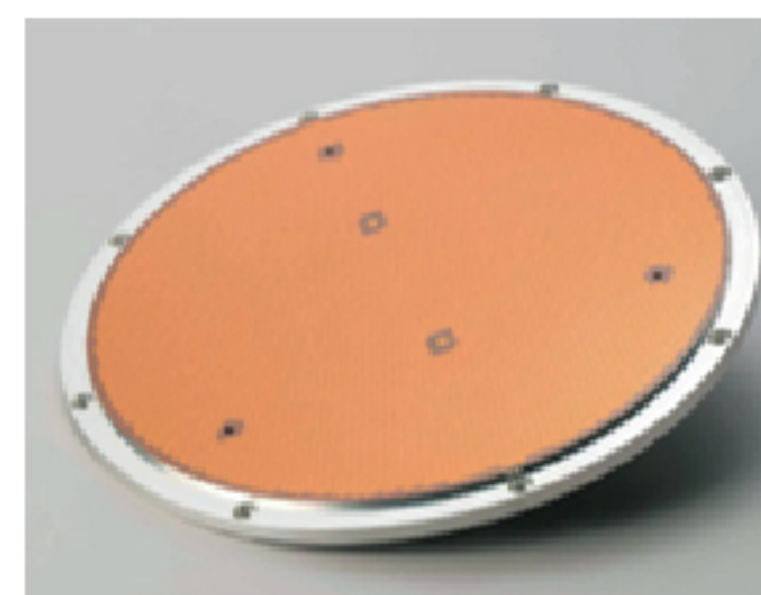


Thin Wafer Support Carrier

- Electrostatic Adsorption Cordless Carrier for Thin Wafers Support
- Release Adsorption by applying a release voltage
- No Wafer breakage
- Suitable for wide variety of materials from Sapphire & Silicon and other compound wafers

Electrostatic Chuck

- Suitable for wide variety of materials from Sapphire & Silicon and other compound wafers
- Suitable for use in Plasma or Vacuum environments
- Can be retrofitted into Equipment



Other Products*



Handheld Wand



Robot End Effector,
can be integrated with
most robot brands

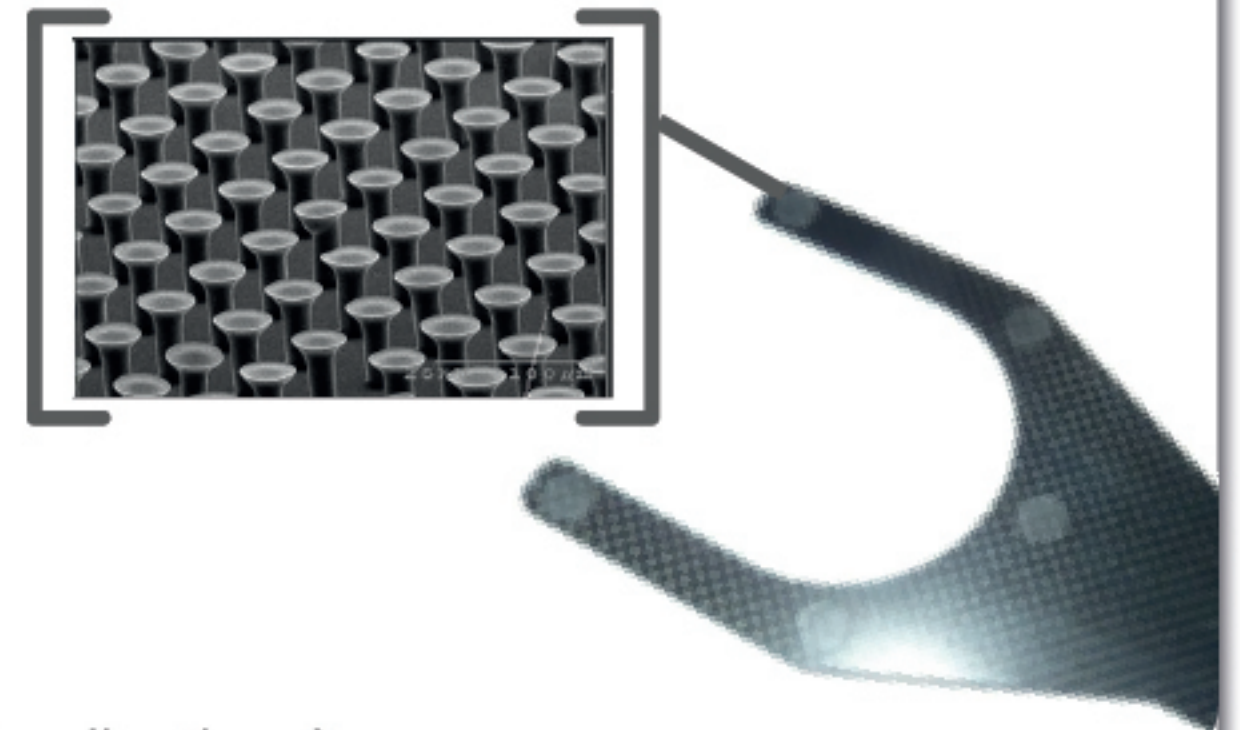
HIGHLY RELIABLE & DURABLE END EFFECTORS THE ALTERNATIVE SOLUTION TO TRADITIONAL END EFFECTORS

Carbon Fiber End Effectors For Wafer Handling



Customizable Vacuumless / Vacuum Carbon-Fiber End Effector

- For Wafer Handling
- Suitable For Tight Vertical Spaces
- Wafer Removal During Equipment Recovery
- Customizable for Equipment to replace traditional ceramic / metal end effectors
- Customizable for Vacuum or Vacuumless Applications
- Patented Nanotechnology Dry Adhesive (For Vacuumless Applications)



The end effector is the part of an equipment intended to handle wafers along the process.

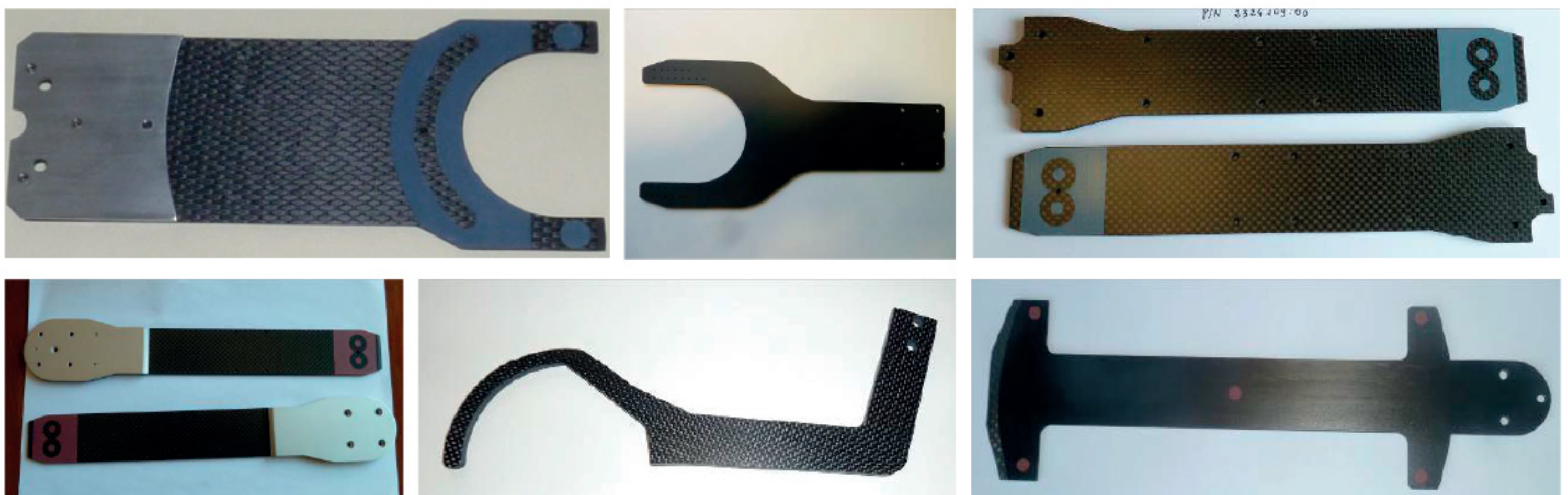
This implies that this is an important and critical part, even if its role is often underestimated. End effector can, in case it is not perfect, damage or even break wafers and this is not acceptable.

End effectors are normally made by metal or ceramic. Metal end effectors can bend and are subject to contaminate wafers in the long run. Ceramic end effectors can break if hit and can, in case of incorrect contacts, scratch wafers.

Carbon fiber is stiff but flexible, so its use is ideal to manufacture end effectors for wafer handling.

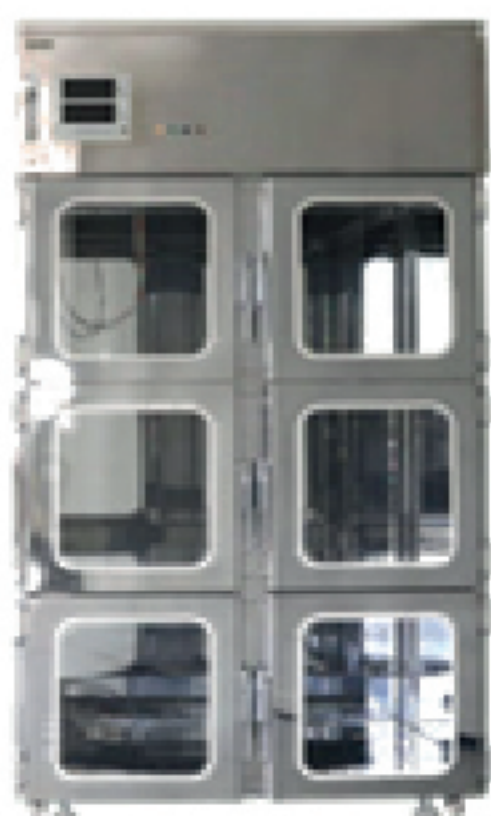
Our parts are extremely reliable, ESD free, has a smooth surface and not contaminated with metals.

Examples of our End Effectors, used with Branded Process Equipment



MINI-ENVIRONMENT CONTROLLED INTELLIGENT STORAGE SYSTEMS. THE BEST WAY TO MANAGE SENSITIVE MATERIALS

WAFER & MATERIAL STORAGE SYSTEMS



Particle & Humidity N2 Cabinet

- Class 10
- ESD Control
- Energy Saving



Precision Clean Nanoscale Photomask Cabinet

- Temperature & Humidity Controlled
- Display Indicators
- Up to 80% Savings in N2 Consumption



Intelligent Rewarming Solder Paste Cabinet

- Capacity: 16 Bottles
- FIFO Control
- Intelligent System Monitors Thawing Time and Minimize Scraps



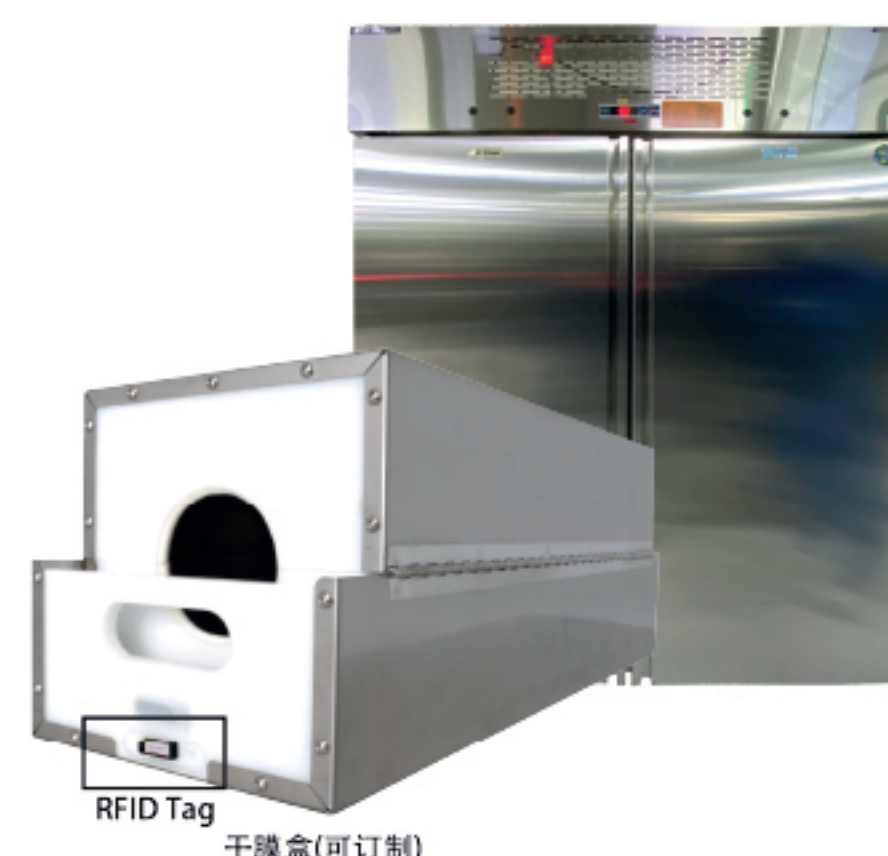
Airtight Dry Film Cabinets

- Uses CDA or N2
- Humidity <5% RH
- Customizable



Copper Foil Storage Cabinet

- Stores Up To 2 Packs (40Kgs)
- Barcode Scanner + Software for Inventory Management



Dry Film Refrigerator / Freezer

- Electronic Temperature Control
- Intelligent RFID Reader Records
- Insulation To Prevent Leakage

MINI-ENVIRONMENT CONTROLLED INTELLIGENT STORAGE SYSTEMS THE BEST WAY TO MANAGE SENSITIVE MATERIALS

WAFER & MATERIAL STORAGE SYSTEMS



Humidity Controlled Glove Cabinet

- Airtight
- Humidity Control

Rack Lift Trolley

- Anti-drop design
- Retractable side bars
- Suitable for loading / unloading from Oven



Temperature & Humidity Monitor with Display

- Built-In Memory for 11,900 Records
- Supports Database Formats
- Programmable Records Collection Intervals

Dry / Airtight Cabinets

- 1~40RH% or 20~60RH%
- N2 Controller (Option)



SMR186(A)



SMR386(A)



SMR496(A)



SMR740(A)



SMR1530(A)

*Storage Solutions available for other applications

WAFER HANDLING SOLUTIONS EASY ON YOUR BUDGET, HASSLE-FREE USE

WAFER HANDLING TOOLS

Wafer Handling Systems

- Single Wafer Handling
- True ESD Protection
- Normally Open Vacuum Switch
- Support Ribs Prevents Wafer Deformation / Cracks
- Reinforced Vacuum Tubing



6 - 8 Inch Wafer Handling



12 Inch Wafer Handling



Vacuum Pump

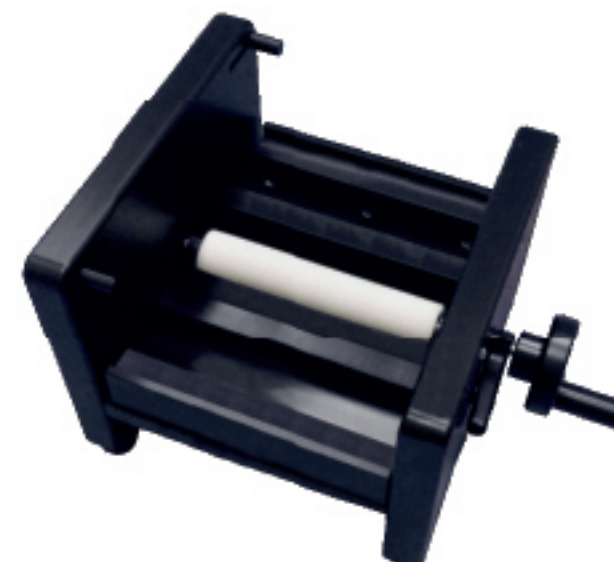


Vacuum Tester

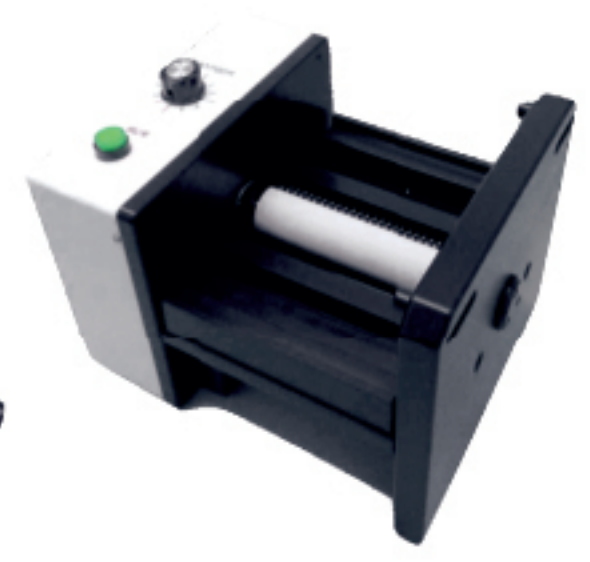
Cleanroom Tools & Peripherals



Horizontal Wafer Transfer



Manual / Automatic Wafer Aligner



Wafer Pick



Wafer Inspection



Metal Cassettes



WAFER STORAGE AND TRANSFER BOXES TOTAL SOLUTIONS FOR YOUR WAFERS

WAFERS TRANSPORT, STORAGE & AUTOMATION

Reticle Boxes

- Capacity: Single Wafer
- Sizes: 4, 5, 6, 7, 9 & 14 Inch
- Material: PP, ABS (ESD), PC (ESD) Or Stainless Steel



EUV / Reticle Pods

- Size: 6 Inch
- ESD and Wear-Resistant
- Supports OHT & RFID
- Suitable For EUV Process (ASML / Canon / Nikon Certified)
- Material: PEEK (ESD) / ABS (ESD) / PC (ESD)

Multi-Reticle SMIF Pod (MRSP)

- For 6 inch Wafers
- Suitable for ASML / Nikon Photo Tools
- Supports RFID
- Wear-Resistant
- Material: ABS (ESD) or PC (ESD)



WAFER HANDLING SOLUTIONS EASY ON YOUR BUDGET, HASSLE-FREE USE

WAFERS TRANSPORT, STORAGE & AUTOMATION

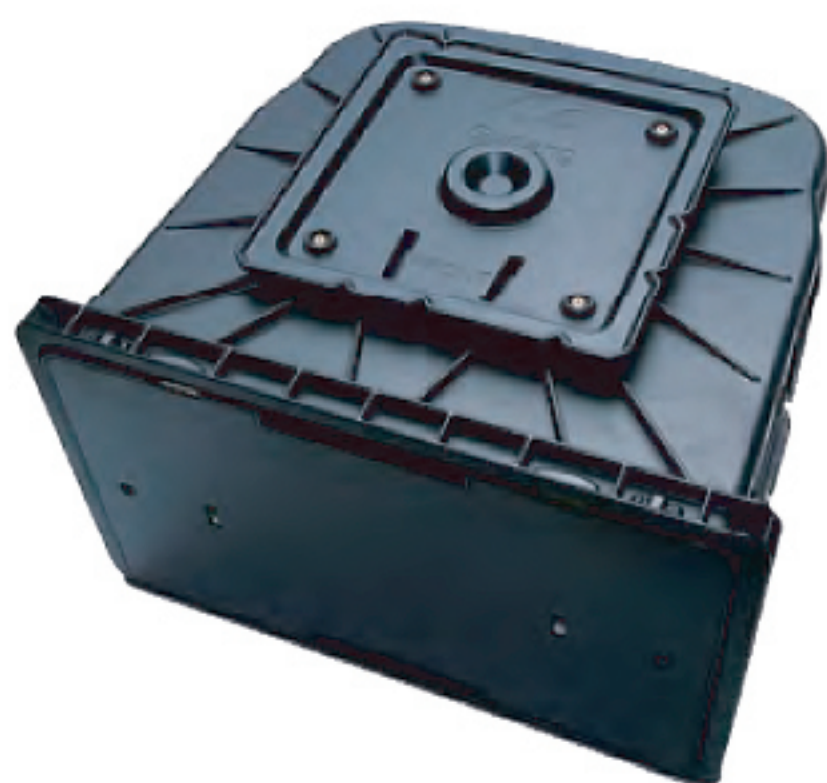


300MM FOUP (Red / Orange)

- Capacity: 13 or 25 Wafers
- Material: PC or COP

300MM FOUP (Transparent / Black)

- ESD and Wear-Resistant
- Supports OHT & RFID
- Material: PC or COP



Panel FOUP

- Sizes: 243 x 233, 243 x 244, 240 x 241, 243 x 241, 300 x 300, 510 x 510, 510 x 515, 600 x 600
- Semi Standards
- For ABF / Advanced Package Applications

200MM Wafer Shipping Box

- High Strength and Wear-Resistant
- Airtight Rubber Seals To Prevent Contamination During Transport
- Capacity: 25 Wafers
- Material: PC



OTHER PRODUCTS ADVANCE IOT SENSORS

For Environment - Gas / Particles / VOC / AMC



Environment Type Gas O2 Sensor



- Detect oxygen concentration and micro-oxygen residual in two models.
- Concentration ranges from 0 to 25%, with corresponding applicable models that can be selected
- Triggers Alarm if <19%
- Supports 4-20mA Output / Modbus RTU Output
- Couple With A45 VOC Sensor (Optional)

VOC Humidity Temperature Pressure Multi-Sensor



- VOC 0-50ppm $\pm 0.1\text{ppm}$
- Humidity 0~100%RH $\pm 1.0\%RH$
- Temp -40~125°C $\pm 0.1^\circ\text{C}$
- Pressure -100K~300KPa $\pm 0.1\text{kPa}$
- Advanced CMOS Technology
- Supports Exhaust And Environment Monitoring

Vacuum Type Gas Micro O2 Sensor



- Detects 0~10,000ppm $\pm 10\text{ppm}$
- Supports 4~20mA Output / Modbus RTU Output

RS485 Temperature & Humidity Sensor



- High Accuracy, Ultra-Low Power, 16-Bit Temperature & RH Sensor
- Temp -40~125 $\pm 0.1^\circ\text{C}$
- Humidity 0~100% $\pm 1.0\%RH$

Anti-Corrosion Temperature & Humidity Sensor



- High Accuracy, Ultra-Low Power, 16-Bit RH Sensor
- Temp -40~125 $\pm 0.1^\circ\text{C}$
- Humidity 0~100% $\pm 1.0\%RH$
- JEDEC JES47

Maxtrix IR Thermo Sensor with AI



- For Equipment Control / Enclosed Chambers / Factory Pipes monitoring
- Scan & analyze Temp. Trend
- Trigger Alarm if exceeds Upper / Lower Limits
- Temp 0~400 $\pm 0.1^\circ\text{C}$

Micro Differential Pressure Sensor



- Miniature, high precision
- Low DP for HVAC/EFEM Air Flow Speed / Volume Monitoring
- Offset Stability <0.1Pa / Year
- Ranges:
 - -25~25 $\pm 0.1\text{Pa}$
 - -150~150 $\pm 0.1\text{Pa}$ (EFEM)
 - -500~500 $\pm 0.1\text{Pa}$

Particle & VOC Multi-Sensor



- Monitors Airborne Molecular Contamination For Critical Applications
- Use simultaneously with Micro Differential Pressure Sensor (Optional)
- Particle 0.3~10 μm $\pm 5\%$
- VOC 0~50 $\pm 0.1\text{ppm}$
- Humidity 0~100% $\pm 1.0\%RH$
- Temp -40~125 $\pm 0.1^\circ\text{C}$

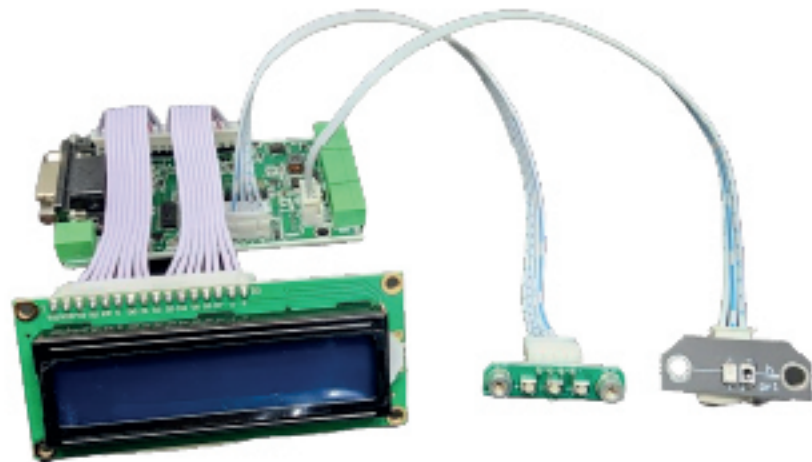
VOC: Volatile Organic Contamination

OTHER PRODUCTS RFID SYSTEMS

For RFID-Enabled Cassette Tracking



LF RFID Shelf Reader Module



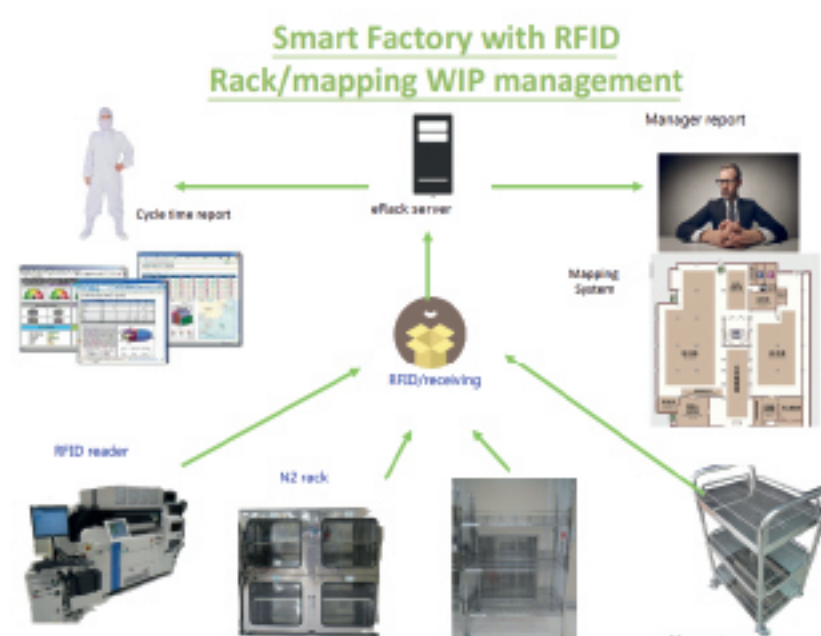
- LF RFID Reader For TI FSK 134.2K/123.2KHz Tags
- Includes Antenna, Presence Sensor, LED Board & 1602 LCD
- Scan Distance 15~190mm
- 2 x RS485 Integrated Sockets For Daisy Chain
- RS232 CANBUS

LF RFID Load Port / OHB Reader



- LF RFID Reader For TI FSK 134.2k/123.2 kHz Tags
- Scan Distance 15~180mm
- Design For Load Port, OHB
- RS232 DB9 Female & RS485 EDGRC-3.5-04P For Daisy Chain
- Supports:
 - α 1602 LCD By XH2.54P16
 - α 1 x 24V NPN Sensor (EDGRC-3.5-03P)
 - α 2 x 5V NPN Presence Accessories (XH2.54P4)
 - α External LED Accessories (XH2.54P4)
 - α Long Antenna (8cm, EDGRC-3.5-02P) Short Antenna (4.5cm, XH2.54P2)

WIP Intelligent Logistics System



- Factory-wide Smart Logistics System
 - α Intelligent Shelf Position Allocation
 - α Item Movement Tracking
 - α Automatic In / Out
 - α SECS / GEM Compliant

RFID Reader Module



- RFID Reader 134.2KHz
- SEMI E15.1 Compliant for Tool Load Port
- Supports:
 - SEMI E99
 - SECS-I / HSMS / ASCII Protocols
- Ethernet & RS232 Ports
- Read / Write MIDs: 150ms / 680ms

LF RFID Reticle Dual Antenna Reader



- LF RFID Reader For TI FSK 134.2k/123.2 kHz Tags
- Scan Distance 15~100mm
- Designed For Reticle Load Port. Pod Equipped With 1 Tag In Left Or Right Side
- Reader Will Test Read To Ensure ID Reliability
- RS485 EDGRC-3.5-04P For Daisy Chain
- Supports:
 - α 2 x 5V NPN Presence Accessories (XH2.54P4)
 - α Short Antenna (4.5cm, XH2.54P2)

DY73F1-MEC 32mm Glass Transponder



- Multi-Page, Total Volume 136 Bytes / 17 Pages, Rewritable
- Read String: 8 Bytes / Read
- Read Minimum Lifetime: 100,000 times
- Data Segmentation:
 - α MID: Page 1 ~ 2: Total 16 Bytes
 - α Data: Page 3 ~ 17: Total 120 Bytes

OTHER PRODUCTS FIBER OPTIC SOLUTIONS

Enhanced Connectivity For Various Applications



Machine Vision Fiber Optic USB3.2



U10HBS1

Type-C(M) to Type-C(M)

U10HBS3

Type-A(M) to Type-C(M)

U10HBS6

Type-A(M) to Micro-B(M)

- Cable OD: 5.8mm
 - Bandwidth: 10Gbps
 - Length: 15m
- Supports:
- α USB3 Data Support
 - α USB2 Data Support (Hub IC)
 - α Power: 4.5W

Consumer Fiber Optic USB3 AOC



U10HBS9

Type-C(M) to Type-C(M)

U10HBSA

Type-A(M) to Type-C(M)

U10HBSB

Type-A(M) to Type-A(F)

- Cable OD: 5.0mm
 - Bandwidth: 10Gbps
 - Length: 50m
- Supports:
- α USB3 Data Support
 - α USB2 Data Support Up To 10m
 - α Power: 4.5W



H48EBE1

8K HDMI Extender with MPO



H48HBS3

8K HDMI AOC Plenum



H48HBS1

8K HDMI AOC TPE



H18HBV1

4K HDMI AOC



H48HBS2

8K HDMI AOC CL2

Professional A/V Fiber Optic HDMI

Specs	8K	4K
Version	HDMI 2.1	HDMI 2.0
Bandwidth	48 Gbps	18 Gbps
Audio	eARC, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos, DTS	ARC, L-PCM, Dolby Digital, DTS Digital Surround, Dolby Digital Plus, DTS-HD
Video	HDCP 2.3, Dynamic HDR, DSC, HFR, VRR, QMS, QFT, ALLM	HDCP 1.3 & 2.2 HDR

Interconnections



LC Reversible Uniboot Patchcord (2-Fiber)

- Grade A
- Insertion Loss
 - α **Single mode**
 - Random mated typical $\leq 0.07\text{dB}$
 - Random mated for 97% $\leq 0.12\text{dB}$
 - α **Multi mode**
 - Random mated typical $\leq 0.05\text{dB}$
 - Random mated for 97% $\leq 0.10\text{dB}$
- Insertion Loss
 - α **Single mode**
 - $\geq 70\text{dB}$ (APC)
 - $\geq 55\text{dB}$ (UPC)
 - α **Multi mode**
 - $\geq 25\text{dB}$ (APC)



LC Patchcord (2-Fiber)



SN Patchcord & Adaptor (2-Fiber)

- Low Loss
- Insertion Loss
 - α **Single mode**
 - Random mated typical $\leq 0.07\text{dB}$
 - Random mated for 97% $\leq 0.15\text{dB}$
 - α **Multi mode**
 - Random mated typical $\leq 0.05\text{dB}$
 - Random mated for 97% $\leq 0.15\text{dB}$
- Insertion Loss
 - α **Single mode**
 - $\geq 65\text{dB}$ (APC)
 - $\geq 55\text{dB}$ (UPC)
 - α **Multi mode**
 - $\geq 25\text{dB}$ (APC)



MPO/MTP Patchcord (12, 16, 24, 32-Fiber)

- Low Loss
- Insertion Loss
 - α **Single mode 12-Fibers**
 - Typical $\leq 0.1\text{dB}$
 - Max. $\leq 0.25\text{dB}$
 - α **Multi mode 12-Fibers**
 - Typical $\leq 0.08\text{dB}$
 - Max. $\leq 0.15\text{dB}$
- Insertion Loss
 - α **Single mode**
 - $\geq 65\text{dB}$ (APC)
 - $\geq 55\text{dB}$ (UPC)
 - α **Multi mode**
 - $\geq 25\text{dB}$ (APC)



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