



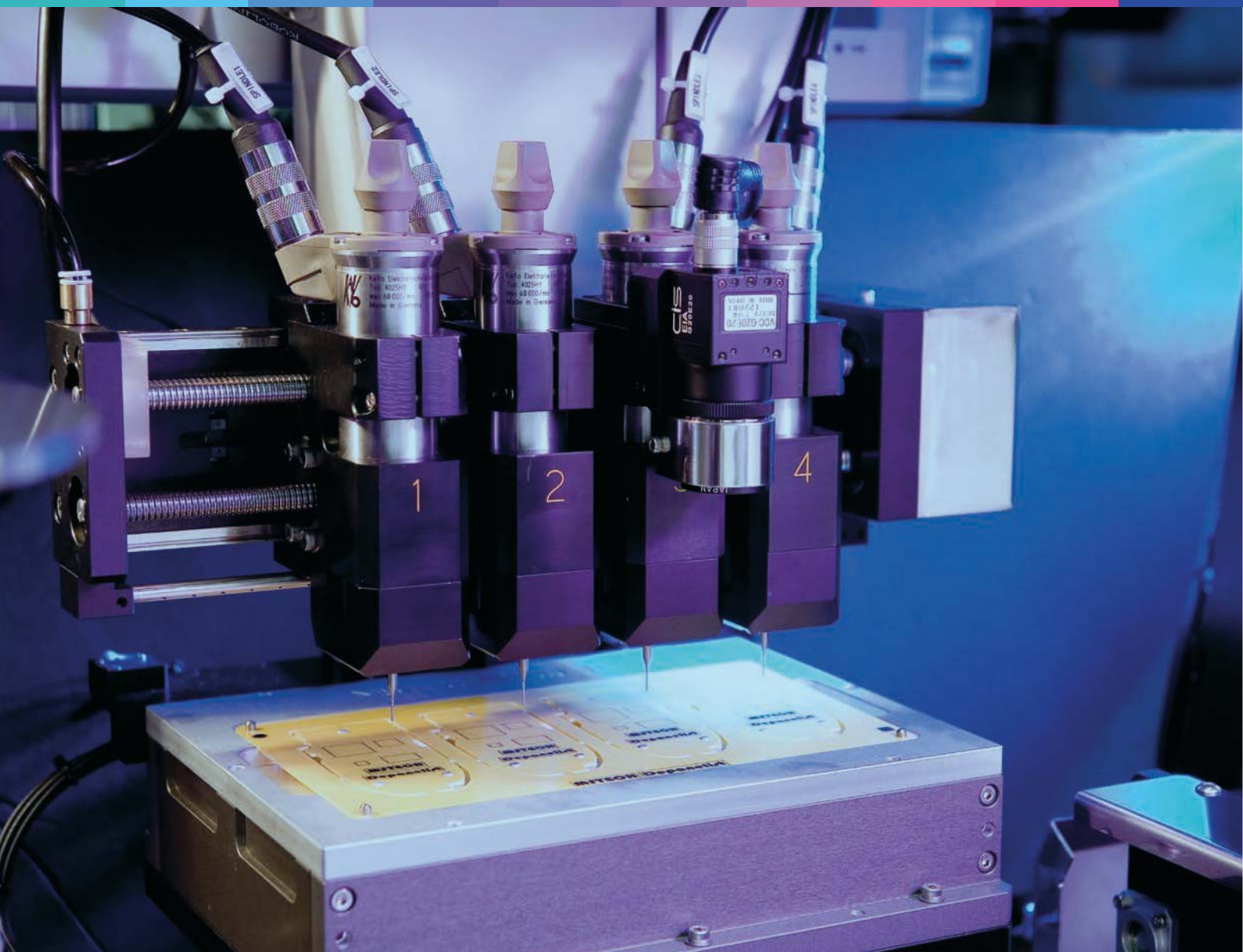
# MSTECH

EUROPE

Ultimate PCB Depaneling Router

## Depanelist

Handling	Depaneling	Dust collecting & clenning	Electrical test & programing	Protection	Curting	Inspection	Leah test	Auto Tray	SMT Full Process
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**LOGISTICCENTER**  
SPAIN

**JEAN BAPTISTE BÉNARD**

EUROPEAN BUSINESS DIRECTOR

[director@mstechcorp.eu](mailto:director@mstechcorp.eu)

T. +34 902 998 600  
M. +34 686 099 381

Ctra. BV-2116, Km. 2,5 Castellet i la Gornal  
08729 Clariana  
Barcelona - Spain



**BUSINESSCENTER**  
PORTUGAL

**NUNO BORGES**

EUROPEAN SALES MANAGER

[sales@mstechcorp.eu](mailto:sales@mstechcorp.eu)

T. +34 902 998 600  
T. +351 936 962 908  
M. +34 662 944 158

Rua do Conhecimento, 10  
Centro de Incubação de Empresas de Soutelo  
4730-575 Vila Verdes - Braga - Portugal

**VASCO MARTA**

CUSTOMER SUPPORT

[services@mstechcorp.eu](mailto:services@mstechcorp.eu)

T. +34 902 998 600  
T. +351 938 586 111  
M. +34 662 944 166



**DEMOLABCENTER**  
FRANCE

**JEAN PIERRE DOUCHY**

LABORATORY EXPERTISE DIRECTOR

[lab@mstechcorp.eu](mailto:lab@mstechcorp.eu)

T. +34 902 998 600  
M. +33 679 80 86 39

ZA La Rivoire, 1230  
Route de la Porte  
38630 Corbelin - France

A row of white industrial machines, likely CNC routers or similar manufacturing equipment, in a factory setting. Each machine has a large monitor mounted on top displaying a software interface, and a keyboard is positioned in front of it. The machines are arranged in a line, receding into the background. The floor is polished and reflective, and the ceiling has industrial lighting.

# Depanelist

**State of Art is our starting point**

High-Quality Materials  
Superior-Function Designs  
Advanced Operation Controls  
Precise Manufacturing  
Qualified Service Teams

# THE NEXT GENERATION!!

Excellent features of **Depanelist** guarantee the safe performances.

Highly accurate and smooth cutting processes will not damage the surfaces, assembled parts, and components.

At the same time, Depanelist will satisfy all customers' expectations and requirements without limitations.

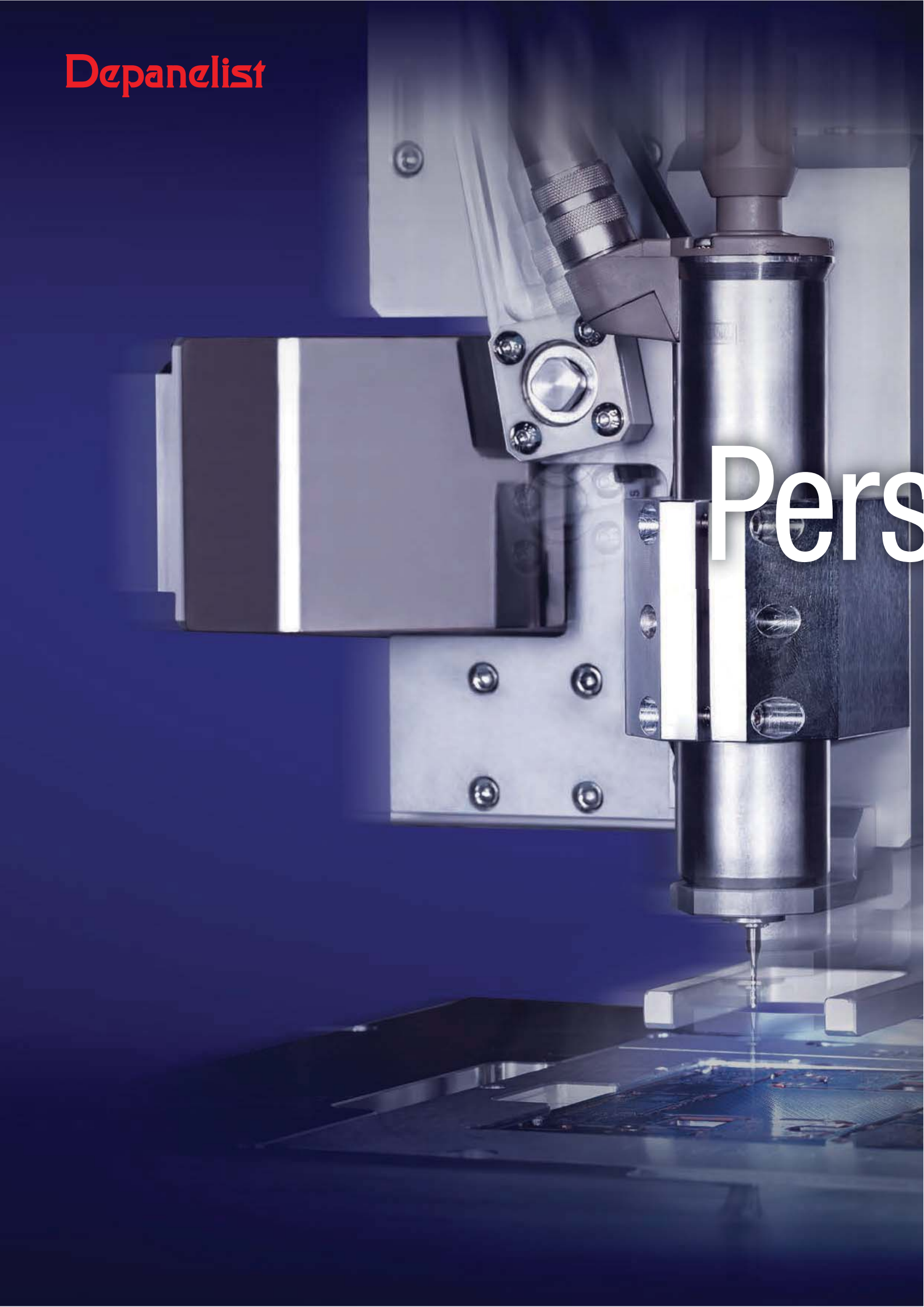
**MSTECH** will provide outstanding depaneling systems to meet the various customers' needs.





Depanelist

Pers



# suit of Perfection

**Depanelist** the world's most technically  
advanced depaneling router system



# **DPL-D** Patent

## FULLY AUTOMATIC DUAL IN-LINE ROUTER

- ◆ Independently Working Dual Station & Dual Lane
- ◆ Independently Working Dual Transfer (X2)
- ◆ Mixed & Mass Productivity (Maximum Depaneling Performance)
- ◆ Automatic Pitch Adjustment for Multi-Dual Spindles (1~5 X2)
- ◆ Real-Time Monitoring of Spindle RPM (Option)
- ◆ Bit Broken & Slip Down Detection
- ◆ Quick & Easy Programming with Camera & MPG/JOG
- ◆ User friendly GUI based on IPC & Touch LCD (X2)
- ◆ Compact Footprint (1M Width)



# **DPL-S**

## FULLY AUTOMATIC SINGLE IN-LINE ROUTER

- ◆ Fastest Cycle Time from Dual Spindle (3~5 Spindle Optional)
- ◆ Dual Transfer for Minimizing Idle Time
- ◆ Vacuum Type or Gripper Type Unloader
- ◆ Real-Time Monitoring of Spindle RPM (Option)
- ◆ Bit Broken & Slip Down Detection
- ◆ Pallet Transportation System or Pallet Shuttle (Option)
- ◆ Auto Tray Function (Option)
- ◆ Quick & Easy Programming with Camera & MPG/JOG
- ◆ CAD/CAM Data Conversion & Edge Detection (Option)



# **DPL-ST** **NEW**

## FULL AUTO SINGLE IN-LINE ROUTER + AUTO TRAY

- Auto Tray Function
- Fastest Cycle Time by New Crank Type Z-Axis
- Real-Time Monitoring of Spindle RPM
- Shuttle Type In-Let Conveyor (Free Lay-Out)
- Pass/Fail PCB Separation
- Selective Use of Single or Dual Spindle
- Programless Loader & Unloader Position
- ID Verification with Fingerprint (Option)
- Interlock with AGV System (Option)



## **Outlooks**







## TWIN SHUTTLE STANDARD ROUTER

- Fastest Cycle Time from Dual Spindle (3~5 Spindle Optional)
- Mixed Production & Auto Spindle Pitch Adjustment
- Bit Broken & Slip Down Detection (Option)
- Safety Area Curtain
- Compact Footprint
- Quick & Easy Programming with Camera & MPG/JOG
- Barcode Interlock & MES Interface (Option)
- CAD/CAM Data Conversion & Edge Detection (Option)
- All Diagnostic Intellectual Dust Collector (Option)



## SINGLE SHUTTLE STANDARD ROUTER

- Fastest Cycle Time from Dual Spindle (3~5 Spindle Optional)
- Bit Broken & Slip Down Detection (Option)
- Compact Footprint
- Quick Model Changeover
- User friendly GUI based on IPC & Touch LCD
- Quick & Easy Programming with Camera & MPG/JOG
- Barcode Interlock & MES Interface (Option)
- CAD/CAM Data Conversion & Edge Detection (Option)





# **DPL-TW(SW)** **SAWING**

## TWIN SHUTTLE SAWING SYSTEM

- ◆ Twin Table for Minimizing Idle Time & Mixed Production
- ◆ Simultaneous Top/Bottom Dust Removal
- ◆ Rotating Sawing Head (0~270°) by Servo (Option)
- ◆ Safety Area Curtain
- ◆ Compact Footprint
- ◆ Quick Model Changeover
- ◆ User friendly GUI based on IPC & Touch LCD
- ◆ Quick & Easy Programming with Camera & MPG/JOG
- ◆ Barcode Interlock & MES Interface (Option)



## Options



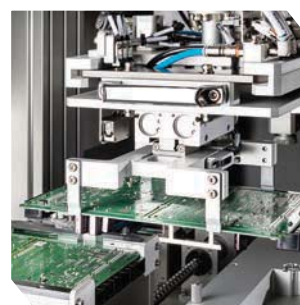
Vision System+MES



Auto Vertical Rack Insert



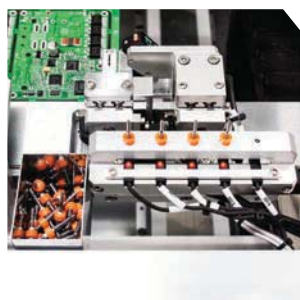
Pallet Transp. System



Grip Unloader



500W Spindle



ATC



PCB Unloader



Universal Jig

# Outstanding Features & New Technologies

## Hardware Features

### **Mixed and Mass Production** Patent

Twin-tables (single-side and dual-side) allow continuous operations without downtime, which provides the maximum productivity.

Multi-tasking operations enable even mixed production for different models.

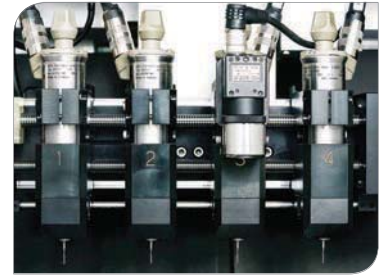
### **Automatic Width Adjustment for Multi-Spindles** Patent

Multi-spindle (2~5) can memorize all different PCB pitches.

Customers can achieve flexibilities for mixed and mass productions.

### **Real-Time Monitoring of Spindle RPM**

Spindle RPM is monitored by sensor in real time, which can protect PCB & its components from stress or damage due to abnormal RPM change while cutting. Bit Slip Down is also detected.



## Software Features

### **ID Verification with Fingerprint (Option)**

As more enhanced security function than previous log-in system, customer can manage the machine operation & maintenance more efficiently. Fingerprints of authorized persons are registered in the system with their face picture, and they can log in the system with their fingerprints. The log-in record remains at Log File of system.



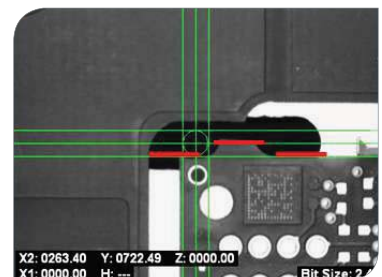
### **Edge Detection (Option)**

As a powerful Vision System function, the both sides PCB edges beside a cutting tab are detected and compensate cutting position by tolerance of boards. The Edge Detection function can make the perfect flush cutting accuracy (0 ~ -20μm) while typical accuracy is within +/-0.1mm. Both linear and curvilinear Edge Detection are available.



### **Auto Programming & Dimensional Inspection (Option)**

The concept of the Edge Detection function can be also used for Automatic Programming and Dimensional Inspection after depaneling. The special Vision System scans a panel and acquires all cutting positions of the panel automatically with edge tolerance offset. Also Dimensional Inspection after depaneling is optionally available.



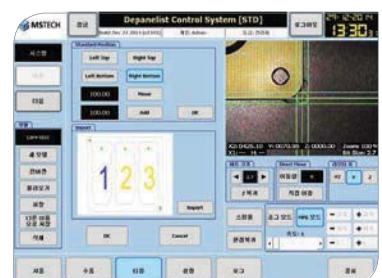
### **CAD/CAM Data Conversion (Option)**

The cutting data of a panel can be acquired from CAD/CAM Data Conversion function more easily and simply than typical camera-aid teaching method. This function can be used for offline programming.

### **Full Graphical User Interface**

Easiest operation & maintenance are possible by Full Graphical User Interface and CCD camera. MPG provides quick & convenient teaching for detail functions without additional teaching pendant.

Self Diagnosis Mode / Teaching & MES interface are also available.



### **Barcode Interlock & MES / LMS (Line Monitoring System)**

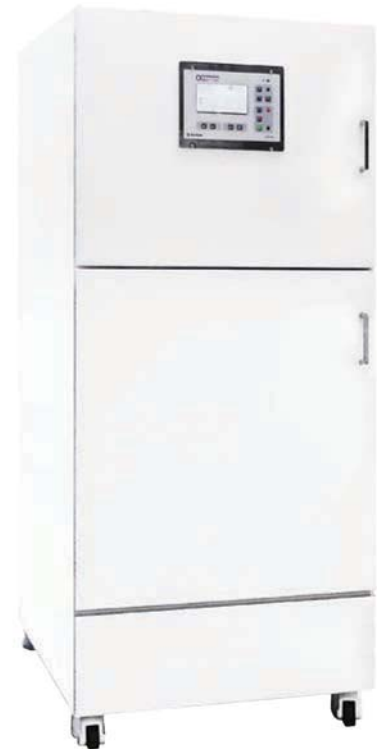
*Features & Specifications are subject to change without prior notice for improvement.*



# Peripheral Equipment & Customization

## Dust Collector **NEW**

- All Diagnostic Intellectual Dust Collector
- Real-Time Monitoring System (Router UI Interlock & Pop-Up Window)
- Filter Tear & Block Detection
- Dust Outlet Leak Detection (Anti-Pollution)
- Dust Box Full Detection
- Real-Time Blower Current Monitoring
- Auto Pulsing
- Router Damper Differential Pressure Detection



## Customization

- Customized Operator-less Complex System & Process Establish
- Full Operator-less Process Development (Magazine Loader + Router + Inspection + Tray Function)
- Automatic Measurement Inspection
- MES (Mfg. Execution System) & LMS (Line Monitoring System)
- Pass/Fail PCB Automatic Separation
- Auto Vertical Rack PCB Insert
- Other Customized Systems Development Available



