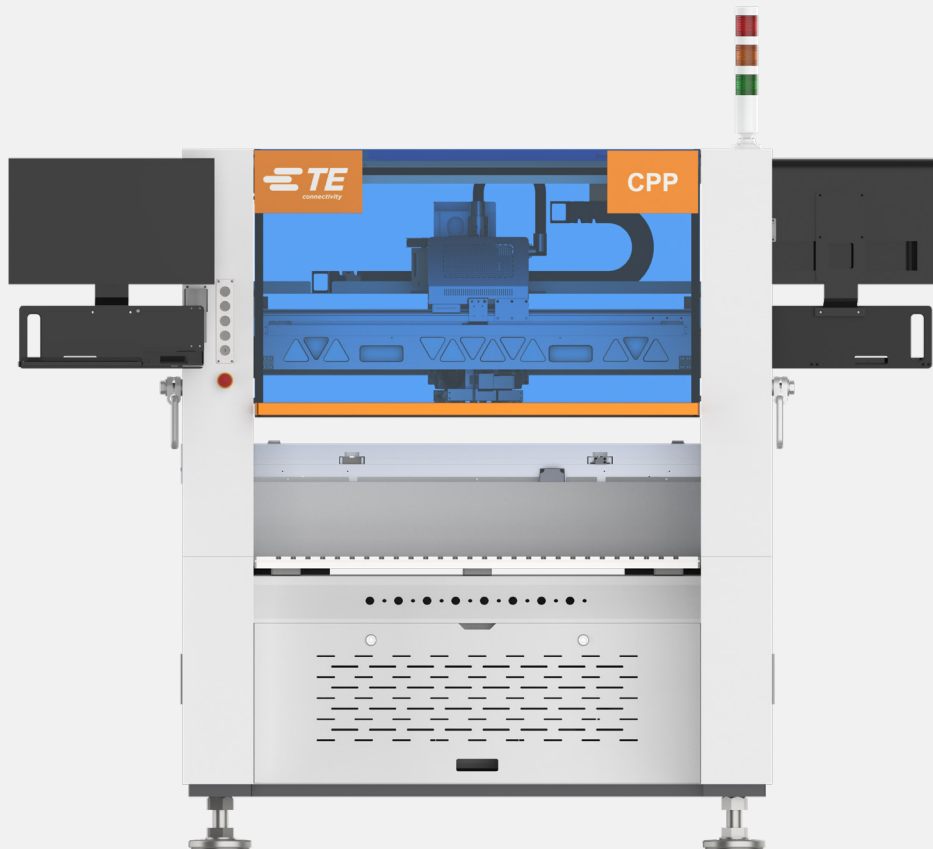


# CPP-500 CONNECTOR PICK-PLACE MACHINE

Product Brochure



# CPP-500 CONNECTOR PICK-PLACE MACHINE

TE CPP-500 is a fully automated Pick-and-Place system, precision-engineered for the online pre-assembly of Press-fit connectors. It handles critical components such as high-speed, high-density I/O, and backplane connectors, preparing them for reliable final press-fit operations through integrated preload stabilization and precision monitoring. Designed for high-reliability manufacturing, it delivers the consistency, flexibility, and defect prevention essential in automotive electronics, data communications, and industrial control applications.

## Key Features

- Pre-Press Force vs. Distance Monitoring System
- Advanced Pick-Place Gripper System
- Diverse and Customizable Feeding Systems
- Integrated 3D Vision Inspection System

## Key Features Description

<b>Pre-Press Force vs. Distance Monitoring System</b>	<ul style="list-style-type: none"><li>• Ensures Accurate, Consistent Insertion: Features 500N pre-press force with real-time FVD monitoring via built-in load cells</li><li>• Programmable for Each Connector: Preload settings can be customized per connector type</li><li>• Prevents Vibration &amp; Misalignment: The applied pre-press force stabilizes high-density connectors during transport</li></ul>
<b>Advanced Pick-Place Gripper System</b>	<ul style="list-style-type: none"><li>• Intelligent, Adaptive Grip: Motor-controlled gripper auto-adjusts force for delicate to deformable components</li><li>• Enables Rapid Changeover: Automatic, tool-free gripper change</li><li>• Doubles Throughput with Dual Heads: Dual Z-axis design allows simultaneous pick-and-place operations</li></ul>
<b>Diverse and Customizable Feeding Systems</b>	<ul style="list-style-type: none"><li>• Handles Mixed Production: Supports tube and tray feeding in different sizes for various connectors</li><li>• Independent Process Monitoring: Features a dedicated HMI for clear operation and material status oversight</li></ul>
<b>Integrated 3D Vision Inspection System</b>	<ul style="list-style-type: none"><li>• Inspect Before Placement: The configured ULC 3D camera checks for missing pins, bent pins, and pin height</li><li>• Prevents Defective Assembly: Proactively screens out non-conforming connectors before they reach the PCB</li></ul>

## Industries and Applications

- Data Communications
  - Data Center
  - Servers
  - Switching and Routing
  - Storage
- PCBA
- IGBT
- Automotive

## Machine Specification

Machine General	
Machine Size(LxWxH)(mm)	2695*2230(Depth)*1800(H)
Machine Weight(kg)	2560KG
Main Power Supply	380V/50Hz, 10KVA
Compressed Air Pressure	5-6BAR, 50L/Min
Insertion Accuracy (@3 sigma)	±0.02MM
Gripper Quantity per Gantry	2
Max. Insertion Force (N)	500
Conveyor Height (mm)	950 ±20
Conveyor Width Change	Automatic
Min. Component Space Requirement (mm)	3MM

Component Feeding	
Max. Tube Feeder Qty.	18
Max. Tray Feeder Qty.	4


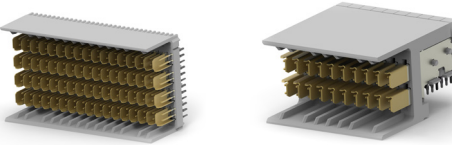
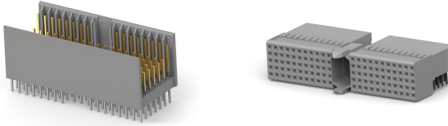

Product	
Max PCB size (LxW)(mm)	880*760MM(Depth)
Min PCB Size (LxW) mm)	110*110MM
PCB Thickness (mm)	4-10MM
Max PCB Weight (kg)	20KG
Max Connector Width (mm)	76MM
Max Connector Height (mm)	80MM
Max Connector Weight (kg)	2









Picking and Placing Head	
Gripper Control Method	Servo Motor
Gripper Force Control	Stroke + Current
Gripper Change Mode	Automatic
Gripper Magazines Quantity	7
Gripper Changeover Time(s)	2 Seconds
Z Axis Force Control	Load cell + Force curve
Gripper Rotation	0-360 Degree

Vision	
Board Centering Method	Vision(Fiducial Mark)
Camera Type	CCD
Auto Holes Locate	Yes
PCB Height Inspection	Optional
3D Camera	Yes

Software	
Camera Guide Programming	Yes
Operation System	Win10
Permission Management	Yes
Production Performance Monitor Function	Yes
Offline Programming	Yes

## Compatible Connectors

Connector Type	Figure
STRADA-Whisper Header & Receptacle	
Z-PACK HM-ZD & HM-ZD+ Header & Receptacle	
Z-PACK 2mm HM Header & Receptacle	
Z-PACK Slim UHD Header & Receptacle	

Connector Type	Figure
<b>Z-PACK TinMan Header &amp; Receptacle</b>	
<b>MULTIGIG RT Vertical and Right Angle</b>	
<b>IMPACT Header &amp; Receptacle</b>	
<b>MULTI-BEAM Header &amp; Receptacle</b>	
<b>Eurocard Vertical and Right Angle</b>	
<b>Pluggable I/O Connectors &amp; Cages with EMI spring, heatsink, and lightpipes</b>	
<b>AdrenaLINE 224G</b>	
<b>ICCON</b>	

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**Phone:**

Americas	1-800-722-1111
EMEA	49-6151-607-1518
APAC	86-021-3325-9030

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02-26