

# T-320 Tray Presentation System

**Precise Feeding, Locating and Stacking of  
Molded JEDEC Trays & Thermoformed Trays**

**Engineered for Machine Builders and Systems Integrators**



Videos of the T-320 in operation are available on the APT web site.



## The APT Advantages

- Lower Cost
- Fast to Market
- Reduced Design Risk
- Easy Integration
- Advanced Features
- No Special Software

## The Handling Process

A stack of trays is placed on the topside of the input station. Upon command, each tray is automatically removed from the bottom of the stack, transferred into the presentation station and precisely clamped in position for processing by the user.

When processing is complete, the clamps release and the tray moves automatically to the output station where it is stacked. As it is being stacked, the next tray moves onto the presentation station, and the process repeats.

Trays may be added or removed from the system at any time without process interruption. Sensors, coupled to an internal controller monitor the handling process and alert the user to any fault conditions.

**APT Automation LLC** **APT**

[www.aptautomation.com](http://www.aptautomation.com)

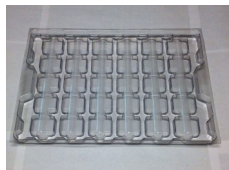
# T-320 Tray Presentation System

## Features

- Top loading and un-loading allows trays to be added or removed from the system at any time without process interruption.
- An initialization routine performs a complete self-check of the system at each power up.
- The user is automatically signaled if the input stack is low or output stack is full. This is in addition to seven “fault condition” alerts that stop the process and warn the user.
- A “soft stop” feature prevents component shift or upset during tray moves.
- An internal controller automatically directs all motions, identifies fault conditions and provides alerts to the user.
- Trays are accurately clamped in position (x and y axis) during processing.
- The user’s interface with the T-320 only requires a few simple signals (contact closures). No special user software is required, making integration quick and easy.
- A diagnostics mode can be entered with a simple switch closure. This allows the user to manually check all sensors and actuators for proper operation.



JEDEC Tray Stack



Clear Thermoformed Tray



Waffle Packs in Carrier

## Typical Applica-

- Laser Marking
- Assembly In-feed
- Tape & Reel
- Vision Inspection
- IC Programming
- Die Handling
- Dispensing
- Singulation
- Media Transfer

## \*Specifications

Tray types accommodated:	Thick & Thin JEDEC per Std. 95.1 & Thermoformed
Stack Capacity	11 KG (25 lbs.)
Tray exchange time:	3-5 seconds typical (w/o process time)
On-board controller:	Programmable Logic Controller (PLC)
Position repeatability:	+/- 0.038 mm (+/- 0.0015")
Tray transport:	Micro stepper driven belts with “soft stop”
Fault Annunciation:	6 fault conditions alerted automatically
User interface access:	Bottom or end entry
Surface finishing:	Exposed tooling— Nickel; Covers— SS
Services required:	24 VDC, 3 A, 60 - 80 PSI clean air
Footprint dimensions:	1308 x 204 mm (51.5 x 8") - [3 module system]

\*Specifications subject to change

**APT Automation LLC** **APT**

[www.aptautomation.com](http://www.aptautomation.com)