

# DELTA MATRiX

High Performance, Configurable Pick-and-Place Handler



## High Productivity

- 16,000 uph
- Up to x32 test site parallelism
- Auto contactor cleaning
- Auto retest, auto retry
- Continuous load/unload, lot cascading
- Universal recipe

## Flexibility

- 3 x 3 mm to 51 x 51 mm package handling
- Compatible with existing test site pitches

## Chamberless design

Active Thermal Control per site,  
other T-Core options

NVcore Vision options

Class 0 closed-loop Ionization

MEMS device test capability

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## Specifications

### PLATFORM

#### Media

JEDEC trays

#### Input and Sorts

7 - Automated tray stacks  
3 - Manual trays in pullout drawer

#### Test Site

x1 to x32  
Pitch – x: 31.75 mm up to 80 mm  
Pitch – y: 30 mm up to 80 mm  
Horizontal docking  
Custom pitches optional

#### Plunge Force

227 kgf  
480 and 567 kgf (optional)

#### NVcore Vision Options

2DID  
In-Socket Part Detection

#### Index Time\*

x1 to x4: 550 ms  
x8: 630 ms  
x16: 800 ms  
x32: 3,900 ms

#### Throughput\*

Up to 9,000 uph  
Up to 16,000 uph (optional)

#### Jam Rate\*

1 in 12,000 units (ambient-hot)  
1 in 5,000 units (cold)

#### Productivity

Auto Retest  
Continuous Load/Unload  
Auto Temperature Calibration  
Lot Cascading (optional)  
Auto Contactor Cleaning (optional)

#### Temperature Range

+50°C to +155°C  
-55°C to +155°C (optional)  
+175°C (optional)

#### Thermal (Base)\*

Chamberless tri-Temperature test site  
Active Thermal Control per site  
Temperature Accuracy (with thermal contactors)  
x1 to x8:  $\pm 2^{\circ}\text{C}$   
x16 to x32:  $\pm 4^{\circ}\text{C}$   
+175°C:  $\pm 5^{\circ}\text{C}$

Specified values are dependent on the use of contactors that comply with Cohu ITS's thermal contactor specification (results may be better — device-dependent)

Soak capacity: 3 trays

DUT Thermal Conditioning

#### T-Core Thermal Options

LN2 cooled  
Multiple feed loop options\*  
Patented thermal interface technology  
Single insertion multiple temperatures (optional)

#### Tester Interface

Loadboard compatibility (X and Y pitch)  
Docking height 990 to 1,178 mm  
Universal docking design can reuse most existing interface hardware  
RS 232, GPIB and P849  
Parallel (optional)

#### ESD Control

Decay: 1,000V to 100V in 10 s  
Balance:  $\pm 50\text{V}$   
Class 0  $\pm 5\text{V}$  (optional)

#### User Interface

Windows-based color touchscreen

#### Power Requirements

200-240 VAC, 50/60Hz, Three Phase, 32 A

#### Standards

CE, Certified per SEMI S2/S8 and NFPA 79 requirements

### KITS

#### Device Type

QFP, TQFP, TSOP, SOIC, CSP, BGA, QFN, WLCSP and others

#### Package Size

Minimum: 3 mm x 3 mm  
Maximum: 51 mm x 51 mm

#### Package Changeover

< 30 minutes typical

#### Contactors

Cohu ITS high-performance or customer-specified contactors

#### Docking

Supports Delta Design universal docking  
All standard docking

\* Consult factory for specific applications.



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For global sales locations and support, please visit  
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Specifications subject to change without notice.  
For detailed performance specifications, please contact Cohu.

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