

MATRiX II Machine Training

Highly Performance Configurable Pick-and-Place Handler



Course Description

This training material introduces the student to the MATRiX test handler. The training is offered in three levels from the perspective of an Operator, a Maintenance Technician and an Advanced Technician:

- Level 1 - Basic: Focused on basic operational procedures: loading/unloading parts, troubleshooting, and general equipment safety
- Level 2 - Intermediate: Maintenance focused course intended to get the student familiar with the product. Operational requirements, setup and alignment, device workflows, and mechanical/electrical diagnosis
- Level 3 - Advanced: Maintenance focused course intended to get the student familiar with the product. Complex mechanical/electrical diagnosis, motor tuning, setup and alignment

Course Outline

- Overview
- Graphical User Interface (GUI)
- Machine Platform
- Troubleshooting
- Electrical and Thermal Control
- Q&A, Test, Wrap Up

Course Length

- Level 1: Basic - half a day (four hours)
- Level 2: Intermediate - five days (forty two hours)
- Level 3: Advanced - ten days (eighty hours)

Recommended

- English - written and spoken

Who Should Attend

- Level 1 : Operator
- Level 2: Maintenance Technician
- Level 3: Advanced Technician

Prerequisites

- Level 2: Level 1 training and a minimum of thirty days experience with the MATRiX II test handler
- Level 3: Level 2 training and a minimum of six months experience with the MATRiX II test handler



Automotive



Mobility



IoT/IoV & Optoelectronics



Computing & Network



Industrial & Medical



Consumer

- Full tri-temp range -55°C to +175°C
- Easy access with chamberless design
- NVcore Vision options
- Active Thermal Control per site, other T-Core options
- Class o closed-loop Ionization
- MEMS device test capability: PTU & Acoustic

MATRiX II Machine Training

Level 1: Basic

Day 1

1 - General Operating Conditions

- Handler Status Information
- Handler Startup Procedure

2 - Q&A

- Q&A, Test, Wrap Up

Level 2: Intermediate

Day 1

1 - Overview

- Handler Overview and Introduction
- Operation of the Handler

2 - Graphical User Interface (GUI)

- UI Screen Orientation
- UI Screen Overview
- Main Screen
- Operation Screen
- Maintenance Screen
- Datalog Screen
- Mechanism Setup Screen
- Software Setup Screen

Day 2

3 - Theory of Operations - 5 Main Mechanical Components Area

- Power and Control
- Input/Output
- Leg Assembly
- Testsite
- Top Compartment

Day 3 - 5

4 - Handler Basic Mechanical Alignment

- Alignment Overview
- Conveyor
- I/O PnP
- Testsite Chucks
- ATT Platform Alignment
- TSA Guide Alignment

5 - Kit Installation and Setup

- Kit Installation
- Setup and Fine Tuning
- Thermal Fine Tuning

6 - Troubleshooting

- Mechanical
- Electrical

7 - Q&A

- Q&A, Test, Wrap Up

Level 2: Intermediate (ATC Option Only)

Day 1

1 - ATC Operation

- Introduction to ATC

2 - ATC Hardware

- T-Core Box
- ATC Chucks
- Power Supply
- Cold gas hardware
- Others

3 - ATC using Adaq

- Adaq Overview

- Full tri-temp range -55°C to +175°C
- Easy access with chamberless design
- NVcore Vision options
- Active Thermal Control per site, other T-Core options
- Class o closed-loop Ionization
- MEMS device test capability: PTU & Acoustic

MATRiX II Machine Training

Level 3: Advanced

Day 1 - 5

1 - Mechanical Alignment

- Alignment Overview/Preparation
- Conveyor Belt Phasing Check/Adjustment
- Conveyor Z Elevation and Theta Y Alignment
- Chamber X Elevation and Theta Y Alignment
- Chamber Door Mechanical Bar Theta Y Setup
- IPNP / OPNP Y Gantry Theta X Alignment
- TPS Tray Finger Elevation Setup (Theta XY Axes)
- OPNP Y Gantry Theta-Z Alignment
- TPS Theta Z Alignment
- IPNP Y Gantry Theta Z Alignment (16K Handler Only)
- Conveyor Theta Z Alignment
- OPNP / IOPNP Head Theta Z Alignment
- IPNP Head Theta Z Alignment (16K Handler Only)
- TPNP Head Theta Z Alignment
- Test Site Mechanism Setup
- Shuttle Theta Z Alignment
- ATT Lower and Upper Travel Check
- ATT Platform Alignments
- ATT-TPS Teach
- Manual Tray Drawer (MTD) Setup
- Tray Stack Assembly (TSA) Guide Setup
- Tray Stack Assembly (TSA) to ATT Alignment
- Pick Tip Alignments
- Chamber Top Cover Door Setup

Day 6 - 8

2 - Auto Teach

- Auto Teach Overview
- TPNP Auto Teach
- IPNP Auto Teach
- OPNP Auto Teach
- Kit Setup and Cycle Parts

Day 9

3 - CanOpen Troubleshooting with CME

- Motor/IO File Loading Procedures
- Standalone Method Loading of Motor File
- Diagnostic with CME2 Program

Day 10

4 - Electrical and Thermal Control

- Electrical
- Thermal Control

5 - Q&A

- Q&A, Test, Wrap Up

Training Locations

- Level 1 - Basic: on-site customer class
- Level 2 - Intermediate: on-site customer class or Cohu training facility
- Level 3 - Advanced: on-site customer class or Cohu training facility

Customized classes and on-site customer classes are available to suit your training needs.

More Information/Registration

- Contact training@cohu.com

Training Course Catalog

- Visit our handler training catalog to view our other training offerings www.cohu.com/handler-training