



KLA - Automation User Guide

Global Support Services (GSS) Knowledge Services



9022549-000

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KLA Automation User Guide

KLA - Corporation

One Technology Drive,
Milpitas, CA. 95035

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Original Instructions.

Send any comments to: GSS.ECMSAdmin@KLA-Tencor.com

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Preface

Manual Purpose

This User Guide describes:

- Hardware components of the KLA Automation™ System for KLA instrumented test wafers
- Setting up the system for automatic missions
- Managing inventory
- Controlling the KLA Automation System
- Launching user missions using SensArray® Temperature Wafers and Automation Metrology™ Wafers

Manual Structure

This manual consists of this preface, 4 sections, and a glossary. Each section is briefly described below:

Preface

Introduces the manual.

Section 1: Introduction

This section provides an introduction to the KLA Automation System.

Section 2: KLA Automation System Hardware Components

This section describes the functions and controls of the KLA Automation System hardware components.

Section 3: KLA Automation System Web UI

This section describes how to use the Web UI of the KLA Automation System.

Glossary

Defines abbreviations and terms used in the manual.

Reference Documentation

The following table specifies documents referenced in this manual.

Document Number	Title
9022547-000	CPG KLA Automation System Safety Manual
9022552-000	KLA Automation System GEM/SECS Reference Manual

Conventions Used in this Guide



WARNING

*Indicates danger to personnel.
Includes instructions needed to prevent any damage.*



CAUTION

*Indicates danger to Equipment.
Includes instructions needed to prevent any damage.*

When either of the above symbols appear in this manual, follow the advice given. Failure to do so may endanger yourself or others, and can result in damage to the Equipment.



IMPORTANT

*Indicates there is possibility for a failure.
Includes the instruction needed to prevent the failure.*



NOTE

*Indicates there is additional information connected with the current subject.
Includes that information.*

Special terms

Special terms (dialog box names, button names and any other unique term) are in **bold**, as demonstrated in the example below:

File menu, **Start** button.

Hyperlinks

Hyperlinks to references in this document appear in blue (on screen).
Hyperlinks to web sites, or external documentation, are blue and underlined.

1.

Introduction

1.1 KLA Automation System Overview

The KLA Automation System provided by KLA automates the use of instrumented wafers in a semiconductor wafer fab. The KLA Automation System is used with SensArray temperature wafers and Automation Metrology motion analysis wafers to enable real-time measurement and monitoring of parameters that are critical to fab yield and productivity.

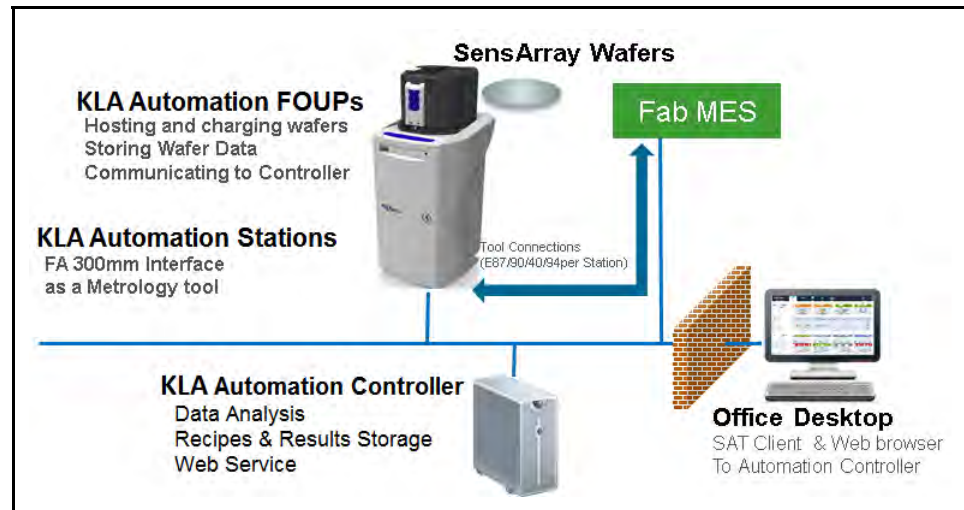
The KLA Automation hardware consists of the following components:

- Battery-powered, instrumented wafers that perform the actual measurements and reside in Automation FOUPs; examples are SensArray Temperature Wafers and Automation Metrology Wafers (to measure motion and humidity)
- Battery-powered Automation FOUPs to transport and store instrumented wafers, and to provide wafer charging and data communications (see [Section 2.2](#) for information about KLA Automation FOUPs)
- KLA Automation Stations that charge Automation FOUPs and provide the communication between the FOUP and the fab host (see [Section 2.1](#) for information about KLA Automation Stations)
- KLA Automation Controller to control the system

1.2 KLA Automation System Operation

The KLA Automation System provided by KLA is used to deploy and manage instrumented wafers in a semiconductor wafer fab to enable real-time measurement and monitoring of parameters that are critical to fab yield and productivity. Operation is completely automated (see [Figure 1-1](#)).

Figure 1-1: KLA Automation System Topology



Measurement “missions” are executed automatically under control of the fab manufacturing execution system (MES). The instrumented wafers are transported by the fab OHT and automated material handling system (AMHS) to and from the tool under test. Tests are executed on process tools without removing them from full automated mode. Mission results are communicated directly to the MES, plus results can be automatically available to engineers inside and outside the fab through a web-based GUI and desKLAop analysis software system.

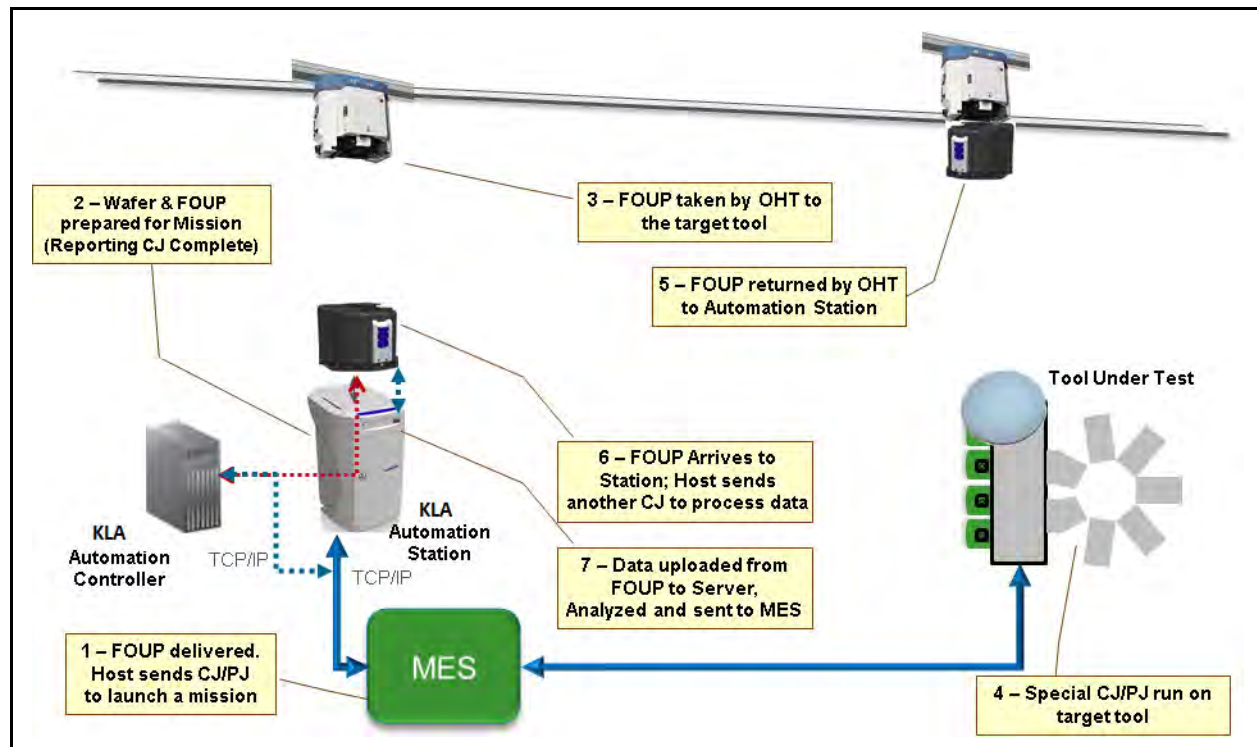
Measurements are easy to accomplish without removing the process tools from production use and without manual handling or recipe execution in the fab. This enables KLA metrology wafers to be used for in-line monitoring of process and mechanical system parameters, preventing excursions that can cause yield loss, and improving tool matching performance.

Examples of instrumented metrology wafers from KLA that are supported by this system are: the SensArray EtchTemp Wafer for monitoring etch temperature; and the KLA Automation Metrology Wafer for monitoring AMHS FOUP and equipment front end wafer handling.

To create and launch a new mission (see [Figure 1-2](#)), the MES system sends the instrumented wafer(s) in a KLA Automation FOUP to the KLA Automation Station (1). The MES communicates with the KLA Automation Station to initiate the mission with a Control Job/Process Job (CJ/PC). If the correct wafers for the mission are present in the FOUP with sufficient charge, the CJ/PJ is completed (2). The FOUP is transported to the target tool under test by the standard fab AMHS (3). The MES host system initiates the correct test recipe on the target tool in full auto mode. When the test is complete, the Automation FOUP is returned to the Automation Station (5). When the Automation FOUP

arrives at the Automation Station, the host executes another CJ/PJ to process the data (6). The mission results are uploaded to the KLA Automation Controller and the Go/No Go results are reported to the host from the Station, per the metrology recipe in effect (7).

Figure 1-2: KLA Automation System Mission Sequence



1.3 KLA Automation Missions

There are 3 ways to launch and control KLA Automation missions:

- 1. Automatic missions:** controlled by fab MES via Factory Automation (as described above); results are reported back to the MES (see *9022552-000, KLA Automation System GEM/SECS Reference Manual*)
- 2. User missions:** initiated by an operator via the KLA Automation Web UI; the Automation FOUN is carried manually to the target tool and back to the station
- 3. Manual missions:** initiated through the SA Tools software installed on a laptop that is directly connected to the Automation FOUN and provides all the required parameters for starting a mission; the Automation FOUN is carried manually to the target tool and the mission is manually executed on that tool

1.4 Regulatory Compliance Statements

1.4.1 Prohibitions on Modifications

Changes or modifications not expressly approved by KLA could void the user's authority to operate the equipment.

1.4.2 Class A Digital Device

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

1.4.3 Special Accessory Installation: Manual Use Laptop/FOUP cable

1. Verify SensArray Tools software is installed before connecting cable to ensure appropriate communication settings.
2. Connect power supply to barrel connector in middle of manual use case cable.
3. Connect manual use case RJ (Ethernet) connector to Ethernet port on laptop.
4. Connect manual use case cable to FOUP magnetic connector on the back of the FOUP to the left of the power switch. The factory provided ferrite must be installed on the magnetic connector side of the manual use case cable.

1.4.4 Singapore Regulatory Statement

COMPLIANCE LABEL



1.4.5 Israel Regulatory Statement

1.4.6 Input Power for Battery Charging

1. **For 12V DC:** The device is powered through listed AC/DC power adapter with Limited Power Source (LPS) at minimum rate of 3.75A.
2. **For 24V DC:** The device is powered through listed AC/DC power adapter with Limited Power Source (LPS) at minimum rate of 4A.



NOTE

The power option through the Control Electronics Box (CEB) of the Automation System within the AM station.



DANGER

Use only batteries with built-in protection, and not intended to replace by an operator.

3. Input power rating for AF120 and AMW Wafer is mentioned in below table.

Table 1-1: Equipment input rating

AF120		AMW Wafer
12V DC	24V DC	5V DC
3.3A Maximum	1.8A Maximum	1A Maximum

4. Refer to the below mentioned table for equipment manufacturers and supplier.

Table 1-2: Equipment supplier and manufacturers

Equipment Supplier	Equipment manufacturing sites
SA Division	FOUP, Wafers - Milpitas, USA
	Wafer - FLEX, Migdal HaEmek, ISRAEL
	AM Station - Singapore

5. For the equipment charging input and output port, refer to the below mentioned table.

Table 1-3: Equipment charging input/output port

Equipment	Input port	Output port
AF120	12V	LAN Communication
	24V	
	8.3V (internal battery)	
AM Wafer	3.7V (from battery)	-

1.4.7 Environmental conditions for the equipment

Table 1-4: Environmental conditions

Wafer	Temperature	Pressure
AF120	0 - 85 °C	-
AM Wafer	0 - 85 °C (unlimited), < 120 °C (for one minute)	1E ⁻⁹ Torr - 760 Torr (Air, CDA, N ₂ or Ar) <i>Note: Clean the wafer only with dampened lint free cloth with deionized H₂O (IPA ratio 10:1)</i>

1.4.8 Critical component list



DANGER

Use only batteries with built-in protection, and not intended to replace by an operator.

User can see the below mark on the battery;

14		DANGER	ISO 7000-0434B (2004-1)
----	--	---------------	--------------------------------

FOUP - Rechargeable batteries pack (Shenzhen Bak, MN: 1850CA-2P-3J).

2.

KLA Automation System Hardware Components

2.1 KLA Automation Station

2.1.1 KLA Automation Station Function

The KLA Automation Station communicates with the KLA Automation FOUP to start missions and to extract the results after the missions are completed. The KLA Automation Station also recharges the KLA Automation FOUP between missions.

Figure 2-1 shows the KLA Automation Station (including the optional signal tower), with and without a KLA Automation FOUP loaded on the station.

Figure 2-1: KLA Automation Station



NOTE

If your system uses the optional signal tower, the signal tower is installed and configured at the time the rest of the system is installed.

2.1.2 KLA Automation Station Indicator Panel LEDs

The indicator panel at the front of the top cover (see [Figure 2-2](#)) contains all the Automation Station LEDs, as well as the Manual/Auto control button.

Figure 2-2: KLA Automation Station Indicator Panel

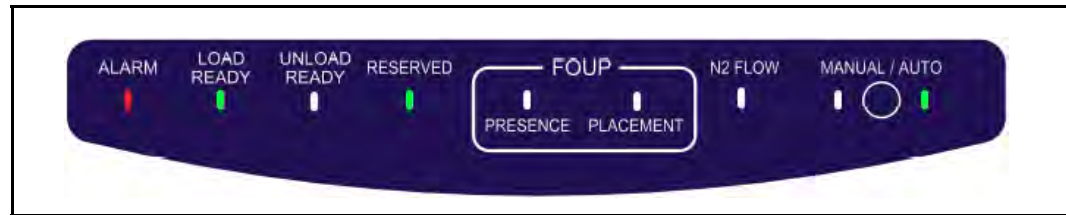


Table 2-1: KLA Automation Station Indicator Panel LEDs

LED Name	Color	Description
ALARM	Red	Indicates a critical error (for example, application has stopped working) that requires the operator to recover the Automation Station
LOAD READY	Green	Indicates the Automation Station is ready to receive a FOUP (there is currently no FOUP on the Automation Station)
UNLOAD READY	Green	Indicates the FOUP can be unloaded from the Automation Station (there is currently a FOUP loaded on the Automation Station)
RESERVED	Green	Indicates the Automation Station is reserved by the fab Host for a mission
FOUP PRESENCE	Green	Indicates a FOUP is present on the Automation Station
FOUP PLACEMENT	Green	Indicates a FOUP is fully placed on the Automation Station
Important: When a FOUP is seated properly, both the FOUP PRESENCE and the FOUP PLACEMENT LEDs are on.		
N2 FLOW		Indicates N2 is flowing from the Automation Station to the FOUP (in systems that include the N2 option)
MANUAL		<i>Blinking MANUAL LED</i> Indicates the Automation Station is in the process of initializing and is not yet ready for use <i>Steady MANUAL LED</i> Indicates the Automation Station is in Manual mode (user can manually place or remove a FOUP)
AUTO	Green	Indicates the Automation Station is in Auto mode (controlled by the fab Host and the OHT delivery system)

2.1.3 KLA Automation Station Indicator Panel Manual/Auto Button

The Manual/Auto control button is located between the MANUAL and the AUTO LEDs on the KLA Automation Station Indicator Panel (see [Figure 2-2](#)).

The button has two functions:

1. **Toggles between Auto mode and Manual mode**

Press and hold the Manual/Auto control button for 5 seconds to toggle the Automation Station between Auto mode and Manual mode, indicated by the AUTO and MANUAL LEDs.

2. **Operates the Automation Station** (when the Automation station is in Manual mode)

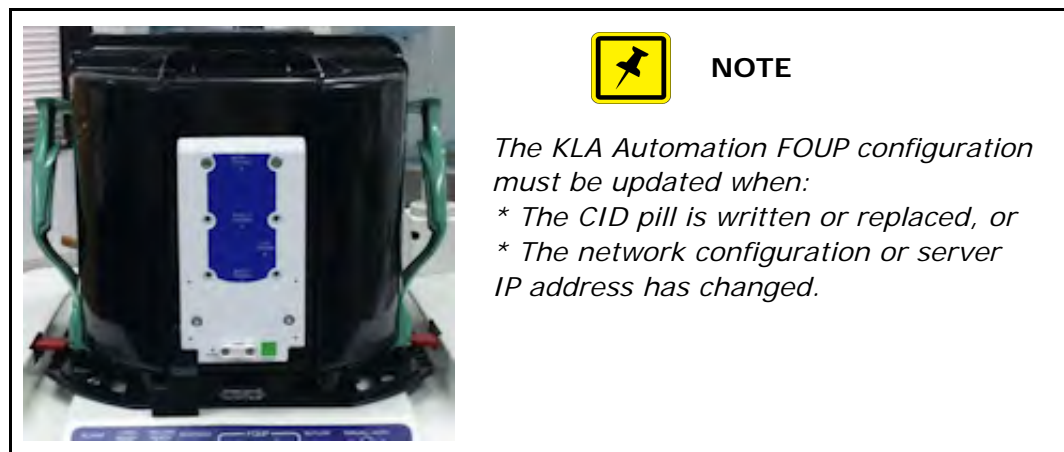
- When the FOUP is present on the Automation Station, press and release the button to unclamp the FOUP and switch it to the UNLOAD READY state (UNLOAD READY LED is green), which allows you to pick it up manually.
- When the Automation Station is in the LOAD READY state (LOAD READY LED is green):
 - Manually place the FOUP on the Automation Station.
 - Press and release the Manual/Auto control button to lock the FOUP and connect it to the Automation Station.

2.2 KLA Automation FOUP

2.2.1 KLA Automation FOUP Function

The KLA Automation FOUP transports the instrumented wafer to the equipment during missions. It also charges the wafer, stores the wafer data, and communicates the wafer data to the Automation Controller.

Figure 2-3: KLA Automation FOUP



2.2.2 KLA Automation FOUP Indicators and Controls

All FOUP indicators and controls are on the rear of the KLA Automation FOUP (see [Figure 2-4](#)).

Figure 2-4: KLA Automation FOUP Indicators and Controls

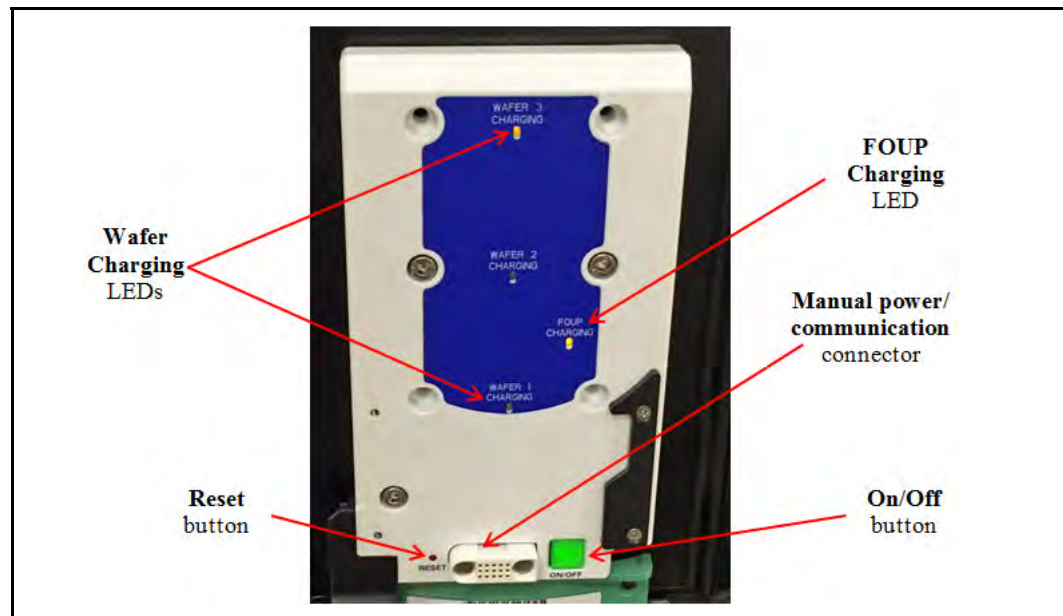


Table 2-2: KLA Automation FOUP Indicators and Controls

Control or Indicator	Color	Comments
Wafer Charging LED	Green	Blinks when the applicable Wafer is charging Steady when the applicable Wafer is present but not charging (Wafer is fully charged)
	Orange	Steady when the applicable Wafer is absent
FOUP Charging LED	Green	Blinks when the FOUP is charging Steady when the FOUP is powered On and at the Station but not charging (FOUP is fully charged)
	Orange	Steady when the FOUP is powered On but is not at the Station
Reset button	n/a	To press the Reset button, insert a thin stylus or pen tip into the hole
Important: If the FOUP is in an error state, reset it using the FOUP software (see Section 2.2.6 for details). If the software reset does not clear the error, then use the Reset button to perform a physical reset. Reset the FOUP only if it is an error state.		
Manual power/communication connector	n/a	Used to connect a laptop to the FOUP in order to perform manual missions, or provide power to a FOUP that has not been at the Station for a long time
ON/OFF button	n/a	To power down the FOUP, press and hold the ON/OFF button until the FOUP Charging LED turns off

2.2.3 KLA Automation FOUP Data Storage and Transfer

- When the Wafer is back in the Automation FOUP, it automatically transmits the data it collected during the mission to the Automation FOUP.
- When the Automation FOUP is placed on the Automation Station, the Automation FOUP automatically transmits the data to the Automation Controller to be stored in the centralized database.
- An Automation FOUP can store up to 10 hours of data.

2.2.4 KLA Automation FOUP Battery

- When an Automation FOUP's charge level goes down to 35%, an alarm is sent to the host.
- The Automation FOUP goes into power-save mode:
 - When the charge level goes down to 20%
 - If it is not on a mission and has not been charged for 30 minutes
- When in power-save mode, the Automation FOUP can maintain its charge for 6 months.
- To charge an Automation FOUP, place it on the FOUP Station and make sure it is **clamped (not in LOAD READY state)**, or use the manual power/communication cable to connect it to a laptop.



NOTE

If the Automation FOUP was powered off, placing it on the Automation Station and clamping it will power it on automatically.

- When powered off, the Automation FOUP can maintain its charge for 12 months.



DANGER

Use only batteries with built-in protection, and not intended to replace by an operator.



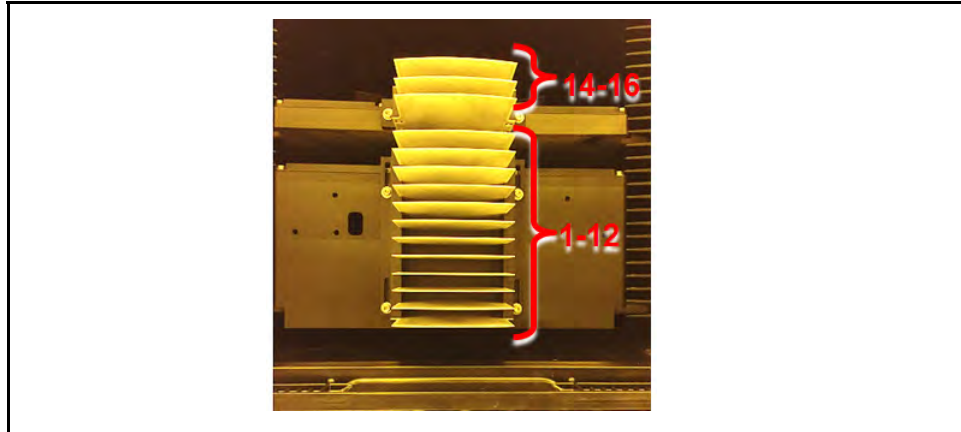
NOTE

If the Automation FOUP loses its charge completely, please ask your KLA service representative to change the battery.

2.2.5 Option: Emulating Occupied KLA Automation FOUP Slots

An available KLA Automation FOUP option is a set of emulation fins for slots that contain any electronics boxes. The fins cause load port wafer mappers to identify those slots as occupied.

Figure 2-5: KLA Automation System Topology



2.2.6 Reset the KLA Automation FOUP (software restart)

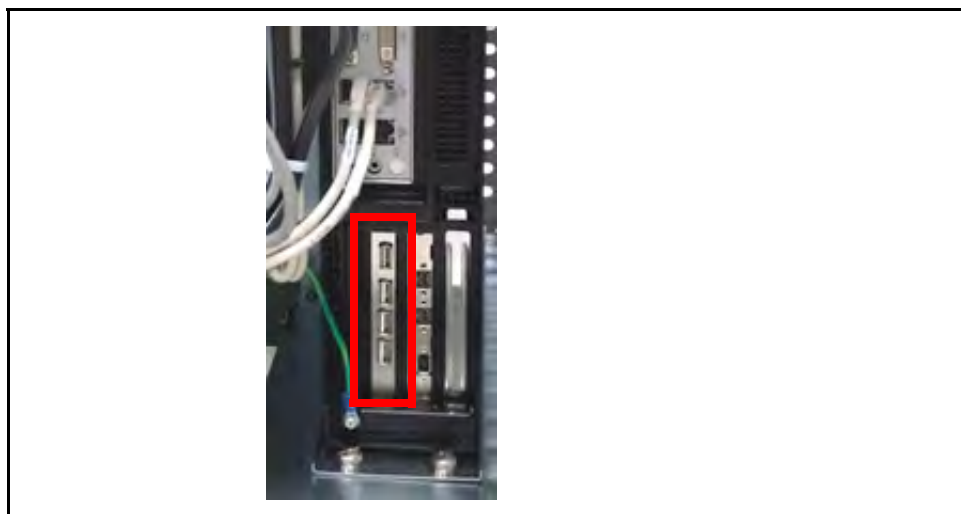


IMPORTANT

Reset the KLA Automation FOUP **only when it is in an error state**.

1. Connect an external touch screen to a USB port on the FEC of the Automation Station.

Figure 2-6: USB Ports on the FEC



NOTE

If you prefer, you can remote-connect to the FEC instead of using an external touch screen, or use the AM Server web UI/Administration page to connect to the station.

2. Open a browser window in Chrome or Firefox.
3. Go to URL:
http://192.168.10.100:5000 (the FOUP's static IP address)
4. Log in to the FOUP using the following ID and Password:
 - **User ID = admin**
 - **Password = admin**
5. In the FOUP Configuration page, click **Advanced**.

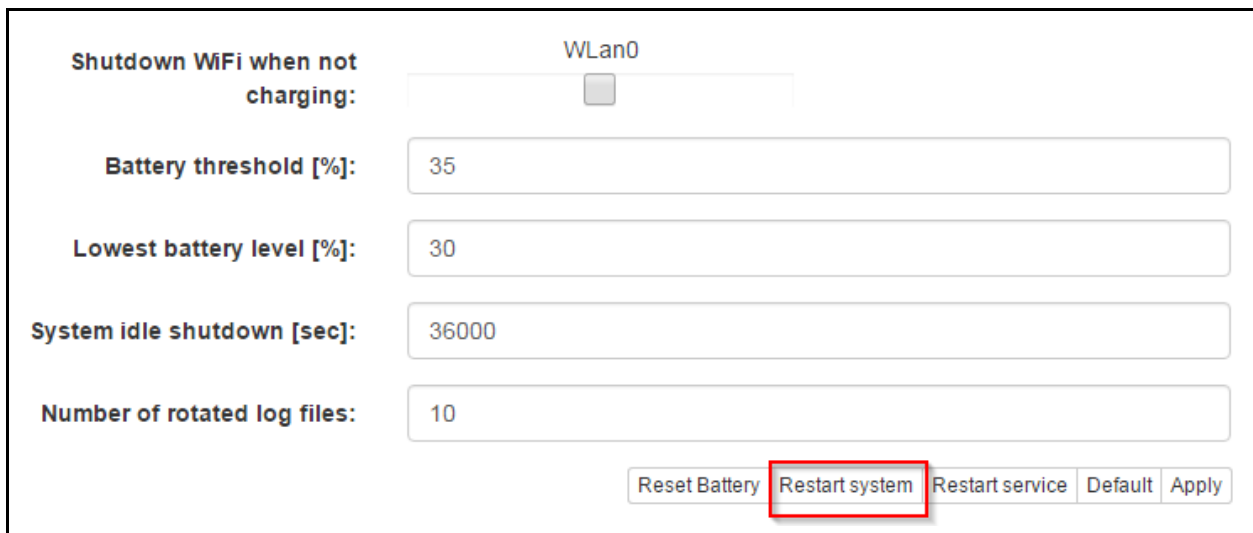
Figure 2-7: FOUP Configuration Page



The screenshot shows the 'FOUP Configuration' page with four tabs: 'Basic', 'Network', 'Advanced', and 'Upgr'. The 'Advanced' tab is highlighted with a red box. Below the tabs, there is a 'Log lines to report: (*)' field with the value '5000' and a 'Help' button. The 'Communication interfaces' section is partially visible at the bottom.

6. In the Advanced page, click **Restart system**.

Figure 2-8: FOUP Restart



The screenshot shows the 'WLAN0' configuration page. It includes several settings: 'Shutdown WiFi when not charging' (checkbox), 'Battery threshold [%]:' (35), 'Lowest battery level [%]:' (30), 'System idle shutdown [sec]:' (36000), and 'Number of rotated log files:' (10). At the bottom, there are five buttons: 'Reset Battery', 'Restart system' (highlighted with a red box), 'Restart service', 'Default', and 'Apply'.

7. Wait until the system restarts.



NOTE

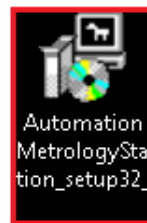
The system takes approximately 3 minutes to restart.

3.

KLA AM Station Application UI

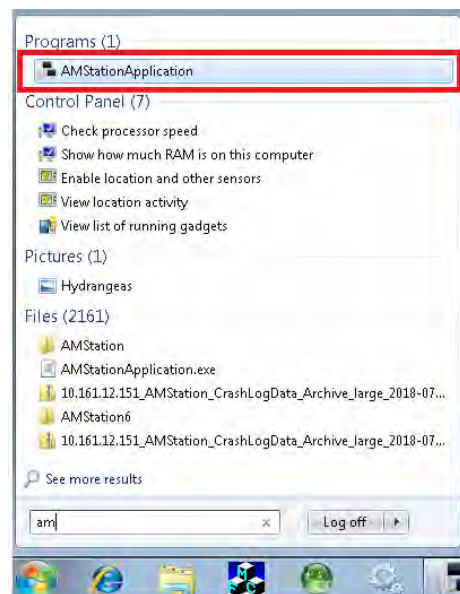
3.1 Access to UI

1. This User Interface is developed by WPF forms using MVVM architecture pattern.
2. User must go to the required build path and copy the required installer to the station/system.
3. User shall double click on the installer as shown in the below figure.



Double click on this installer

4. After the successful installation, User can start the application through window key or click on the icon which is created over the deskLAp.



Click Here



Double Click Here

5. The display of the KLA AM Station Application will be as shown below after the double click on the Icon.

The screenshot displays the KLA AM Station Application interface. At the top, there is a navigation bar with the following tabs: Home, Test, Configuration, Diagnostics, FA UI, and Maintenance. The main content area is divided into two sections. The left section contains a list of system parameters and their current states, with buttons for 'Version' and 'Mission Properties'. The right section contains a table with 25 rows, labeled 'CID : CARRIER1', and a 'Foup State' indicator at the bottom showing '100% Not Charging'.

Automation Station ID	AMStation6
Software Version	Version
Server Status	Communicating
Access Mode	Auto
CID	CARRIER1
Clamp Status	Clamped
Foup Sensor	Present Placement
Magnetic Connector	
E84 Transfer State	ReadyToUnload
Mission State	Idle Mission Properties

CID : CARRIER1
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1

Foup State : 100% Not Charging

6. From the above figure User shall observe the below mentioned Navigation Tabs displayed in the application.

- Home
- Test
- Configuration
- Diagnostics
- FA UI
- Maintenance
- Help About

3.2 Features in the Application


3.2.1 Home Page

1. User must click on the tab "Home Page" to see the over view of the home page tab.
2. The display of Home Page will be shown as mentioned below.

The screenshot shows the Home Page of the KLA AM Station Application. The navigation bar includes tabs for Home, Test, Configuration, Diagnostics, FA UI, and Maintenance. The Home page displays the following information:

Automation Station ID	: AMStation6
Software Version	: Version
Server Status	: Communicating
Access Mode	: Auto
CID	: CARRIER1
Clamp Status	: Clamped
Foup Sensor	: ● Present ● Placement
Magnetic Connector	:
E84 Transfer State	: ReadyToUnload
Mission State	: Idle Mission Properties

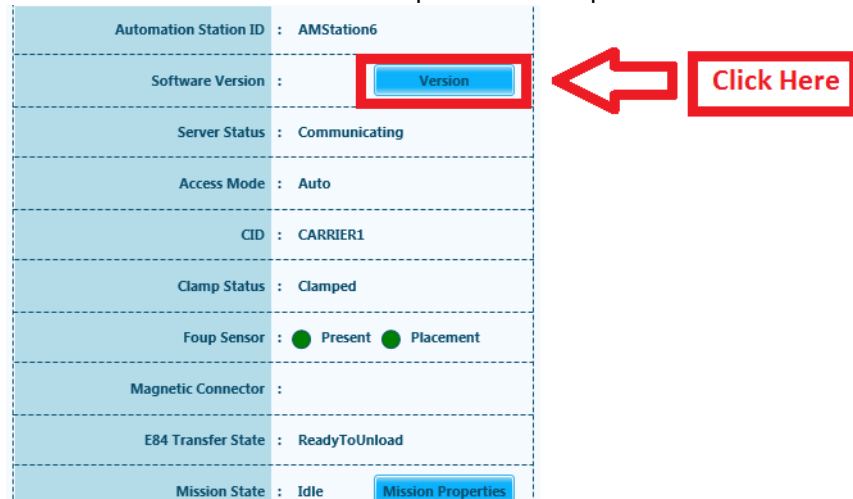
CID : CARRIER1	
25	
24	
23	
22	
21	
20	
19	
18	
17	
16	
15	
14	
13	
12	WID : WAFER1 HWID : WAFER1 W-Type : AmSubstrate
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	

Foup State:  100% Not Charging

3. The Home Page is a default page that should open whenever User try to access the KLA AM Station application.
4. The Home is divided into two parts;
 - Automation Station ID and its subsequent data related to Software Version and Status.
 - Carrier ID and its subsequent data related to Wafer and Charging.

5. The Automation Station ID section contains the below mentioned data.

- Software Version
 - As shown in the below Figure, User must click on "**Version**" to know the Software Version details, Then a pop up window is displayed with station version and its dependent component version.



- After clicking on the "Version", User will observe the below mentioned pop up related to information about "**Server**", "**Station**", "**Foup**" and "**Wafer**".

	AM Version	AM HF Version ▲	SA Version	ClientPatches
	1.3.0.12700	NA	4.1.5.12	+

Station

	Station Name	Version	HF Version	Client Patches
	Station1	1.3.0.12700	1.3.0.12701	+
	Client Name	Version		
	Phoenix	12.6.0.20401		
		12.6.0.20403		
	Nexus	7.3.0.204		
		7.3.0.205		
	Station2	1.3.0.12700	NA	+

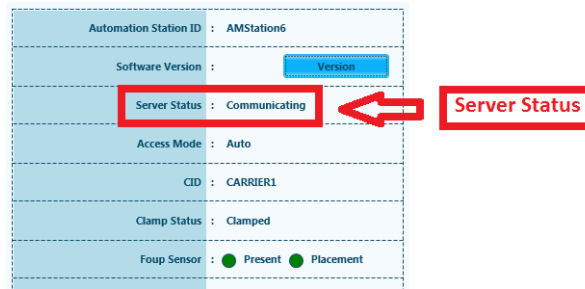
Foup

	FOUP CID	AM Version	SA Version
	00111113	1.3.0.12700	1.5.105
	00111112	1.3.0.12700	1.5.106

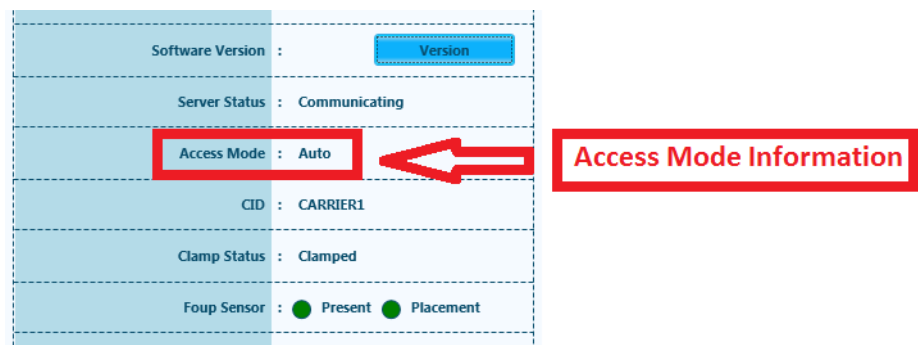
Wafer

	WAFER ID	WAFER Type	Version
	D62911	SA	4.0.99
▶	Am-123	AM	1.2.0.122

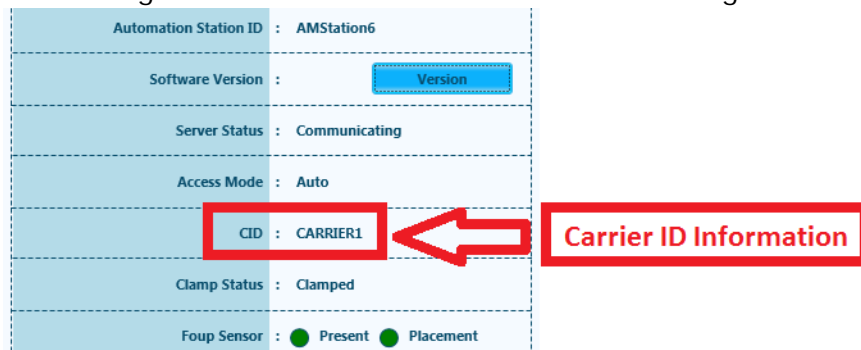
- Server status also is displayed in the Home Page which tells about the Station whether in communication with the server or in any error condition.



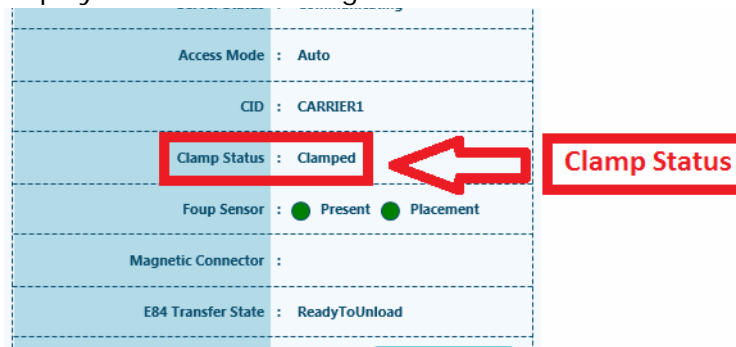
- Station access mode information also be displayed in the Home Page.



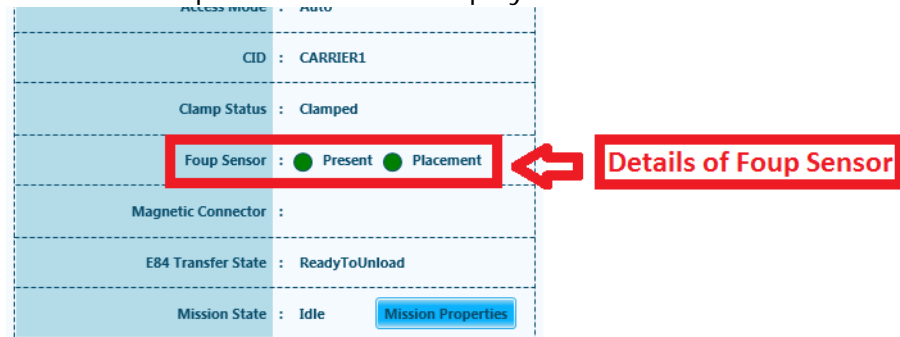
- User shall get the details of Carrier ID in the Home Page.



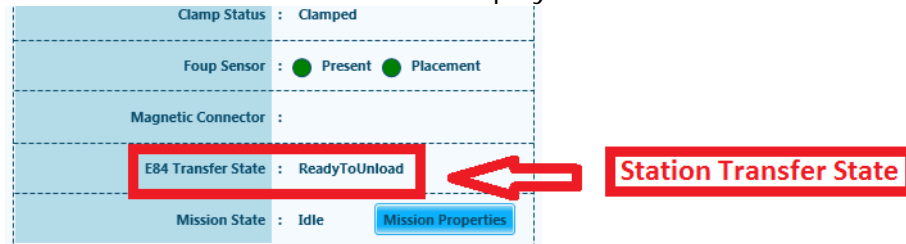
- Status of Foup Clamping (Clamped or Unclamped) shall be displayed in the Home Page.



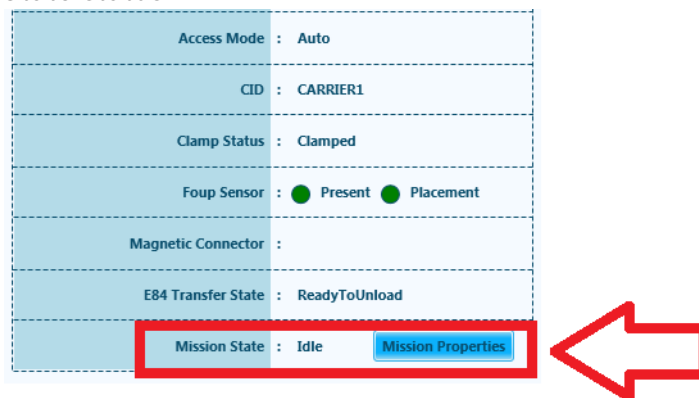
- Details of Foup sensor shall be displayed as shown below.



- Station Transfer state shall be displayed as shown below.



- User can identify the the label "**Mission State**" to know the Mission State status.




- Right side label shall be texted with one of the following state "CJ1" or "CJ2" or "**IDLE**".
- Also User shall see the button "**Mission Parameters**" to know the details of the Mission Parameters.
 - This button shall text as "**Mission Parameters**" if state is CJ1 or CJ2.
 - This button shall text as "Last **Mission Parameters**" if state is IDLE.

- If the mission is in "CJ1" or "CJ2", then user shall able to see current mission parameter.
- If the mission is in "IDLE", then user shall able to see current mission parameter.



- Carrier ID (CID)
 - This section displays information about CID number and the wafer slots information.
 - Also User shall know the wafer details in which slot the wafer existing and other related information.
 - Also this section displays the information about FOUP state.

CID : CARRIER1	
25	
24	
23	
22	
21	
20	
19	
18	
17	
16	
15	
14	
13	
12	WID : WAFER1 HWID : WAFER1 W-Type : AmSubstrate
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	

Foup State :  100% Not Charging

**NOTE**

FOUP State displays the information about whether the FOUP is charging or not. Also Displays the percentage of total charge of the FOUP.

3.2.2 Test

1. The display of "Test" shall be shown as mentioned below.



2. This Feature shall allow the user to view the below mentioned features

- AM Station ID
- Server Status (Refer to [page 3-23](#))
- Access Mode (Refer to [page 3-23](#))
- CID Read
- CID Write
- Clamp Status
- Foup Sensor
- Magnetic Connector
- E84 Transfer State
- Mission State

- User shall get details of the AM Station ID in the "AM Station ID" row.



- User shall test the Carrier ID read option in CID Read by clicking on "Read".



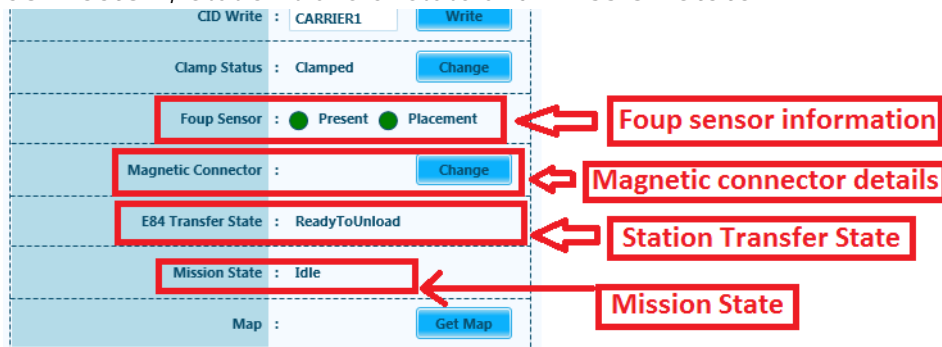
- User shall also edit details of Carrier ID in "CID Write" by clicking on "Write".



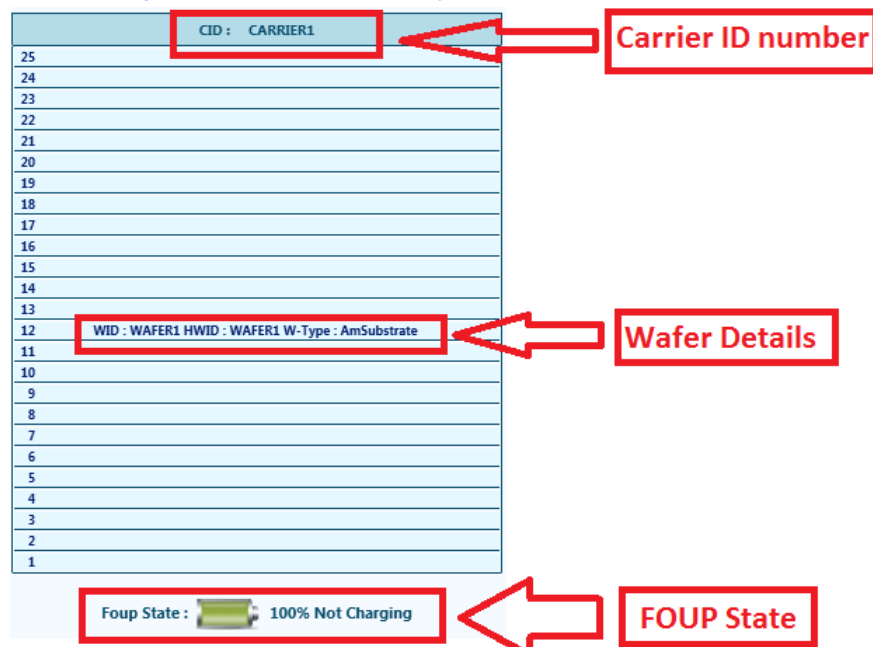
6. User shall get the clamping information as shown in the below figure, Also User shall able to change clamping status by clicking on "Change".



7. Also User shall know the details of "FOUP SENSOR", "Magnetic Connector", Station transfer state and "Mission State".

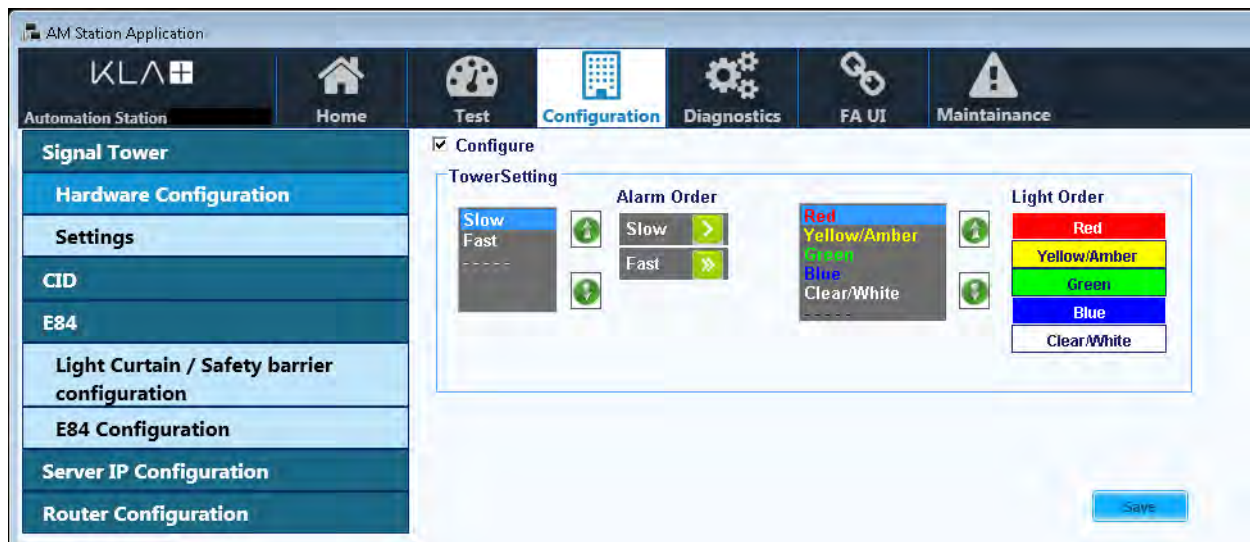


8. Refer to [page 3-26](#) for CID display information.



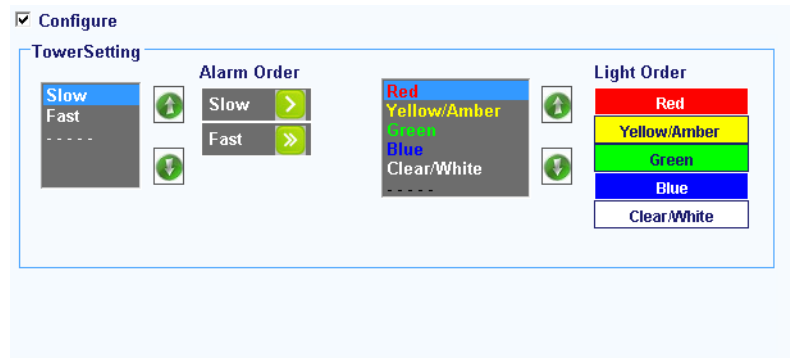
3.2.3 Configuration

1. Configuration window used to configure the station and its components.
The display of Configuration window shall be seen as shown below.



2. In this User controls shall be used to display in UI as third party UI components shall be populated in AM Station application UI.
3. HW Configuration

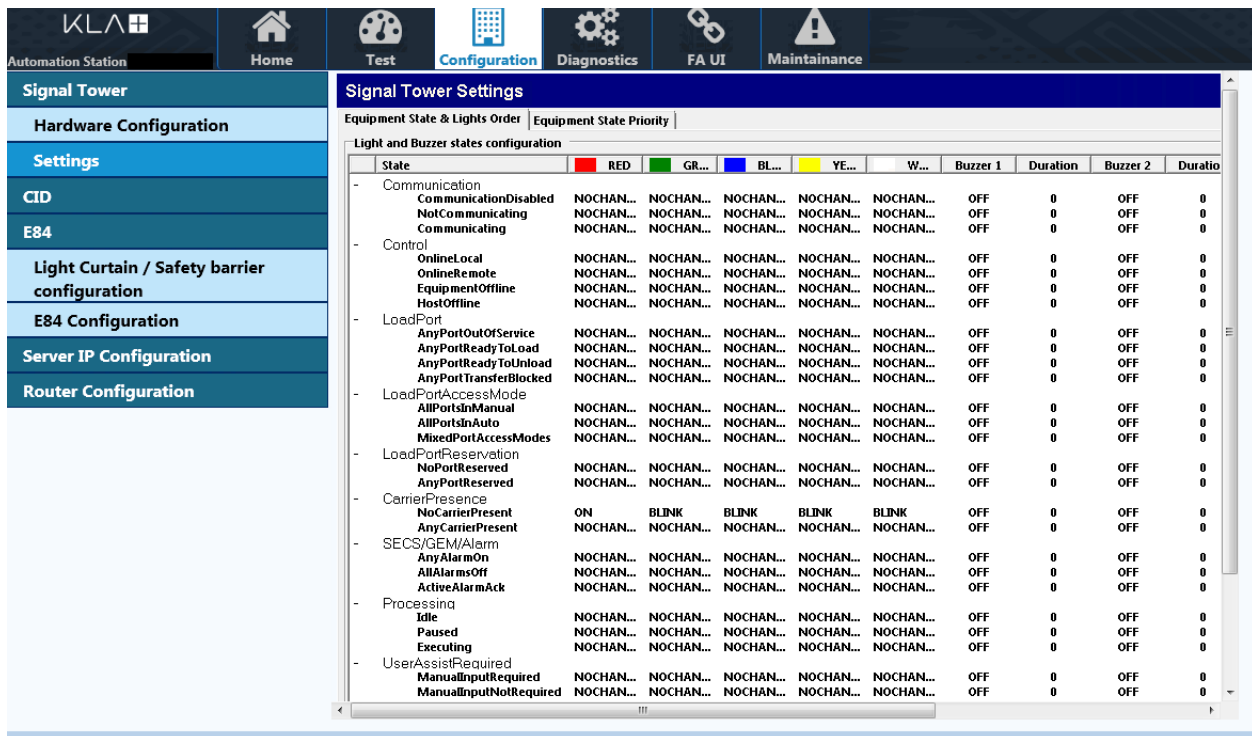
- On Click of configuration icon in the banner, the sub menu shall be populated, by default Hardware Configuration sub menu shall be selected.



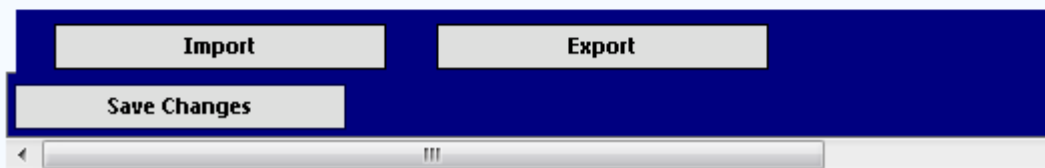
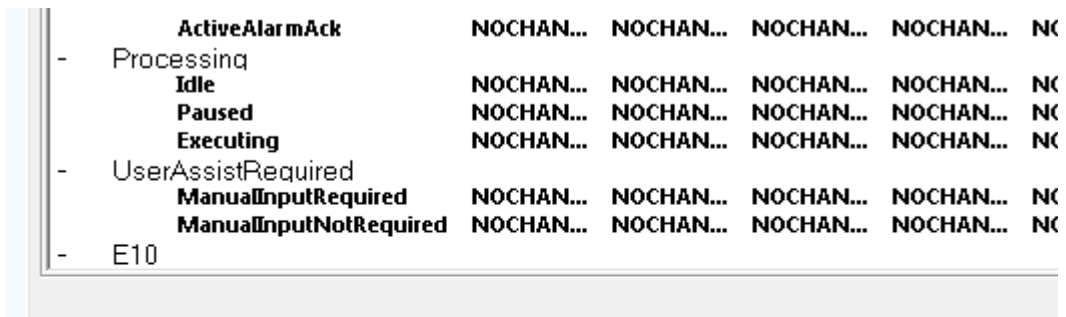
- The above figures shows the details about the Tower settings UI component which shall be populated in user control.
- User shall select the required fields in this window to set the Tower Settings.

4. Settings

- User must click on "Settings" and the display of "Settings" shall be seen as shown below



- The above figure shows the signal tower setting details.
- User shall modify the settings and save the changes.
- Also User can be able to Import/Export the settings.



5. CID

- User must click on "**CID**" and the display shall be seen as shown below.

The screenshot shows the application's navigation menu on the left with 'CID' highlighted. The main interface is titled 'Carrier Tag Read / Write' and contains the following elements:

- A checked checkbox labeled 'Use Mask'.
- A text input field for 'Mask Name'.
- Two numeric input fields for 'Mask Offset' and 'Mask Length'.
- A text input field for 'Carrier Data'.
- Two buttons at the bottom right: 'Carrier Read' and 'Carrier Write'.

- Carrier ID (CID) tab is used to enter the details of Mask Name, For this User must select the "**Use Mask**" option.

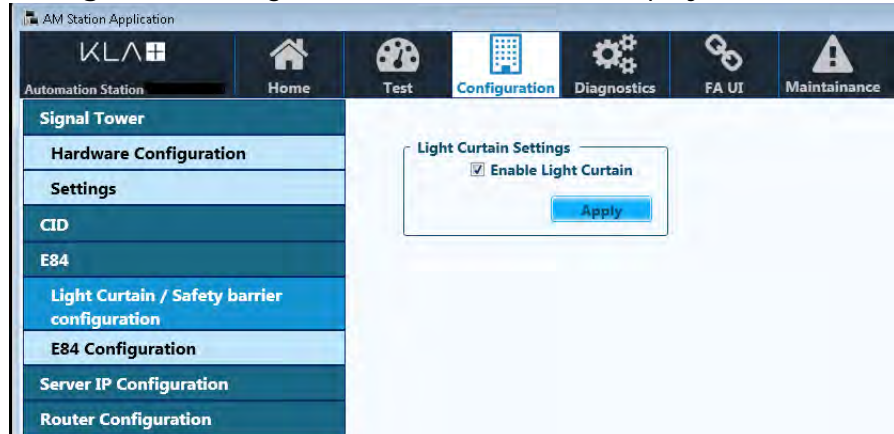
This close-up highlights the 'Use Mask' checkbox, which is enclosed in a red rectangular box. A red arrow points from a separate red-bordered text box containing the text 'User must select this' towards the checkbox.

- Also User shall set the details of offset / mask length
- Click on "**Carrier Read**" to read the carrier ID details.
- Click on "**Carrier Write**" to update the Carrier ID details. asfter clicking on "Carrier Write" User shall get a pop up as shown below.

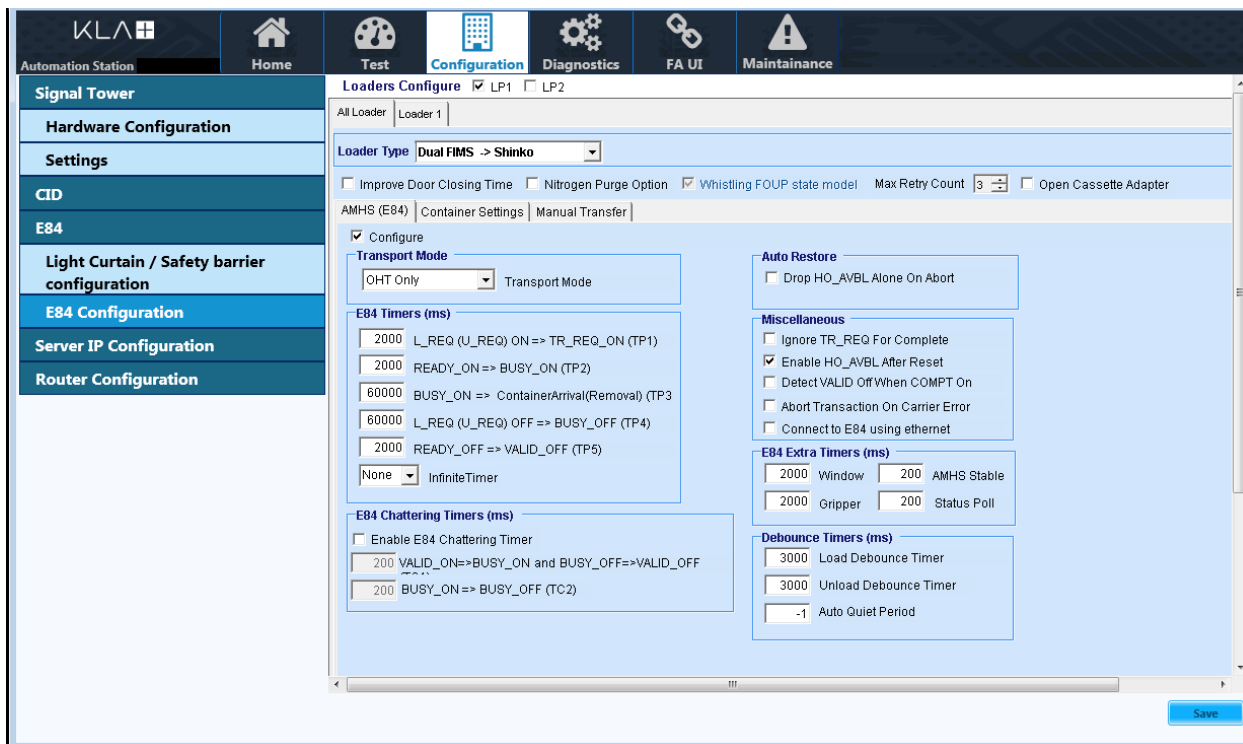
The screenshot shows the 'Carrier Tag Read / Write' form with a modal dialog box overlaid on top. The dialog box has a title bar with a close button and contains the text 'Successfully write CID data' and an 'OK' button.

6. E84

- Light Curtain/Safety barrier configuration
 - User has to click on "**Light Curtain/Safety barrier configuration**" to get the below mentioned display..



- A check box shall be displayed (Refer to above figure) which shall allow the User to enable or disable the Light Curtain Option.
- E84 Configuration
 - User must click on "**E84 Configuration**" to get the below mentioned display.



- This UI (Refer to above figure) displays the E84 configuration component in user control.

7. Server IP Configuration

- User must click on "**Server IP Configuration**" to get below mentioned display.

The screenshot shows the 'Server IP Configuration' page in the KLA AM Station Application. The top navigation bar includes 'Automation Station', 'Home', 'Test', 'Configuration' (selected), 'Diagnostics', 'FA UI', and 'Maintenance'. The left sidebar menu lists various configuration options, with 'Server IP Configuration' highlighted. The main content area is divided into three sections: 'Server Info' with fields for 'Server IP' (10.161.20.151) and 'Port' (38090); 'Station Info' with fields for 'Station Name' (AMStation) and 'Port' (18090); and 'Station Parameters' with an 'N2 Enable' checkbox. At the bottom right, there are 'Apply' and 'Ping' buttons.

- User shall know the details of Server Info, Station Info details which are populated in the right side (Refer to above figure).
- Server IP: This can be edited as per the requirement. Validate the IP in correct format while clicking apply button.
- Port : This displays the Port number to the User and this cannot be edited by User.
- Station Name: User can edit this and validate the data before clicking on "Apply".
- Port : This displays the Station Port number to the User and this cannot be edited by User.
- "**N2 enable**": User shall allow to enable or disable N2.
- User has to click on "**Apply**" to update the information Station Configuration file.

8. Router Configuration

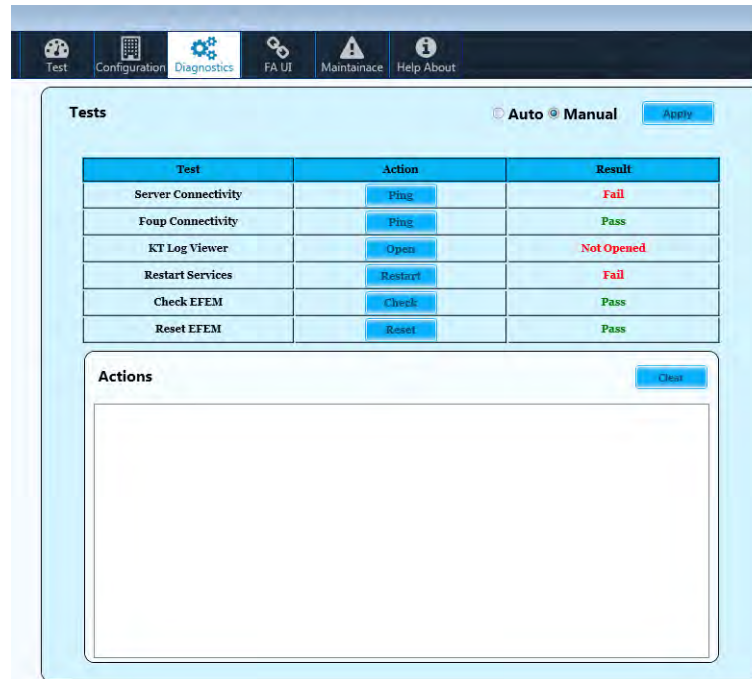
- Click on "**Router Configuration**", Then User shall have the following display as shown below.

The screenshot displays the D-Link router configuration interface. On the left, a sidebar menu lists various configuration options, with "Router Configuration" selected. The main content area shows the "Dashboard" for a D-Link Unified Services Router (DSR-250). The dashboard includes several monitoring widgets:

- Traffic Overview:** A pie chart showing traffic distribution: HTTP (42.67%), HTTPS (22.94%), Email (0%), and DNS (34.39%). A note states: "These statistics will not reflect exact traffic information, since hardware is offload is enabled." A "Details" button is present.
- WAN Ports:** A line graph showing WAN usage. Below the graph, it indicates WAN10.00 MB/s and WAN20.00 MB/s. A "Details" button is present.
- VPNs:** A line graph showing VPN tunnel status. Below the graph, it indicates "IPsec Gateway 0/0 Tunnels Connected" and "IPsec Client 0/0 Tunnels Connected".
- CPU Utilization:** A pie chart showing CPU usage: User (15%), Kernel (2%), Idle Time (82%), and I/O (1%).

3.2.4 Diagnostics

1. User has to click on "**Diagnostics**" icon and the display will be seen as shown below.



2. User shall able to see the three columns from the above figure which are
 - Test: This column shall give the details of different kinds of tests
 - Action: This column shall give the details of Action. Here User need to click on respective button to start the action.
 - Result: This column shall give the details of the result of particular test.
3. Also User can able to set the mode to "**Auto**" or "**Manual**" and then click on "**Apply**" (Refer to below Figure).
4. Also User shall see the relevant details of "**Actions**" after clicking on any action (Refer to below Figure).

5. User shall clear the details action by clicking "Clear"
(Refer to below Figure).

Tests

Test	Action	Result
Server Connectivity	Ping	Fail
Foup Connectivity	Ping	Pass
KT Log Viewer	Open	Opened
Restart Services	Restart	Fail
Check EFEM	Check	Pass
Reset EFEM	Reset	Pass

Actions

Service name : KLA-Tencor Logging Service is started
 Starting service name : KLA-Tencor Logging Service
 Service name : KLA-Tencor Event Distributor Service is started
 Starting service name : KLA-Tencor Event Distributor Service

Annotations:
 - "User has to select the mode here and then click on 'Apply'" points to the **Apply** button.
 - "After clicking here, User shall identify the actions here" points to the **Restart** button in the table.
 - "User can clear the action section by clicking on 'Clear'" points to the **Clear** button.

3.2.5 FA UI (Factory Automation User Interface)

1. User must click on "FA UI" and the display will be seen as shown below.

Automation Station | Home | Test | Configuration | Diagnostics | **FA UI** | Maintenance

FA UI | E87 Carrier Summary | Port1 | E87 Equipment Constants

Load Ports

- Transfer State: TransferBlocked
- Reservation State: NotReserved
- Association State: Associated
- Access Mode: Manual
- Carrier ID: AMFOUP13
- Location ID: LP1
- Carrier ID Status: WaitingForHost
- SlotMap Status: NotRead
- Carrier Accessing Status: NotAccessed

All Load-ports operation

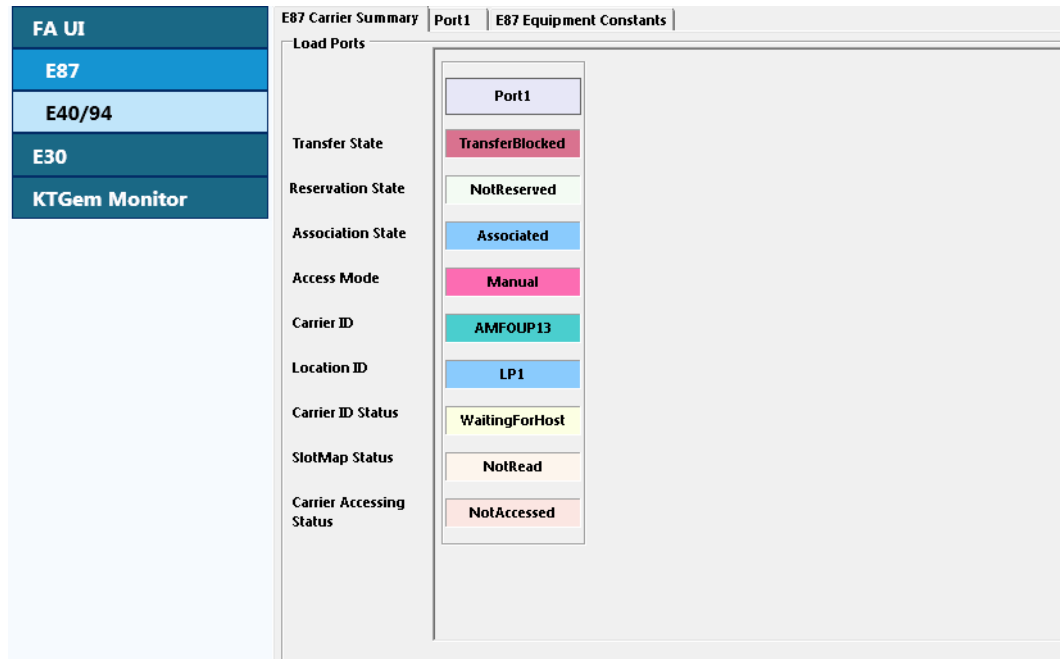
Transfer State: In Service, Out Of Service

Port Access: Auto, Manual

Refresh

2. Here User can see the the current running jobs which are "E87", "E40/90", "E30" and "KTGem Monitor".

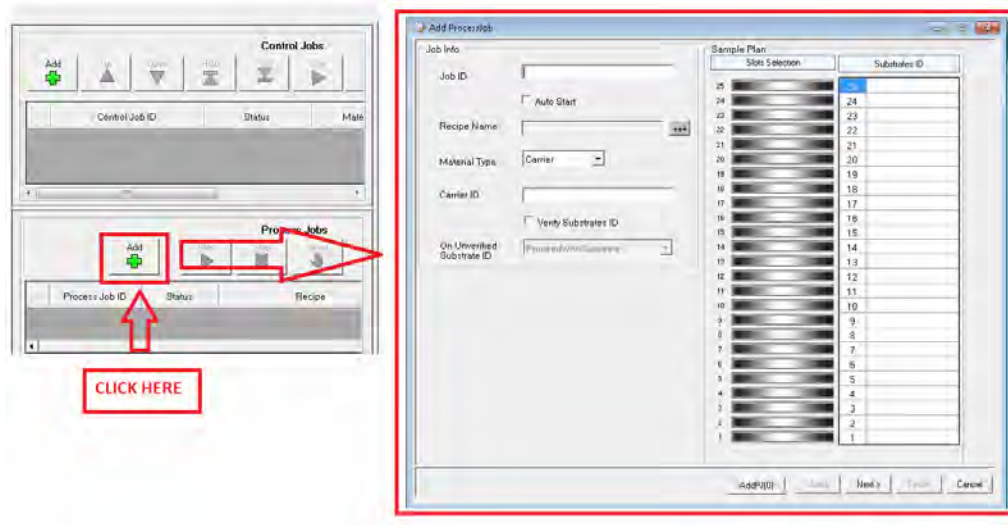
3. Click on "E87" and the display will be seen as shown below.



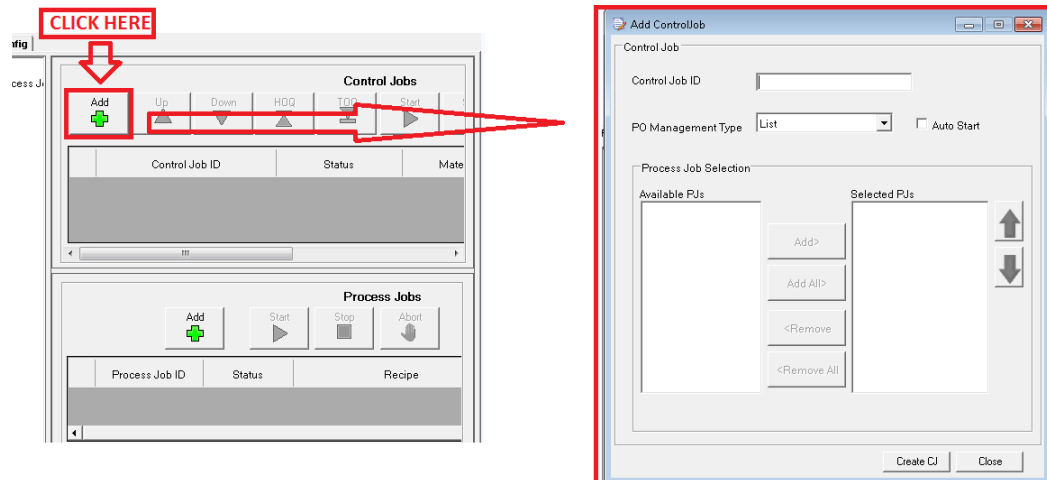
4. Click on "E40/90" and User shall able to see the below mentioned window.



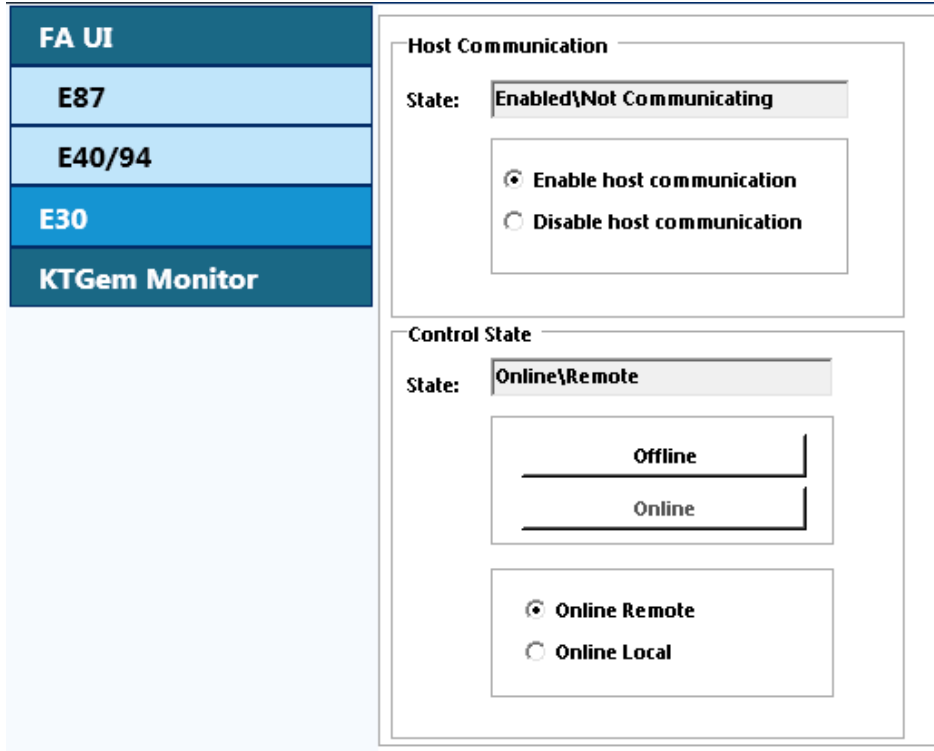
- Also User can able to add new Process Job by clicking on **"Add"** in Process Jobs section.



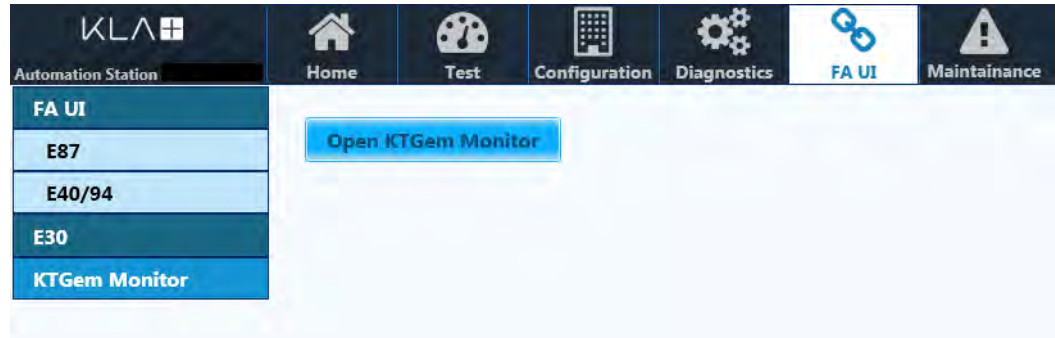
- Also User can able to add the new Control jobs a in the **"E40/90"** window by clicking on **"Add"** in Control Jobs section.



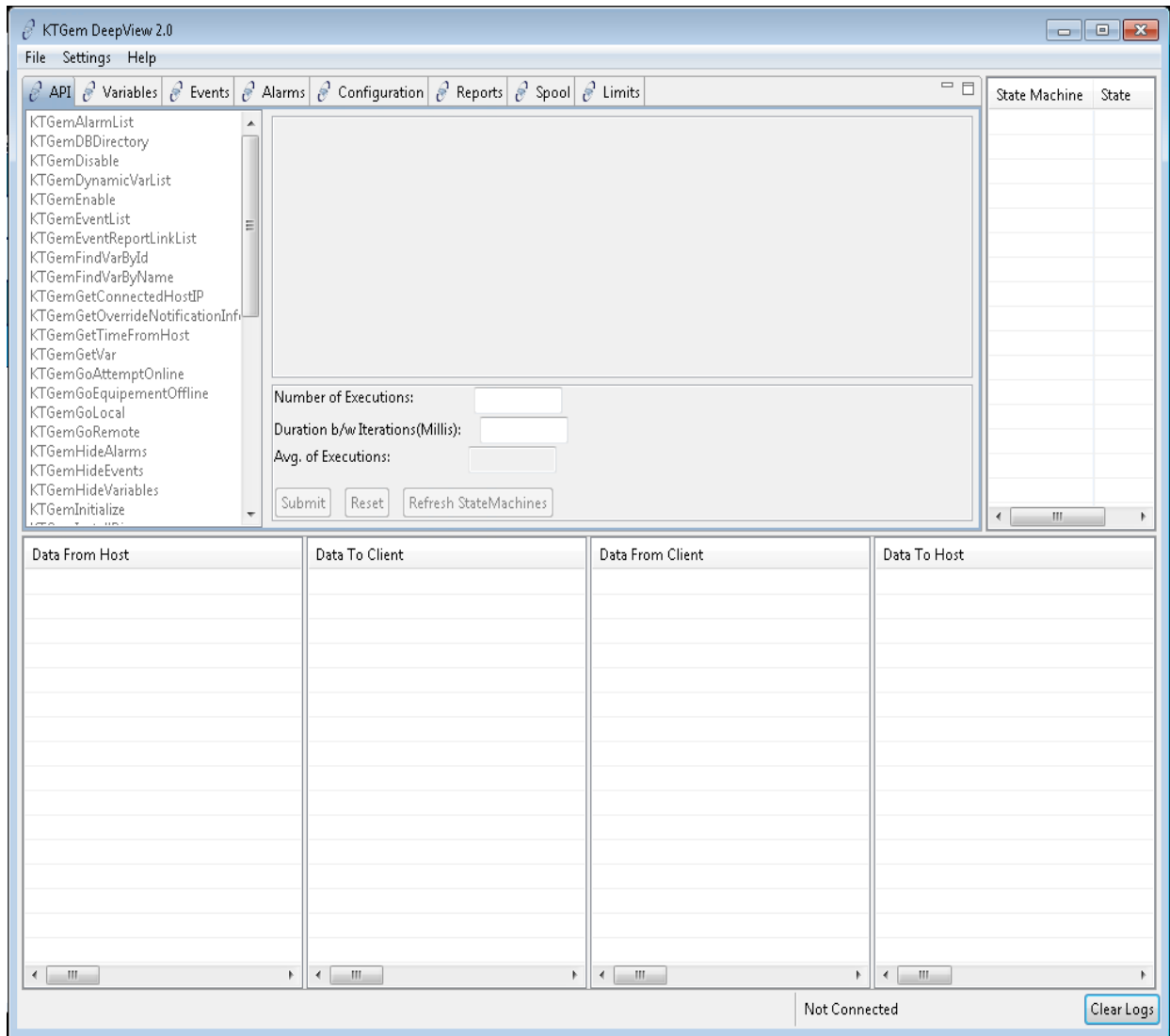
- Click on "E30" and User shall able to see the below mentioned window.



- Click on "KTGem Monitor" and User shall able to see the below mentioned window.



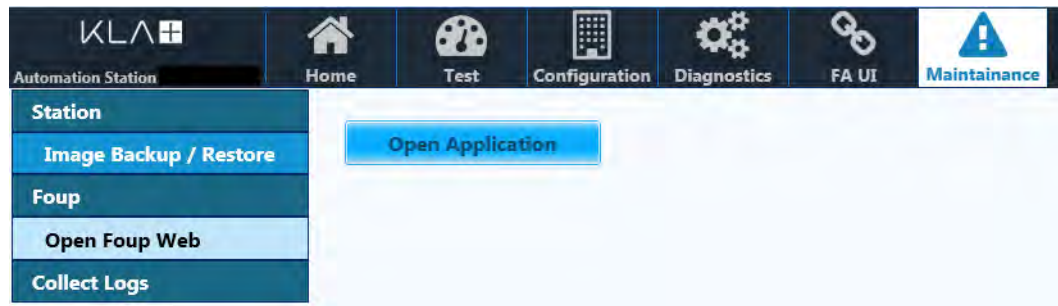
- Click on "**Open KTGem Monitor**" to open KTGem Deep View 2.0 Application.



- From the above figure User can able to view the all tabs and click on respective tab to know detailed information.
- User must click on "**Clear Logs**" to clear the log files for the selected tab.

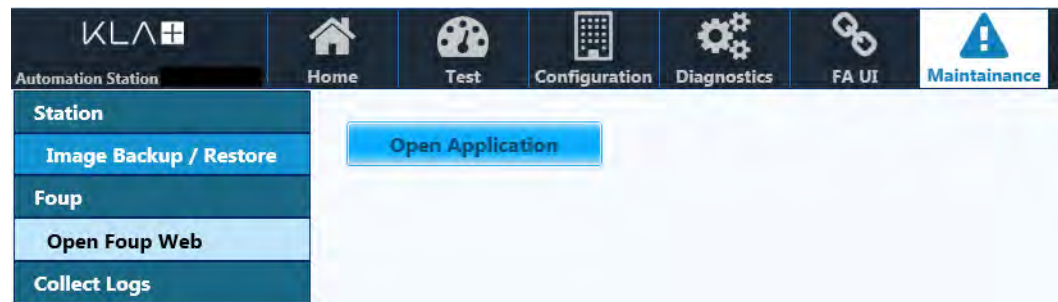
3.2.6 Maintenance

1. User must click on "**Maintenance**" tab to get the below mentioned display.

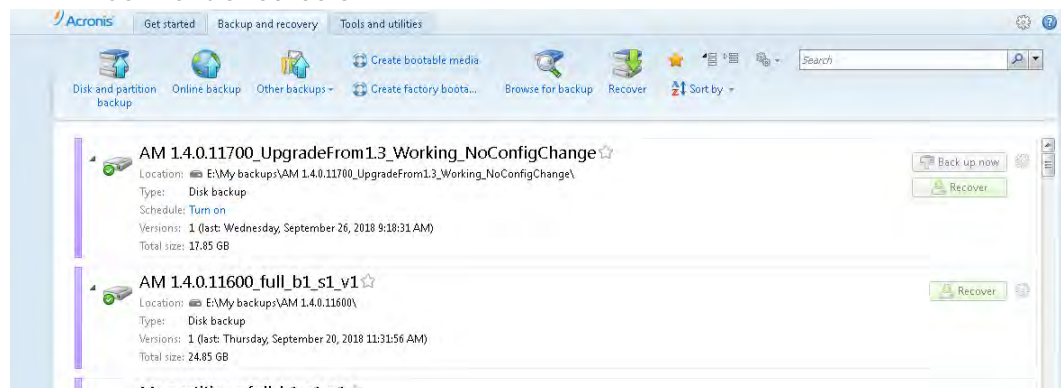


2. This window will give User the below mentioned features
 - Image Back up/Restore.
 - Open Foup Web.

3. User must click on "**Image Back Up / Restore**" to open the FOUP Web UI.

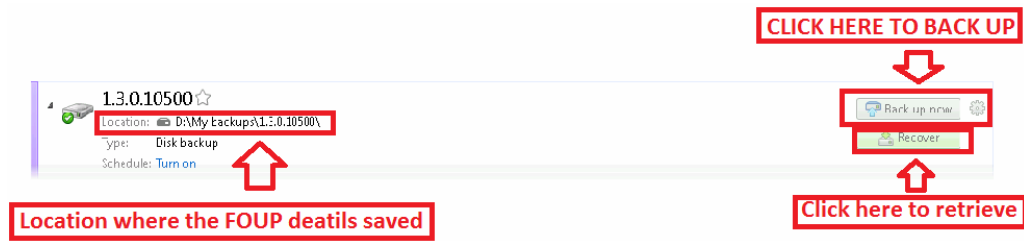


- User must click on "**Open Application**" and the display shall be seen as mentioned below

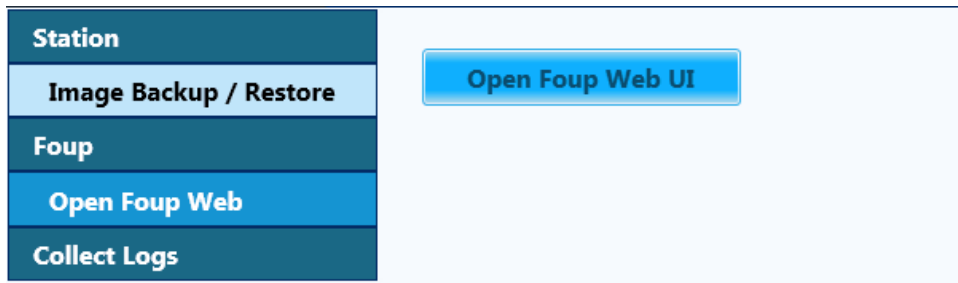


- User must click on "**Back up now**", then the AM Station details will be saved in the in the respective location.

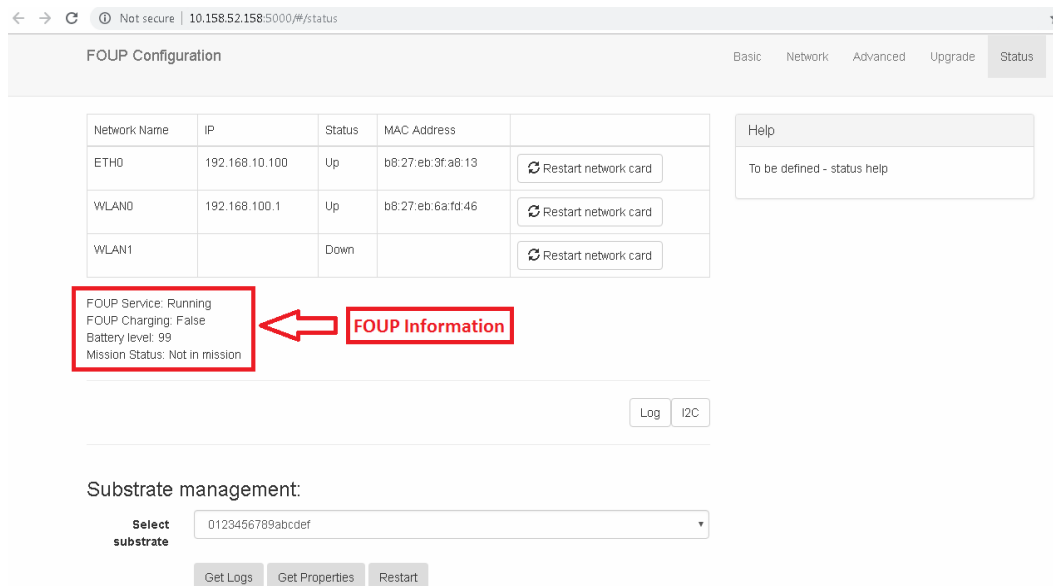
- User must click on **"Recover"** to retrieve the FOUP data when ever required.



4. User must click on **"Open Foup Web"** to open the Open Foup Web UI.



- User must click on **"Open Foup Web UI"** and the display shall be seen as mentioned below.



- From the above figure User shall see the details of Foup Service, Foup Charging, Battery Level and Mission status.
- Also User shall able to see the Network details from the above Figure.

- Click on "**Log**" to display Foup logs.

FOUP Logs

```

2018-10-04 14:55:43,388 - INFO - daemon - 97d3fed4-7818-4579-81cb-074a5e91020f: <-to socket ('192.168.100.1', 50351), Sending message: {"BatteryImpedance": 0.0,
"BatteryLevelPercent": 0, "BatteryTemperature": 0.0, "BatteryVoltage": 0.0, "Capabilities": 0, "Class": 0, "Hwid": "HWID-FOUP-000050", "IP": "10.161.21.59", "Index": 0,
"MessageResult": 0, "NodeType": 0, "Operation": 2, "Port": 50001, "Properties": {}, "SourceHwid": "0123456789abcdef", "TargetHwid": "0123456789abcdef", "UUID": "", "Version": ""}
2018-10-04 14:55:43,391 - INFO - daemon - 97d3fed4-7818-4579-81cb-074a5e91020f: Sending message.
2018-10-04 14:55:43,392 - INFO - daemon - 97d3fed4-7818-4579-81cb-074a5e91020f: Done sending message.
2018-10-04 14:55:43,393 - INFO - daemon - 97d3fed4-7818-4579-81cb-074a5e91020f: Sending message.
2018-10-04 14:55:43,394 - INFO - daemon - 97d3fed4-7818-4579-81cb-074a5e91020f: Done sending message.
2018-10-04 14:55:43,395 - INFO - daemon - 97d3fed4-7818-4579-81cb-074a5e91020f: Done sending the message
2018-10-04 14:55:43,396 - INFO - daemon - 97d3fed4-7818-4579-81cb-074a5e91020f: Reading message.
2018-10-04 14:55:43,397 - INFO - daemon - 97d3fed4-7818-4579-81cb-074a5e91020f: Getting header
2018-10-04 14:55:43,398 - INFO - daemon - 97d3fed4-7818-4579-81cb-074a5e91020f: Reading from socket (('192.168.100.1', 50351)), 8 bytes.
2018-10-04 14:55:43,696 - INFO - daemon - 97d3fed4-7818-4579-81cb-074a5e91020f: Done reading 8 bytes from socket (('192.168.100.1', 50351)).
2018-10-04 14:55:43,698 - INFO - daemon - 97d3fed4-7818-4579-81cb-074a5e91020f: Message size 175, message format 1
2018-10-04 14:55:43,699 - INFO - daemon - 97d3fed4-7818-4579-81cb-074a5e91020f: Reading from socket (('192.168.100.1', 50351)), 175 bytes.
2018-10-04 14:55:43,700 - INFO - daemon - 97d3fed4-7818-4579-81cb-074a5e91020f: Done reading 175 bytes from socket (('192.168.100.1', 50351)).
2018-10-04 14:55:43,702 - INFO - daemon - 97d3fed4-7818-4579-81cb-074a5e91020f: -->from socket ('192.168.100.1', 50351), Got message: {"BatteryLevelPercent": 100,
"Capabilities": 0, "Charging": true, "Class": 2, "Hwid": "0123456789abcdef", "Index": 0, "MessageResult": 0, "NodeType": 2, "Operation": 2, "Version": "1.4.0.11700"}
2018-10-04 14:55:43,703 - INFO - daemon - 97d3fed4-7818-4579-81cb-074a5e91020f: Got message, Operation 2
2018-10-04 14:55:43,704 - INFO - daemon - 97d3fed4-7818-4579-81cb-074a5e91020f: Done reading the message
2018-10-04 14:55:43,705 - INFO - daemon - Done sending the message
2018-10-04 14:55:43,711 - INFO - daemon - Getting substrate hwid:0123456789abcdef prop to the web site
2018-10-04 14:55:43,712 - INFO - daemon - a5dce5fa-8774-4194-9cdf-3ee6558b1404: Sending message 2

```

Download view

Close

- Click on "**I2C**" to see the I2C debugging information.

I2C Debugging

Address

0x3c

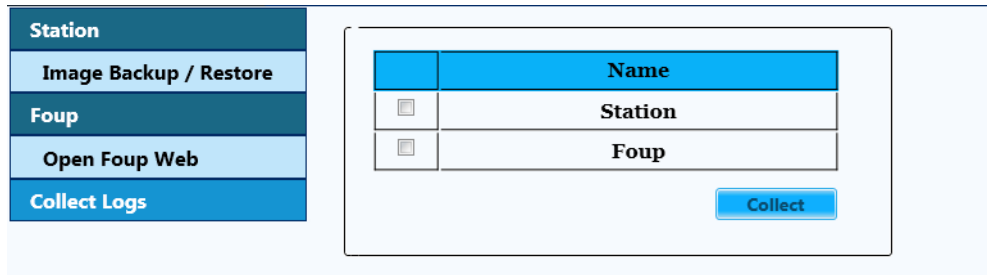
Read mode:

I2C

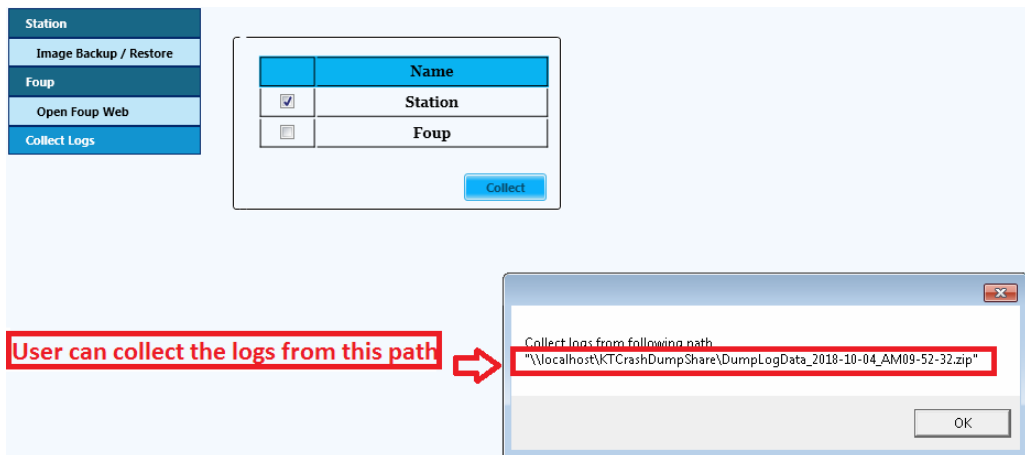
Dump

Close

5. User must click on "**Collect Logs**" and the display shall be seen as shown below.



- User must select "**Station**" or "**Foup**" to collect respective Logs.
- Click on "**Collect**" to see the display of Foup Log.



- From the above figure User shall observe the location for collecting logs.

3.3 Software Upgrade for FOUP and Wafer

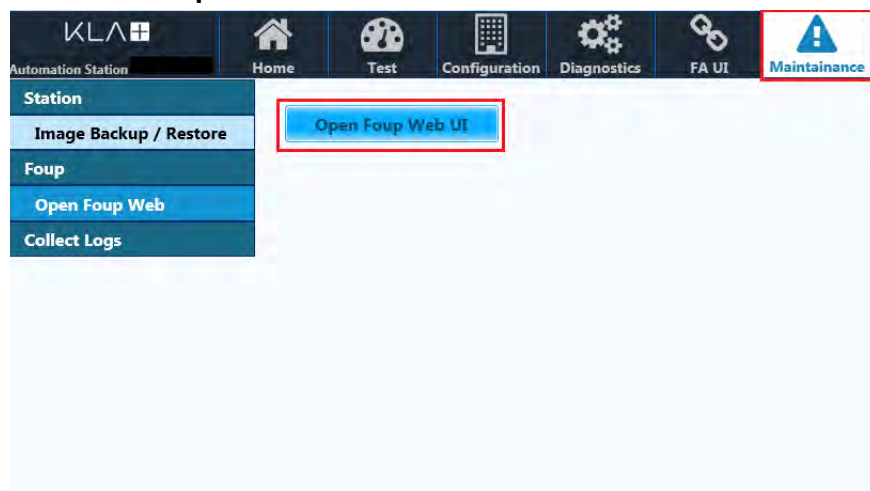
1. Launch AM Station Application.



2. Click on **Maintenance**, to open the maintenance page.



3. Click on **Open FOUP Web UI**.



4. FOUP configuration login page will open.

5. Enter **Username**, **Password** and click login to view FOUP configuration page.

6. Click on **Upgrade**, to view FOUP upgrade page.

3.3.1 To Upgrade FOUP

1. To upgrade FOUP, click on **Choose File** and select **Foup.deb** file from bin folder.

The screenshot displays the 'FOUP Configuration' interface with tabs for 'Basic', 'Network', 'Advanced', 'Upgrade', and 'Status'. The 'Upgrade' tab is active, showing the 'Current FOUP version: 1.4.1.20300_VirtualFoup_2.8.10.16768'. Below this, there are three sections: 'Substrate Upgrade (BIN file)', 'FOUP Upgrade (DEB file)', and 'FOUP Archive'. The 'FOUP Upgrade (DEB file)' section is highlighted with a red box and contains a 'File' field with a 'Choose File' button and the text 'No file chosen'. An 'Upgrade' button is located at the bottom right of this section. The 'FOUP Archive' section shows the 'Current archived version: 1.4.0.11700_VirtualFoup_1.2.9.2' and includes 'archive current version' and 'restore archived version' buttons.

2. Click on **Upgrade** to upgrade the FOUP.
3. Refresh UI after 5 minutes to view the upgraded FOUP version in the UI.

3.3.2 To Upgrade Wafer

1. To upgrade **Wafer**, click on **Choose File** and select **Wafer.bin** file from bin folder.

FOUP Configuration

Basic Network Advanced **Upgrade** Status

Current FOUP version:
1.4.1.20300_VirtualFoup_2.8.10.16768

Help
To be defined - upgrade help

Substrate Upgrade (BIN file)

Pick substrate
DS19007000abcdef

File
Choose File No file chosen Upgrade

FOUP Upgrade (DEB file)

File
Choose File No file chosen Upgrade

FOUP Archive

Current archived version: 1.4.0.11700_VirtualFoup_1.2.9.2
archive current version restore archived version

2. Click on **Upgrade** to upgrade the Wafer.
3. Refresh UI after 5 minutes to view the upgraded Wafer version in the UI.

4.

KLA Automation Web UI

4.1 Logging In

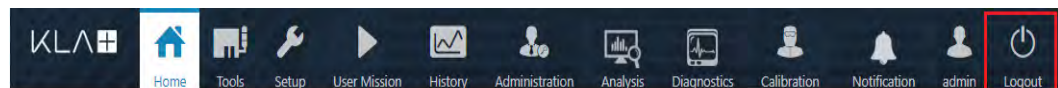
1. At the KLA Automation login page, select your role (in this example, **Administrator** is selected).
2. Enter your password.
3. Click **Start** to log in and go to the Home page (see [Section 4.3](#)).



4.2 Logging Out

1. From any page in the KLA Automation Web UI, click **Logout**.

The display returns to the KLA Automation login page.



4.3 KLA Automation Home Page

The **Home** page summarizes the current status of all KLA Automation System components, usage, and recent mission alerts. It is the first page that you see after you log on.

1. To return to the **Home** page from any other KLA Automation page, click **Home**.

The screenshot displays the KLA Automation Home Page dashboard. The top navigation bar includes icons for Home, Tools, Setup, User Mission, History, Administration, Alerts, Diagnostics, and Calibration. The left sidebar contains three main sections: 'Equipment Coverage & Usage' with a gauge, 'Tool Mission Alerts' with a list of alerts, and 'Configured FOUPs' with a list of FOUPs. The main content area is divided into four colored panels: 'Tools' (green), 'KT Automation FOUPs' (green), 'KT Wafers' (red), and 'KT Automation Stations' (red). Below these panels is a table of mission alerts with columns for Tool ID, Time, Wafer ID, Mission Error, Mission Recipe, Tool Recipe, and More Details. At the bottom, there are three detailed views of FOUPs showing their state and usage.

4.3.1 Equipment Coverage and Usage

The **Equipment Coverage & Usage** area allows you to view information about the Tools, KLA Automation FOUPs, KLA Wafers, and KLA Automation Stations in the system.

The color of the header for each equipment type shows the extent of usage:

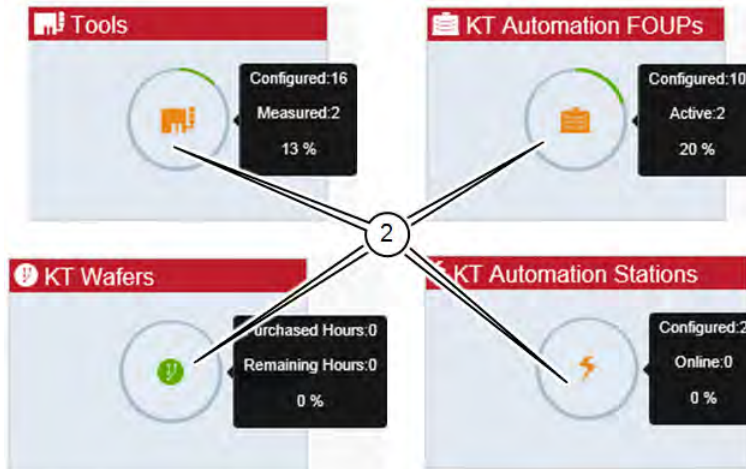
- Green: High usage (>80%)
- Orange: Low usage
- Red: Not used

This close-up screenshot shows the 'Equipment Coverage & Usage' section. It features four colored panels: 'Tools' (green), 'KT Automation FOUPs' (green), 'KT Wafers' (red), and 'KT Automation Stations' (red). Each panel contains a circular gauge and a small icon representing the equipment type.

- To select the time period for which you want to see coverage and usage information, select the time period from the drop-down list in the top right-hand corner.



- To view the statistics for the equipment type, hover the cursor over the image.



Equipment	Statistics Provided
Tools	<ul style="list-style-type: none"> How many configured How many online (as number) How many online (as percentage)
KLA Automation FOUPs	
KLA Automation Stations	
KLA Wafers	<ul style="list-style-type: none"> How many hours purchased How many hours used (as number) How many hours used (as percentage)

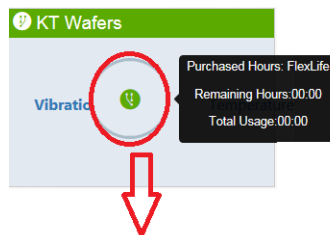
KLA Wafers:

- KLA Wafers section consists the below mentioned Wafers
 - Vibration - AM Wafer

- Temperature Wafer



5. Click on **"Vibration"** and keep the mouse as shown in the below figure to see the data



Keep the mouse over here to see the AM Vibration Wafer information related to "Purchased Hours", "Remaining Hours" and "Total Usage" of all Vibration Wafers available

6. Click on **"Vibration"** to know the AM Vibration Wafer information.

This screenshot shows the 'KT Wafers' dashboard with the 'Vibration' section selected. A red box highlights the 'Purchased Hours', 'Remaining Hours', and 'Total Usage' columns in the mission details table. Another red box highlights the 'ToolID', 'Mission Type', and 'Status' columns in the tool list table. Red arrows point from text boxes to these specific areas.

Wafer #	Wafer ID(Scribe)	Foup ID	Current Location	Mission Completed	Purchased Hours (hh:mm)	Remaining Hours (hh:mm)	Total Usage (hh:mm)	Battery	Battery	Temperature	Usage
0	1	substrate-	00442831	AMStationQC3	4/18/2018 12:47:48 PM	FlexLife	00:40	00:03	0	0	0

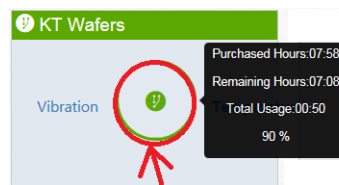
#	ToolID	Mission Type	Status
1	Flex1	Automatic	Passed
2	FABTool	Manual	Passed
3	Flex7	Manual	Passed
4	Flex7	Manual	Passed

7. From the above figure, User can see the AM Vibration Wafer mission details related to

- Wafer ID

- Foup ID
- Current Location
- Mission Completed
- Purchased Hours (hh:mm)
- Remaining Hours (hh:mm)
- Total Usage (hh:mm)
- Also User can view the list of "**Tool IDs**", "**Mission Type**" and "**Status**" associated to the current AM Wafer.
- Battery details are yet to be mentioned in the AM Vibration Wafer mission details.

8. Click on "**Temperature**" and keep the mouse as shown in the below figure to see the data



Keep the mouse over here to see the Temperature Wafer information related to "Purchased Hours", "Remaining Hours" and "Total Usage" of all Temperature Wafers available

9. Click on "**Temperature**" to know the Temperature Wafer information.

Click here to know the Temperature Wafer mission details

Here the information related to "Purchased Hours", "Remaining Hours" and "Total Usage" are for the particular Temperature Wafer only

Here User can see the list of "Tool IDs", "Mission Type" and "Status" associated to current Temperature Wafer

#	Wafer ID (Scribe)	Foup ID	Current Location	Mission Completed	Purchased Hours (hh:mm)	Remaining Hours (hh:mm)	Total Usage (hh:mm)	Category	Battery Impedance	Battery Temperature	Battery Voltage
1	00064781XSD5			10/31/2017 4:48:39 PM	576000	03:51	00:08				
2	D64795			1/23/2018 5:02:37 PM	576000	03:17	00:42				

#	ToolID	Mission Type	Status
1	MicronTool	Automatic	Passed

10. From the above figure, User can see the Temperature Wafer mission details related to

- Wafer ID
- Foup ID
- Current Location
- Mission Completed
- Purchased Hours (hh:mm)
- Remaining Hours (hh:mm)
- Total Usage (hh:mm)
- Also User can view the list of "**Tool IDs**", "**Mission Type**" and "**Status**" associated to the current Wafer.
- Battery details are yet to be mentioned in the Temperature Wafer mission details.

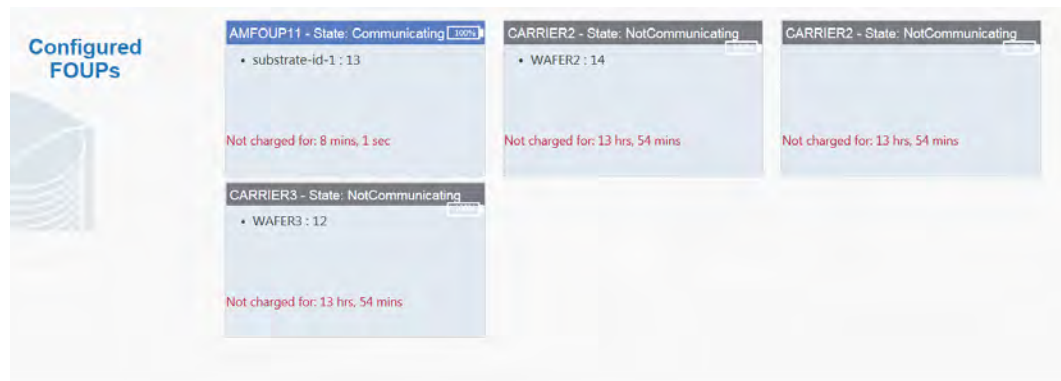
4.3.2 Tool Mission Alarms

The **Tool Mission Alarms** area lists error messages and alerts received during recent missions.

Tool	Time	Wafer ID (Scribe)	Mission Error	Mission Recipe	Tool Recipe	More Details
Flex2	4/19/2018 12:43:12 PM		No mission pending analysis with CID: 00442831, WID: substrate-id-1:			
Flex1	4/18/2018 4:14:44 PM	substrate-id-1	Object reference not set to an instance of an object.:	Reanalysis Recipe	FlexRecipe	
Flex5	4/17/2018 3:31:41 PM	substrate-id-1	Method not found: 'Void KLA.Tencor.AutomatedMetrology.DAL.Emissary.WaferInventory.set_MissionCounterMin(System.Nullable`1<Int32>):'.	AMLLongRecipe	FlexRecipe	
Flex3	4/12/2018 4:21:19 PM		Mission plug-in validation failed: FlexLife wafer bank for Vibration does not have available time: FlexLife wafer bank for Vibration does not have available time			
MicronTool	4/11/2018 1:58:06 PM	substrate-id-1	FlexLife wafer bank for Vibration can't deduct time when StartTime >= CompleteTime:	MicronRecipe	MicronToolRecipe	

4.3.3 Connected FOUPs

The **Connected FOUPs** area displays all KLA Automation FOUPs (carriers) in the system and their statuses.



For each FOUP, the following information is displayed:

1. Carrier ID
2. Carrier status
3. Wafer IDs
4. Battery level of KLA Automation FOUP



4.4 Tools Page

The **Tools** page displays information about all the tools that were set up in the system (as described in [Section 4.5.1](#) through [Section 4.5.4](#)).



To view the **Tools** page, click **Tools**.



#	Tool Name	Tool Location	Tool Type	Last Mission	Last Mission State
1	Etcher1	Loc1	DefaultAM/ToolType	Manual	7/16/2019 8:49:33 AM
2	DemoTool	DefaultLocation	DefaultAM/ToolType	Manual	10/23/2017 4:09:45 PM
3	IntTempTool	Location1	IntTemp/ToolType	Automatic	6/30/2017 2:38:56 PM
4	HCL	Loc1	HCL/ToolType	Manual	6/30/2019 2:57:43 PM
5	AMTool	Location1	AM/ToolType	Manual	12/9/2017 2:57:44 PM
6	IntTemp/ToolTypeRefuse	DefaultLocation	DefaultAM/ToolType	Automatic	9/9/2017 10:23:29 AM
7	DES	LC	DefaultAM/ToolType		
8	TestTool	Loc1	TestType	Manual	10/9/2017 1:27:27 PM
9	ASTool	Location1	AS/ToolType		
10	NoBaselineTool	LC	NoBaseline	Manual	10/4/2017 4:10:40 PM

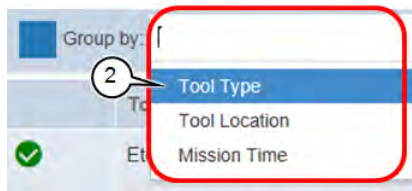


NOTE

-  shows that the last mission that ran on this tool was successful
-  shows that the last mission that ran on this tool indicated a problem

1. You can group tools by:

- Tool Type
- Tool Location
- Mission Time (mission run date and time)



4.5 Setup Page

Use the **Setup** page to add new or edit existing tools and mission recipes.



IMPORTANT

Mission recipes are added or edited for Automation Metrology Wafers only. See [Section 4.11.4](#) for details of adding or editing recipes.

1. To view the **Setup** page, click **Setup**.

#	Tool Name	Tool Location	Tool Type	
1	Etcher1	Loct1	DefaultAMToolType	✎ 🗑
2	DemoTool	DefaultLocation	DefaultAMToolType	✎ 🗑
3	RHTempTool	Location1	RHTempToolType	✎ 🗑
4	HCL	Loct1	HCLToolType	✎ 🗑
5	AMTool	Location1	AMToolType	✎ 🗑
6	RHTempToolTypeRecipe	DefaultLocation	DefaultAMToolType	✎ 🗑
7	DES	LC	DefaultAMToolType	✎ 🗑
8	TestTool	Loct1	TestType	✎ 🗑
9	AllTool	Location1	AllToolType	✎ 🗑
10	NoBaselineTool	LT	NoBaseline	✎ 🗑

4.5.1 Edit or Add Tool

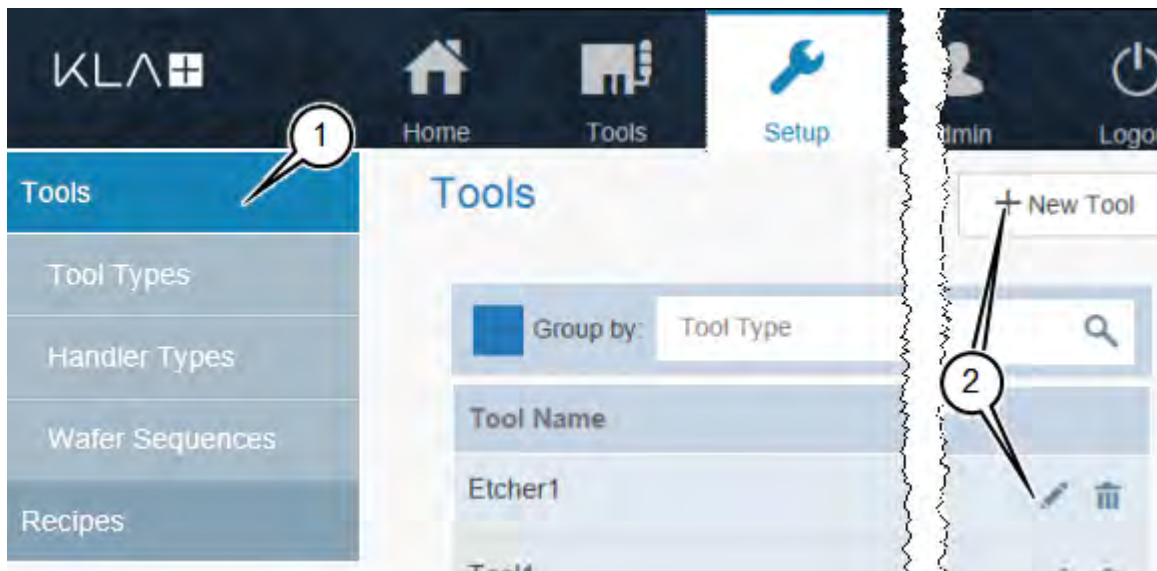


IMPORTANT

Before you can add a new tool, the applicable tool type and handler type must have been defined in the system (see [Section 4.5.2](#) and [Section 4.5.3](#)).

1. In the **Setup** page, make sure **Tools** is selected (the default selection when the **Setup** page opens).
2. Continue as follows:
 - To edit an existing tool, click the Edit icon for the tool.
 - To add a new tool, click + **New Tool**.

In either case, the **Edit Tool** window opens.



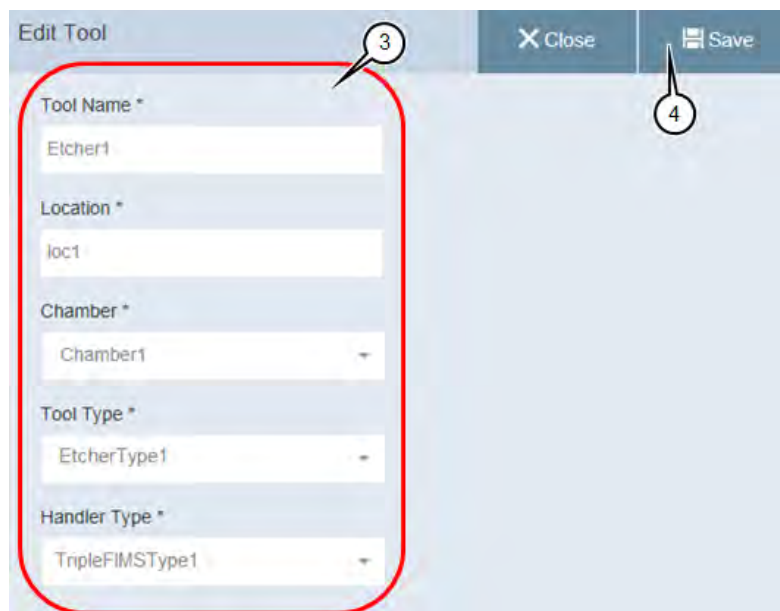
3. In the **Edit Tool** window, enter or select a value for every field.



NOTE

If you are editing an existing tool, enter or select new values only for those fields that you need to update.

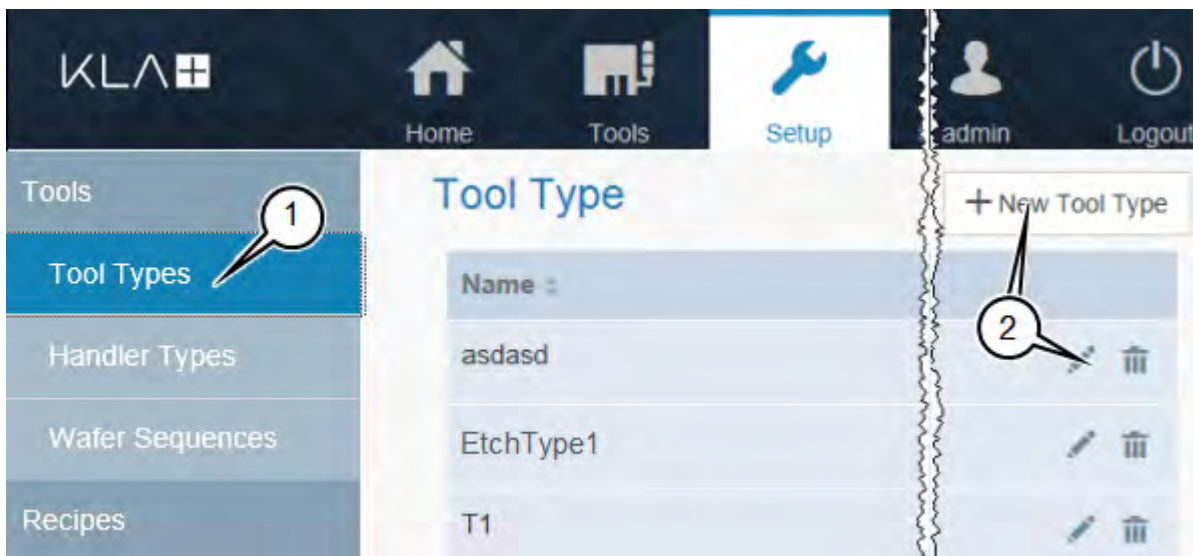
4. Click **Save** to save the values and close the **Edit Tool** window.



4.5.2 Edit or Add Tool Type

1. In the **Setup** page, click **Tool Types**.
2. Continue as follows:
 - To edit an existing tool type, click the Edit icon for the tool type.
 - To add a new tool, click **+ New Tool Type**.

In either case, the **Edit Tool Type** window opens.



NOTE

If you are editing an existing tool type, enter or select new values only for those fields that you need to update.

3. In the **Tool Type Edit** window, type a **Tool Type Name**.



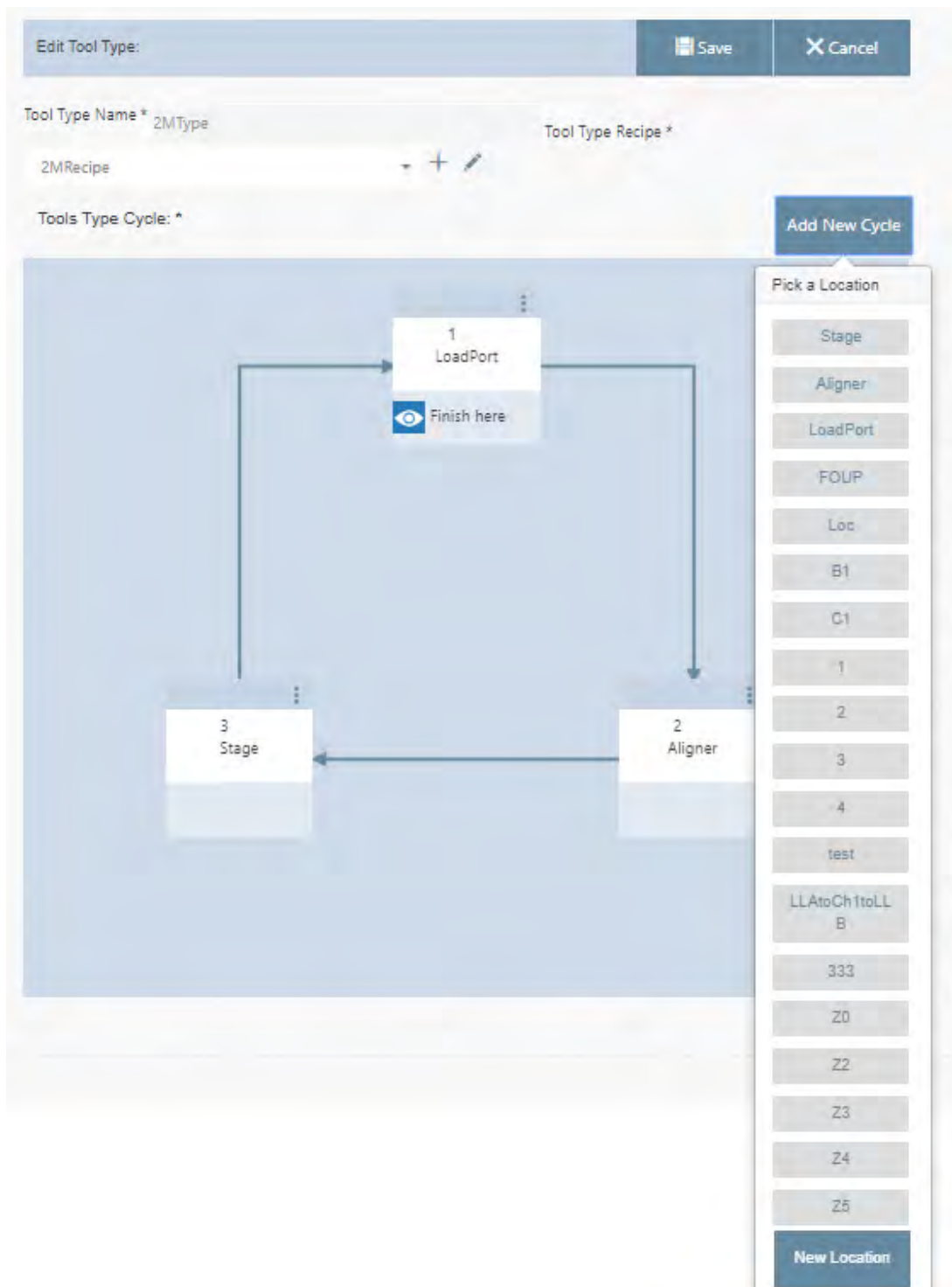
IMPORTANT

Use an informative name that includes information that will be important for operators to know about the tool.

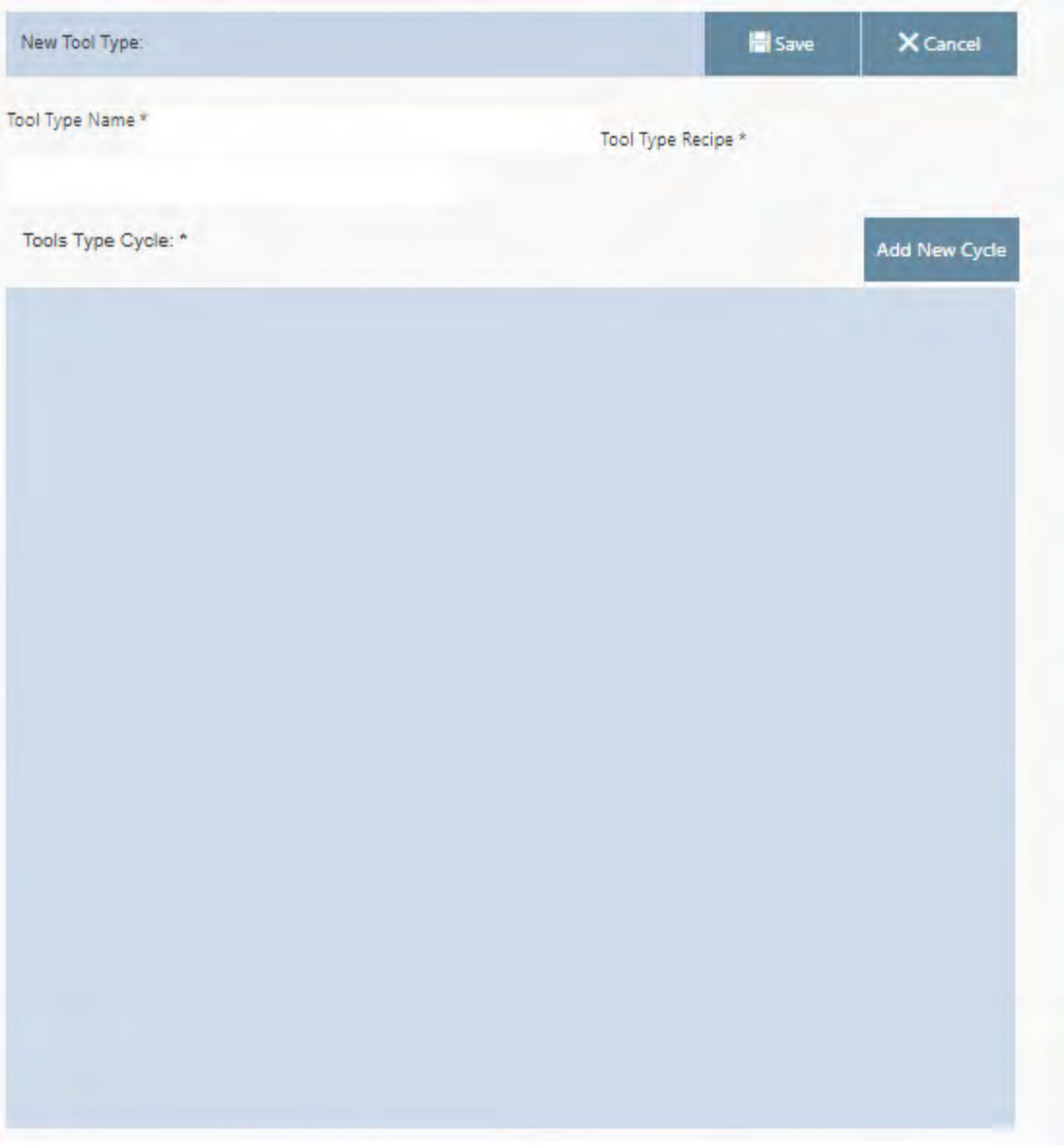
4. Select the **Tool Type Recipe**.

5. Continue as follows:

If you want to...	Then continue with...
Create a new Tool Type Sequence	step 6
Modify an existing Tool Type Sequence	step 11



6. To create a new **Tool Type Sequence** from scratch, click **Add New Cycle**.



The screenshot shows a web form titled "New Tool Type". At the top, there is a header bar with the text "New Tool Type:" on the left and two buttons, "Save" and "Cancel", on the right. Below the header, there are three main input sections: "Tool Type Name *" with a text input field, "Tool Type Recipe *" with a text input field, and "Tools Type Cycle: *" with a text input field. To the right of the "Tools Type Cycle" input field is a blue button labeled "Add New Cycle". Below these input fields is a large, empty blue rectangular area, likely a workspace for defining the tool type sequence.

**NOTE**

Each location that wafers visit within a tool is called a tool station.

7. From the list of available stations, select the first station in the sequence.

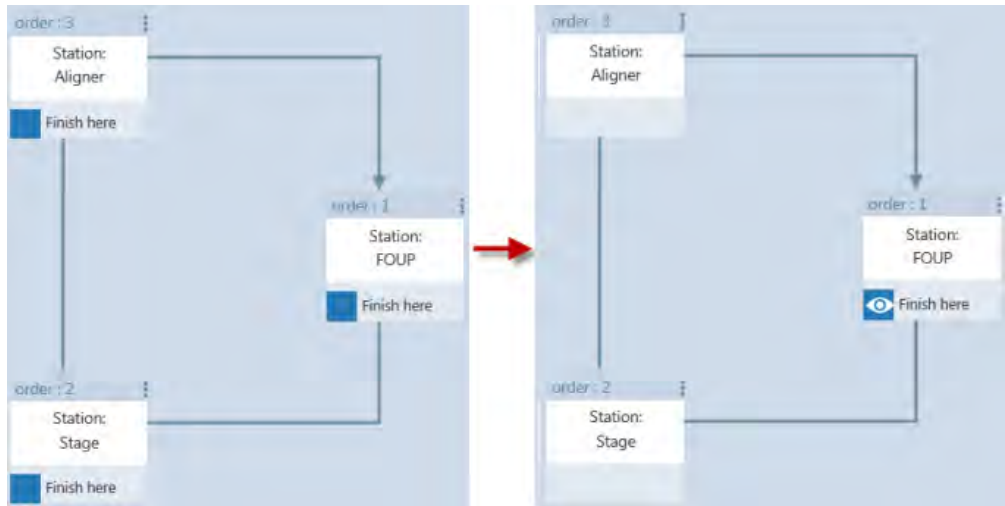


- Continue clicking **New location** and selecting stations until you have selected every station in the sequence.

The screenshot shows the 'New Tool Type' configuration window. At the top, there are 'Save' and 'Cancel' buttons. Below are input fields for 'Tool Type Name *', 'Tool Type Recipe *', and 'Tools Type Cycle: ^'. A large blue area represents the tool type cycle. On the right, a 'Pick a Location' dropdown menu is open, showing a list of locations: Stage, Aligner, LoadPort, FOUP, Loc, B1, C1, 1, 2, 3, 4, test, LLAtCh1toLL B, 333, Z0, Z2, Z3, Z4, and Z5. The 'New Location' button at the bottom of the dropdown is highlighted with a red box.

- For the last station in the sequence (in this example, **FOUP**), click **Finish here** to select that station and remove the option to select from the other stations.

Not selected *Selected*
 Finish here Finish here

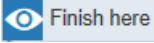


10. Click **Save** to save the new tool type and close the **Edit Tool Type** window.

11. You can modify an existing **Tool Type Sequence** in any of the following ways:

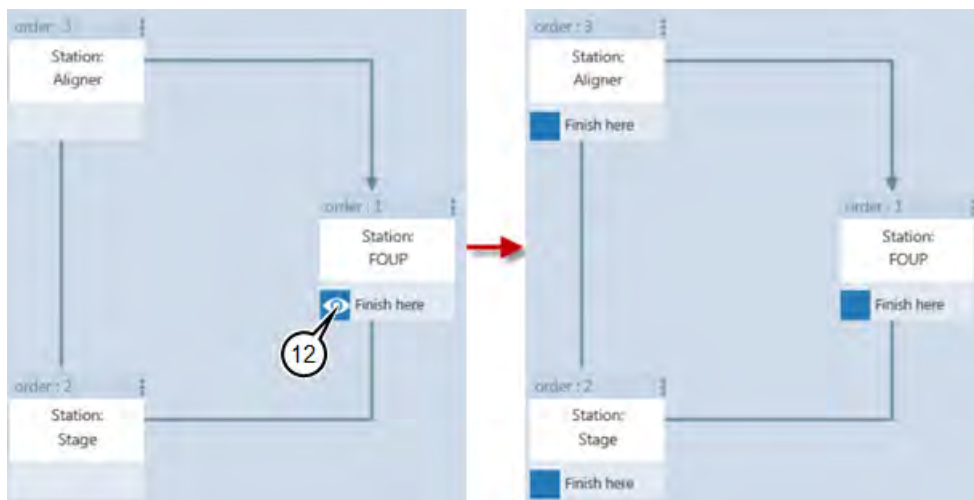
- Swap the station where the sequence finishes
- Delete a station from the sequence or replace it with a different station
- Add another station to the sequence

12. To change the station where the sequence finishes:


- Click  to deselect the station.

Every station in the sequence then displays the option to select it.

- Click **Finish here** to select the new station where the sequence finishes.



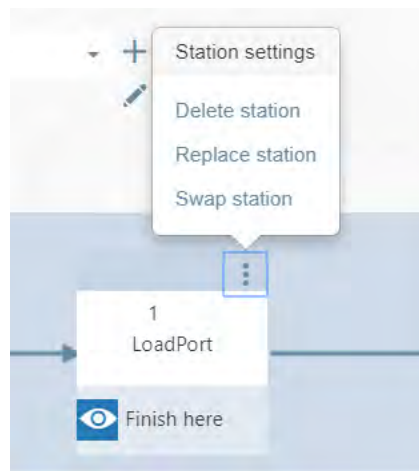
13. To delete a station or Replace or to swap a station, from the sequence:

- Click  for that station.
- To delete the station, click **Delete station**.
- Click **Replace station**.
- To **Swap** the station, click the **Swap station**.



NOTE

The list contains those stations that are set up in the KLA Automation System but are not currently used in this Tool Type Sequence.



14. When you have made all the required changes to the **Tool Type Sequence**, click **Save** to save the changes and close the **Tool Type Edit** window.

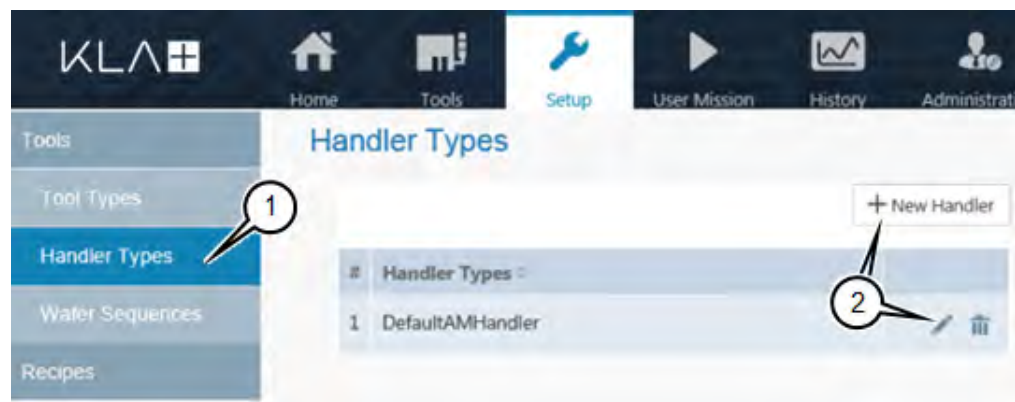
4.5.3 Edit or Add Handler Type



NOTE

The only parameter that is entered for a **Handler Type** is the **Name**.

1. In the **Setup** page, click **Handler Types**.
2. Continue as follows:
 - To edit an existing handler type, click the Edit icon for the handler type.
 - To add a new handler type, click **+ New**.



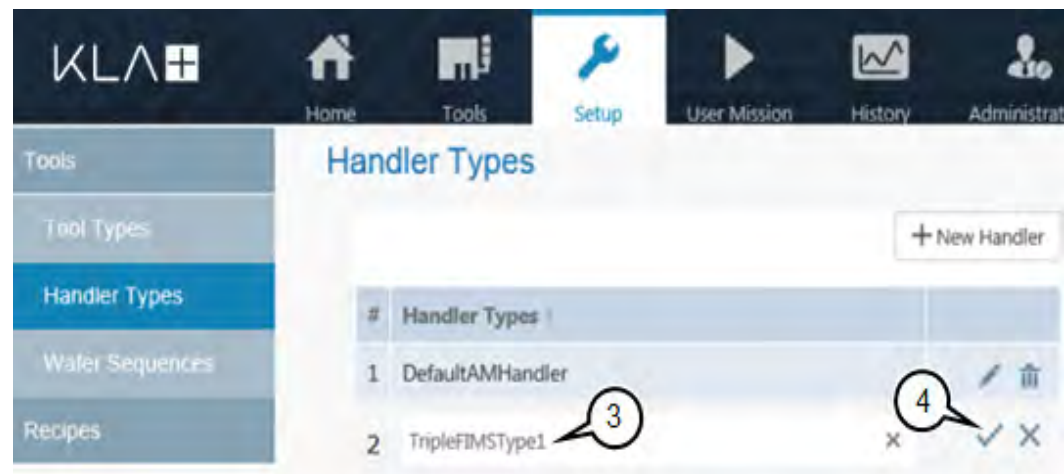
3. Type the **Name** for the handler type.



IMPORTANT

Use an informative name that shows the robot type, the number of load ports, and any other information that will be important for operators to know about the handler type.

4. Click to save.



4.5.4 Edit or Add Wafer Sequence



NOTE

The only parameter that is entered for a **Chamber** or **Station** is the **Name**.

1. In the **Setup** page, click **Wafer Sequence**.
2. Continue as follows:
 - To edit an existing chamber or station, click the Edit icon for the chamber or station.
 - To add a new chamber, click **+ New Chambers**.
 - To add a new location, click **+ New Location**.

3. Type the **Name** for the chamber or location.



IMPORTANT

Use an informative name that includes information that will be important for operators to know about the chamber or station.

- Click to save.

Wafer Sequences

+ New Chambers + New Location

Chambers			Locations		
#	Name		#	Name	
1	Chamber1	<input type="checkbox"/>	1	Stage	<input type="checkbox"/>
2	Chamber2	<input type="checkbox"/>	2	Aligner	<input type="checkbox"/>
3	<input type="text"/>	<input checked="" type="checkbox"/>	3	LoadPort	<input type="checkbox"/>
			4	FOUP	<input type="checkbox"/>
			5	Loc	<input type="checkbox"/>
			6	B1	<input type="checkbox"/>
			7	C1	<input type="checkbox"/>
			8	1	<input type="checkbox"/>
			9	2	<input type="checkbox"/>
			10	3	<input type="checkbox"/>
			11	<input type="text"/>	<input checked="" type="checkbox"/>

< PREV Page 1 of 2 NEXT >

4.6 User Mission page

The **User Mission page** is used to execute the **Tool** or **OHT** manual mission.

- To view **User Mission** page, click User Mission.

KLA Automation Web UI navigation bar:

- Home
- Tools
- Setup
- User Mission** (highlighted)
- History
- Administration
- Analysis
- Diagnostics
- Calibration

User Mission page:

Select Mission Type: ▶ Execute Abort Re-Load

Tool OHT

- Tool page will open by default.

4.6.1 To Execute Tool Mission

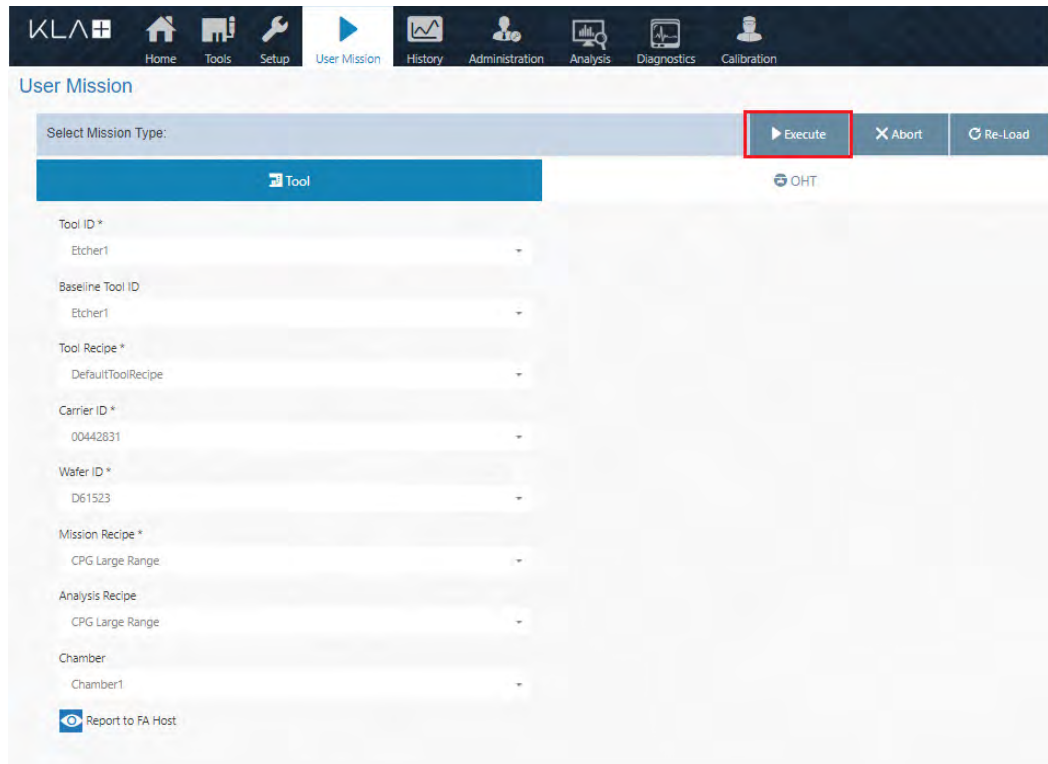
1. Add **Tool** data to execute the tool mission.

The screenshot shows the 'User Mission' page in the KLA Automation Web UI. The 'Tool' section is highlighted with a red box. The 'Tool ID' dropdown is set to 'Etcher1', 'Baseline Tool ID' to 'Etcher1', 'Tool Recipe' to 'DefaultToolRecipe', 'Carrier ID' to '00442831', 'Wafer ID' to 'D61523', 'Mission Recipe' to 'CPG Large Range', and 'Analysis Recipe' to 'CPG Large Range'. The 'Chamber' is set to 'Chamber1'. A 'Report to FA Host' button is visible at the bottom of the form.

2. Click on **Reports to FA Host**.

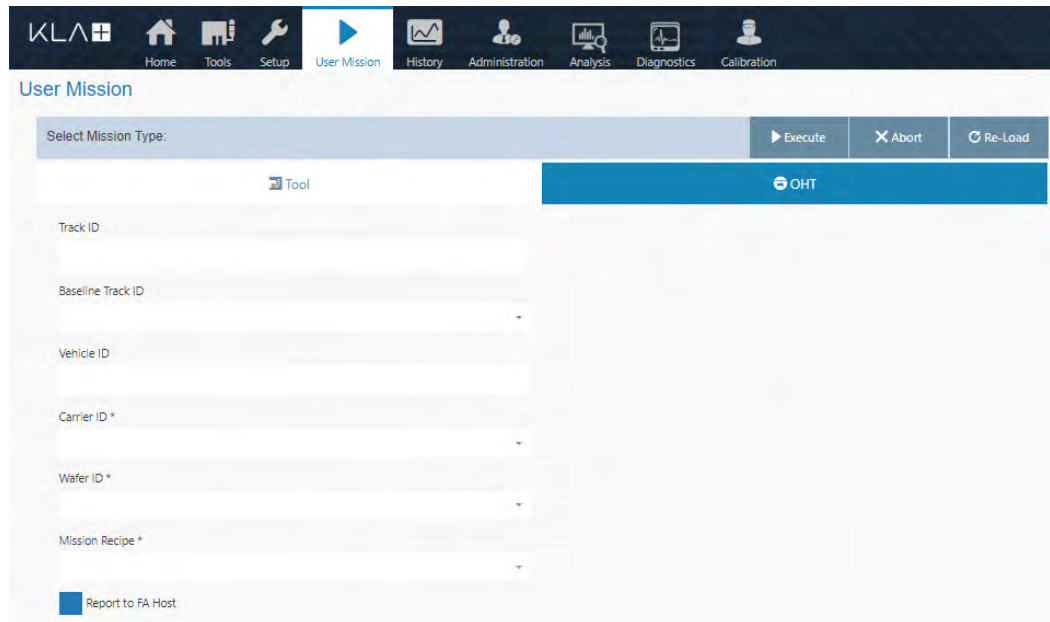
The screenshot shows the 'User Mission' page in the KLA Automation Web UI. The 'Report to FA Host' button is highlighted with a red box. The 'Tool' section is highlighted with a blue bar. The 'Tool ID' dropdown is set to 'Etcher1', 'Baseline Tool ID' to 'Etcher1', 'Tool Recipe' to 'DefaultToolRecipe', 'Carrier ID' to '00442831', 'Wafer ID' to 'D61523', 'Mission Recipe' to 'CPG Large Range', and 'Analysis Recipe' to 'CPG Large Range'. The 'Chamber' is set to 'Chamber1'.

3. Click on **Execute** to run the tool mission.



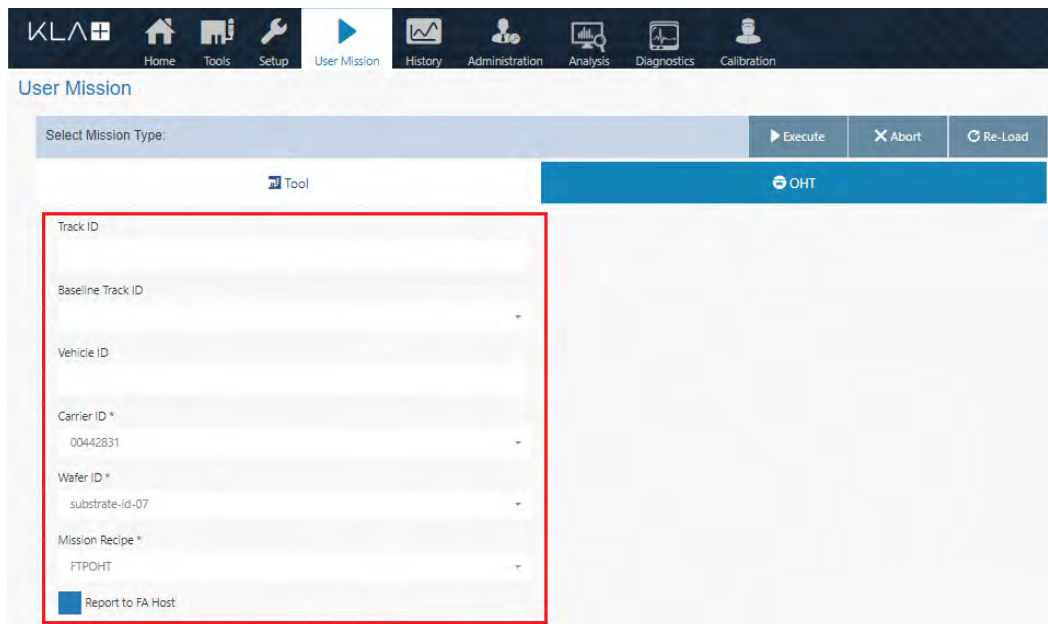
4.6.2 To Execute OHT mission

1. Click on **OHT** to execute the OHT mission.



The screenshot shows the 'User Mission' page in the KLA Automation Web UI. The top navigation bar includes icons for Home, Tools, Setup, User Mission, History, Administration, Analysis, Diagnostics, and Calibration. Below the navigation bar, the 'User Mission' section has a 'Select Mission Type:' dropdown menu. To the right of this menu are three buttons: 'Execute', 'Abort', and 'Re-Load'. Below the dropdown menu, there are two tabs: 'Tool' and 'OHT'. The 'OHT' tab is currently selected and highlighted in blue. The main content area contains several input fields: 'Track ID', 'Baseline Track ID', 'Vehicle ID', 'Carrier ID *', 'Wafer ID *', and 'Mission Recipe *'. At the bottom left of this area is a checkbox labeled 'Report to FA Host'.

2. Add **OHT** data to execute the OHT mission.



The screenshot shows the 'User Mission' page with the 'OHT' tab selected. The input fields are now populated with data and are highlighted with a red rectangular box. The data entered is as follows:

Field	Value
Track ID	
Baseline Track ID	
Vehicle ID	
Carrier ID *	00442831
Wafer ID *	substrate-id-07
Mission Recipe *	FTPOHT

At the bottom left of the input area, the 'Report to FA Host' checkbox is still present.

3. Click on **Reports to FA Host**.

The screenshot shows the 'User Mission' page in the KLA Automation Web UI. The page has a dark navigation bar at the top with icons for Home, Tools, Setup, User Mission, History, Administration, Analysis, Diagnostics, and Calibration. Below the navigation bar, the 'User Mission' section is visible. It includes a 'Select Mission Type:' dropdown menu with 'OHT' selected. To the right of this menu are three buttons: 'Execute', 'Abort', and 'Re-Load'. Below the dropdown menu, there is a 'Tool' dropdown menu. The main area contains several input fields: 'Track ID', 'Baseline Track ID', 'Vehicle ID', 'Carrier ID *' (with value '00442831'), 'Wafer ID *' (with value 'substrate-id-07'), and 'Mission Recipe *' (with value 'FTPOHT'). At the bottom left of the form, there is a button labeled 'Report to FA Host' which is highlighted with a red rectangular box.

4. Click on **Execute** to run the OHT mission.

This screenshot is identical to the previous one, showing the 'User Mission' page. The 'Execute' button in the top right corner of the 'Select Mission Type:' dropdown menu is now highlighted with a red rectangular box. The 'Report to FA Host' button at the bottom left is no longer highlighted.

4.6.3 To Execute ToolOHT Mission

1. Click on **Tool** in **User Mission**.
2. Use drop-down and select **Tool ID**.
3. Use drop-down and select **Baseline Tool ID** (optional).
4. Use drop-down and select **Tool Recipe**.
5. Use drop-down and select **Carrier ID**.

- Use drop-down and select the **Wafer ID**.
- Use drop-down and select the **Mission Recipe** (added through **Setup - Recipes - New Recipe**).

User Mission

Select Mission Type: ▶ Execute ✕ Abort ↻ Re-Load

Tool OHT

Tool ID *
KLARFGenTool

Baseline Tool ID
KLARFGenTool

Tool Recipe *
KLARFGen

Carrier ID *
AMFOUP11

Wafer ID *
substrate-id-5

Mission Recipe *
ToolOHT Recipe Select OHT recipe for running ToolOHT mission

Chamber
0

Report to FA Host

Load Port Number *

- Use drop-down and select **Chamber** description.
- Click on **Reports to FA Host**.
- Select the **Load Port Number**.

11. Click on **Execute** to run the **ToolOHT** mission.

The screenshot shows the 'User Mission' page in the KLA Automation Web UI. At the top, there is a navigation bar with icons for Home, Tools, Setup, User Mission (active), History, Administration, Analysis, and Diagnostics. Below the navigation bar, the page title 'User Mission' is displayed. The main content area features a 'Select Mission Type:' dropdown menu, which is currently set to 'Tool'. To the right of this dropdown are three buttons: 'Execute' (highlighted with a red box), 'Abort', and 'Re-Load'. Below the dropdown menu, there is a list of mission parameters, each with a dropdown menu:

- Tool ID *: KLARFGenTool
- Baseline Tool ID: KLARFGenTool
- Tool Recipe *: KLARFGen
- Carrier ID *: AMFOUP11
- Wafer ID *: substrate-id-5
- Mission Recipe *: ToolOHT Recipe
- Chamber: chamber2
- Report to FA Host
- Load Port Number *: 1

4.7 History Page



The **History** page displays information about missions that have run.

1. To view the **History** page, click **History**.

Task ID	Mission Recipe	Task ID	Water ID/Order	Mission Status	Mission Mode	Mission Run Date	Failures
1	ZachRecipe	ZachDoor	substrate-is-07	✓	Manual	11/28/2019 12:17:14 PM	
2	ZachRecipe	ZachDoor	substrate-is-07	✗	Manual	11/28/2019 12:50:21 PM	
3	ZachRecipe	CPG Ambient 1	D61523	✓	Automatic	11/28/2019 12:19:07 PM	
4	ZachRecipe	CPG Ambient 1	D61523	✓	Automatic	11/28/2019 12:06:18 PM	
5	ZachRecipe	ZachDoor	substrate-is-07	✗	Manual	11/28/2019 10:39:47 AM	
6	ZachRecipe	ZachDoor	Lam3	✗	Automatic	11/28/2019 8:59:43 AM	
7	ZachRecipe	ZachDoor	Lam1	✗	Automatic	11/28/2019 8:26:11 AM	
8	ZachRecipe	ZachDoor	substrate-is-07	✗	Manual	11/23/2019 2:48:19 PM	
9	ZachRecipe	CPG Ambient 1	D61523	✓	Manual	11/23/2019 2:08:09 PM	
10	ZachRecipe	CPG Ambient 1	D61523	✓	Automatic	11/23/2019 12:32:23 PM	



NOTE

-  shows that the mission ran successfully
-  shows that the mission did not run successfully

4.8 Administration Page

The **Administration** page allows those with Administrator-level privileges to remote-connect to KLA Automation Stations to perform troubleshooting.



IMPORTANT

The **Administration** page is available only to those who log in with the role of **Administrator**.

1. To view the **Administration** page, click **Administration**.

Station Name	IP Address	Remote Connection	FOUJ on Station	Delete
AMSrvTEST1	10.158.52.153	Connect	None	Delete
AMStation6	10.161.13.31	Connect	CARRIES1	Delete
AMStation5QC3	10.158.52.158	Connect	55442831	Delete
AMStation5QC4	10.158.52.179	Connect	No FOUJ is associated with this Station	Delete
HCLStation2	10.161.12.102	Connect	No FOUJ is associated with this Station	Delete
AMStationMadonna	10.158.52.156	Connect	No FOUJ is associated with this Station	Delete

4.8.1 KLAStations



IMPORTANT

This will allow users to view the list of configured KLA Automations Stations to the Server.

1. Click on "**KTStations**" to view the list of **KT Automation Stations**.

ID	KT Automation Station Name	IP Address	Remote Connection	FOUF on Station	Delete
1	AMSrvTEST1	10.118.52.183	Connect	None	Delete
2	AMStation6	10.161.13.11	Connect	C4851251	Delete
3	AMStation5QC3	10.156.52.156	Connect	00442831	Delete
4	AMStation5QC4	10.156.52.179	Connect	No FOUF is associated with this Station	Delete
5	HCLStation2	10.161.12.102	Connect	No FOUF is associated with this Station	Delete
6	AMStationMadonna	10.156.52.136	Connect	No FOUF is associated with this Station	Delete

2. User can filter the **KT Automation Stations** using the available selections, (**Default, Days and Date (select the required date)**).
3. Click on "**Collect Logs**" to collect the all crash dump logs for the selected KLA Automation Station (Refer to the above Figure).

4.8.2 Wafers



IMPORTANT

This will allow users to view the list of Wafers available in the FOUF.

1. Click on "**Wafers**" to view the list of Wafers in the FOUF.

Wafer HWID	Wafer ID	Wafer ID Extension	Wafer Status	CameraID
05190070000000	042911	042911	Enabled	00442834
substrate-04-07	WAFER1		Enabled	
042918	042918	042918	Enabled	
042894	042894		Enabled	
041922	041922		Enabled	00442831
01234567890000	substrate-04-1		Enabled	
044792	044792		Enabled	0489201
01190070000000	substrate-04-07		Enabled	00442831

2. The newly added wafer **Status** will be "**Disabled**" by default.
3. User has to enable the Status to "**Enabled**" with the edit option.

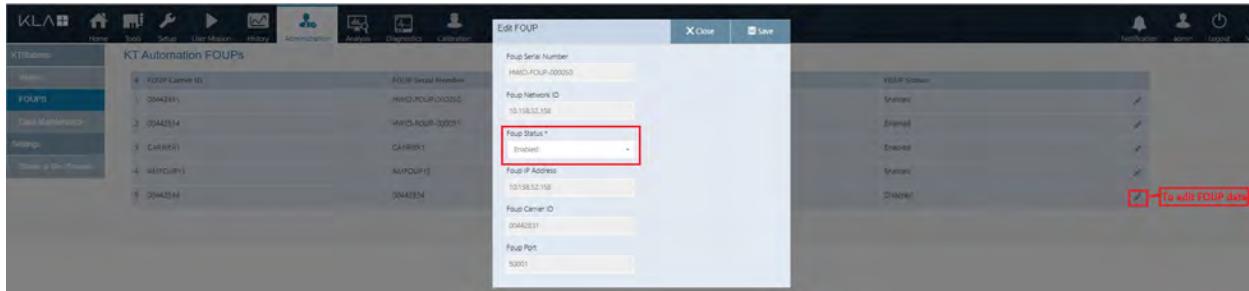
4.8.3 FOUPS



IMPORTANT

This will allow User to view the configured FOUPS list in the server.

1. Click on "**FOUPS**" to view the list of FOUPS configured in the server.



2. The newly added FOUP **Status** will be "**Disabled**" by default.
3. User has to enable the Status to "**Enabled**" with the edit option.

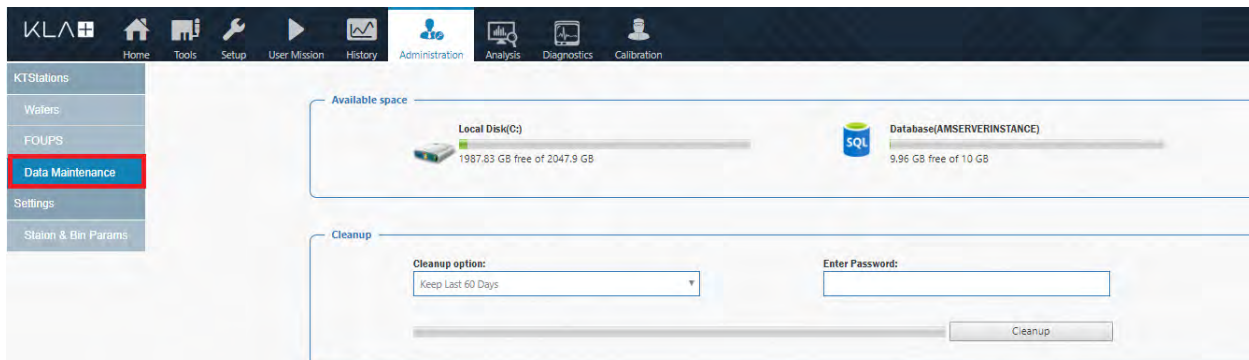
4.8.4 Data Maintenance



IMPORTANT

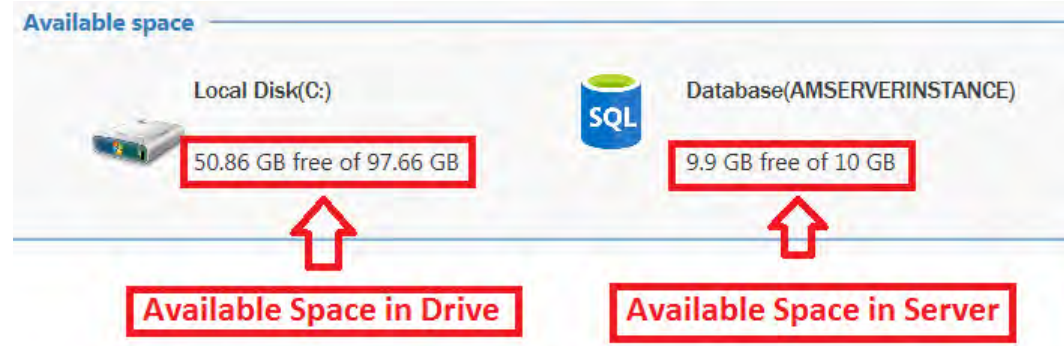
This feature allow the User to clean up the AM Data in Drive and Database.

1. Click on "**Data Maintenance**" to view the space existing in the Drive and Database.

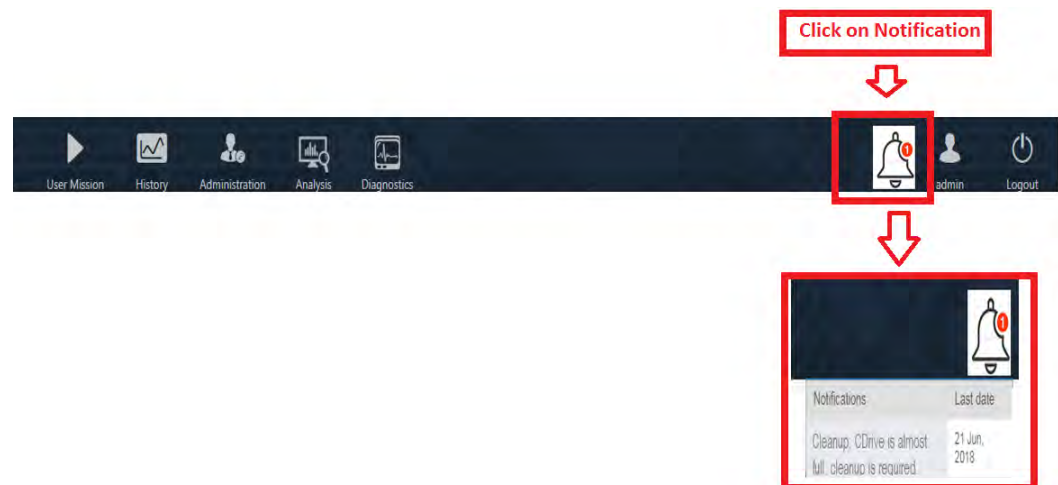


2. From the above figure User must identify the sections "**Available space**" and "**Cleanup**" in the UI.

3. User must see the available space in Drive and Database in “**Available space**”.



4. Also User must be notified when clean up is required to AM Data in Drive and Database (Refer to below Figure).



5. To cleanup the AM Data in Drive and Database, User must select required option in the Cleanup option drop down box (Refer to below Figure).
6. Then enter the password in the “**Enter Password**” section (Refer to below Figure).

7. Then click on **"cleanup"** (Refer to below Figure).

The figure illustrates the cleanup process in two stages. In the first stage, the 'Cleanup option:' dropdown menu is set to 'Keep Last 60 Days'. A red box labeled 'Click Here' points to the dropdown arrow. To the right, there is an 'Enter Password:' field. A large red arrow points from the 'Cleanup' button to the second stage. In the second stage, the dropdown menu is open, showing options: 'Keep Last 30 Days', 'Keep Last 60 Days' (highlighted), and 'Keep Last 120 Days'. A red box labeled 'Click here for "Cleanup"' points to the 'Cleanup' button. To the right, the 'Enter Password:' field now contains six dots, indicating a password has been entered. A red box labeled 'Enter Password' points to this field.

8. Now the AM Data is cleaned up in the Drive and Database.

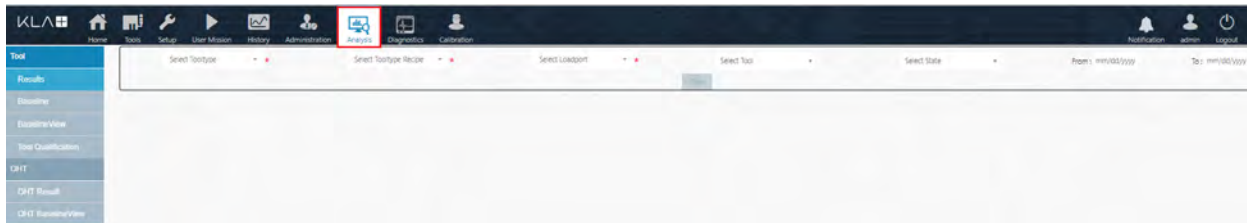
4.9 Analysis



IMPORTANT

This Analysis page will allow User to create Baseline, allow User to see the monitoring mission results and User must view whether the tool has qualified or not.

- Click on **"Analysis"** and the page will be displayed as shown below.



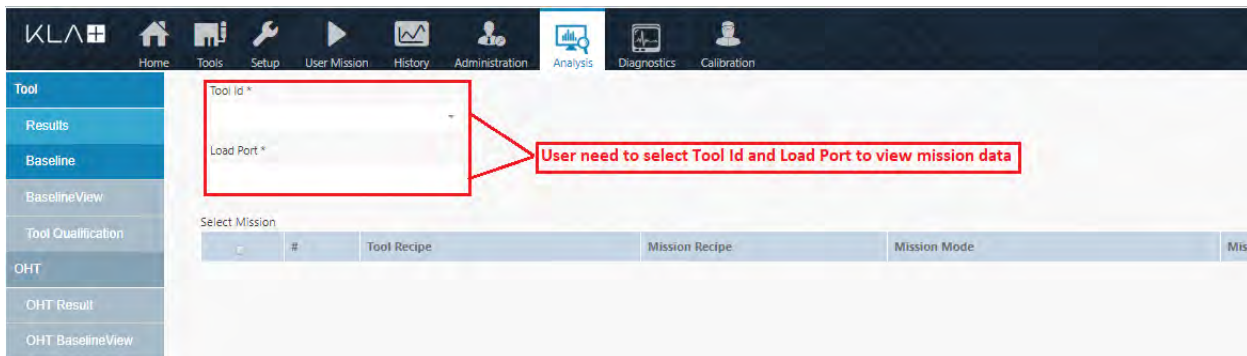
4.9.1 Baseline



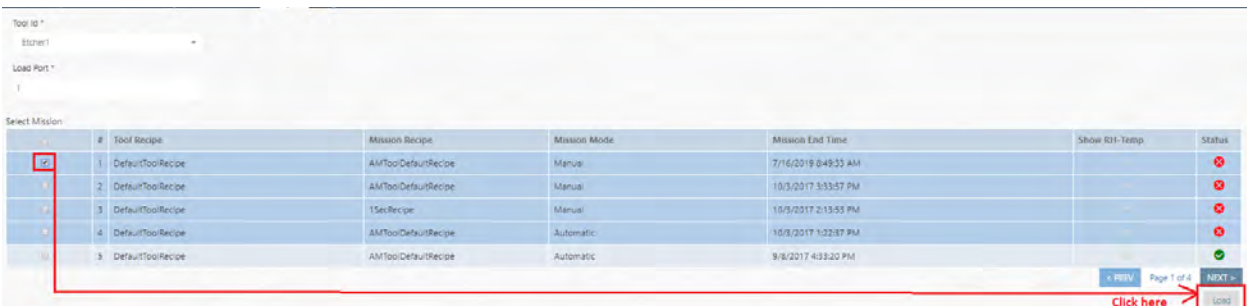
IMPORTANT

This section will allow user to create the Baseline per tool id and load port number.

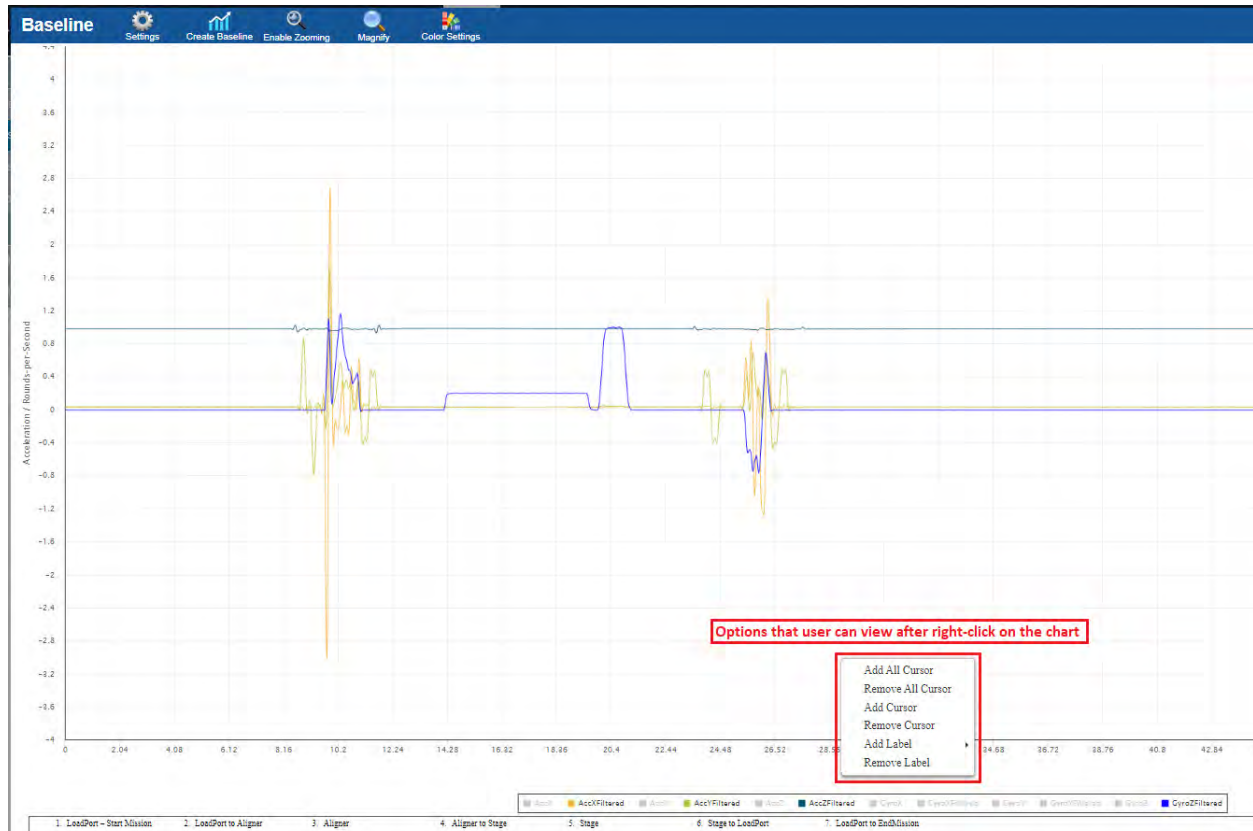
- Click on **"Baseline"** and the page will be displayed as shown below.



- User can create the Baseline for particular Tool Id and Load Port.
- Click on **"Load"** to get the mission raw data of particular event selected in the mission data.



4. User need to know the below mentioned details before creating the Baseline in the Chart
 - Adding/Removing the stations
 - Adding/Removing the Label
5. User has to right click on the chart to get the below shown options.



NOTE

Station must be added in two ways either by clicking on **“Add All Cursor”** or **“Add Cursor”**

6. Click on **"Add All Cursor"** to add all stations in the chart which is shown in the below figure



7. Also User can able to delete the all stations by clicking on **"Remove All Cursor"** (Refer to [step 5](#)).
8. Each stage and label will be indicated between two green lines as shown in the above figure.

9. User must add each station into the chart by clicking **"Add Cursor"** and **"Add Label"** as shown in the below figure.

- Right click on the Chart to get the options.
- Select **"Add Cursor"** to add Station.
- Select **"Add Label"** to add station number.



10. User can define the stage (or) Wafer sequence by moving the Station line (Green line) horizontally as shown in the above figure.

11. User will get the detailed information related to Baseline creation after defining the Stage (or) Wafer sequence and Station number (or) Label.



12. Also User can see the "Error List" as shown in the above Figure.



NOTE

Error List must be appeared in the Baseline mission if mission data has discrepancy with the predefined settings data.

13. Re-analysis: In the “Errors List” User can see the list of errors for the particular mission. Here User has to do the required changes in the JSON settings and re-run the machine to reduce the errors.



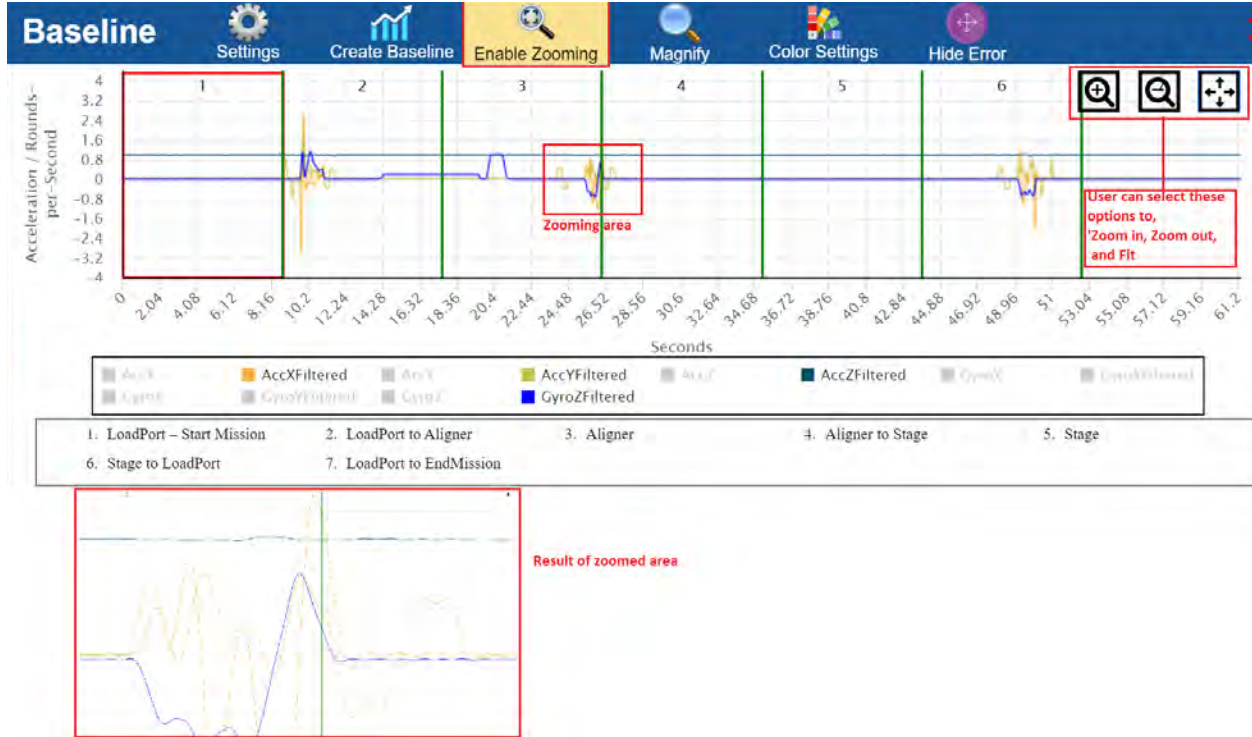
The screenshot shows the 'Processing Settings' and 'Spec Settings' tables. The 'Processing Settings' table has columns for 'ID', 'Name', 'Min', 'Max', 'Unit', 'Min', 'Max', 'Unit', 'Min', 'Max', 'Unit'. A red box highlights the 'Max' value for 'Leveling' (1.049) with the text 'User can click here to modify the value as required'. The 'Spec Settings' table has columns for 'ID', 'Name', 'Min', 'Max', 'Unit', 'Min', 'Max', 'Unit'. Below the tables, a red box highlights the 'Apply Settings' button with the text 'User can click here to apply the modified values to the settings'.



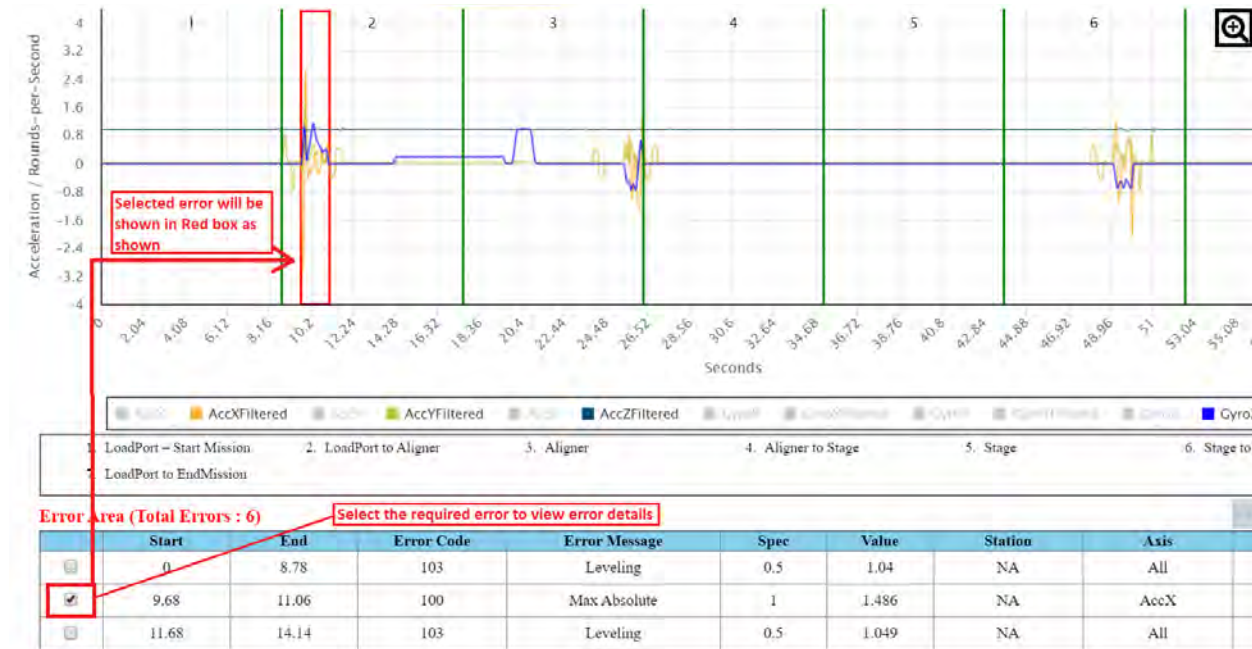
NOTE

Here the number of errors may be increased if the JSON settings changes are not modified properly. User has to keep the exact values to reduce the errors.

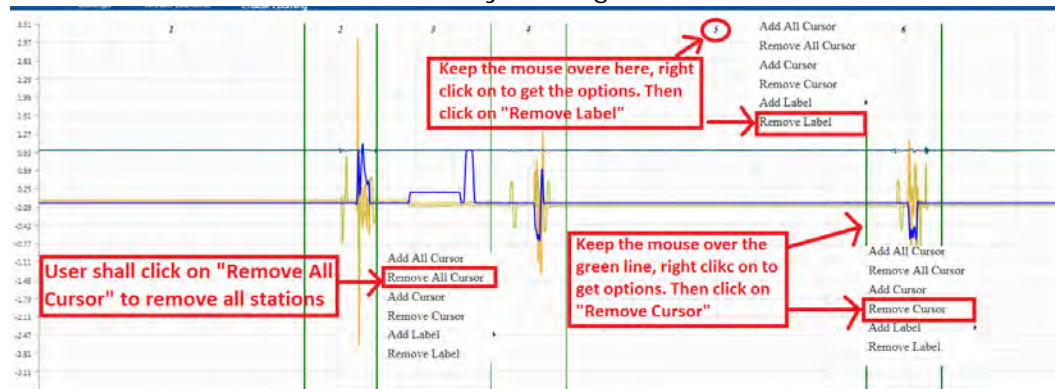
14. User can enable the "Zoom" option as mentioned in the below figure.



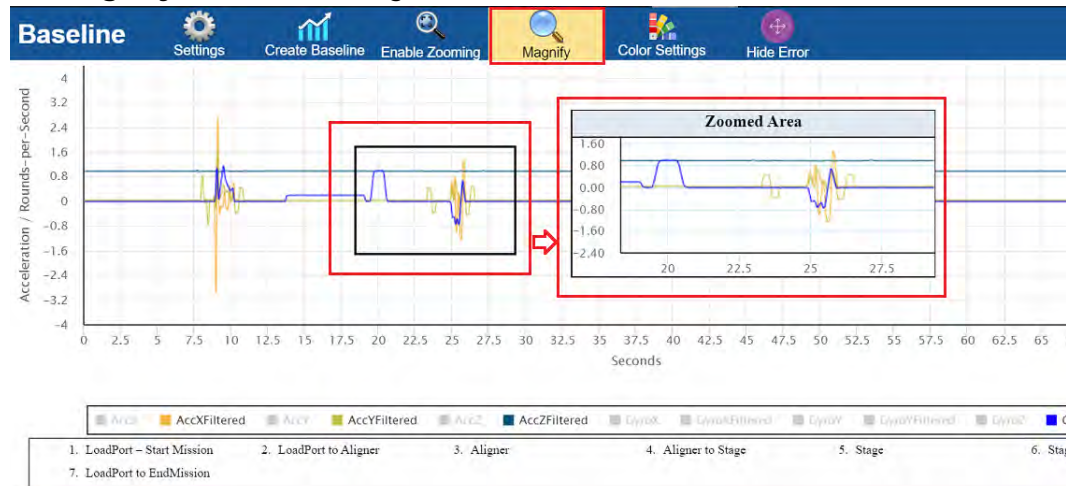
15. User has to check and click on respective error in "Error List" to see the detailed information about the error.



16. User must remove the stage by clicking on **“Remove Cursor”**, User must remove the station number (or) Label by clicking on **“Remove Label”** and User must remove all stations by clicking **“Remove All Cursors”**.



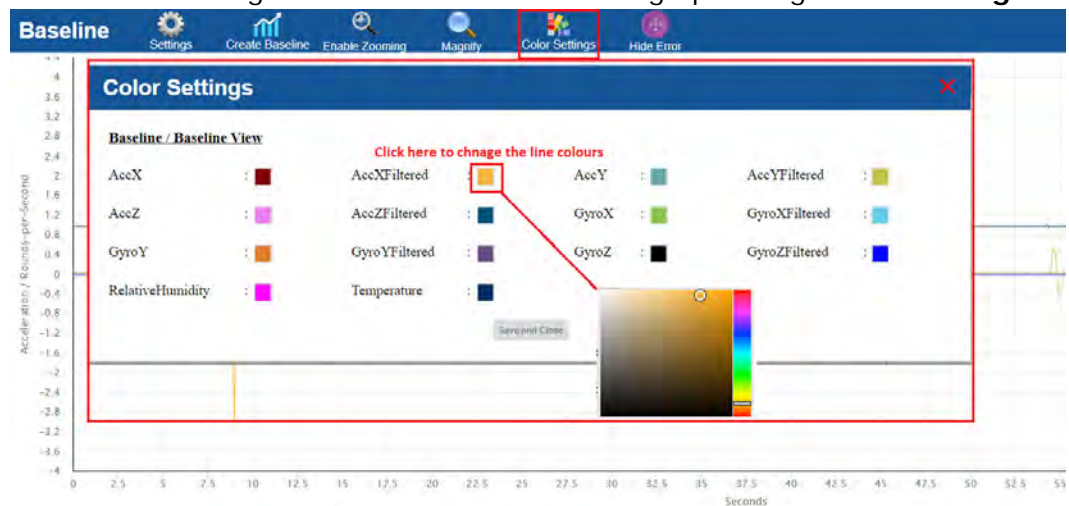
17. User can view the required raw data along with graph co-ordinates using **Magnify**. See below image for reference.



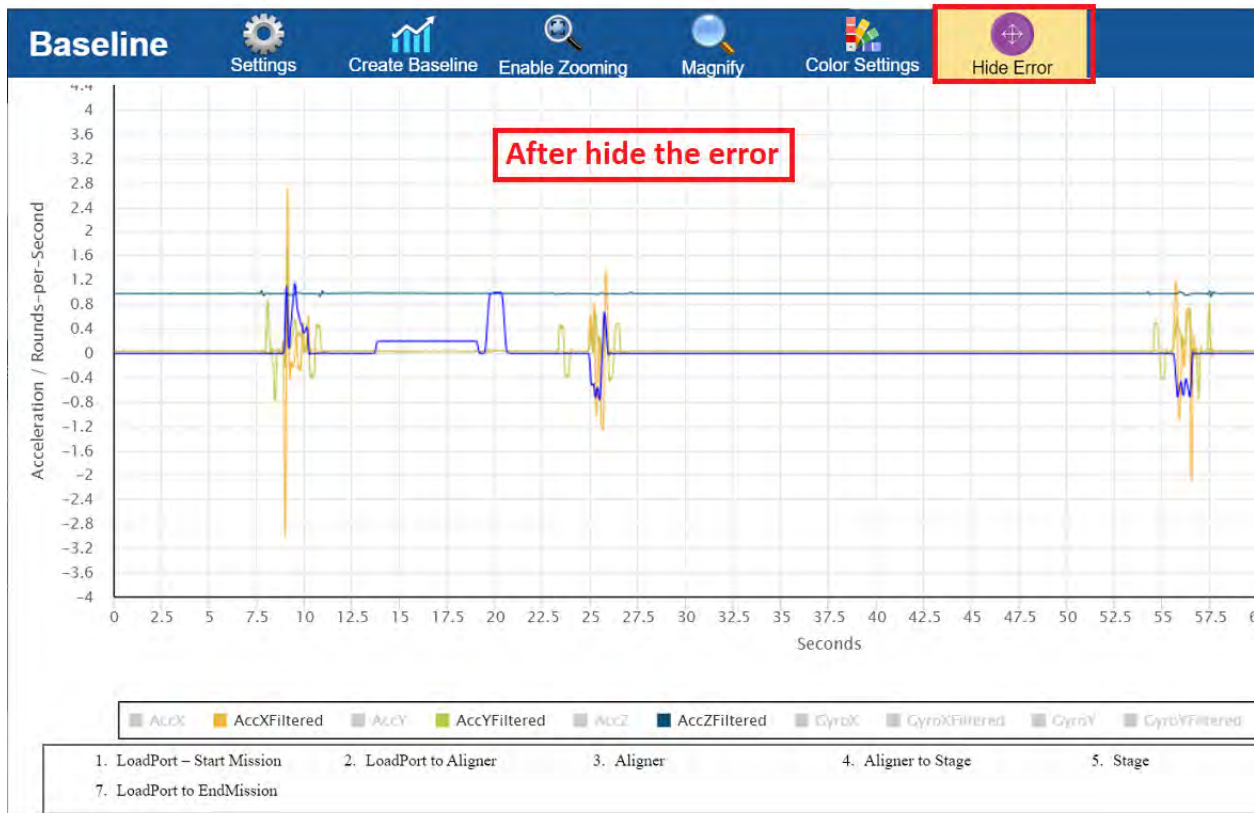
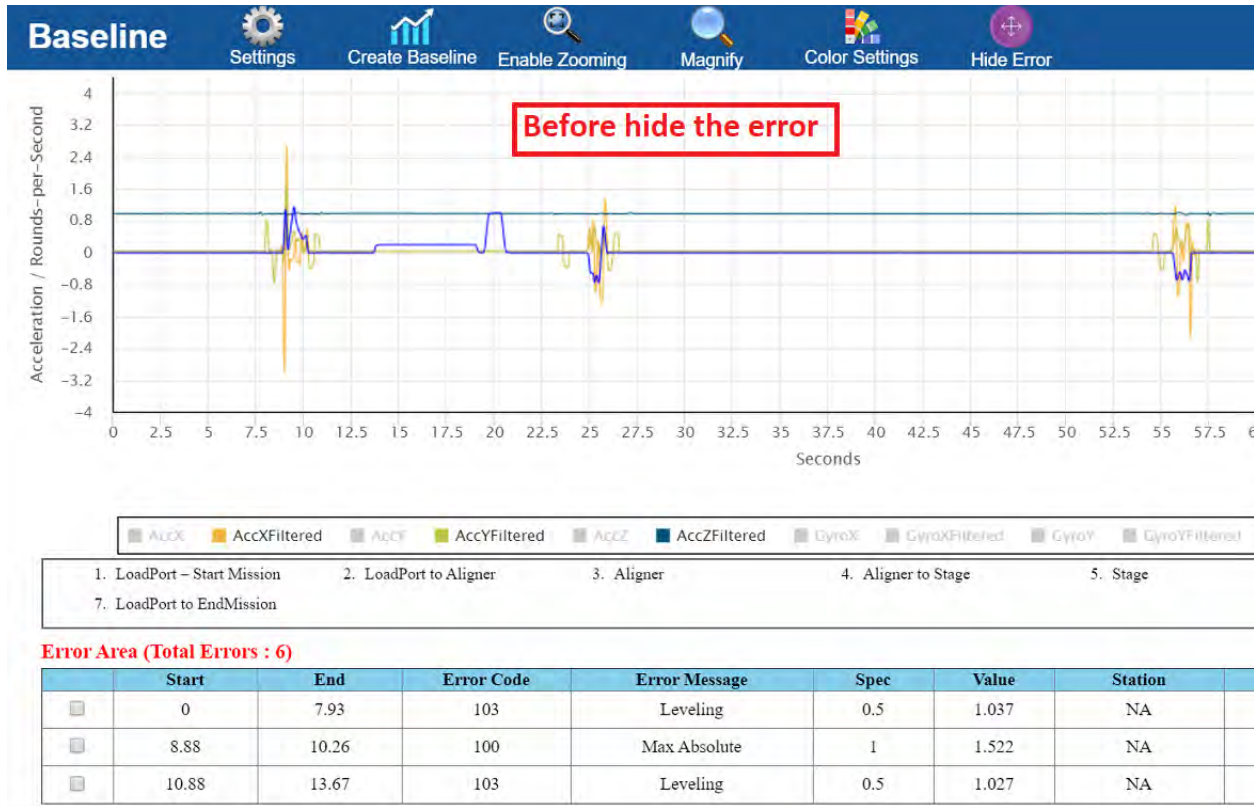
Error Area (Total Errors : 6)

	Start	End	Error Code	Error Message	Spec	Value	Station	Axis
	0	7.93	103	Leveling	0.5	1.037	NA	All

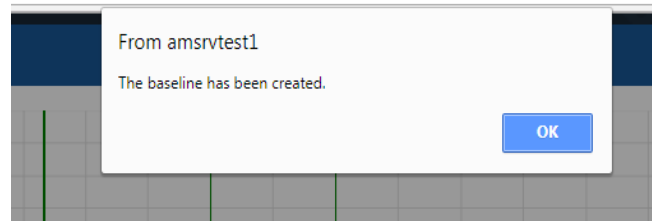
18. User can change the baseline colors for the graph using **Color Settings**.



19. User can hide the error by clicking **Hide Error**.

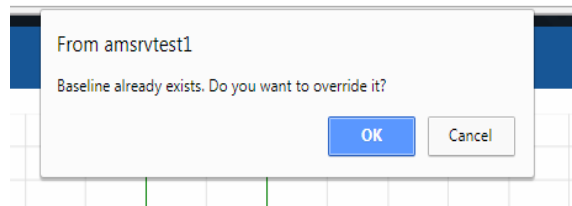


20. After the successful creation of the Baseline the pop up will be shown as mentioned below.



NOTE

A pop up will be shown in case of the Baseline already exists, Here User has to decide whether to override or cancel the Baseline creation.



21. The Baseline existence will become **“true”** in **“Results”** page after successful creation of Baseline to the particular Tool Id and Load Port combination. Also the Baseline existence will become **“true”** for other events of same combination of Tool Id and Load Port Number.

4.9.2 Results

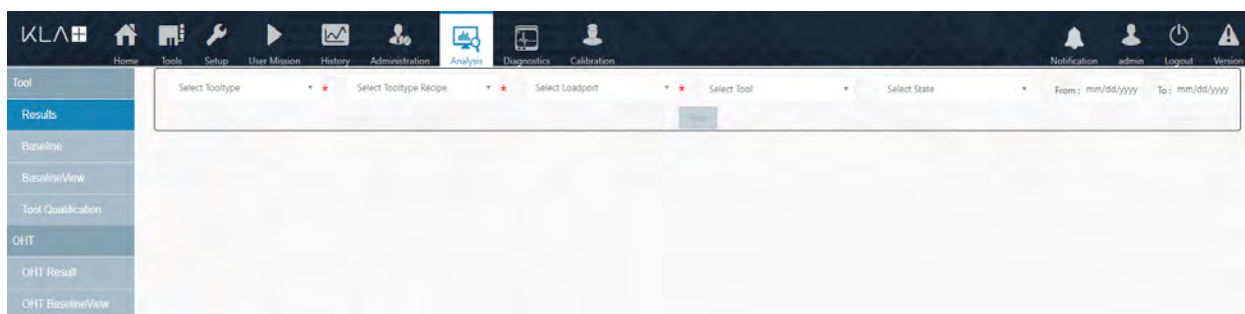


IMPORTANT

This page will allow User to see the Monitoring Mission details of per tool id and load port number.

- Baseline must be existed for monitoring mission results.
- Baseline will be created (in the section [Baseline](#)) in case of non existence of baseline and re-run the mission to get the monitoring mission details.

1. Click on **“Results”** to view the raw data of particular Tool, Recipe and Loadport combination.



2. User has to select the **“Tooltype, Tooltype Recipe, and Loadport”** to view the raw details (Refer to the below figure).

#	Tool	Tool Recipe	Mission Recipe	Mission Mode	Mission End Time	Has Baseline	Mission State	Mission Status
1	Ztech1	ZtechRecipe	ZtechDoor	Manual	9/6/2019 3:31:39 AM	True	Analysis Failed - Only Raw Data	✘
2	Ztech1	ZtechRecipe	ZtechDoor	Manual	9/5/2019 12:20:28 PM	True	Completed	✔
3	Ztech1	ZtechRecipe	ZtechDoor	Manual	11/25/2019 2:49:18 PM	True	Completed With Failures	✔
4	Ztech1	ZtechRecipe	ZtechDoor	Automatic	11/24/2019 11:41:26 AM	True	Completed With Failures	✔
5	Ztech1	ZtechRecipe	ZtechDoor	Automatic	11/24/2019 11:28:11 AM	True	Completed With Failures	✔
6	Ztech1	ZtechRecipe	ZtechDoor	Manual	11/22/2019 9:27:35 AM	True	Completed	✔
7	Ztech1	ZtechRecipe	ZtechDoor	Manual	11/22/2019 3:38:38 PM	True	Completed	✔
8	Ztech1	ZtechRecipe	ZtechDoor	Automatic	11/22/2019 1:58:35 PM	True	Completed With Failures	✔
9	Ztech1	ZtechRecipe	ZtechDoor	Manual	11/21/2019 9:27:29 AM	True	Completed With Failures	✔
10	Ztech1	ZtechRecipe	ZtechDoor	Manual	11/21/2019 7:59:09 AM	True	Completed With Failures	✔
11	Ztech1	ZtechRecipe	ZtechDoor	Manual	11/21/2019 3:14:39 PM	True	Completed	✔
12	Ztech1	ZtechRecipe	ZtechDoor	Manual	11/21/2019 10:28:30 AM	True	Completed	✔
13	Ztech1	ZtechRecipe	ZtechDoor	Manual	11/21/2019 10:10:47 AM	True	Completed	✔

3. Also this **“Results”** page will allow user to see the existence of baseline.



NOTE

User can not see the mission results without baseline, in the **Results** page.

4. User has to create Baseline in **Baseline** section in case of non-existence of the baseline for the created mission.



NOTE

Error List will be empty if monitoring mission results has no leveling or impact problems.

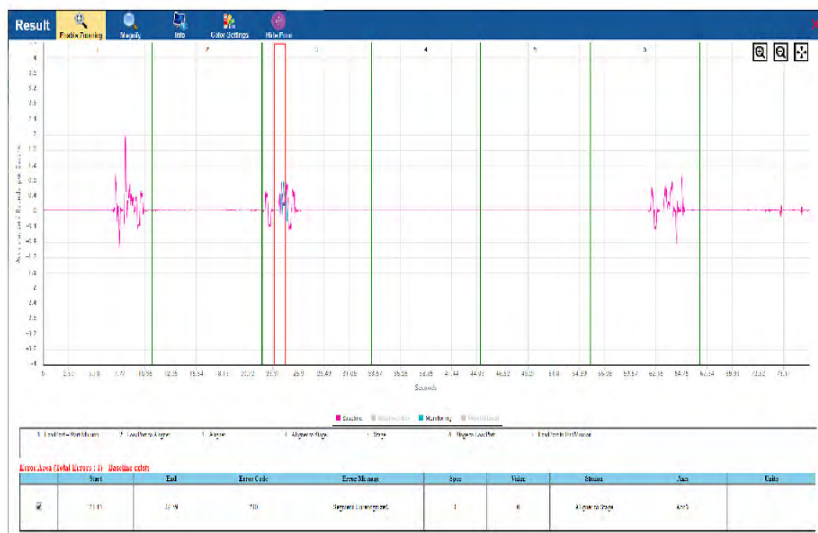
5. User can **Export Raw Data** or **Resend VID**, once select the required mission. Click on **X(close)** to close the pop-up window.

#	Tool	Tool Recipe	Mission Recipe	Mission Mode	Mission End Time	Has Baseline	Mission State	Mission Status
1	Ztech1	ZtechRecipe	ZtechDoor	Manual	9/6/2019 3:31:39 AM	True	Analysis Failed - Only Raw Data	✘
2	Ztech1	ZtechRecipe	ZtechDoor	Manual	9/5/2019 12:20:28 PM	True	Completed	✔
3	Ztech1	ZtechRecipe	ZtechDoor	Manual	11/25/2019 2:49:18 PM	True	Completed With Failures	✔
4	Ztech1	ZtechRecipe	ZtechDoor	Automatic	11/24/2019 11:41:26 AM	True	Completed With Failures	✔
5	Ztech1	ZtechRecipe	ZtechDoor	Automatic	11/24/2019 11:28:11 AM	True	Completed With Failures	✔
6	Ztech1	ZtechRecipe	ZtechDoor	Manual	11/22/2019 9:27:35 AM	True	Completed	✔
7	Ztech1	ZtechRecipe	ZtechDoor	Manual	11/22/2019 3:38:38 PM	True	Completed	✔
8	Ztech1	ZtechRecipe	ZtechDoor	Automatic	11/22/2019 1:58:35 PM	True	Completed With Failures	✔
9	Ztech1	ZtechRecipe	ZtechDoor	Manual	11/21/2019 9:27:29 AM	True	Completed With Failures	✔
10	Ztech1	ZtechRecipe	ZtechDoor	Manual	11/21/2019 7:59:09 AM	True	Completed With Failures	✔
11	Ztech1	ZtechRecipe	ZtechDoor	Manual	11/21/2019 3:14:39 PM	True	Completed	✔
12	Ztech1	ZtechRecipe	ZtechDoor	Manual	11/21/2019 10:28:30 AM	True	Completed	✔
13	Ztech1	ZtechRecipe	ZtechDoor	Manual	11/21/2019 10:10:47 AM	True	Completed	✔

- Click on **“Load”** to get the mission raw data for the existence of Baseline of particular Tool ID, Tool Recipe, and Load Port Number. See below figure shows the mission raw data.

#	Tool	Tool Recipe	Mission Recipe	Mission Mode	Mission End Time	Has Baseline	Mission State	Mission Status
1	Zach1	ZachRecipe	ZachDoor	Manual	9/8/2019 9:31:59 AM	True	Analysis Failed - Only Raw Data	
2	Zach1	ZachRecipe	ZachDoor	Manual	9/5/2019 12:20:28 PM	True	Completed	
3	Zach1	ZachRecipe	ZachDoor	Manual	11/25/2019 2:49:18 PM	True	Completed With Failures	
4	Zach1	ZachRecipe	ZachDoor	Automatic	11/24/2019 11:41:26 AM	True	Completed With Failures	
5	Zach1	ZachRecipe	ZachDoor	Automatic	11/24/2019 11:28:11 AM	True	Completed With Failures	
6	Zach1	ZachRecipe	ZachDoor	Manual	11/22/2019 9:27:35 AM	True	Completed	
7	Zach1	ZachRecipe	ZachDoor	Manual	11/22/2019 3:38:38 PM	True	Completed	
8	Zach1	ZachRecipe	ZachDoor	Automatic	11/22/2019 1:58:35 PM	True	Completed With Failures	
9	Zach1	ZachRecipe	ZachDoor	Manual	11/21/2019 9:27:29 AM	True	Completed With Failures	
10	Zach1	ZachRecipe	ZachDoor	Manual	11/21/2019 7:59:29 AM	True	Completed With Failures	
11	Zach1	ZachRecipe	ZachDoor	Manual	11/21/2019 5:14:39 PM	True	Completed	
12	Zach1	ZachRecipe	ZachDoor	Manual	11/21/2019 10:28:30 AM	True	Completed	
13	Zach1	ZachRecipe	ZachDoor	Manual	11/21/2019 10:10:47 AM	True	Completed	

Load



Loaded Result

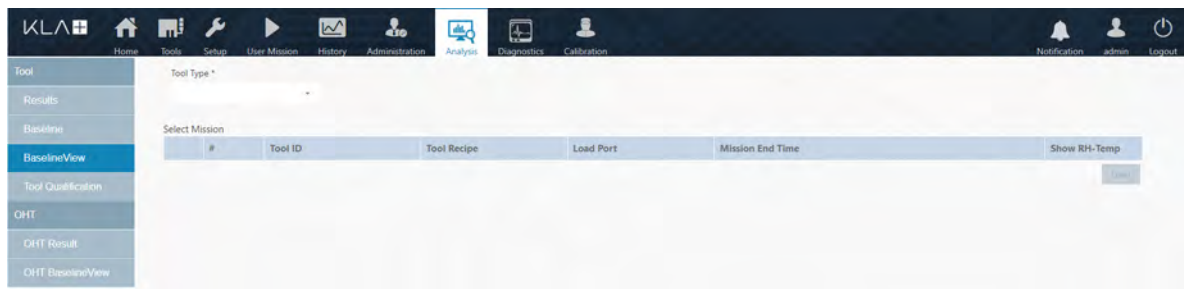
4.9.3 BaselineView



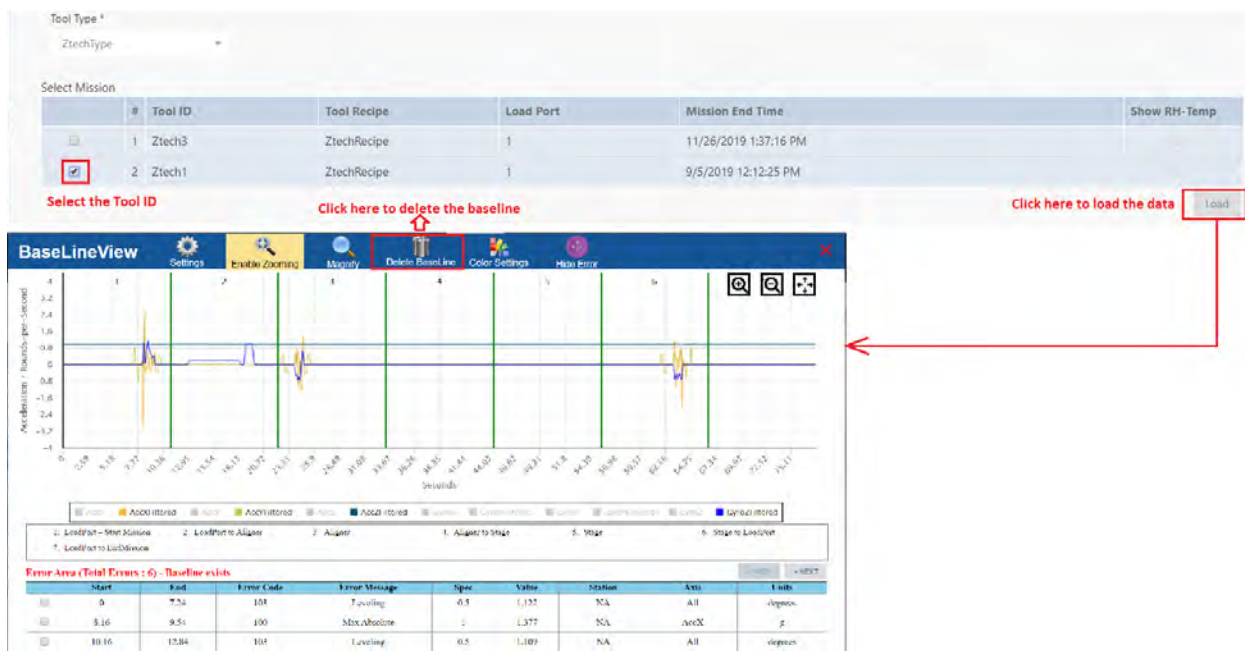
IMPORTANT

This section will allow user to view the Baselines existed (Base line created in [Baseline](#) section) per tool type and also allow the User to view their Mission Data.

1. Click on "**BaselineView**" and the page will be displayed as shown below.



2. Select **Tool Type** to load the mission data.
3. Click on "**Load**" to select to get the mission raw data of particular event selected in the mission data.



4. User can delete the Baseline for particular Tool Type (See the above figure).
5. Refer to the [step 12](#) to see the details of Errors List.

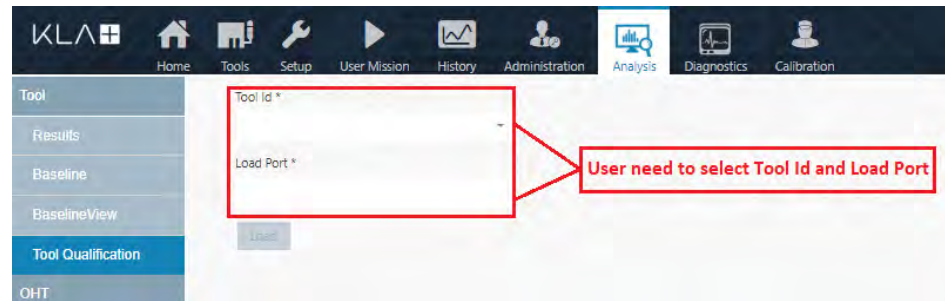
4.9.4 Tool Qualification



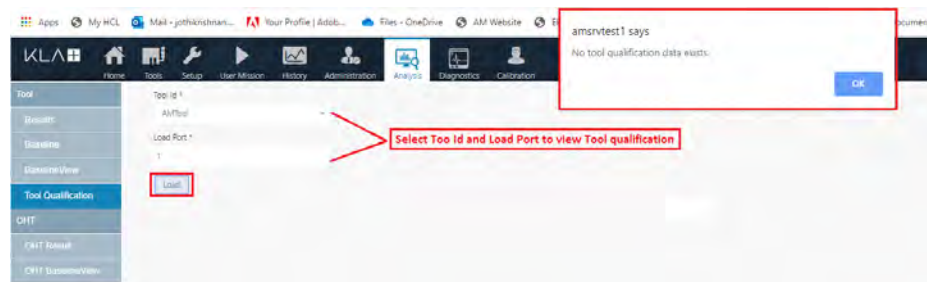
IMPORTANT

This UI must allow User to see the health of a tool mapping issues to different stations.


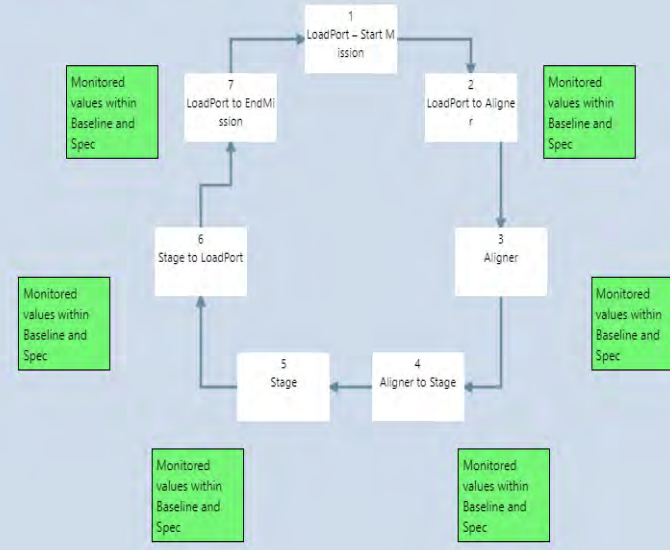
1. Click on **"Tool Qualification"** and the page will be displayed as shown below.



2. There will not be any data if no tool qualification data exists after clicking on **"Load"** for the particular combination of "Tool Id" and "Load Port".



3. For the successful qualified tool data, the data will be shown as mentioned below.

Tool	Tool Id * Zero2	Select Tool Id and LoadPort
Results	Load Port * 2	
Baseline	Load	
BaselineView		
Tool Qualification		
OHT	 Zero2 If, the tool qualification data will pass, the result will shown in Green.	
OHT Result	If, the tool qualification data will fail, the result will shown in RED,	
OHT BaselineView		

4. Mission end status of Tool qualification data will be anyone of the following 3 states

- **Failed** - the tool has Baseline, Monitor mission has faults compared to Baseline.
- **Completed** -the tool has Baseline, Monitor mission is equal to Baseline.
- **Completed with Failures** - The tool has no Baseline.

5. Result Signal

- The result signal will be RED if **“Failed”** status exists in any stage (Refer to above [step 3](#)).
- The result signal will be RED if both **“Failed”** stage and **“Completed with Failures”** stage exists.
- The result signal will be in YELLOW if **“Completed with Failures”** stage exists and no **“Failed”** status.
- The result signal will be GREEN if **“Completed”** stages only exists.

4.9.5 OHT Analysis

1. Click **OHT Result** to view, OHT Result page.

#	Track Id	Cart Id	Mission Recipe	Mission Mode	Mission Start Time	Mission End Time	Baseline Info	Status
1			GSTOHTLeveling	Manual	8/30/2019 2:43:16 PM	8/30/2019 2:43:28 PM		
2	T51		ISRTopOHT	Manual	8/30/2019 1:36:05 PM	8/30/2019 1:36:35 PM		
3	TG1		ISRTopOHT	Manual	8/30/2019 8:36:47 AM	8/30/2019 8:37:00 AM		
4		Vehicle1	ISROHT	Manual	8/30/2019 8:23:55 AM	8/30/2019 8:24:25 AM		
5	T51		ISRTopOHT	Manual	8/29/2019 1:43:48 PM	8/29/2019 1:45:18 PM		

2. Select **Track ID**, using drop-down menu to view the mission data for the selected Track ID.

#	Track Id	Cart Id	Mission Recipe	Mission Mode	Mission Start Time	Mission End Time	Baseline Info	Status
1	Track1		ISRTopOHT	Manual	8/29/2019 8:49:27 AM	8/29/2019 8:49:51 AM		
2	Track1	Vehicle1	ISROHT	Automatic	8/29/2019 7:31:30 AM	8/29/2019 7:32:19 AM		
3	Track1		ISRTopOHT	Manual	8/28/2019 2:00:12 PM	8/28/2019 2:00:40 PM		
4	Track1		ISRTopOHT	Manual	8/28/2019 1:47:01 PM	8/28/2019 1:47:51 PM		
5	Track1		ISRTopOHT	Manual	8/28/2019 12:41:02 PM	8/28/2019 12:41:51 PM		

3. **Select Mission** from the mission data table, to view the analysis report for the selected mission.

#	Track Id	Cart Id	Mission Recipe	Mission Mode	Mission Start Time	Mission End Time	Baseline Info	Status
16	Track1		ISRTopOHT	Manual	8/28/2019 2:00:12 PM	8/28/2019 2:00:40 PM		
17	Track1		ISRTopOHT	Manual	8/28/2019 1:47:01 PM	8/28/2019 1:47:51 PM		
18	Track1		ISRTopOHT	Manual	8/28/2019 12:41:02 PM	8/28/2019 12:41:51 PM		
19			FTPTopOHT	Automatic	7/23/2019 11:39:58 AM	7/23/2019 11:42:08 AM		
20	Track1	Vehicle1	FTPOHT	Automatic	7/23/2019 11:14:00 AM	7/23/2019 11:15:49 AM		

- Click on **“Load”** get the analysis report of the particular mission selected in the mission data.

#	Start Date	End Date	Status
1	7/23/2019 11:14:00 AM	7/23/2019 11:15:49 AM	✖

#	Channel	Feature	Unit	Spec	Error Code	Status
1	AccX	Max Absolute	g	1	100	✔
2	AccX	Standard Deviation	g	0.5	104	✔
3	AccX	Impact	g	0.5	102	✔
4	AccY	Max Absolute	g	1	100	✔
5	AccY	Standard Deviation	g	0.5	104	✔
6	AccY	Impact	g	0.5	102	✖

#	Value	Failure Time (Seconds)
1	0.6206 g	25.63

- Click on **chart** to view the OHT result graph.



4.10 Diagnostics



IMPORTANT

This page allows the user to know the status of AM required Ports and AM system communications.

User must click on "**Diagnostics**" and the display will be seen as shown below.

Station IP

Available Stations:

Station IP	Port Number	Use By	Protocol	Status	Manual
10.158.52.179	8293	Crash Dump	TCP		<input type="button" value="Test"/>
	22	SHSH/SFTP	TCP		<input type="button" value="Test"/>
	3389	Remote Desktop	TCP		<input type="button" value="Test"/>
	5000	Foup Interface	TCP		<input type="button" value="Test"/>
	18090	Station Link	TCP		<input type="button" value="Test"/>
	50001	Foup Link	TCP		<input type="button" value="Test"/>
10.161.12.102	8293	Crash Dump	TCP		<input type="button" value="Test"/>
	22	SHSH/SFTP	TCP		<input type="button" value="Test"/>
	3389	Remote Desktop	TCP		<input type="button" value="Test"/>
	5000	Foup Interface	TCP		<input type="button" value="Test"/>
	18090	Station Link	TCP		<input type="button" value="Test"/>
	50001	Foup Link	TCP		<input type="button" value="Test"/>
10.158.52.136	8293	Crash Dump	TCP		<input type="button" value="Test"/>
	22	SHSH/SFTP	TCP		<input type="button" value="Test"/>
	3389	Remote Desktop	TCP		<input type="button" value="Test"/>
	5000	Foup Interface	TCP		<input type="button" value="Test"/>
	18090	Station Link	TCP		<input type="button" value="Test"/>
	50001	Foup Link	TCP		<input type="button" value="Test"/>

This page must have the below mentioned features.

- Ports
- System Communications

4.10.1 Ports

1. User must click on “**Ports**” and the UI display will be seen as shown below.

Station IP					
10.158.52.179					
Port Number	Use By	Protocol	Status	Manual	
8293	Crash Dump	TCP		Test	
22	SHSH/SFTP	TCP		Test	
3389	Remote Desktop	TCP		Test	
5000	Foup Interface	TCP		Test	
18090	Station Link	TCP		Test	
50001	Foup Link	TCP		Test	
10.161.12.102					
Port Number	Use By	Protocol	Status	Manual	
8293	Crash Dump	TCP		Test	
22	SHSH/SFTP	TCP		Test	
3389	Remote Desktop	TCP		Test	
5000	Foup Interface	TCP		Test	
18090	Station Link	TCP		Test	
50001	Foup Link	TCP		Test	
10.158.52.136					
Port Number	Use By	Protocol	Status	Manual	
8293	Crash Dump	TCP		Test	
22	SHSH/SFTP	TCP		Test	
3389	Remote Desktop	TCP		Test	
5000	Foup Interface	TCP		Test	
18090	Station Link	TCP		Test	
50001	Foup Link	TCP		Test	

2. Ports section must be divided into 4 sub sections which are shown below

- Station IP
- Available Stations
- Server Details
- Start Diagnostics

3. Station IP

- This section allows the User to add new Station.
- User must enter the IP details in the text box and click on “**Add**” to add the new Station IP details.



- The new Station IP address must be displayed in the section "[Available Stations](#)".

**NOTE**

This Section must be used to add the Station IP in the available Station IP Grid.

4. Available Stations

- The "Available Stations" section must be seen as shown below.

Available Stations:

		Station IP			
<input type="checkbox"/>	<input type="checkbox"/>	10.161.25.123			
Port Number	Use By	Protocol	Status	Manual	
8293	Crash Dump	TCP		<input type="button" value="Test"/>	
22	SHSH/SFTP	TCP		<input type="button" value="Test"/>	
3389	Remote Desktop	TCP		<input type="button" value="Test"/>	
5000	Foup Interface	TCP		<input type="button" value="Test"/>	
18090	Station Link	TCP		<input type="button" value="Test"/>	
50001	Foup Link	TCP		<input type="button" value="Test"/>	

- User must view the list of Station IPs which were added in the "[Station IP](#)" section.
- User must see the following columns in this section.

Available Stations:

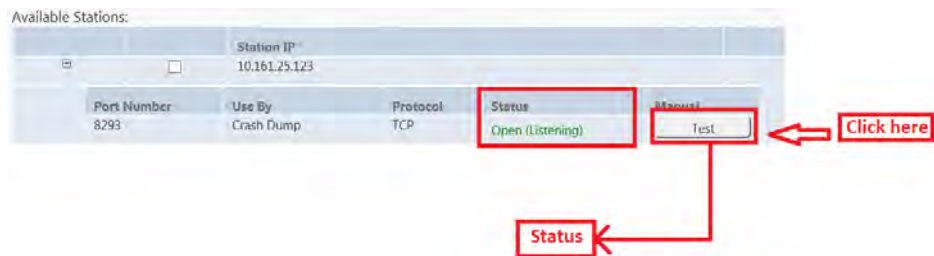
		Station IP
<input type="checkbox"/>	<input type="checkbox"/>	10.161.25.123

- Expand / Collapse control
- Check Box
- Station IP

- User must see the below listed columns on clicking Expand.

Port Number	Use By	Protocol	Status	Manual
8293	Crash Dump	TCP		<input type="button" value="Test"/>
22	SHSH/SFTP	TCP		<input type="button" value="Test"/>
3389	Remote Desktop	TCP		<input type="button" value="Test"/>
5000	Foup Interface	TCP		<input type="button" value="Test"/>
18090	Station Link	TCP		<input type="button" value="Test"/>
50001	Foup Link	TCP		<input type="button" value="Test"/>

- Port Number
- Used By
- Protocol
- Status
- Manual Test (Button)
- User must click on Manual Test button to test the particular port status.
- The status of the port must be seen under status column.



5. Server Details

- The Server section must be displayed as shown below.

Server:

Server IP	Server Name
10.161.12.185	AMServer3

Port Number	Use By	Protocol	Status	Manual
80	Server Web Interface	TCP		<input type="button" value="Test"/>
445	Diagnostic File Upload to server	TCP		<input type="button" value="Test"/>
1434	SQL Server Browser	UDP		<input type="button" value="Test"/>
1612	SQL Server SensarrayAM Instance	TCP		<input type="button" value="Test"/>
3389	Remote Desktop	TCP		<input type="button" value="Test"/>
8888	SensArray Tools Client Interface	TCP		<input type="button" value="Test"/>
38090	Station Link	TCP		<input type="button" value="Test"/>
50001	Foup Link	TCP		<input type="button" value="Test"/>

- This section has a table with nested grid. when the page gets loaded the nested grid will be expanded.

Server:

	Server IP	Server Name
+	10.161.12.185	AMServer3

- User must see the all port details after the table grid expansion.
- User must see the below listed columns on clicking the expand button
 - Port Number
 - Used By
 - Protocol
 - Status
- User must click on Manual Test button to test the particular port status.
- The status of the port must be seen under status column.

Server:

Server IP	Server Name				
10.161.12.185	AMServer3				
+	Port Number	Use By	Protocol	Status	Manual
	80	Server Web Interface	TCP		Test
	445	Diagnostic File Upload to server	TCP		Test
	1434	SQL Server Browser	UDP	Open (Listening)	Test

Annotations: A red box labeled "Click here" points to the "Test" button for port 1434. A red box labeled "Status" points to the "Open (Listening)" status text for port 1434.

6. Start Diagnostics

- This section allows the User to know the status of all available ports status in the Server.
- User has to click on the required check box of available station to know the status.

The screenshot displays the 'Ports' section of the KLA Automation Web UI. It features a sidebar with 'Ports' and 'System Communications' options. The main content area is divided into 'Available Stations' and 'Server' sections. The 'Available Stations' table has a checkmark in the first column of the first row, highlighted by a red box and a red arrow pointing to it, with a red text box above it stating 'User must check this check box if Start Diagnosis required'. The 'Server' table lists various ports and their uses. At the bottom, a red box highlights the 'Start Diagnosis' button, with a red arrow pointing to it and a red text box above it stating 'CLICK HERE TO START THE DIAGNOSIS'.

Station IP	Station IP
<input checked="" type="checkbox"/>	10.158.52.158

Port Number	Use By	Protocol	Status	Manual
8293	Crash Dump	TCP		Test
22	SSH/SFTP	TCP		Test

Server IP	Server Name
10.161.12.185	AMServer3

Port Number	Use By	Protocol	Status	Manual
80	Server Web Interface	TCP		Test
445	Diagnostic File Upload to server	TCP		Test
1434	SQL Server Browser	UDP		Test
1612	SQL Server SensarrayAM Instance	TCP		Test
3389	Remote Desktop	TCP		Test
8888	SensArray Tools Client Interface	TCP		Test
32081	Station Link	TCP		Test
50001	Foup Link	TCP		Test

CLICK HERE TO START THE DIAGNOSIS → Start Diagnosis Stop Diagnosis

- User must click on **"Start Diagnosis"**.
- Then all the available ports tests will be displayed after the completion of the diagnosis in the server as well as in the Station which was selected by User.

- User must find the all ports status in their respective column.

Server IP		Server Name			
10.161.12.185		AMServer3			
Port Number	Use By	Protocol	Status	Manual	
80	Server Web Interface	TCP	Open (Listening)	<input type="button" value="Test"/>	
445	Diagnostic File Upload to server	TCP	Open (Listening)	<input type="button" value="Test"/>	
1434	SQL Server Browser	UDP	Open (Listening)	<input type="button" value="Test"/>	
1612	SQL Server SensarrayAM Instance	TCP	Open (Not-Listening)	<input type="button" value="Test"/>	
3389	Remote Desktop	TCP	Open (Listening)	<input type="button" value="Test"/>	
8888	SensArray Tools Client Interface	TCP	Open (Listening)	<input type="button" value="Test"/>	
38090	Station Link	TCP	Open (Listening)	<input type="button" value="Test"/>	
50001	Foup Link	TCP	Open (Listening)	<input type="button" value="Test"/>	

↑
Click Here

- Also User can stop the diagnosis by clicking on “**Stop Diagnosis**” after the start of the Diagnosis.

Server:

Server IP		Server Name			
10.161.12.185		AMServer3			
Port Number	Use By	Protocol	Status	Manual	
80	Server Web Interface	TCP	Open (Listening)	<input type="button" value="Test"/>	
445	Diagnostic File Upload to server	TCP	Open (Listening)	<input type="button" value="Test"/>	
1434	SQL Server Browser	UDP	Open (Listening)	<input type="button" value="Test"/>	
1612	SQL Server SensarrayAM Instance	TCP	Open (Not-Listening)	<input type="button" value="Test"/>	
3389	Remote Desktop	TCP	Open (Listening)	<input type="button" value="Test"/>	
8888	SensArray Tools Client Interface	TCP	Open (Listening)	<input type="button" value="Test"/>	
38090	Station Link	TCP	Open (Listening)	<input type="button" value="Test"/>	
50001	Foup Link	TCP	Open (Listening)	<input type="button" value="Test"/>	

↑
Click here to stop the Diagnosis

4.10.2 System Communication



IMPORTANT

This will allow the User to know the status of communication between AM Systems.

1. User must click on "System Communication" and the display must be seen as displayed below.



2. From the above figure User must observe the table with a nested grid.

3. The nested grid must have the following columns.



- Check Box
- Server IP
- Station IP

4. User must know the communication of between

- Server to Station
- Station to Server
- Server to Foup

5. The UI Page of communication will look like as shown below.

		Station IP	Status
<input type="checkbox"/>	<input type="checkbox"/>	10.158.52.158	● Success
Source	Destination		Manual
 10.161.12.185 (Server)	<p style="text-align: center;">Communicating</p> <p style="text-align: center;">>>>></p> <p style="text-align: center;"><<<<</p> <p style="text-align: center;">Communicating</p>	 10.158.52.158 (Station)	<input type="button" value="Test"/>
 10.161.12.185 (Server)	<p style="text-align: center;">Communicating</p> <p style="text-align: center;">>>>></p> <p style="text-align: center;"><<<<</p> <p style="text-align: center;">Communicating</p>	 10.158.52.158 (Foup)	<input type="button" value="Test"/>

6. From the above figure, User can see the status as “**Success**” of the station.

7. User must see the table with a nested grid with the below mentioned columns from the above figure.

- Source:

An image with IP address of the source machine. It could be server, station or Foup.

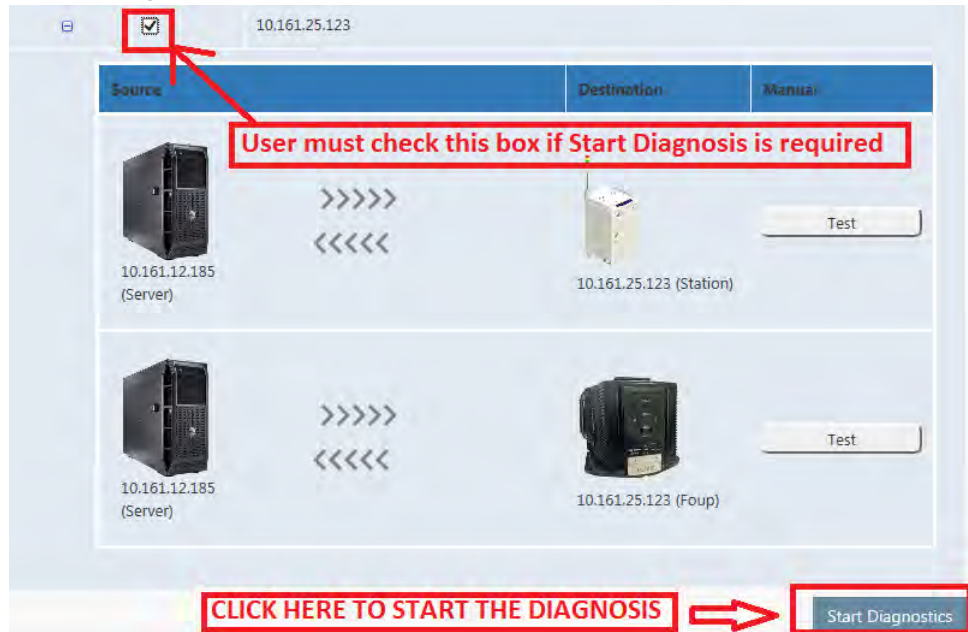
- Destination:

An image with IP address of the destination machine. It could be server, station or Foup.

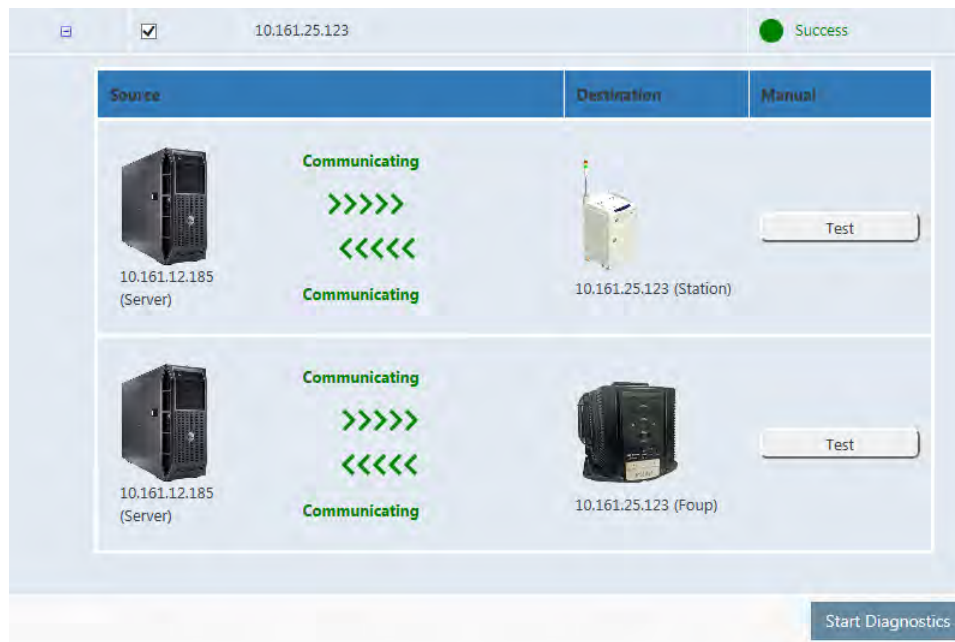
- Manual:

Test buttons, on click, between the source and destination a arrow line will appear. If source and destination is communicating, then an arrow will become green with communicating status otherwise as red with Non-communicating status.

8. User must click on the check box of the respective station and then click on "Start Diagnostics".



9. Then the UI communication will start and represent as shown below



4.11 Automation Metrology Wafer Functions

The below mentioned parameters are used to **Start** and **Stop** the triggers.

Table 4-1:

Trigger	Description
Start Trigger	
DoorOpen	FOUP door opens
Delay	Data acquisition begins after specified delay (in seconds) from start of mission
WaferLeavesFOUP	Wafer is picked from the FOUP at the start of a tool mission
FoupLeaveCharging	Data acquisition begins after the Foup leave from the station
Stop Trigger	
Door Close	FOUP door closes
Duration	Data acquisition ends after the specified duration (in seconds) of data acquisition
Wafer Return to FOUP	Wafer is returned to the FOUP at the end of a tool mission
FoupReturnCharging	Data acquisition stops after the Foup return to the station

4.11.1 To Add Tool Recipe

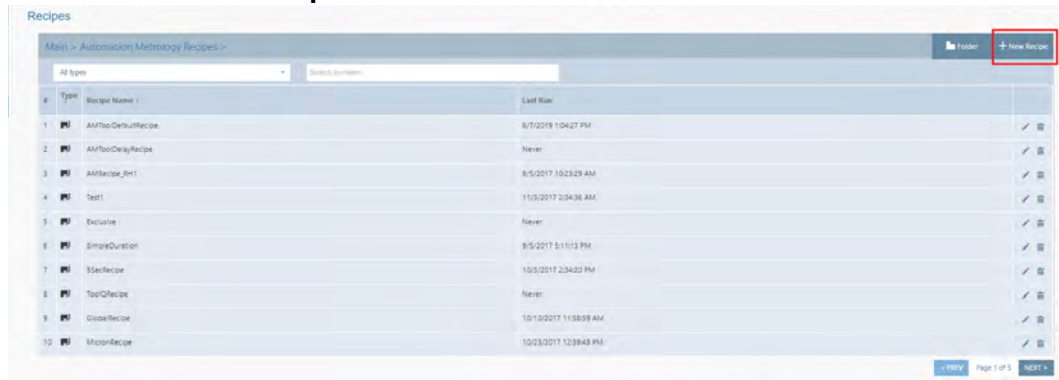
1. In the **Setup** page, click **Recipes**.



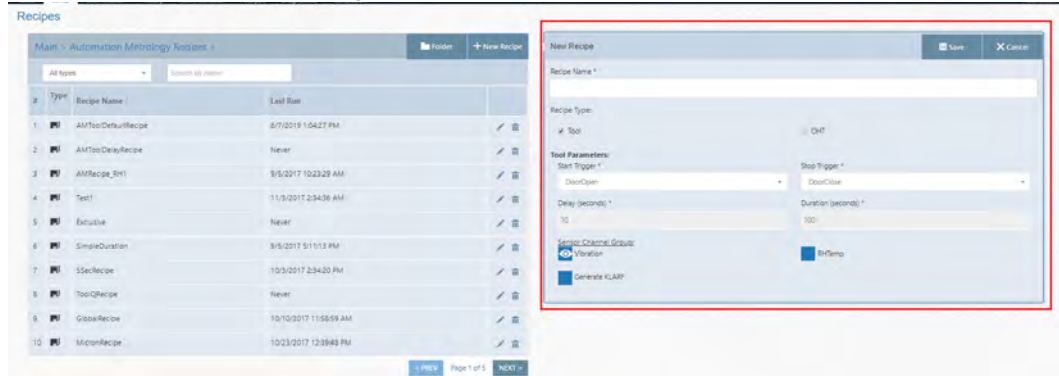
2. Click on **Automation Metrology Recipes**.



3. Automation Metrology recipes page will open.

4. Click on **New Recipe**.

5. New recipe pop-up page will open.

6. Enter **Recipe Name**.7. Select **Tool** in **Recipe Type**.8. Use drop-down menu to select the **Start trigger** and **Stop Trigger**, for the **Tool Parameters**.

- Select **Start Trigger - DoorOpen**

- Select **Stop Trigger - DoorClose**

The screenshot shows the 'New Recipe' dialog box with the following configuration:

- Recipe Name: Tool Recipe
- Recipe Type: Tool, OHT
- Tool Parameters:
 - Start Trigger: DoorOpen
 - Stop Trigger: DoorClose
 - Delay (seconds): 10
 - Duration (seconds): 100
- Sensor Channel Group:
 - Vibration
 - RHTemp
 - Generate KLARF

- If required, Generate KLARF file for monitoring mission.

This screenshot is identical to the one above, but includes a red callout box pointing to the 'Generate KLARF' checkbox. The text inside the callout box reads: "Select this option, if KLARF file want to generate for monitoring mission".

9. Click on **Save** to add the new tool recipe.

The screenshot shows a 'New Recipe' dialog box with the following fields and options:

- Recipe Name ***: Tool Recipe
- Recipe Type:**
 - Tool
 - OHT
- Tool Parameters:**
 - Start Trigger ***: DoorOpen
 - Stop Trigger ***: DoorClose
 - Delay (seconds) ***: 10
 - Duration (seconds) ***: 100
- Sensor Channel Group:**
 - Vibration
 - RHTemp
 - Generate KLARF

4.11.2 To Add OHT Recipe

1. Select **OHT**, from the **New Recipe** pop-up.

The screenshot shows the 'New Recipe' dialog box with the following fields and options:

- Recipe Name ***: (Empty)
- Recipe Type:**
 - Tool
 - OHT
- Tool Parameters:**
 - Start Trigger ***: DoorOpen
 - Stop Trigger ***: DoorClose
 - Delay (seconds) ***: 10
 - Duration (seconds) ***: 100
- Sensor Channel Group:**
 - Vibration
 - RHTemp
 - Generate KLARF

2. Enter **Recipe Name**.

3. Use drop-down menu to select the **Start trigger** and **Stop Trigger**, for the **Tool Parameters**.

- Select **Start Trigger - FoupLeaveCharging**

- Select **Stop Trigger - FouppReturnCharging**

New Recipe Save Cancel

Recipe Name *
OHT Recipe

Recipe Type:
 Tool OHT

Tool Parameters:
Start Trigger *
FouppLeaveCharging
Stop Trigger *
FouppReturnCharging
Delay (seconds) *
10
Duration (seconds) *
100

Sensor Channel Group:
 Vibration RHTemp
 Generate KLARF

4. Click on **Save** to add the new OHT recipe.

New Recipe Save Cancel

Recipe Name *
OHT Recipe

Recipe Type:
 Tool OHT

Tool Parameters:
Start Trigger *
FouppLeaveCharging
Stop Trigger *
FouppReturnCharging
Delay (seconds) *
10
Duration (seconds) *
100

Sensor Channel Group:
 Vibration RHTemp
 Generate KLARF

4.11.3 To add ToolOHT Recipe

1. Select both **Tool** and **OHT** in **Recipe Type**, from the **New Recipe**
2. Enter **Recipe Name**.

The screenshot shows the 'New Recipe' dialog box with the following configuration:

- Recipe Name ***: ToolOHT Recipe
- Recipe Type:**
 - Tool
 - OHT
- Tool Parameters:**
 - Start Trigger ***: DoorOpen
 - Stop Trigger ***: DoorClose
 - Delay (seconds) ***: 10
 - Duration (seconds) ***: 100
- Sensor Channel Group:**
 - Vibration
 - RHTemp
 - Generate KLARF

3. Use drop-down menu to select the **Start trigger** and **Stop Trigger**, for the **Tool Parameters**.
 - Select **Start Trigger - FoupLeaveCharging**
 - Select **Stop Trigger - FoupReturnCharging**

The screenshot shows the 'New Recipe' dialog box with the following configuration:

- Recipe Name ***: ToolOHT Recipe
- Recipe Type:**
 - Tool
 - OHT
- Tool Parameters:**
 - Start Trigger ***: FoupLeaveCharging
 - Stop Trigger ***: FoupReturnCharging
 - Delay (seconds) ***: 10
 - Duration (seconds) ***: 100
- Sensor Channel Group:**
 - Vibration
 - RHTemp
 - Generate KLARF

4. Click on **Save** to add the new **ToolOHT** recipe.

New Recipe

Save Cancel

Recipe Name *

ToolOHT Recipe

Recipe Type:

Tool OHT

Tool Parameters:

Start Trigger * Stop Trigger *

FoupLeaveCharging FoupReturnCharging

Delay (seconds) * Duration (seconds) *

10 100

Sensor Channel Group:

Vibration RHTemp

Generate KLARF





















4.11.4 Edit or Add an Automation Metrology Wafer Mission Recipe

1. In the **Setup** page, click **Recipes**.
2. Click the **Automation Metrology Recipes** folder to edit or add new recipes.
3. **Automation Metrology Recipes** page will open.

Recipes

Main > Automation Metrology Recipes >

All types Search by name

#	Type	Recipe Name	Last Run	
1	AMToolDefaultRecipe	AMToolDefaultRecipe	7/12/2019 4:13:24 PM	 
2	AMToolDelayRecipe	AMToolDelayRecipe	7/27/2016 11:01:19 PM	 
3	test1	test1	Never	 
4	TestRecipe	TestRecipe	Never	 
5	AMTestRecipe	AMTestRecipe	5/13/2019 2:09:46 PM	 
6	FA_S4_Recipe	FA_S4_Recipe	10/31/2017 11:54:07 AM	 
7	OHT	OHT	Never	 
8	ToolDelayDoorRecipe	ToolDelayDoorRecipe	10/29/2018 6:27:58 PM	 
9	Reanalysis Recipe	Reanalysis Recipe	2/8/2018 6:19:04 PM	 
10	JedDoor	JedDoor	5/29/2018 6:24:10 PM	 



















< PREV Page 1 of 3 NEXT >

4. Click on edit icon to update the recipe.

Recipes

Main > Automation Metrology Recipes >

All types Search by name

#	Type	Recipe Name	Last Run	
21	Test1	Test1	Never	 
22	Test2	Test2	Never	 
23	AMRecipe11	AMRecipe11	Never	 
24	Tool Recipe	Tool Recipe	Never	 
25	OHT Recipe	OHT Recipe	Never	 
26	ToolOHT Recipe	ToolOHT Recipe	Never	 
27	KLARF	KLARF	Never	 
28	Folder1	Folder1	Never	 
29	testfolder	testfolder	Never	 

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5. **Edit Recipe** pop-up will open.

The screenshot shows the 'Edit Recipe' dialog box. At the top, there is a title bar with the text 'Edit Recipe' and two buttons: 'Save' and 'Cancel'. Below the title bar, the 'Recipe Name' field is populated with 'ToolOHT Recipe'. Under the 'Recipe Type' section, there are two checkboxes: 'Tool' and 'OHT', both of which are checked. The 'Tool Parameters' section contains four fields: 'Start Trigger' (a dropdown menu showing 'DoorOpen'), 'Stop Trigger' (a dropdown menu showing 'DoorClose'), 'Delay (seconds)' (a text input field with '10'), and 'Duration (seconds)' (a text input field with '100'). At the bottom, the 'Sensor Channel Group' section has three items: 'Vibration' (with an eye icon), 'RHTemp' (with a blue square icon), and 'Generate KLARF' (with a blue square icon).

6. Update the recipe as per the requirement.

7. Click on **Save** to update the recipe.

Glossary

Term, acronym, abbreviation	Description
CID	Wafer Carrier ID (serial number contained in RF Pill of FOUP; might also be Lot ID, if written by fab)
FA	Factory Automation (software- and communications-based control of a semiconductor fab)
FOUP	Front-Opening Universal Pod (wafer container)
GEM	Generic Model for Communications and Control of SEMI Equipment
GSS	Global Support Services (KLA Support organization).
HWID	Hardware ID (serial number of the specified hardware component such as SensArray Wafer)
KLA	KLA Corporation
KLAAF	KLA Automation FOUP (to charge, transport, and store KLA in situ test wafers)
KLAAS	KLA Automation Station (charging and communication station for Automation FOUPs)
MES	Manufacturing Execution System (the fab Host)
Mission	Execution of a single KLA Automation job/cycle
OHT	Overhead Transport system (fab automation system for FOUP transportation)
UI	User Interface
WID	Wafer ID (T7 Mark on the bottom of the wafer)

Revision History

Revision Date	New Rev. Level	Changes Made	Reviewer	Approver
10/2016	AA	Initial Issue	Avi Zaban	Henry Lam
04/2017	AB	DCR T35533: Added Regulatory Compliance Statements (Section 1.4); other minor edits	Avi Zaban	Henry Lam
05/2017	AC	DCR T35123: Added FOUP Reset (Section 2.2.6)	Avi Zaban	Henry Lam
05/2018	AD	Figures Modified and added for the sections 3.3 and 3.3.1 Text added in the section 3.3.1 about Vibration and Temperature. Added the Sections 3.7.1, 3.7.2 and 3.7.3. Added the Section 3.8 and its sub sections 3.8.1, 3.8.2, 3.8.3 and 3.8.4	Evgeny Rudminsky	Avi Zaban
10/2018	AF	Added the section "3. KLA AM Station Application UI". Added the sections "Data Maintenance" in Administration section in "KLA Automation Web UI" Section. Added the section "Diagnostics" in "KLA Automation Web UI" Section. Modified the Illustrations in "KLA Automation Web UI" Section.	Evgeny Rudminsky	Avi Zaban
07/2019	AG	Added section "3.3 Software upgrade for FOUP and Wafer." Added the section "4.8 User Mission page." Added the section "4.9.3 To Execute ToolOHT Mission" Added the section "4.11.5 OHT-Tool Analysis." Added the section "4.11.6 OHT Analysis" Added the section "4.14.1 To add Tool Recipe" Added the section "4.14.2 To add OHT Recipe" Added the section "4.14.3 To add ToolOHT Recipe" Updated the section "4.14.4 Edit or Add an Automation Metrology Wafer Mission Recipe"	Raja Vishvanathan	Evgeny Rudminsky
12/2019	AH	Changed brand logo and text from "KLA-Tencor" to "KLA". Added NCC statement. Added section 1.4.6 Input Power for Battery Charging. Added section 1.4.7 Environmental conditions for the equipment. Added section 1.4.8 Critical component list. Added Danger in Section 2.2.4 KLA Automation FOUP Battery. Updated images as per recent UI, in section 3. KLA AM Station Application UI and section 4.KLA Automation Web UI.	Eran Bachinski	Evgeny Rudminsky

