



User Manual



for **Assembly Lines**

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Theory & Definitions

Terms and definitions used to define how the system works.

To access Info on Demands backend and reporting, follow the URL that was supplied at time of purchase, or contact Huzzard Systems for support.

Assembly Line

The Assembly Line is a group of data collection stations (one or more), arranged in a logical order, to perform work.

Line Status

Line Active

Line Active is total time between line Activation and line Inactive. Example of use: Activate the line at the beginning of the shift and Inactivate at the end of the shift and you can easily run reports for the shift across the Line Active time.

Line Activation is performed by selecting **Assembly Lines** from the menu, find the line you wish to activate and press **“Start Assembly Line.”**

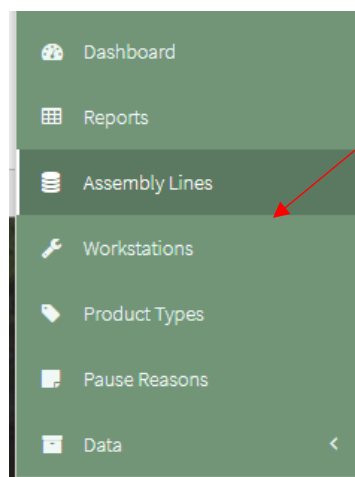


Figure 1 Assembly Line Menu

ID	Code	Name	Parent	Current Status	Actions
1		Line 71	-	Inactive	▶ Start Assembly Line ✎ Edit 🚫 Disable ⚙️ Configure ⚠️ Statuses
2		Test Assembly Line	-	Inactive	▶ Start Assembly Line ✎ Edit 🚫 Disable ⚙️ Configure ⚠️ Statuses

Figure 2 Assembly Line Status Table - Inactive

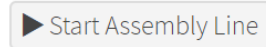


Figure 3 Start Assembly Line Button

17	AL-STH	Standard_Time_Huzz	-	Active	■ Stop Assembly Line ✎ Edit 🚫 Disable ⚙️ Configure ⚠️ Statuses Pause Assembly Line 📅 Schedule Stop
18	AL-STHS	Standard_Time_Huzz_Sub	Standard_Time_Huzz	Active	✎ Edit 🚫 Disable ⚙️ Configure

Figure 4 Assembly Line Active

Line Inactive is performed by selecting **Assembly Lines** from the menu, find the line you wish to active and press “**Stop Assembly Line.**”

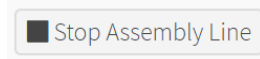


Figure 5 Stop Assembly Line Button

Line Active is total time between line activation and line Inactive.

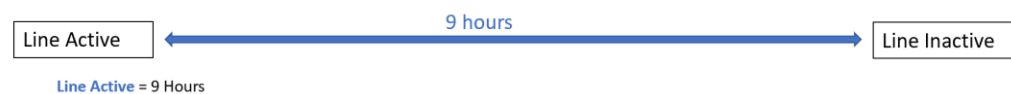


Figure 6 Line Active Graphical View

Line Pause

Line Pause is time between line pausing to Line Pause End – Line must be Active in order to initiate a Line Pause event. Line Pause event examples could be break or lunch. No data collection is allowed during a Line Pause. **NOTE: Line Pause and Data Collection Station Pause are different events and are tracked separately.**

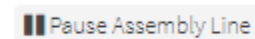


Figure 7 Pause Assembly Line Button

17	AL-STH	Standard_Time_Huzz	-	Paused	▶ Start Assembly Line	■ Stop Assembly Line	🔗 Edit	🚫 Disable	⚙️ Configure	⚠️ Statuses
18	AL-STHS	Standard_Time_Huzz_Sub	Standard_Time_Huzz	Paused	🔗 Edit	🚫 Disable	⚙️ Configure			

Figure 8 Assembly Line Pause

Press the **Start Assembly Line** button when the Pause event is over and the line Current Status will turn back to green/active. Once the Line is started data collection can begin again.

Line Running

Line Running is time between line activation to Line Inactive Less the Sum of Line Pause(s).

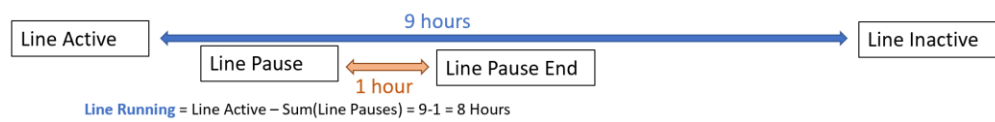


Figure 9 Line Running Graphical View

Line Stop

Line Stop is total time between Line Inactive and the next line activation. Line Stop examples; end of shift, overnight, weekend, holiday.



Figure 10 Line Stop Diagram

Line Stop is accomplished by pressing the line stop button.

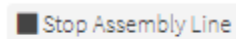


Figure 11 Stop Assembly Line Button

17	AL-STH	Standard_Time_Huzz	-	Inactive	▶ Start Assembly Line	🔗 Edit	🚫 Disable	⚙️ Configure	⚠️ Statuses
18	AL-STHS	Standard_Time_Huzz_Sub	Standard_Time_Huzz	Inactive	🔗 Edit	🚫 Disable	⚙️ Configure		

Figure 12 Assembly Line Inactive

Schedule stop

Schedule Stop is the ability to set a time when the line status will automatically become stopped.

Active	■ Stop Assembly Line	🔗 Edit	🚫 Disable	⚙️ Configure	⚠️ Statuses	⏸️ Pause Assembly Line	📅 Schedule Stop
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Figure 13 Schedule Stop

When Schedule Stop is clicked, a prompt will show up allowing you to choose the time and date the line will automatically stop.

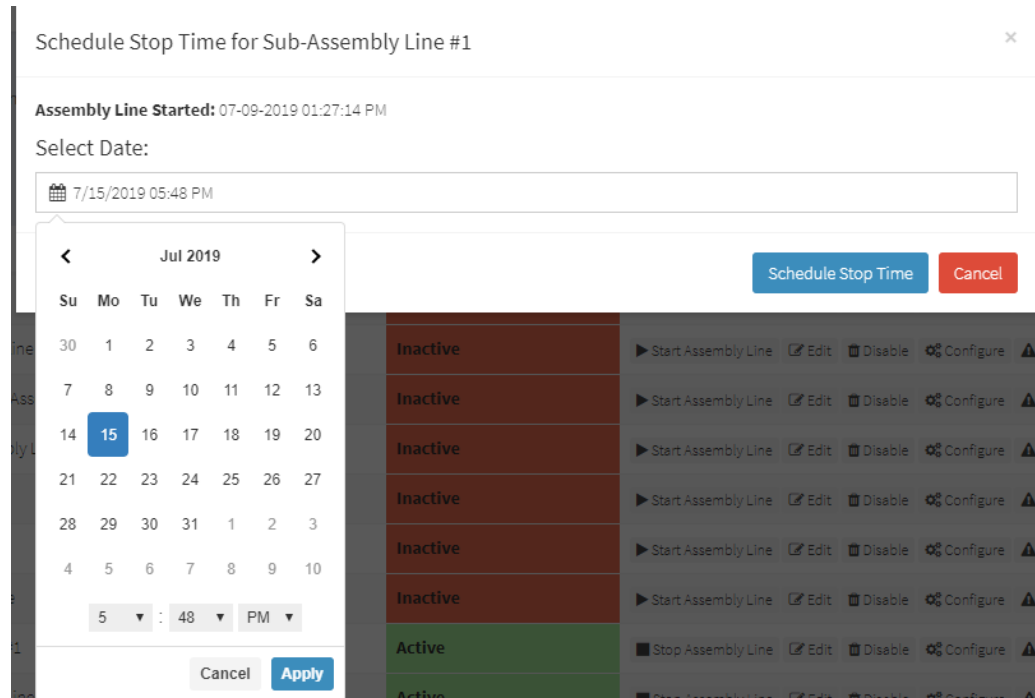


Figure 14 Selecting Schedule Stop Time

Line Gap

Line Gap Active

Line Gap Active is time between the activation (start) of the Line and the first Data Collection Station work scan Less and Line Pauses.

- First Data Collection Station Work Scan is the first of **any** active station to scan after line activation (any station does not have to be the first station in the line configuration).

Line Gap Inactive

Line Gap Inactive is time between the Last Data Collection Station Work scan and the inactivation (stop) of the Line Less and Line Pauses.

- Last Data Collection Station Work Scan is the last of **any** active station to scan before the line goes inactive.

Line Gap

Line Gap = Line Gap Active time + Line Gap Inactive time

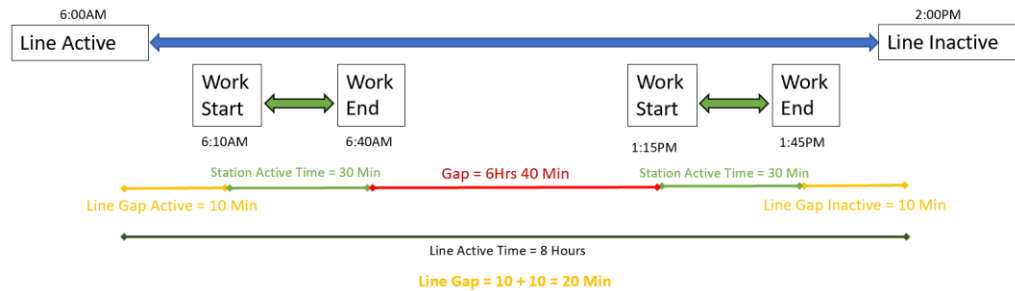


Figure 15 Line Gap Example

Line Pause

A Line Pause is possible between the line activation and the First Work Scan and also between the Last Work Scan and the line inactivation.

- Line Pause Time is removed from the Line Gap (both Active and Inactive) times.

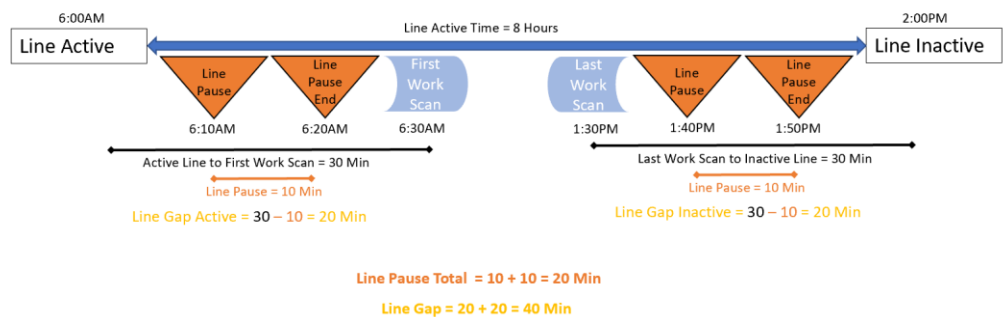


Figure 16 Line Gap Example with Line Pause

Data Collection Workstation

Data Collection Workstation is a designated area for collecting data with a scanner or mobile data collection device. May also be called a **workstation** for short.

Data Collection Scan is the process of reading a barcode with a scanner or mobile data collection device.

Start Work Scan is a Data Collection Scan that collects employee name, workstation and Date&Time stamp at the beginning of a work process.

Stop Work Scan is a Data Collection Scan that collects employee name, workstation and Date&Time stamp at the end of a work process

Typically Start Work and the End Work scans are initiated by the same employee. Example: Paul Smith starts work on Data Collection Workstation 1 and he would also end work at workstation 1. It is possible for one person to start the work and another

to end the work at a workstation, if so, in reporting down to the employee level would be listed for the employee that Ended the work.

Station Status

Station Active

Station Active is total time between Data Collection Station Work Start to Work End (Total time from start of work on an AUN to the completion of AUN at a given Data Collection Station).

Station Pause

Station Pause is time between Data Collection Station Pause to Station Pause End (Work on AUN must be started in order to start a Station Pause event).

Line Pause event could be triggered during a Station Active time or even during a station pause.

Work Time

Work Time

Work Time is the time between Data Collection Station Work Start and Work End Less the Sum of Station Pause(s) and Less the Sum of Line Pause(s).

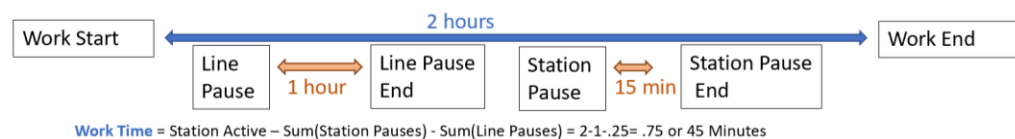


Figure 17 Station Example with Work Time

Workstation Gap

Gap Time (Workstation)

Gap is time between a previous Data Collection Station Work End and the next stations Work Start Less any Line Pauses.

Gap Time Total (Workstation)

Gap Total is the Sum of Gap time – it can be looked at from two different reporting perspectives, AUN or Time.

- AUN – would be the sum of all Gap Times from the first Data Collection Station thru the last station for a specific AUN.
- Time – would be the sum of all Gap Times by Line over the selected time period.

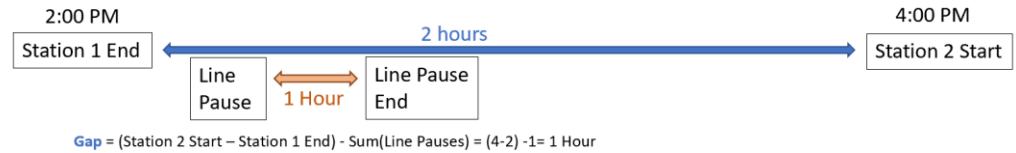


Figure 18 Gap Calculation Explanation

Administration Portal

Administration Portal or “Backend” is utilized for configuration, administration functions and reporting.

Common Features

The Administration Portal has common features across the selections/screens.

Data Tool Bar



Figure 19 Export/Column visibility data tool bar

The Data Tool Bar allows you to work the presented data.

Export



Figure 20 Export Pull Down List

- Copy – will copy the data presented on the screen into the Windows Clipboard
- Excel & CSV – will create a CSV file of the data presented on the screen. You will be asked where to save the file to (local or network drive/folder). Excel will have a .xlsx file extension while the CSV will have the .csv file extension.

- PDF – will create a PDF of the data presented on the screen. You will be asked where to save the file to (local or network drive/folder).
- Print – will open your print window (select the proper printer and any desired setting) and print the data presented on the screen.

HINT: check the Column Visibility to verify you are seeing all the columns available.

- Column Visibility – will allow you to “hide” columns if not needed for any of the actions listed above. A visible Column is highlighted with a dark background color with white text, while a deselected column will have a white/gray background with dark text.

Search Bar

Search:

Figure 21 Administration Portal Search Bar (20180801)

The Search Bar allows you filter the presented data. The search occurs across all columns.

Pagination

25 records per page

Figure 22 Administration Portal Records Per Page (20180801)

Record Per Page pulldown allows you filter the number of records displayed on the screen.

Showing 1 to 6 of 6 entries

Previous 1 Next

Figure 23 Administration Portal Status and Navigation (20180801)

Status will show the record set being displayed. Navigation allows you move through the record sets displayed on the screen.

Sorting

Table Columns are sorted by utilizing the sort icon.

↕ Default Sort Icon

Figure 24 Default Sort Icon

⇓ Sort Ascending

Figure 25 Sort Ascending Icon



Sort Descending

Figure 26 Sort Descending Icon

System Configuration

Assembly Lines

Assembly Lines Section is used to define assembly lines and Start/ Stop and Assembly Lines. Status of the Assembly Line will determine how the non-work time is tracked.

Start an assembly Line to allow the line to be utilized and produce products. While started, time between workstations (collection points) is gap time.

Stop an assembly line to disable the ability to scan or work on products for that line. While stopped, the time between workstations will be tracked as non-work time.

The Assembly Line must be created before adding any Workstation that are associated with the line.



ID	Code	Name	Parent	Current Status	Actions
1		Line 71	-	Inactive	▶ Start Assembly Line ⚙️ Edit 🛑 Disable ⚙️ Configure ⚠️ Statuses
2		Test Assembly Line	-	Active	▶ Stop Assembly Line ⚙️ Edit 🛑 Disable ⚙️ Configure ⚠️ Statuses 🔄 Pause Assembly Line 📅 Schedule Stop
3		Shortened Test Assembly	-	Inactive	▶ Start Assembly Line ⚙️ Edit 🛑 Disable ⚙️ Configure ⚠️ Statuses
4	AU-0234	Test Subassembly Line	Floater Test Line	Active	▶ Stop Assembly Line ⚙️ Edit 🛑 Disable ⚙️ Configure ⚠️ Statuses 🔄 Pause Assembly Line 📅 Schedule Stop
5	AU-0161_test	mei_testline	-	Inactive	▶ Start Assembly Line ⚙️ Edit 🛑 Disable ⚙️ Configure ⚠️ Statuses
6	AU-023456	Test	-	Inactive	▶ Start Assembly Line ⚙️ Edit 🛑 Disable ⚙️ Configure ⚠️ Statuses
7	AU-001010	Floater Test Line	-	Active	▶ Stop Assembly Line ⚙️ Edit 🛑 Disable ⚙️ Configure ⚠️ Statuses 🔄 Pause Assembly Line 📅 Schedule Stop

Figure 27 Assembly Line Screen

Table Columns

- ID – Application unique ID of the Assembly Line (has no reference to the company's internal name or number of the line).
- Name – Human friendly title for the Assembly Line.
- Current Status – Green=Active/Running, Yellow=Pause, Red=Inactive/Stop
- Actions
 - Start Assembly Line Button
 - Stop Assembly Line Button

- Pause Assembly Line Button
- Edit – Edit the Human readable test (this will not change the ID)
- Disable – Remove the Assembly Line from use.
- Configure – Assign data collection station to an assembly line.
 - Workstation order determines what Workstation starts the process and the proper order of work flow across all Workstations until completion for the given assembly line.
- Schedule Stop
 - This will set a time where the line will stop automatically

Workstations

Workstations are a place of work defined by the need for data collection. A workstation is the place designated to collect data for that step in the process. A Workstation will start and stop work to capture the work time.

Verify the Assembly Line has been created before creating new Workstations.

Workstations Showing 1 to 14 of 14 entries

[+ Add workstation](#) Search:

▼ Show Disabled

ID	Name	Code	Assembly Line	SN Assignment Workstation	Actions
1	Workstation 1	WRK-001	Line 71	No	Edit Disable
2	Workstation 2	WRK-002	Line 71	No	Edit Disable
3	Workstation 3	WRK-003	Line 71	No	Edit Disable
4	Workstation 4	WRK-004	Line 71	No	Edit Disable
5	Workstation 5	WRK-005	Line 71	No	Edit Disable
6	Workstation 6	WRK-006	Line 71	No	Edit Disable
7	Workstation 7	WRK-007	Line 71	Yes	Edit Disable
8	Workstation Test 1	WRK-TEST001	Test Assembly Line	No	Edit Disable

Figure 28 Workstations Screen

Table Columns

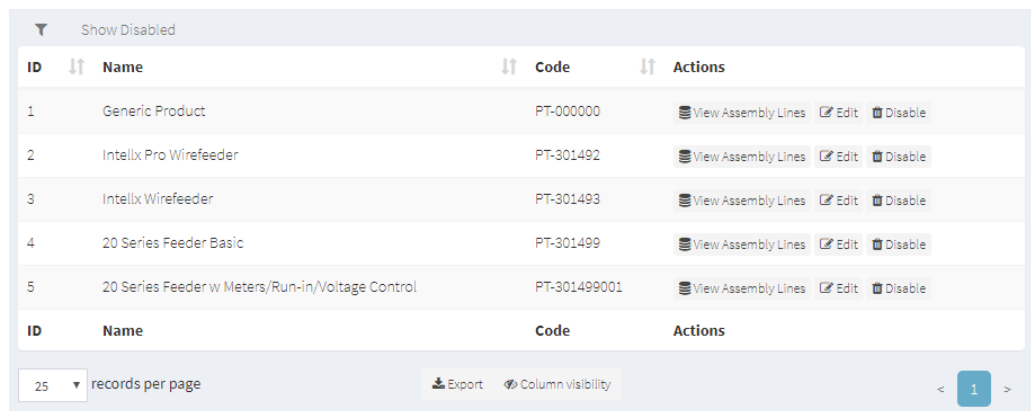
- ID – Application unique ID of the Workstation (has no reference to the company's internal name or number of the Workstation).

- Name – Human friendly title for the Workstation – more descriptive than the Name (Code & Name could be the same)
- Code – is the Bar Code information for the Workstation
- Assembly Line – This is the text name of the Line the Workstation is associated with
- SN Assignment Workstation – Does this workstation assign Serial Numbers (Yes/No)
- Action
 - Edit – Edit the Human readable test (this will not change the ID)
 - Disable – Remove the Workstation from use.

Product Types

Product Types are assigned to an Assembly Line and scanned at the Workstation. This allows for granular reporting and score boarding.

Verify the Product Types has been created before creating new Product Assemblies.



ID	Name	Code	Actions
1	Generic Product	PT-000000	View Assembly Lines Edit Disable
2	Intelix Pro Wirefeeder	PT-301492	View Assembly Lines Edit Disable
3	Intelix Wirefeeder	PT-301493	View Assembly Lines Edit Disable
4	20 Series Feeder Basic	PT-301499	View Assembly Lines Edit Disable
5	20 Series Feeder w Meters/Run-in/Voltage Control	PT-301499001	View Assembly Lines Edit Disable

Figure 29 Product Type Table

Table Columns

- ID – Application unique ID of the Product Types (has no reference to the company's internal name or code).
- Name – Human friendly title for the Product Type

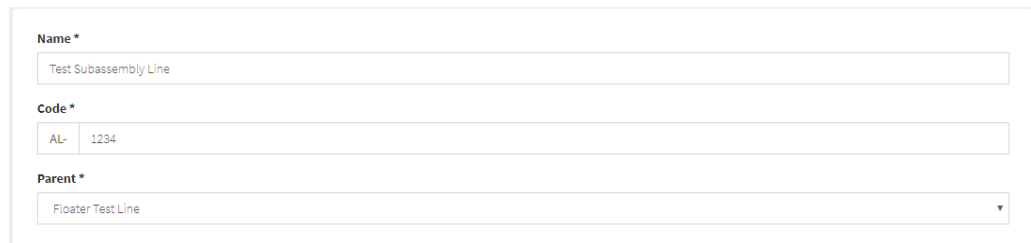
- Code – Must start with **PT-** , alphanumeric entry after the prefix. May consider using an internal part number
- Action
 - View Assembly Lines – will display a list of the Lines that have the selected Product Type assigned
 - Edit – Edit the Human readable test (this will not change the ID)
 - Disable – Disable the Workstation from use.

Subassemblies

Subassemblies are stations that produce sub assembly parts that are used on the product line.

The subassemblies have a slightly differed setup from a normal line.

The subassembly line is created the same way a normal assembly line is created. Go to Assembly Lines, then click add assembly line. Name the assembly line and **set which line the subassembly is creating products for as the parent.** (Example. Subassembly line X is creating products for Line X, Line X would be set as the parent for Subassembly Line X).



The screenshot shows a web form with the following fields:

- Name ***: A text input field containing "Test Subassembly Line".
- Code ***: A text input field containing "AL- 1234".
- Parent ***: A dropdown menu with "Floater Test Line" selected.

Figure 30 Assigning a Subassembly Line

Next the subassembly workstations will be defined. Go into the Workstations tab, and click **add workstation**. Give the workstation a name, serial code that will communicate to the line, and which assembly line this workstation will be under, (the subassembly line you have just created).

Workstation Name *

Code *

Assembly Line

Serial Number Assignment Workstation

Figure 31 Linking Subassembly workstation to Line

Note: Do not check serial number Assignment Workstation box unless under very specific applications of this feature

After setting up the workstations, you will need to add the products that will be produced in the subassemblies. Go to Product types and click **Add product type**. Name the product something that you will be able to realize what it is, (example: Line 71_Motor), and give the product a code. Save the product when ready.

Product Type Name *

Code *

Figure 32 Assigning Product Type as Sub-Product

Finally, under the product type you have created, click **View Assembly Lines**. The assembly line you have already defined should be in the next page. Click edit. Here you will see all of the workstations that the sub-product can be created at.

Front Pannel @ Test Subassembly Line (Inactive)

ID	Name	Current Status	Actions
27	Floater Test 8	Inactive	▶ Activate
28	Floater Test 9	Active	■ Deactivate
29	Floater Test 10	Inactive	▶ Activate

Figure 33 Enabling Sub-Product to Workstations

Note: Make sure only the workstations that are CURRENTLY creating this product are active. The rest should be deactivated, otherwise reporting will not display correctly in the backend.

Note: You can only deactivate and activate the workstations while the line is disabled. To make changes go to Assembly lines, and stop the subassembly line.

Subassemblies Flagged and Auto Completed

If a subassembly unit is being produced when the assembly line is shut off, the subassembly unit will be given the completion time of when the line was shut off. In the Subassembly Units Data sheet, it will also show if the subassembly unit was automatically stopped.

Yes
Yes
No
No
No

Automatically Stopped

If yes is marked for automatically stopped, the line was shut off then the assembly unit was given a completed at time of when the line was shut off.

If no is marked for automatically stopped, the unit was stopped manually by the employee by scanning Finish Subassembly.

Reports and Logs

Dashboard

The dashboard is a graph/report showing daily units produced at each workstation, current average time to produce the unit at each workstation, the historical average time to produce the unit at that workstation, and current average time for a unit to be completed at all workstations depending on the amount of people on the line.

Reports

There are reports that run with a filter and others that are standalone without parameters or filters.



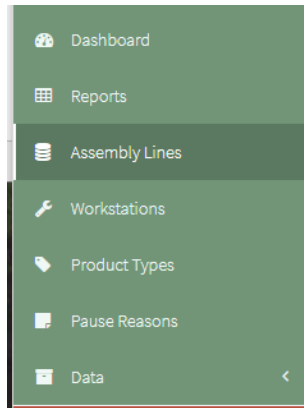
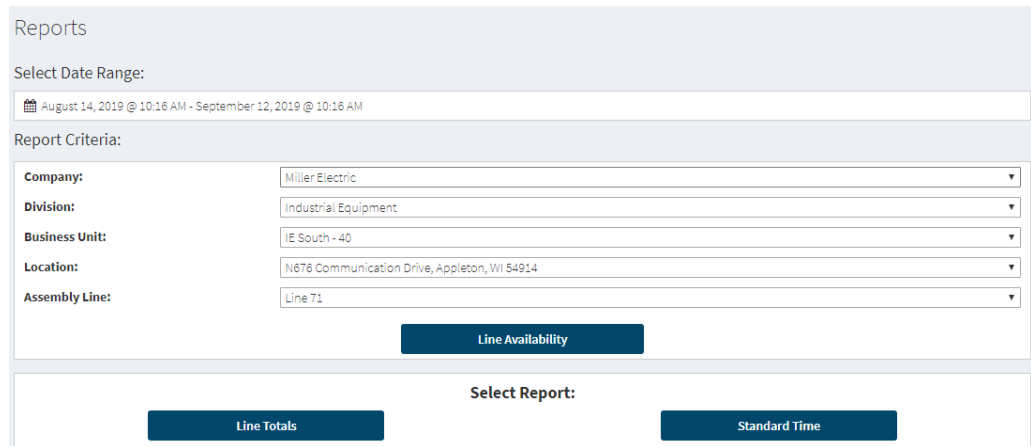


Figure 34 Assembly Lines Tab



The interface shows a 'Reports' section with a 'Select Date Range:' field containing 'August 14, 2019 @ 10:16 AM - September 12, 2019 @ 10:16 AM'. Below this is a 'Report Criteria:' section with five dropdown menus: 'Company' (Miller Electric), 'Division' (Industrial Equipment), 'Business Unit' (IE South - 40), 'Location' (N676 Communication Drive, Appleton, WI 54914), and 'Assembly Line' (Line 71). A 'Line Availability' button is positioned below the dropdowns. At the bottom, a 'Select Report:' section contains three buttons: 'Line Totals', 'Standard Time', and an unlabeled button.

Figure 35 Selecting Report Parameters

Date Range – select a range of Date/Time to filter the data for the report.

Company, Division, Business Unit & Location are all relational feeds according to company setup. Each is selected by using the pull-down menu, available selections will be listed.

Select your reporting parameters and then press the report you wish to run.

Line Availability

Line Availability Report is run with the reporting parameters as filter criteria and shows the Line Active times for line(s). If the procedure of Activating a Line at the start of a shift and Inactivating the Line at the end of the shift is followed, this report will be an easy place to view the data collected during a shift.

April 3, 2019 01:39:01 PM - May 2, 2019 01:39:01 PM					
Company	Division	Business Unit	Location	Line	
Miller Electric	Industrial Equipment	IE South - 40	N676 Communication Drive, Appleton, WI 54914	ALL	
Line	Start		End		
	Date	Time	Date	Time	
<input type="radio"/>	Test Assembly Line	04-05-2019	01:05:00 AM	04-05-2019	09:05:00 AM
<input type="radio"/>	Test Assembly Line	04-06-2019	01:00:00 AM	04-06-2019	09:00:00 AM
<input type="radio"/>	Test Assembly Line	04-29-2019	03:50:29 PM	04-29-2019	04:55:47 PM
<input type="radio"/>	Test Assembly Line	04-29-2019	04:57:21 PM	05-02-2019	11:31:01 AM
<input type="radio"/>	Test Assembly Line	05-02-2019	11:33:19 AM	05-02-2019	11:47:20 AM

Select a record from the above Table to use as Parameters for a report below.

Figure 36 Line Availability Report

Line Totals

Line Totals Report is run with the reporting parameters as filter criteria or from a selected record (shift) from the Line Availability Report. Line Totals Report is a view of the data collected during a shift. Clicking on buttons allows further “drill down.”

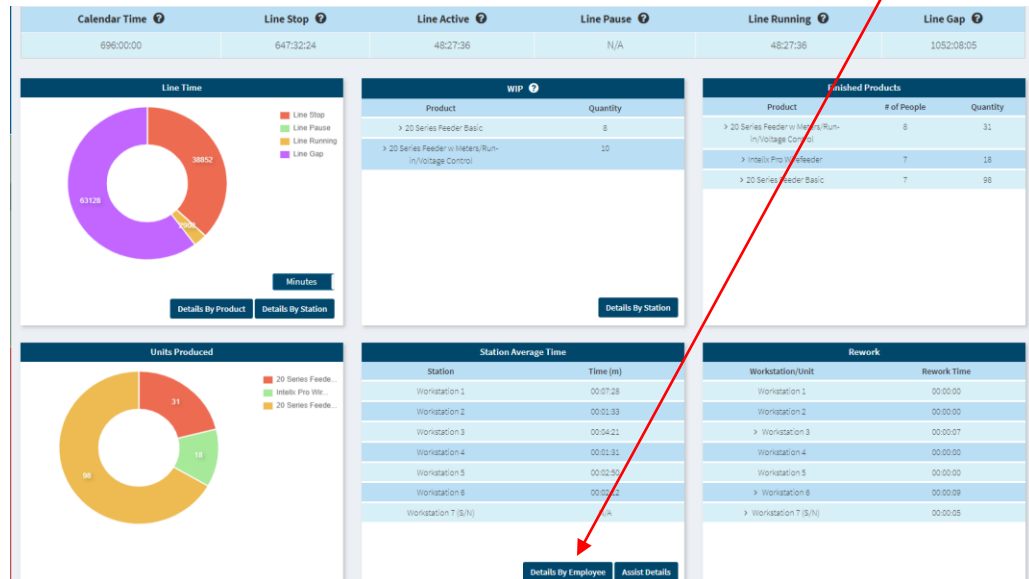


Figure 37 Line Totals Report Page

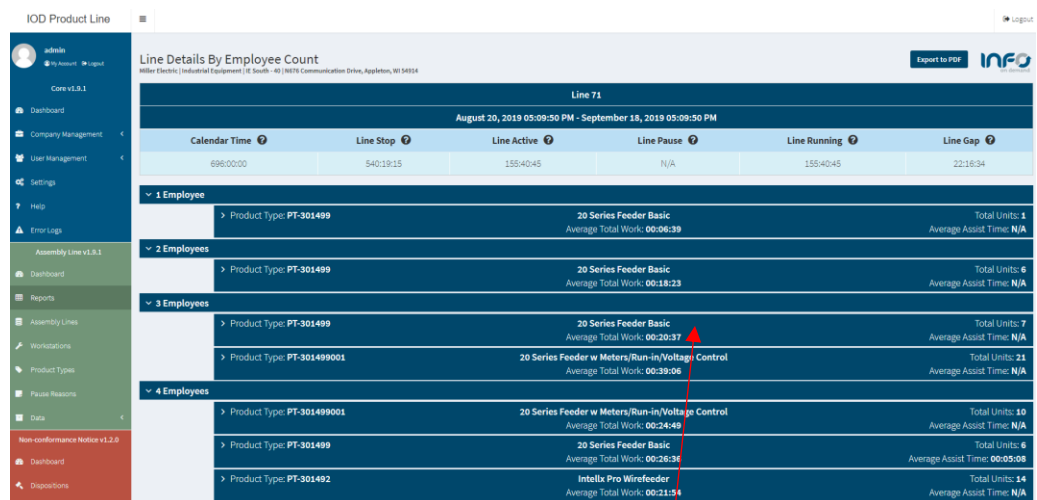


Figure 38 Line Details By Employee Count (Reports / Line Totals / Detail by Employee)

You can drill down into workstation by clicking on X Employee(s) and Product Type and see:

3 Employees						
Product Type: 20 Series Feeder Basic				Total Units: 7		
PT-301499				Average Assist Time: N/A		
				Average Total Work: 00:20:37		
Station	Operators	Type	Time	Average	Completed	WIP
Workstation 1	OP-5, OP-23	Work Pause Idle ?	<u>00:10:33</u> 00:13:16 133:00:22	<u>00:05:16</u> 00:06:38 66:30:11	2	
		Gap	00:13:20	00:06:40		0
Workstation 2	OP-23	Work Pause Idle ?	<u>00:01:00</u> N/A 133:23:11	<u>00:00:30</u> N/A 66:41:35	2	
		Gap	00:04:17	00:02:08		0
Workstation 3	OP-2, OP-3, OP-23	Work Pause Idle ?	<u>00:08:20</u> N/A 133:15:51	<u>00:04:10</u> N/A 66:37:55	2	
		Gap	65:36:18	32:48:09		1
Workstation 4	OP-1, OP-2, OP-3, OP-14	Work Pause Idle ?	<u>00:00:02</u> N/A 133:24:09	<u>00:00:02</u> N/A 133:24:09	1	
		Gap	00:13:24	00:13:24		0
Workstation 5	OP-1	Work Pause Idle ?	<u>00:21:23</u> N/A 133:02:48	<u>00:07:07</u> N/A 44:20:56	3	
		Gap	00:40:08	00:13:22		0
Workstation 6	OP-1, OP-21	Work Pause	<u>00:21:06</u> N/A	<u>00:03:31</u> N/A	6	

Figure 39 Line Details By Employee Count (Reports / Line Totals / Detail by Employee / X Employee(s) and Product Type)

Standard Time

The standard time report will show the plot point information of units produced during the selected time period. The standard time graph allows for setting an **upper limit**, **lower limit**, and **standard time**

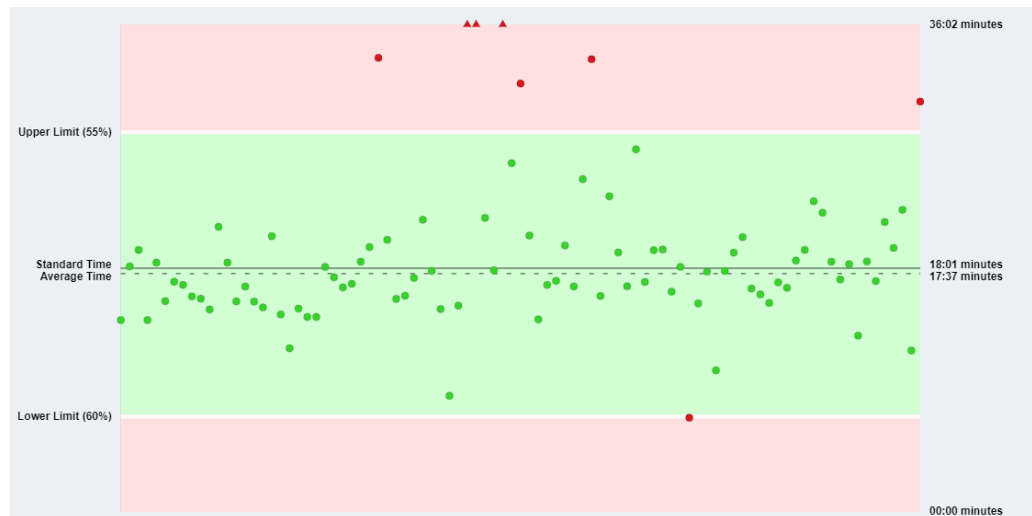


Figure 40 Standard Time Graph

Upper Limit – the maximum amount of time, displayed as a percentage, that is shown as a reasonable amount of production time

Lower Limit – the minimum amount of time, displayed as a percentage, that is shown as a reasonable amount of production time

Standard Time – The end user defined production time that is considered ideal amount of production time

By dragging your mouse cursor over a time period of product plot points it will select a range. Release the mouse button to zoom into the specified area of the graph.

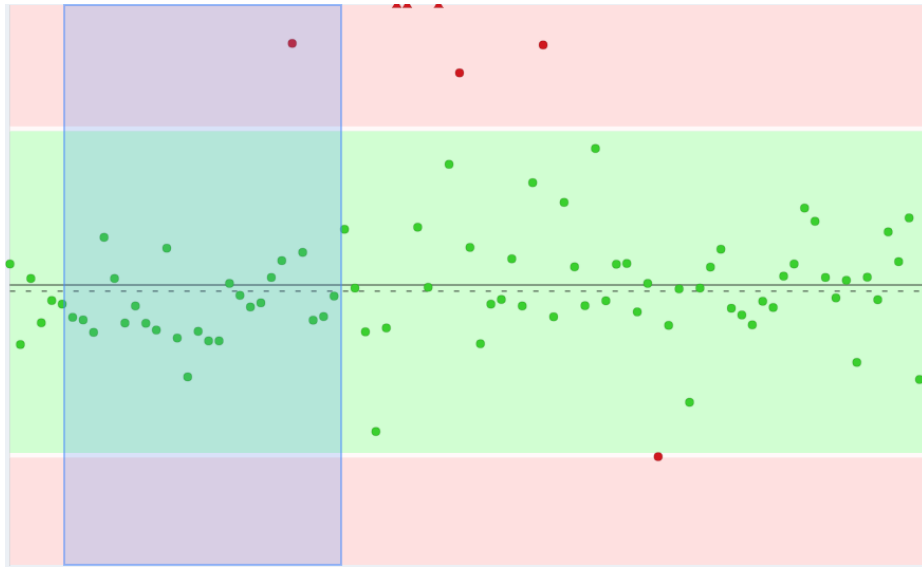


Figure 41 Selecting Standard Time Graph Display Range

Standard time data

The plot points will show production information times, and if selected will display the workstation breakdown for the selected AUN number.

Intelix Pro Wirefeeder						
Average Time	Standard Time	Lower Limit	Upper Limit	Units Below Standard	Units Within Standard	Units Above Standard
00:21:12	00:20:15	80%	75%	0	12	0
Units	AUN	Serial Number	Completed At	Total Work Time		
	AUN_002089	MK345522U	08-20-2019 08:02:54 AM	00:13:32		
	AUN_002088	MK345521U	08-20-2019 07:53:46 AM	00:13:47		
	AUN_002084	MK345517U	08-20-2019 07:04:07 AM	00:17:54		
	AUN_002087	MK345520U	08-20-2019 07:27:11 AM	00:17:56		
	AUN_002081	MK345514U	08-20-2019 06:36:09 AM	00:18:32		
	AUN_002085	MK345518U	08-20-2019 07:07:51 AM	00:19:02		
	AUN_002086	MK345519U	08-20-2019 07:17:52 AM	00:19:21		
	AUN_002083	MK345516U	08-20-2019 06:53:43 AM	00:19:50		
	AUN_002080	MK345513U	08-20-2019 06:18:35 AM	00:20:41		
	AUN_002090	MK345519U	08-20-2019 08:12:54 AM	00:21:26		
	AUN_002082	MK345515U	08-20-2019 06:39:28 AM	00:21:31		
	AUN_002085	MK345524U	08-20-2019 08:16:20 AM	00:27:46		

Figure 42 Standard Time Product Report

Below the standard time graph is the standard time report. The report shows all of the AUN information

Selecting Specific AUN

If your mouse cursor is placed over one of the plot points, it will show that AUN units work time.

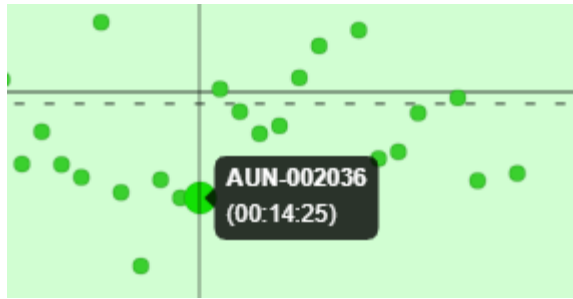


Figure 43 AUN Plot Point Work Time

If the AUN plot point is clicked, it will display the workstation breakdown, showing work time, gap, and pause time for every workstation the unit went through.

20 Series Feeder Basic		Unit: AUN-002035 (MK335984U)		
Station	Work Time	Gap Time	Station Pause Time	
Workstation 1	00:07:14	00:02:11	N/A	
Workstation 2	00:00:55	00:13:33	N/A	
Workstation 3	00:03:00	00:07:44	N/A	
Workstation 4	00:01:14	00:28:43	N/A	
Workstation 5	00:00:36	00:33:32	N/A	
Workstation 6	00:01:26	00:00:11	N/A	
Workstation 7 (S/N)	N/A	N/A	N/A	

Figure 44 Product Workstation Info

This page can also be reached by selecting an AUN number in the standard time report.

Modifying Standard Time Display

The values of date range, standard time, upper limits, and lower limits can be defined for each product type.

Under the product types tab, select view assembly line for the product type



Figure 45 Product type options

Select Configure Standard Time

Standard Time	Lower Limit	Upper Limit	Actions
1215	80%	75%	Configure Standard Time Edit Disable
Standard Time	Lower Limit	Upper Limit	Actions

Figure 46 Standard Time Product Type Display Info

A modifiable screen shows up allowing the Standard, upper and lower limit to be

selected

Configure Standard Time

Intelx Pro Wirefeeder @ Line 71

Average Time: 1272

Standard Time	Lower Limit (Percentage)*	Upper Limit (Percentage)*
<input type="text" value="00:20:15"/>	<input type="text" value="80"/>	<input type="text" value="75"/>

Figure 47 Standard Time Graph Modification

Assist Report

The assist report can be found under the Station Average Time report information table.

Station Average Time	
Station	Time (m)
Workstation 1	00:07:29
Workstation 2	00:01:39
Workstation 3	00:04:23
Workstation 4	00:01:40
Workstation 5	00:02:57
Workstation 6	00:02:14
Workstation 7 (S/N)	N/A

Figure 48 Station Average Time w/ Assist Details

The **assist report** will display information about assistance per line, per product.

Note: The Total for Units Produced with Assistance is total amount of different AUN units that were produced with assistance at that line.

The Units produced with assistance is how many different AUN units per workstation had assistance used.

The Totals is not a sum of the units produced at each workstation.

20 Series Feeder Basic			
Workstation	Assist Time	Average Per Unit	Units Produced With Assistance
Workstation 1	00:08:35	00:08:35	1
OP-23	00:08:35		
Workstation 2	00:05:50	00:01:10	5
OP-23	00:02:32		
OP-21	00:03:18		
Workstation 3	00:03:56	00:03:56	1
OP-23	00:03:56		
Workstation 4	N/A	N/A	0
Workstation 5	N/A	N/A	0
Workstation 6	00:18:12	00:03:38	5
OP-5	00:18:12		
Workstation 7 (S/N)	N/A	N/A	0
Totals	00:36:33		11

Figure 49 Assist Report

Rework Report

The **rework** report will show a breakdown by workstation for the amount of time spent on rework.

Rework	
Workstation/Unit	Rework Time
Workstation 1	00:00:00
> Workstation 2	00:02:56
> Workstation 3	00:06:05
> Workstation 4	00:00:10
> Workstation 5	00:19:45
Workstation 6	00:00:00
> Workstation 7 (S/N)	00:00:05

Figure 50 Rework Report

Click on a workstation to see details for each AUN that was reworked at that workstation.

<ul style="list-style-type: none"> <ul style="list-style-type: none"> Workstation 5 AUN-002511 AUN-002559 AUN-002591 AUN-002599 AUN-002614 AUN-002641 AUN-002715 AUN-002720 Workstation 6 > Workstation 7 (S/N) 	<ul style="list-style-type: none"> 00:19:45 00:02:28 00:02:18 00:01:31 00:01:58 00:00:10 00:00:29 00:00:59 00:09:52 00:00:00 00:00:05
--	--

Figure 51 Expanded Rework Report

Click on any AUN number to go to the Details by workstation report for that AUN number.

Searching by AUN or Serial Number

Under the reports tab on the right side, there is a search box for specific AUN or Serial Numbers.

Search Products:

Figure 52 AUN/SN Search Box

Raw Data Scans

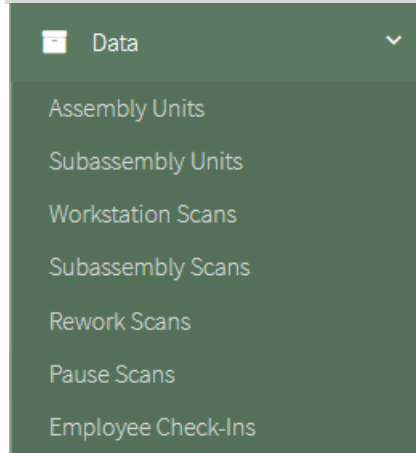


Figure 53 Viewing Raw data

To view all data scans for a particular data type, select **data** then select the type of scans you would like to see.

App Error Logs

Used for App troubleshooting and there should be no need to utilize these other than in a troubleshooting capacity

CORE Software Features

Core Features are items that can be shared between IOD modules.

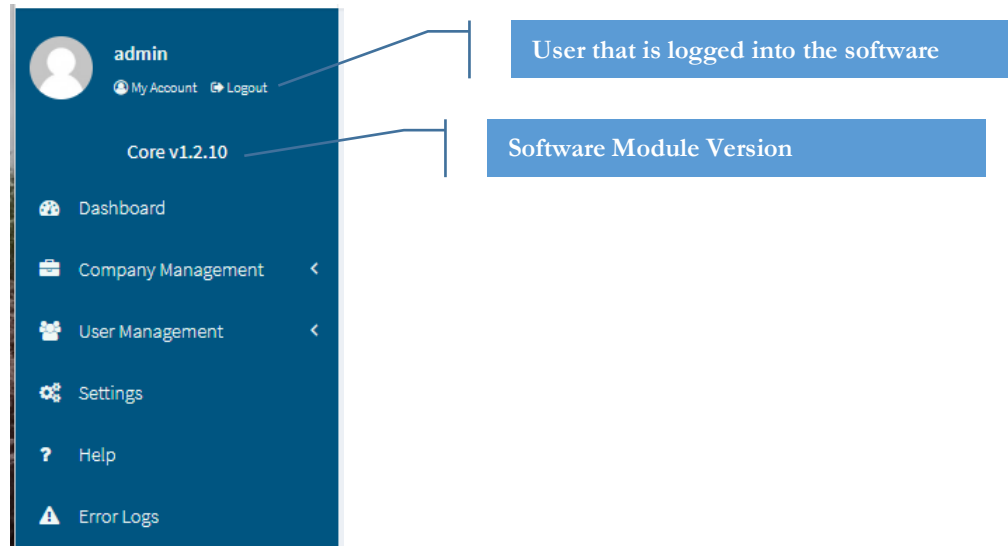


Figure 54 IOD Web Information

User Management

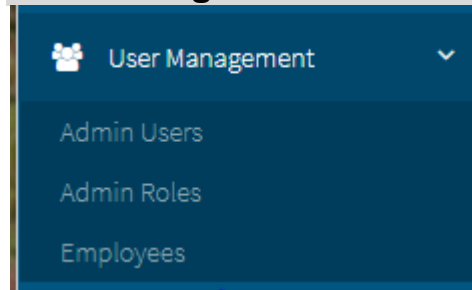


Figure 55 User Management Settings

User Management is a submenu of roles (security), users and employees. Roles define the limits of what a user can do or interact with in the software. Users (or Admin Users) are the web-based backend users that interact with system setup and reporting. Employees are your workers on the line(s) that are collecting data at the data collection workstations.

Employees

Employees Showing 1 to 12 of 12 entries

[+ Add employee](#) Search:

Show Disabled

ID	First Name	Last Name	Code	Actions
1	Ted	Ulman	EMP-0144195	Edit Disable
2	María	Peterson	EMP-147806	Edit Disable
3	Lindsey	Wilharms	EMP-0185228	Edit Disable
4	Betsy	Vandernacker	EMP-0144644	Edit Disable
5	John	Gilmore	EMP-0146827	Edit Disable
6	Ted	Tester	EMP-000000	Edit Disable

Figure 56 Employee Table

Employees must be created and have a bar code available for scanning before they can do work in the IOD system.

To add a new employee, click **Add employee**.

First Name *

Last Name *

Code *

[Save and back](#) [Cancel](#)

Figure 57 Add employee Screen

The Employees first and last name are then added, along with their employee code.

Admin Users

Users Showing 1 to 1 of 1 entries

[+ Add User](#) Search:

Show Disabled

Name	Email	Roles	Actions
admin	admin@huzzard.com	Admin	Reset Password Edit Disable

25 records per page < 1 >

Figure 58 Admin Users Table

Users must be setup in the system before they can log into the backend to preform setup or reporting.

To add a new admin user, select **Add User**.

Name *

Email *

Password *

Password Confirmation *

Roles

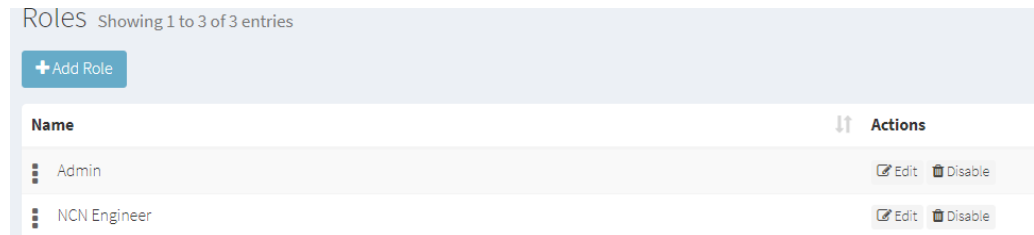
Admin
 NCN Engineer
 View Only

Figure 59 Add User Screen

The new admin users name, Email address that will be used for logging in to IOD, the password used for logging in to IOD, and the Role(s) they are assigned can then be set.

Admin Roles

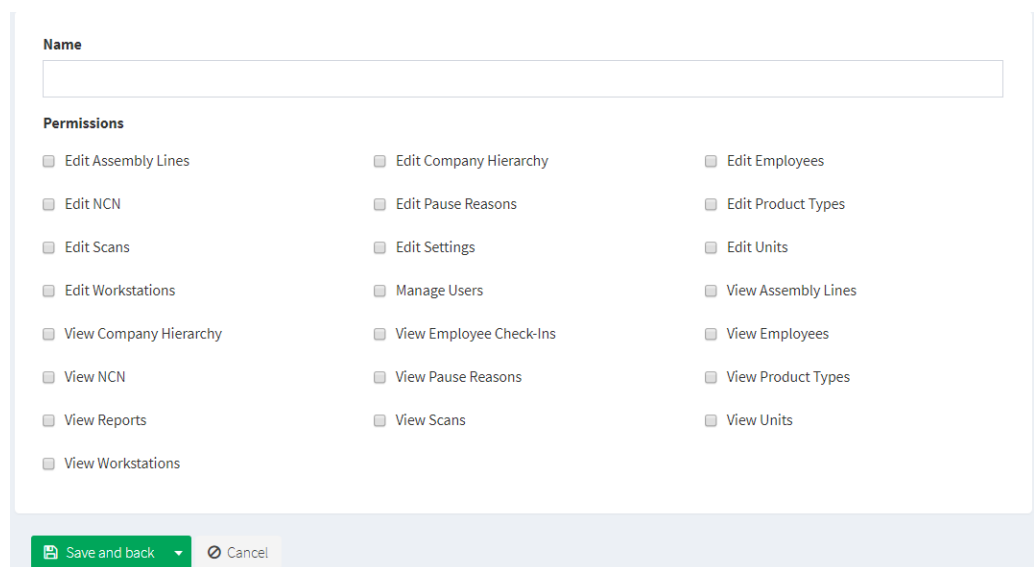
Admin Roles can be set, modified, or deleted under the admin roles section.



Roles <small>Showing 1 to 3 of 3 entries</small>	
Name	Actions
Admin	Edit Disable
NCN Engineer	Edit Disable

Figure 60 Roles Table

To create a new role, select **Add Role**.



Name

Permissions

<input type="checkbox"/> Edit Assembly Lines	<input type="checkbox"/> Edit Company Hierarchy	<input type="checkbox"/> Edit Employees
<input type="checkbox"/> Edit NCN	<input type="checkbox"/> Edit Pause Reasons	<input type="checkbox"/> Edit Product Types
<input type="checkbox"/> Edit Scans	<input type="checkbox"/> Edit Settings	<input type="checkbox"/> Edit Units
<input type="checkbox"/> Edit Workstations	<input type="checkbox"/> Manage Users	<input type="checkbox"/> View Assembly Lines
<input type="checkbox"/> View Company Hierarchy	<input type="checkbox"/> View Employee Check-Ins	<input type="checkbox"/> View Employees
<input type="checkbox"/> View NCN	<input type="checkbox"/> View Pause Reasons	<input type="checkbox"/> View Product Types
<input type="checkbox"/> View Reports	<input type="checkbox"/> View Scans	<input type="checkbox"/> View Units
<input type="checkbox"/> View Workstations		

[Save and back](#) [Cancel](#)

Figure 61 Add Role Screen

The new role can then be named, and permissions for the created role can be selected.

After saving, the newly created role can be found under Admin Roles.



Admin	Edit Disable
NCN Engineer	Edit Disable
View Only	Edit Disable

App Documentation

Data Collection Device

Device Physical Features

The Data collection Device (or referred to as a scanner) has the following physical features:

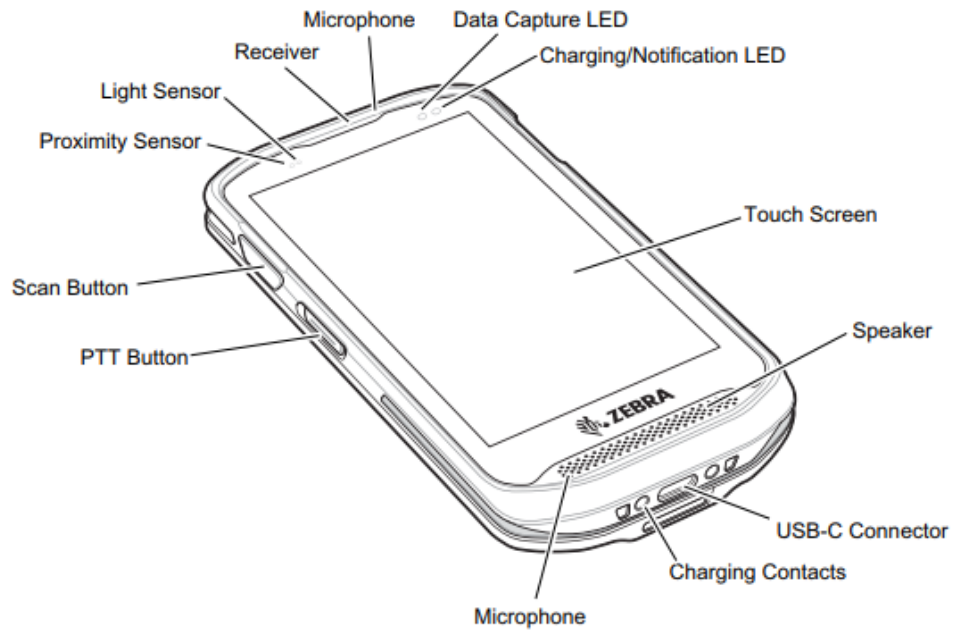


Figure 62 Scanner Diagram

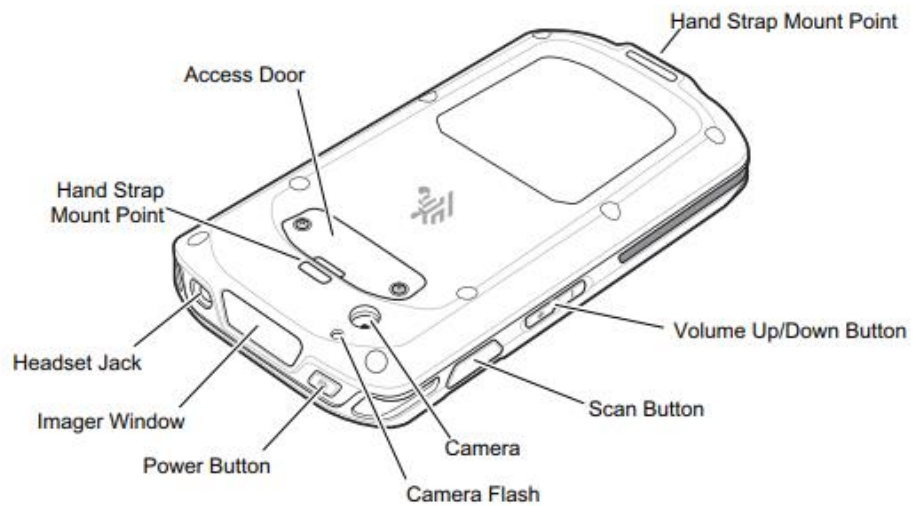


Figure 63 Scanner Diagram 2

Battery and Charging

To charge the Data Collection Device:

1. To charge the internal battery, connect the charging accessory to the appropriate power source.
2. Insert the Data Collection Device into a cradle or attach to a cable. The Data Collection Device turns on and begins charging.
3. The Charging/Notification LED indicated the status of the battery charging in the device.

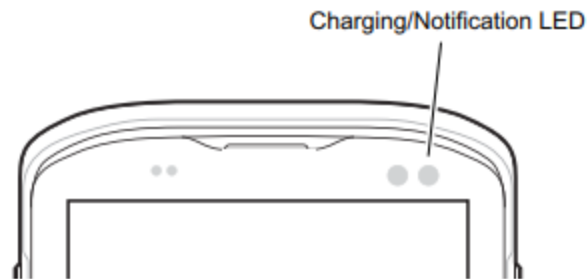


Figure 64 Charging Notification LED

LED State	Indication
Off	Not Charging
Slow Blinking Amber (1 blink every 4 seconds)	Charging
Solid Green	Charging Complete
Solid Red	Battery is at end of useful life.
Fast Blinking Amber (2 blinks per second)	Charging Error: <ul style="list-style-type: none"> • Temperature too low • Temperature too high

LED State	Indication
	<ul style="list-style-type: none"> Charging has gone on too long without completion
Fast Blinking Red (2 blinks per second)	Charging error with battery at end of useful life

Low Battery Notification

When the battery level drops below 20%, a notice to connect to power will be displayed. The battery should be charged using one of the charging accessories.

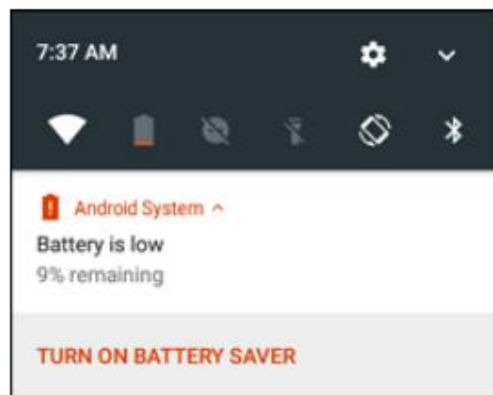


Figure 65 Low Battery Notification

Data Capture

The Data Collection Device uses a scan-enabled application to collection information using an imager to decode the barcode data and display the barcode content.

1. Open the Huzzard IOD Data Collection App and verify a cursor is in a text field.
2. Point the exit window on the top of the Data Collection Device at a barcode
3. Press and hold the scan button.

- a. A red LED aiming pattern turns on to assist in aiming.

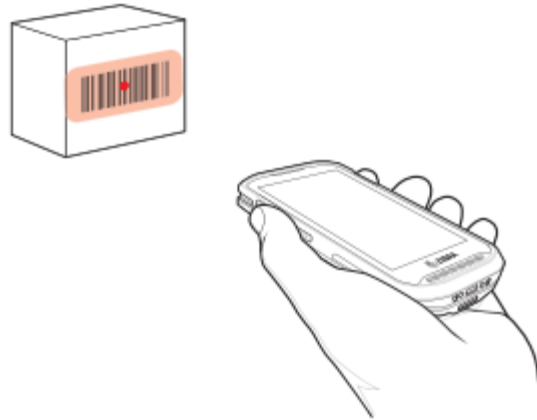


Figure 66 Scanning with Device

- 4. Ensure the barcode is within the area formed by the aiming pattern.

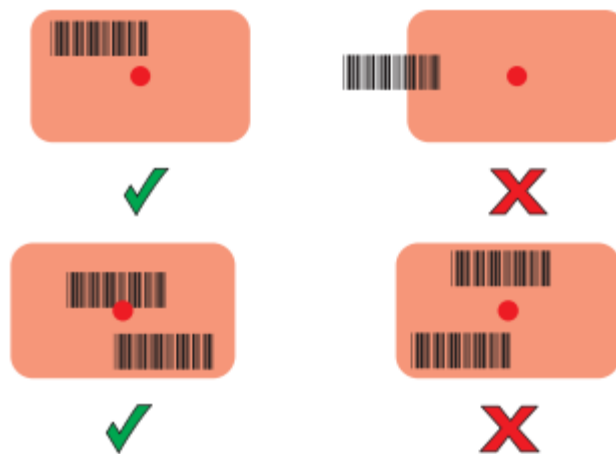


Figure 67 Proper Scanning Location

- 5. The data capture LED lights green and a beep sounds to indicate a successful decoded of the barcode.
- 6. Release the scan button.
- 7. Barcode data will display in the Collection App data

IOD Android Application

App Screens

The App screen without any preferences set.

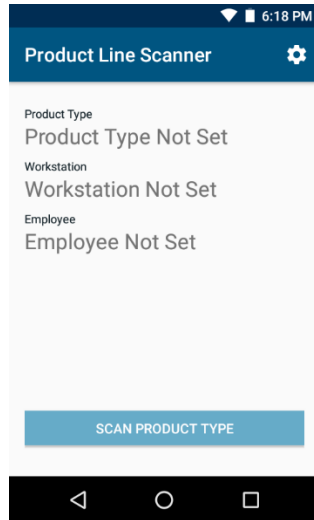



Figure 68 Application Main Screen

Setting/Gear Button  at upper right is utilized to switch between Scanner modes. There are two modes, product line and serial number modes.



Back Button

App Screen - Product Line

Set Product Type, Workstation, and Employee

Product Type

Product Type tells the system what product is being produced.

To change the Product Type scan a Product Type code to set the new Product Type.

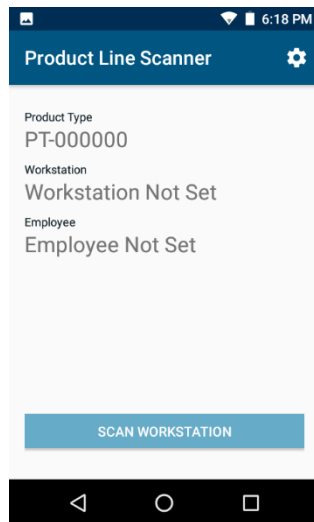


Figure 69 Application with Product Type Selected

Workstation

Workstation tells the system where the data is being collected from for the item/product being produced.

To change the Workstation, scan a Workstation code to set the new value.

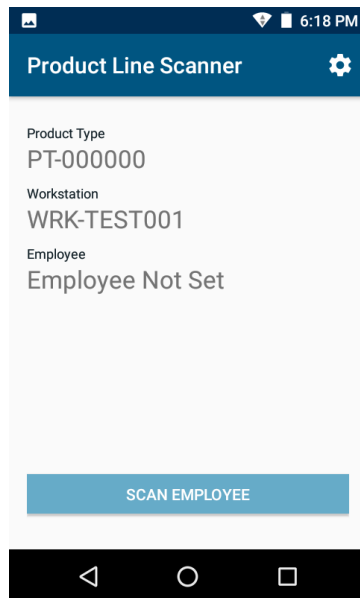


Figure 70 Application with Product Type and Workstation Set

Employee

Employee tells the system who is collecting the data for the item/product being produced.

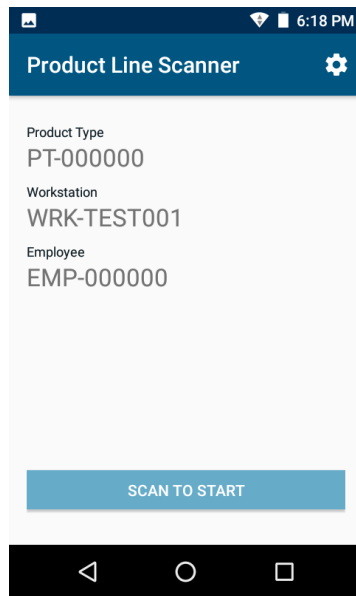


Figure 71 Applications with all Settings Selected

Data Collection

Once the Data Collection Device has the preferences set (Product Type, Workstation & Employee), the device is ready to start data collection.

Assembly Unit Number - AUN

Assembly Unit Number (AUN), is utilized for identifying each unit during production.

Scanning an AUN tag will start the assembly process.

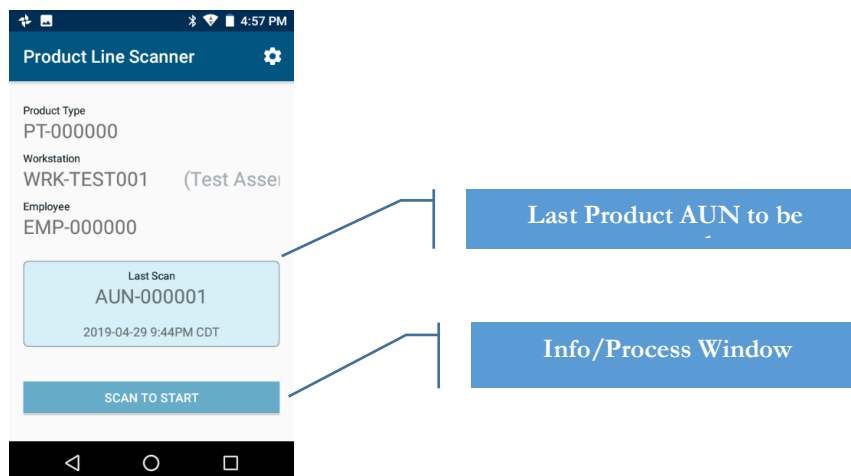


Figure 72 Scan AUN to start work at the Data Collection Station

When the Info/Process Window displays “Scan to Start”, this means there is no work being tracked, notice that the Product Type, Workstation and Employee are displayed on the screen.

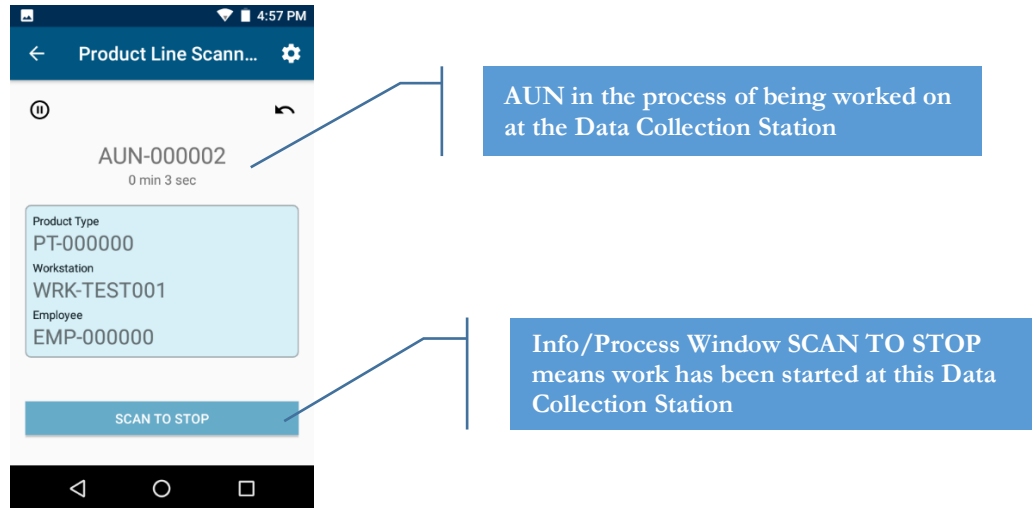


Figure 73 Work has been started – the next AUN scan will complete work at this Data Collection Station

When the Info/Process Window displays “Scan to Stop”, this means work has been started, notice that the AUN is displayed on the screen (Product Type, Workstation and Employee are NOT displayed). Also, a timer is displayed under the AUN showing the elapsed work time.

Once you scan to stop, work will be completed at the Data Collection Station for the given AUN and you will return back to the scan to start screen.


The device is ready to start the work process for this Workstation for the next AUN.

If the product or user changes they will need to follow the steps to change the effected preferences.

Assign Serial Number

After all Workstations have completed work for the product on the line, a serial number needs to be assigned.



Press Setting/Gear Button  at upper right to set the App mode. A user at the last Workstation could toggle between modes or a dedicated scanner to assigning a Serial Number may be more efficient.

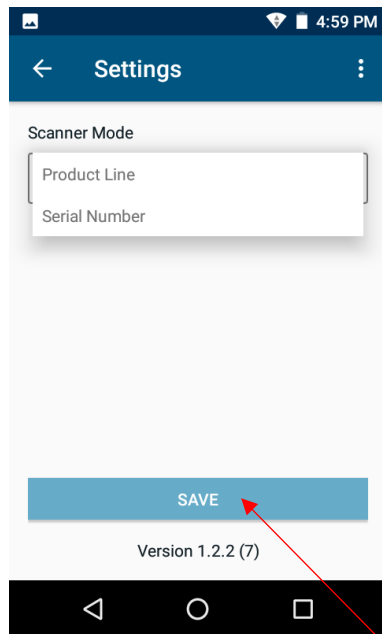


Figure 74 Select Mode Screen - Product Line or Serial Number modes

Select Serial Number Mode and press Save.

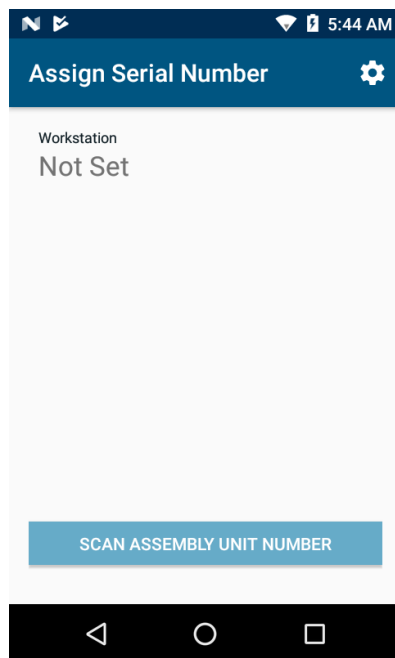


Figure 75 Serial Confirmation Station

Scan the AUN to be converted to a Serial Number.

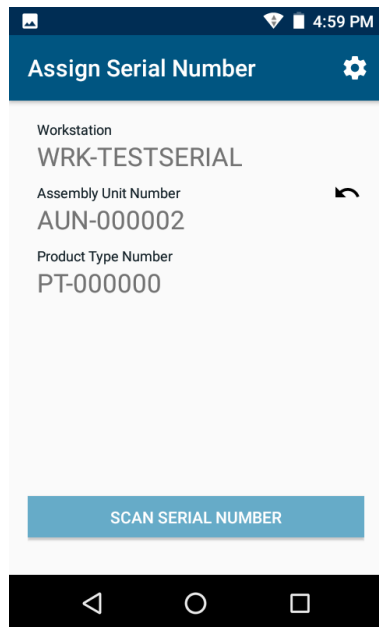


Figure 76 Scan Serial Number Screen

Scan the Serial Number

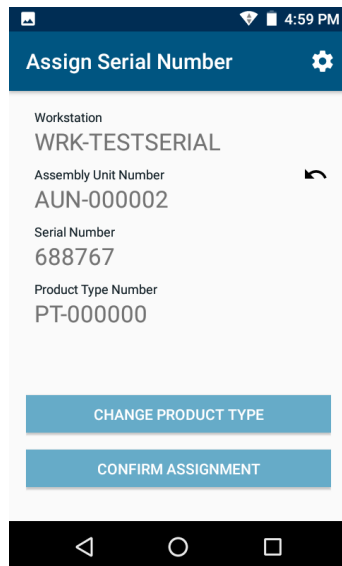


Figure 77 Serial Number Change Product or Confirm Assignment Screen

Once you scan the AUN and the Serial Number you have one last chance to select the Product Type. The Product Type utilized on the serial number assignment screen is type of product that the unit will be classified as in reporting.

Change Product Type button will allow the user to select the Product Number of the serialized unit.

Confirm Assignment button will take the information on the screen (AUN, Serial Number and Product Type) and tie the AUN to a Serial Number with the assigned Product Number.

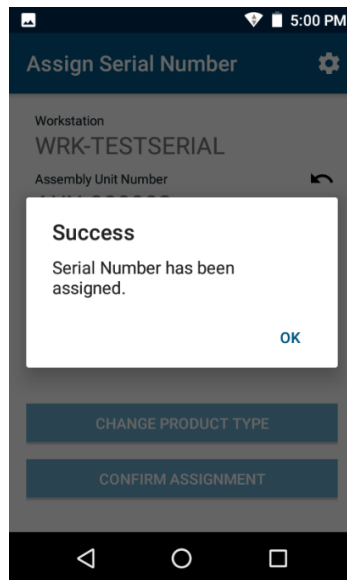


Figure 78 Confirm Assignment Screen - Serial Number successfully assigned

Press OK to remove the Success screen. This will take you back to the Serial Number Assignment scan AUN Screen.

Scan the Serial Number Label generated by the existing on-demand serial number label printer on the line (Generated out of Brother printer with existing Huzzard / Miller Electric Lean Line Labeling software).

Rework Mode

Rework mode gives the ability to track the amount of time spent fixing or modifying products.

Rework mode will work by either scanning a serial number OR an AUN number. If the product is pre-IOD, the serial number can be scanned and the database will use the serial number and assign a value to it. If the serial number is scanned and there is already an AUN linked to it, it will pull the previous data available.

Using Rework Mode

Enter rework mode by either scanning the Rework barcode, or tapping the settings/gear icon, tapping on the drop down and selecting rework, and hitting save

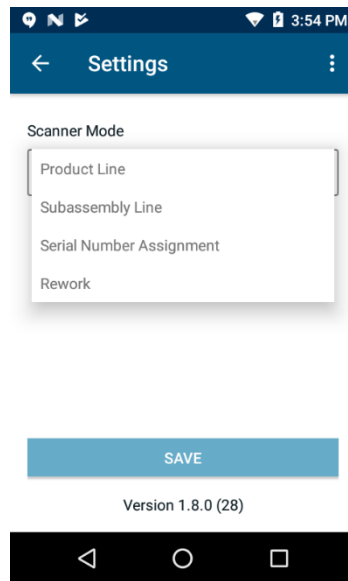


Figure 79 Selecting Modes Screen

Scan the workstation barcode rework is going to be started at, then ensure your employee barcode is shown.

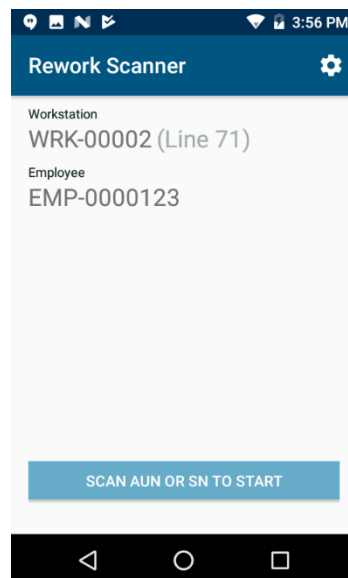


Figure 80 Rework with Options Selected

Scan the AUN or Serial Number of the product that is having rework done

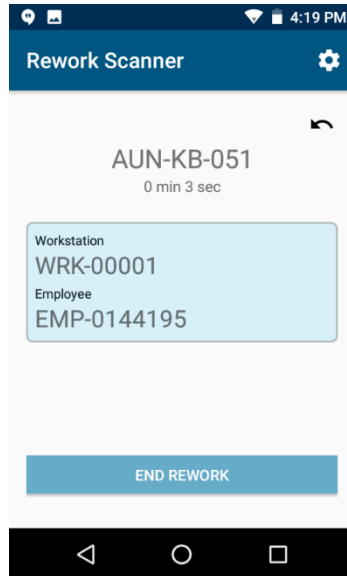


Figure 81 Active Rework Screen

Tap End Rework when finished reworking product

Assisting (Check In/Out)

Information On Demand has the ability to temporarily assign a second employee to a workstation for assistance called *assisting*

Product Line Assisting

Assisting can be done one of two ways:

Note: Using one scanner implies that only one device is being used between two employees

Assisting with One Device

1. Have scanner currently working on a product with a scanned AUN

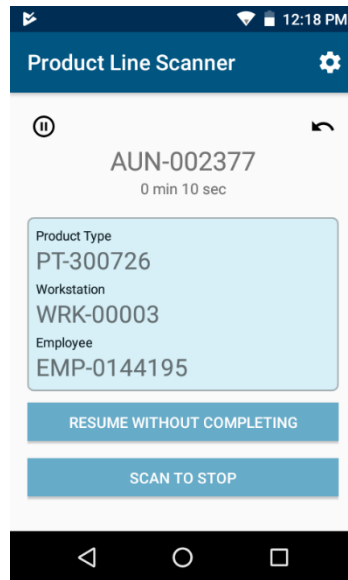


Figure 82 Active Product Line Screen

2. Scan the **Check In QR** code and a **Floater Check In** screen will display

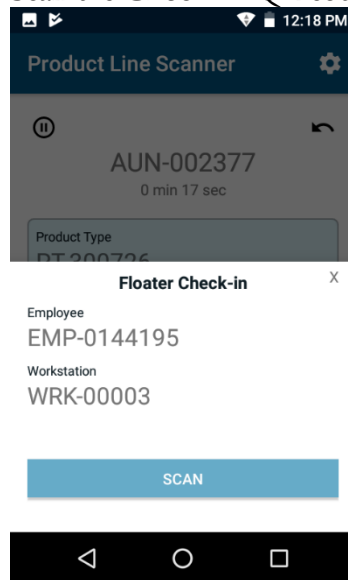


Figure 83 Check in Screen Popup

3. Scan your employee **EMP** barcode to register which user is floating

4. Scan **Check In** to confirm floating

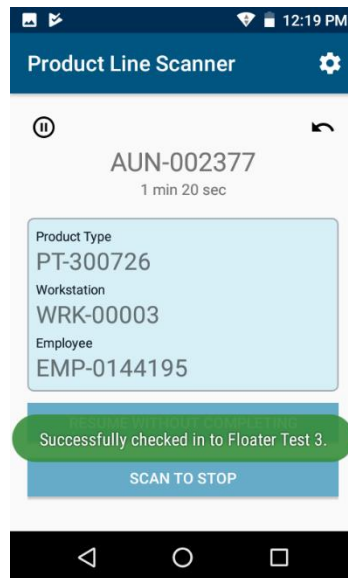


Figure 84 Successful Checkin Screen

5. When done floating scan the **Check Out** QR code with the same scanner that was used before. The **Floater Check Out** screen will display

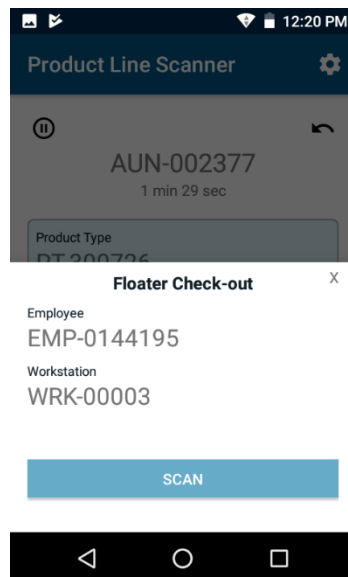


Figure 85 Check out Screen

6. Scan **Check Out** again to confirm floating is complete

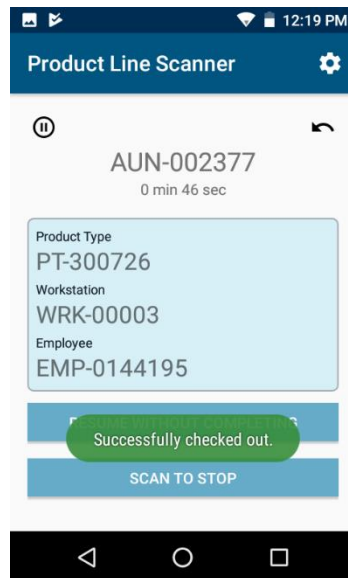


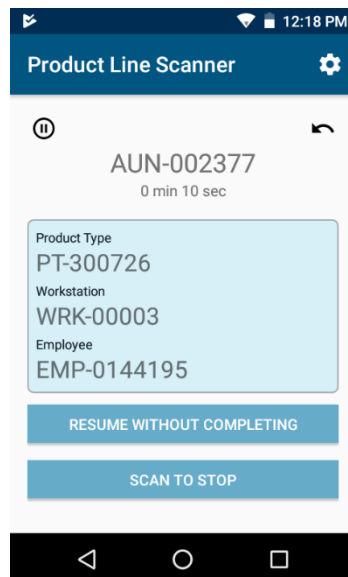
Figure 86 Successful Check out Screen

Note: Using a second scanner implies that the employee that is floating is using a device that they brought from another workstation

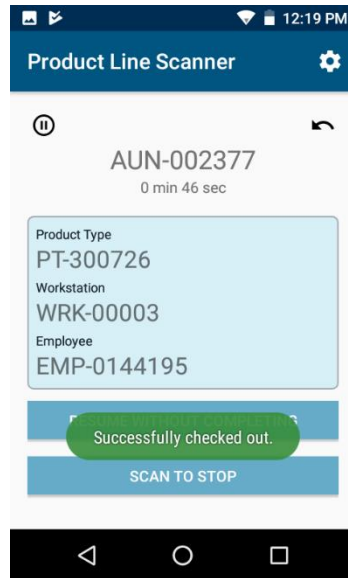
Assisting with a Second Device

When using a second scanner it is a very similar process to initiate floating.

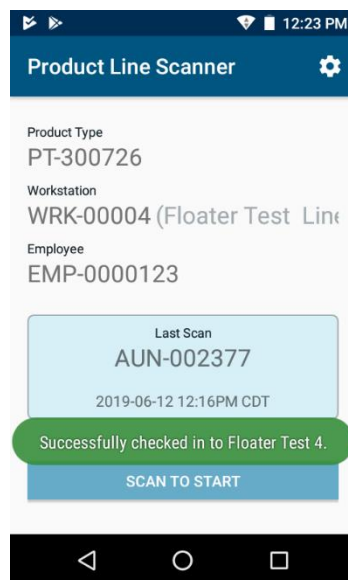
1. Have one scanner that is currently working on a product



- Take a second scanner that is at another workstation and scan **Check Out** QR code at that current workstation



- Take the scanner that has just been checked out to the workstation that is going to be floated to
- Scan the **Workstation** QR code to log into the workstation
- Scan **Check In** QR code



NOTE: Do not try and complete the product from the checked in floater! It will cause backend **error**

- Scan **Check Out** when completed floating
NOTE: Check out of floater before completing product to prevent errors.

Subassembly Line Assisting

Assisting while in subassembly mode is very similar as in product line mode.

Note: Using one scanner implies that only one device is being used between two employees

Assisting with one Device

1. While a subassembly is being worked on, scan **Check-In**. The Floater Check-In screen will show up.
2. Scan the **employee number** you want to Check-In to assist at the subassembly.
3. When done assisting, scan **Check-Out**.
4. Scan the **employee number** you want to check out of assisting.

Note: Using a second scanner implies that the employee that is floating is using a device that they

Assisting with a Second Device

1. If applicable, **Check-Out** of current workstation
2. Scan **Employee Number** to check out
3. Bring device over to the workstation that will be assisted
4. Scan the **Subassembly Workstation Number** that will be assisted
5. Scan **Check-In**
6. Scan your **Employee Number** to check into that station.
7. When done assisting, **Scan Check-Out** then your **Employee Number** again.
8. Return to previous station as normal.

Assisting from Product line To Subassembly

Assisting from the product line to a Subassembly line is only going to take one extra step. Since Product line and Subassembly use different modes, after checking out of the product line, you must switch to Subassembly mode before checking back in.

1. **Check-out** of current product line workstation
2. Scan the **Subassembly Mode** barcode, or click on settings in the upper right corner and tap the **Scanner Mode** dropdown and select **Subassembly Line**
3. Scan the subassembly workstation number

NOTE: Switching from Subassembly to Product line mode is the same way, just ensure you are in the correct Line Mode

4. Scan **Check-in**
5. Scan **Employee Number**
6. When finished assisting, scan **Check-out**
7. Switch **Scanner Mode** back to product line mode if returning to product line
8. Continue working as normal

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Glossary

Current Status The current status of an Assembly Line; Started, Stopped, Paused.....9

Data Collection Scan is the process of reading a barcode with a scanner or mobile data collection device.....5

Glossary - cont'd

Data Collection Workstation is a designated area for collecting data with a scanner or mobile data collection device. May also be called a workstation for short.	5
Date Range select a range of Date/Time to filter the data for the report.	14
Gap is time between a previous Data Collection Station Work End and the next stations Work Start Less any Line Pauses.	6
Gap Total is the Sum of Gap time – it can be looked at from two different reporting perspectives, AUN or Time.	6
ID Application unique ID of the Assembly Line	9
Line Active is total time between line activation and line Inactive.	1, 12
Line Availably Report Predefined time period between time line was started and stopped.	15
Line Gap = Line Gap Active time + Line Gap Inactive time.	5
Line Gap Active is time between the activation (start) of the Line and the first Data Collection Station work scan Less and Line Pauses.	4
Line Gap Inactive is time between the Last Data Collection Station Work scan and the inactivation (stop) of the Line Less and Line Pauses.	4
Line Pause is time between line pausing to Line Pause End – Line must be Active in order to initiate a Line Pause event.	2
Line Running is time between line activation to Line Inactive Less the Sum of Line Pause(s).	3
Line Stop is total time between Line Inactive and the next line activation.	3
Line Totals Report view of the data collected during a shift.	16
Lower Limit User defined percentage for Standard Time Graph representing unit completion time is lower than expected.	18
Name Human friendly title for product types, assembly lines, subassemblies, and employees	9
Plotpoints Plotted point on the Standard Time Graph displaying information about produced unit.	19
Standard Time User set time on Standard Time Graph for ideal production time of a unit.	18
Standard Time Report Report showing all produced units within the selected time range. The units will display amount of time taken to produce including breakdown of assisting, rework, and work time. Standard time, Upper limits, and lower limits can be defined along with displaying product history average time.	18
Start Work Scan is a Data Collection Scan that collects employee name, workstation and Date&Time stamp at the beginning of a work process.	5

Glossary - cont'd

Station Active is total time between Data Collection Station Work Start to Work End	6
Station Pause is time between Data Collection Station Pause to Station Pause End.....	6
Stop Work Scan is a Data Collection Scan that collects employee name, workstation and Date&Time stamp at the end of a work process	5
Subassemblies Workstations that produce Sub-Products for product lines	12
Upper Limit User defined time on Standard Time Report displaying above average production time for a unit.....	18
Work Time is the time between Data Collection Station Work Start and Work End Less the Sum of Station Pause(s) and Less the Sum of Line Pause(s).	6
Workstations Separate assembly stations on a production line	10