

RAPIDRFID




Asset & Inventory Management

Solution Overview

07/02/2025

Contents

Summary	2
RAPID RFID Inventory Management – Web Interface Overview	2
Facility Maintenance	3
Location Maintenance	4
Asset Maintenance (ex/ Containers, Tools, IT Assets, etc)	4
Inventory Sessions	5
Discrepancy Report View	5
Inventory Session Report View	6
Asset Read Report View.....	6
Mobile Overview.....	7
Login.....	7
Settings.....	7
Home.....	7
Inventory.....	7
Inventory Collection.....	8
Inventory Collection.....	8
Done - Confirmation	8
Geiger Counter – Find Single Asset.....	9
Find Assets Feature – Filter Criteria.....	9
Find Assets – Active Search.....	9
Tag Commissioning	10
Tag Commissioning	10
Minimum Server Requirements.....	10

		
<h3>Tag Products</h3>	<h3>Read RFID Tags</h3>	<h3>View Inventory</h3>
<p>Print Labels With Embedded Tag Associate to Pre-encoded Tags Import Existing Tag Asset Info</p>	<p>Inventory Collection with Mobile Automate Reads through Portals</p>	<p>Search & Filter by Asset Attributes Quickly Find Assets via Location Powerful Integration Capabilities</p>

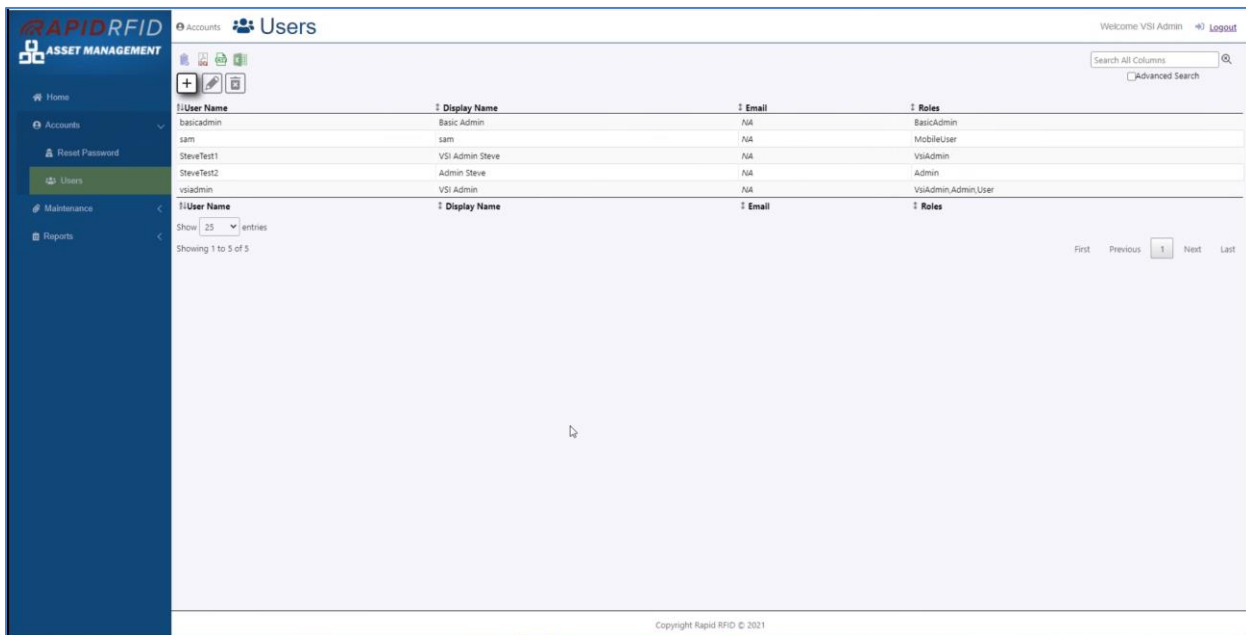
Summary

RFID offers a cost-effective way to track and manage your assets. Imagine the time savings if you could enter a room, walk around, and find all your assets from 10-25 feet away. It’s a reality! RAPID RFID allows you to quickly inventory multiple items at once; no need to scan individual barcodes or tally by hand.

As RFID reads occur, the intuitive interface will continue to update showing the actual inventory vs. the expected inventory for each location. No need to revisit locations, find your assets on the first visit as we show items that are expected nearby.



If advanced automation is desired, the software also works to update asset locations as they move by RFID antennas or through Read Portals.

RAPID RFID Inventory Management – Web Interface Overview

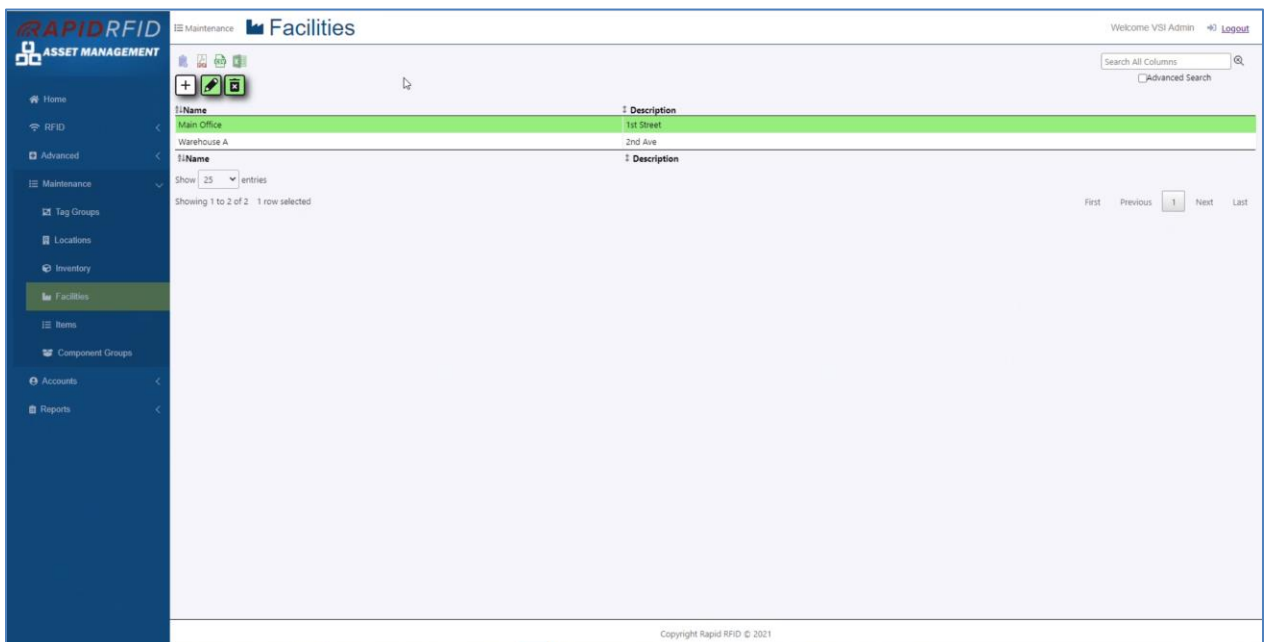


The Asset Management System is built upon Vertical Systems’ .NET Web Framework. This Framework includes core functionality such as role-based security and responsive design functionality.

Most pages are built with table views. Consider the following options available to these powerful pages:

-  - All lists (ex/ inventory) can be exported to the clipboard, PDF, or Excel (notice the icons above the list)
-  - Add/Edit/Delete (soft delete) are common features for each list
- Each grid can optionally import from a spreadsheet (drag & drop) to simplify initial migration and/or bulk data imports.
- Filter / Search Functionality – Filter the list to find specific data
 - Search for text in all columns
 - Advanced Search – filter by date range or for text in individual columns

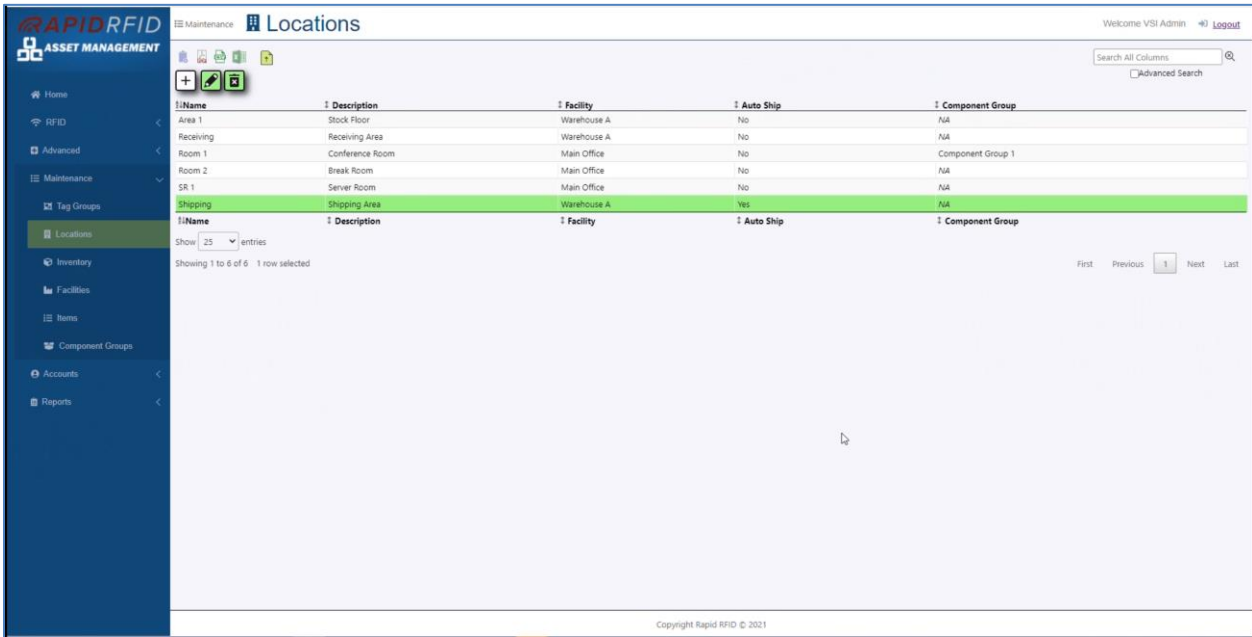
Facility Maintenance



Facilities are the first level of the location hierarchy. This maintenance page is used to add/edit/delete the system facilities. This is only accessible for users with the Admin role.

Delete functionality within our framework is considered a 'soft delete' as items are just set inactive and hidden from most views. This is important for historical reporting on objects and locations that have been 'deleted' from the system. Advanced searches will allow users to filter and view items that have been deleted.

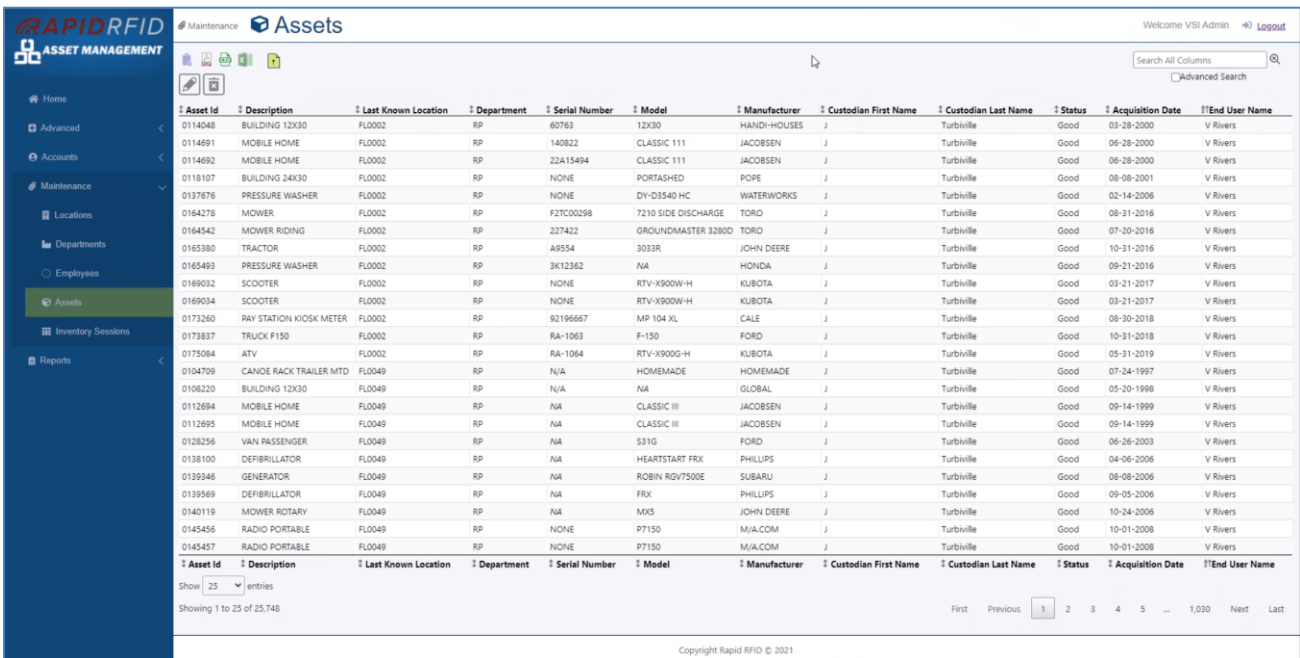
Location Maintenance




Name	Description	Facility	Auto Ship	Component Group
Area 1	Stock Floor	Warehouse A	No	NA
Receiving	Receiving Area	Warehouse A	No	NA
Room 1	Conference Room	Main Office	No	Component Group 1
Room 2	Break Room	Main Office	No	NA
SR 1	Server Room	Main Office	No	NA
Shipping	Shipping Area	Warehouse A	Yes	NA

Locations are configured as locations within a Facility.

Asset Maintenance (ex/ Containers, Tools, IT Assets, etc)



Asset Id	Description	Last Known Location	Department	Serial Number	Model	Manufacturer	Custodian First Name	Custodian Last Name	Status	Acquisition Date	End User Name
0114048	BUILDING 12K30	FL0002	RP	60763	12K30	HANDI-HOUSES	J	Turbville	Good	03-28-2000	V Rivers
0114691	MOBILE HOME	FL0002	RP	140822	CLASSIC 111	JACOBSEN	J	Turbville	Good	06-28-2000	V Rivers
0114692	MOBILE HOME	FL0002	RP	22A15494	CLASSIC 111	JACOBSEN	J	Turbville	Good	06-28-2000	V Rivers
0118107	BUILDING 24K30	FL0002	RP	NONE	PORTASHED	POPE	J	Turbville	Good	08-08-2001	V Rivers
0137676	PRESSURE WASHER	FL0002	RP	NONE	DY-D3540 HC	WATERWORKS	J	Turbville	Good	02-14-2006	V Rivers
0164278	MOWER	FL0002	RP	F27C00298	7210 SIDE DISCHARGE	TORO	J	Turbville	Good	08-31-2016	V Rivers
0164542	MOWER RIDING	FL0002	RP	227422	GROUNDMASTER 32800	TORO	J	Turbville	Good	07-20-2016	V Rivers
0165380	TRACTOR	FL0002	RP	A9554	3033R	JOHN DEERE	J	Turbville	Good	10-31-2016	V Rivers
0165493	PRESSURE WASHER	FL0002	RP	3K12362	NA	HONDA	J	Turbville	Good	09-21-2016	V Rivers
0169032	SCOOTER	FL0002	RP	NONE	RTV-X900W-H	KUBOTA	J	Turbville	Good	03-21-2017	V Rivers
0169034	SCOOTER	FL0002	RP	NONE	RTV-X900W-H	KUBOTA	J	Turbville	Good	03-21-2017	V Rivers
0173260	PAY STATION KIOSK METER	FL0002	RP	92196667	MP 104 XL	CALE	J	Turbville	Good	08-30-2018	V Rivers
0173837	TRUCK F150	FL0002	RP	RA-1063	F-150	FORD	J	Turbville	Good	10-31-2018	V Rivers
0175084	ATV	FL0002	RP	RA-1064	RTV-X900G-H	KUBOTA	J	Turbville	Good	05-31-2019	V Rivers
0104709	CANOE RACK TRAILER MTD	FL0049	RP	N/A	HOMEMADE	HOMEMADE	J	Turbville	Good	07-24-1997	V Rivers
0108220	BUILDING 12K30	FL0049	RP	N/A	NA	GLOBAL	J	Turbville	Good	05-20-1998	V Rivers
0112694	MOBILE HOME	FL0049	RP	NA	CLASSIC III	JACOBSEN	J	Turbville	Good	09-14-1999	V Rivers
0112695	MOBILE HOME	FL0049	RP	NA	CLASSIC III	JACOBSEN	J	Turbville	Good	09-14-1999	V Rivers
0128256	VAN RASSENGER	FL0049	RP	NA	S31G	FORD	J	Turbville	Good	06-26-2003	V Rivers
0138100	DEFIBRILLATOR	FL0049	RP	NA	HEARTSTART FRX	PHILLIPS	J	Turbville	Good	04-06-2006	V Rivers
0139346	GENERATOR	FL0049	RP	NA	ROBIN RGV7500E	SUBARU	J	Turbville	Good	08-08-2006	V Rivers
0139569	DEFIBRILLATOR	FL0049	RP	NA	FRX	PHILLIPS	J	Turbville	Good	09-05-2006	V Rivers
0140119	MOWER ROTARY	FL0049	RP	NA	MX5	JOHN DEERE	J	Turbville	Good	10-24-2006	V Rivers
0145456	RADIO PORTABLE	FL0049	RP	NONE	P7150	M/A.COM	J	Turbville	Good	10-01-2008	V Rivers
0145457	RADIO PORTABLE	FL0049	RP	NONE	P7150	M/A.COM	J	Turbville	Good	10-01-2008	V Rivers

Used to Configure Assets within the System. Add/Edit/Delete the Assets. Assets can be imported by clicking the  button. The asset data elements and import are customized to customer-specific requirements.

Asset data elements can include a variety of data types and all can be used to filter/find assets. A few examples include:

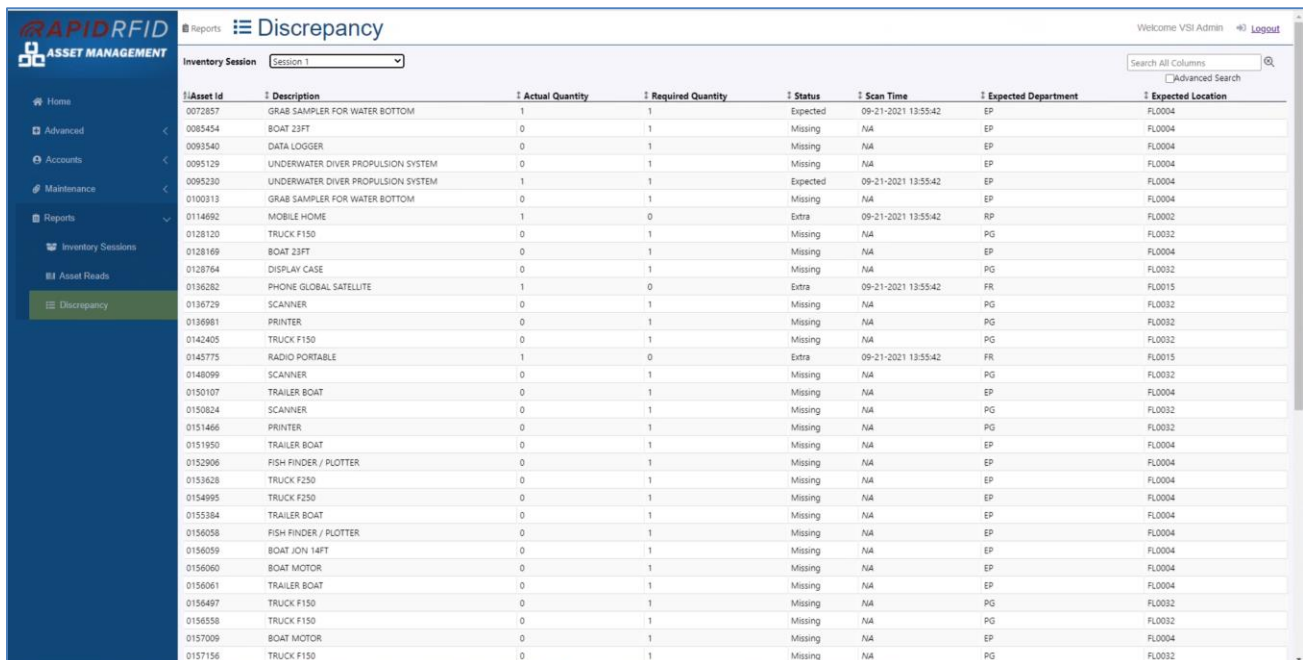
- Maintenance Dates (tied to Maintenance Schedule)
- Acquisition date
- Make
- Model
- Asset Type
- Department
- Owner
- Cost
- Current Value
- Condition

Inventory Sessions

A key feature of Asset Management is collecting the current inventory. Typical Inventory Sessions include Cycle Counts and Physical Inventory. Inventory Sessions are created from the Web UI and mobile devices collect the actual inventory. Refer to the Mobile features below.

Once the Inventory has been collected, several reports are available for review.

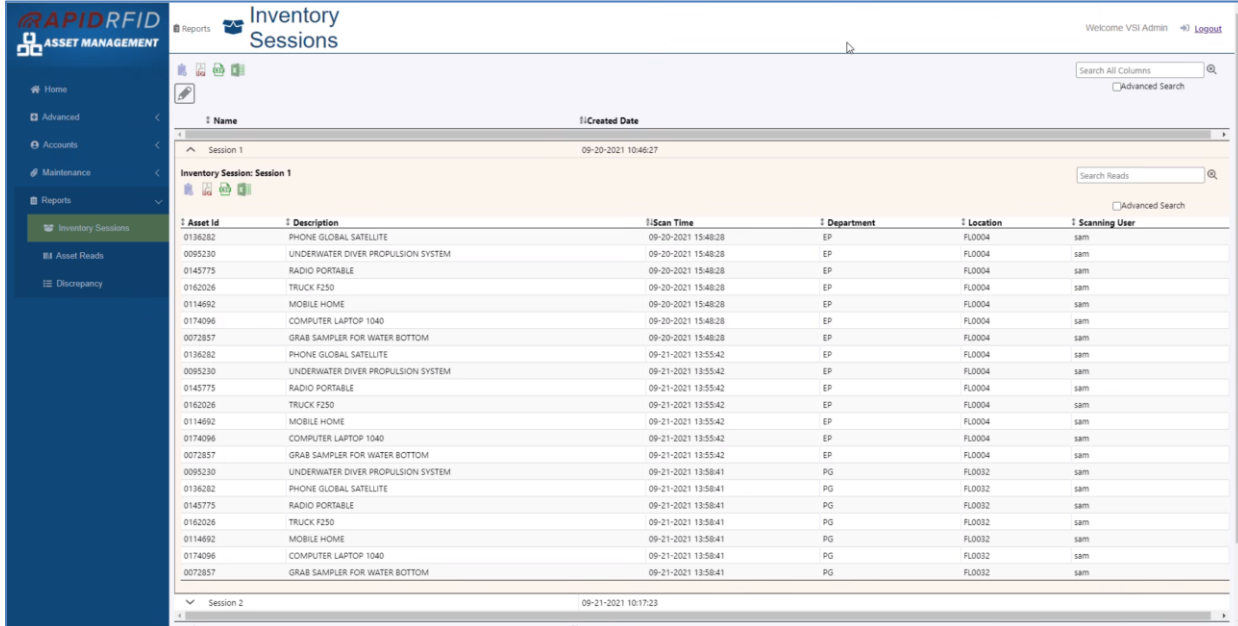
Discrepancy Report View



Asset Id	Description	Actual Quantity	Required Quantity	Status	Scan Time	Expected Department	Expected Location
0072857	GRAB SAMPLER FOR WATER BOTTOM	1	1	Expected	09-21-2021 13:55:42	EP	FL0004
0085454	BOAT 23FT	0	1	Missing	NA	EP	FL0004
0093540	DATA LOGGER	0	1	Missing	NA	EP	FL0004
0095129	UNDERWATER DIVER PROPULSION SYSTEM	0	1	Missing	NA	EP	FL0004
0095230	UNDERWATER DIVER PROPULSION SYSTEM	1	1	Expected	09-21-2021 13:55:42	EP	FL0004
0100313	GRAB SAMPLER FOR WATER BOTTOM	0	1	Missing	NA	EP	FL0004
0114692	MOBILE HOME	1	0	Extra	09-21-2021 13:55:42	RP	FL0002
0128120	TRUCK F150	0	1	Missing	NA	PG	FL0032
0128169	BOAT 23FT	0	1	Missing	NA	EP	FL0004
0128764	DISPLAY CASE	0	1	Missing	NA	PG	FL0032
0136282	PHONE GLOBAL SATELLITE	1	0	Extra	09-21-2021 13:55:42	FR	FL0015
0136729	SCANNER	0	1	Missing	NA	PG	FL0032
0136961	PRINTER	0	1	Missing	NA	PG	FL0032
0142405	TRUCK F150	0	1	Missing	NA	PG	FL0032
0145775	RADIO PORTABLE	1	0	Extra	09-21-2021 13:55:42	FR	FL0015
0148099	SCANNER	0	1	Missing	NA	PG	FL0032
0150107	TRAILER BOAT	0	1	Missing	NA	EP	FL0004
0150824	SCANNER	0	1	Missing	NA	PG	FL0032
0151466	PRINTER	0	1	Missing	NA	PG	FL0032
0151950	TRAILER BOAT	0	1	Missing	NA	EP	FL0004
0152906	FISH FINDER / PLOTTER	0	1	Missing	NA	EP	FL0004
0153628	TRUCK F250	0	1	Missing	NA	EP	FL0004
0154995	TRUCK F250	0	1	Missing	NA	EP	FL0004
0155384	TRAILER BOAT	0	1	Missing	NA	EP	FL0004
0156058	FISH FINDER / PLOTTER	0	1	Missing	NA	EP	FL0004
0156059	BOAT JON 14FT	0	1	Missing	NA	EP	FL0004
0156060	BOAT MOTOR	0	1	Missing	NA	EP	FL0004
0156061	TRAILER BOAT	0	1	Missing	NA	EP	FL0004
0156497	TRUCK F150	0	1	Missing	NA	PG	FL0032
0156558	TRUCK F150	0	1	Missing	NA	PG	FL0032
0157009	BOAT MOTOR	0	1	Missing	NA	EP	FL0004
0157156	TRUCK F150	0	1	Missing	NA	PG	FL0032

The discrepancy report shows the difference between the expected and the actual inventory for a selected Inventory Session.

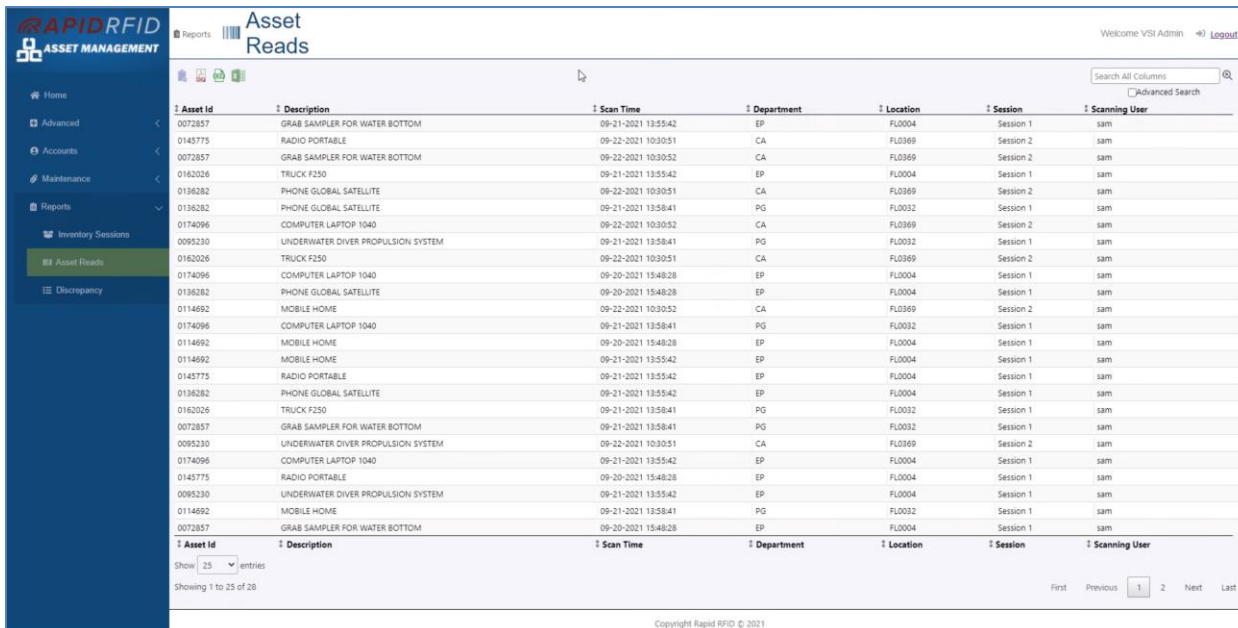
Inventory Session Report View



Asset Id	Description	Scan Time	Department	Location	Scanning User
0136282	PHONE GLOBAL SATELLITE	09-20-2021 15:48:28	EP	FL0004	sam
0095230	UNDERWATER DIVER PROPULSION SYSTEM	09-20-2021 15:48:28	EP	FL0004	sam
0145775	RADIO PORTABLE	09-20-2021 15:48:28	EP	FL0004	sam
0162026	TRUCK F250	09-20-2021 15:48:28	EP	FL0004	sam
0114692	MOBILE HOME	09-20-2021 15:48:28	EP	FL0004	sam
0174096	COMPUTER LAPTOP 1040	09-20-2021 15:48:28	EP	FL0004	sam
0072857	GRAB SAMPLER FOR WATER BOTTOM	09-20-2021 15:48:28	EP	FL0004	sam
0136282	PHONE GLOBAL SATELLITE	09-21-2021 13:55:42	EP	FL0004	sam
0095230	UNDERWATER DIVER PROPULSION SYSTEM	09-21-2021 13:55:42	EP	FL0004	sam
0145775	RADIO PORTABLE	09-21-2021 13:55:42	EP	FL0004	sam
0162026	TRUCK F250	09-21-2021 13:55:42	EP	FL0004	sam
0114692	MOBILE HOME	09-21-2021 13:55:42	EP	FL0004	sam
0174096	COMPUTER LAPTOP 1040	09-21-2021 13:55:42	EP	FL0004	sam
0072857	GRAB SAMPLER FOR WATER BOTTOM	09-21-2021 13:55:42	EP	FL0004	sam
0095230	UNDERWATER DIVER PROPULSION SYSTEM	09-21-2021 13:58:41	PG	FL0032	sam
0136282	PHONE GLOBAL SATELLITE	09-21-2021 13:58:41	PG	FL0032	sam
0145775	RADIO PORTABLE	09-21-2021 13:58:41	PG	FL0032	sam
0162026	TRUCK F250	09-21-2021 13:58:41	PG	FL0032	sam
0114692	MOBILE HOME	09-21-2021 13:58:41	PG	FL0032	sam
0174096	COMPUTER LAPTOP 1040	09-21-2021 13:58:41	PG	FL0032	sam
0072857	GRAB SAMPLER FOR WATER BOTTOM	09-21-2021 13:58:41	PG	FL0032	sam

The Inventory Report shows the captured assets for an inventory session. This list can be filtered if looking for a specific asset or reviewing a specific location’s inventory. *Note: The report data may differ slightly based on customer implementation (Department vs. Facility, etc.).*

Asset Read Report View



Asset Id	Description	Scan Time	Department	Location	Session	Scanning User
0072857	GRAB SAMPLER FOR WATER BOTTOM	09-21-2021 13:55:42	EP	FL0004	Session 1	sam
0145775	RADIO PORTABLE	09-22-2021 10:30:51	CA	FL0369	Session 2	sam
0072857	GRAB SAMPLER FOR WATER BOTTOM	09-22-2021 10:30:52	CA	FL0369	Session 2	sam
0162026	TRUCK F250	09-21-2021 13:55:42	EP	FL0004	Session 1	sam
0136282	PHONE GLOBAL SATELLITE	09-22-2021 10:30:51	CA	FL0369	Session 2	sam
0136282	PHONE GLOBAL SATELLITE	09-21-2021 13:58:41	PG	FL0032	Session 1	sam
0174096	COMPUTER LAPTOP 1040	09-22-2021 10:30:52	CA	FL0369	Session 2	sam
0095230	UNDERWATER DIVER PROPULSION SYSTEM	09-21-2021 13:58:41	PG	FL0032	Session 1	sam
0162026	TRUCK F250	09-22-2021 10:30:51	CA	FL0369	Session 2	sam
0174096	COMPUTER LAPTOP 1040	09-20-2021 15:48:28	EP	FL0004	Session 1	sam
0136282	PHONE GLOBAL SATELLITE	09-20-2021 15:48:28	EP	FL0004	Session 1	sam
0114692	MOBILE HOME	09-22-2021 10:30:52	CA	FL0369	Session 2	sam
0174096	COMPUTER LAPTOP 1040	09-21-2021 13:58:41	PG	FL0032	Session 1	sam
0114692	MOBILE HOME	09-20-2021 15:48:28	EP	FL0004	Session 1	sam
0114692	MOBILE HOME	09-21-2021 13:55:42	EP	FL0004	Session 1	sam
0145775	RADIO PORTABLE	09-21-2021 13:55:42	EP	FL0004	Session 1	sam
0136282	PHONE GLOBAL SATELLITE	09-21-2021 13:55:42	EP	FL0004	Session 1	sam
0162026	TRUCK F250	09-21-2021 13:58:41	PG	FL0032	Session 1	sam
0072857	GRAB SAMPLER FOR WATER BOTTOM	09-21-2021 13:58:41	PG	FL0032	Session 1	sam
0095230	UNDERWATER DIVER PROPULSION SYSTEM	09-22-2021 10:30:51	CA	FL0369	Session 2	sam
0174096	COMPUTER LAPTOP 1040	09-21-2021 13:55:42	EP	FL0004	Session 1	sam
0145775	RADIO PORTABLE	09-20-2021 15:48:28	EP	FL0004	Session 1	sam
0095230	UNDERWATER DIVER PROPULSION SYSTEM	09-21-2021 13:55:42	EP	FL0004	Session 1	sam
0114692	MOBILE HOME	09-21-2021 13:58:41	PG	FL0032	Session 1	sam
0072857	GRAB SAMPLER FOR WATER BOTTOM	09-20-2021 15:48:28	EP	FL0004	Session 1	sam

The Asset Reads Report shows all asset audit reads, regardless of the inventory session. It can be filtered down to find the last read of an asset or to view all reads at a location, by a user, or matching a description. *Note: The report data may differ slightly based on customer implementation (Department vs. Facility, etc.).*

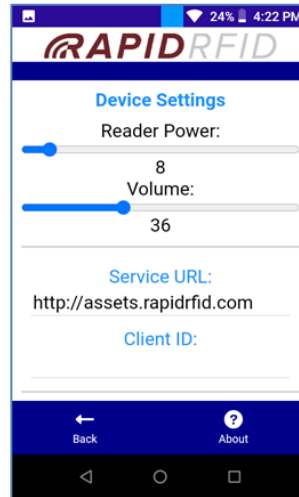
Mobile Overview

Login



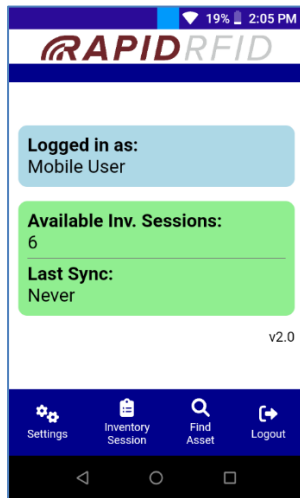
Logins are managed from the web interface. User must belong to the MobileUser Group.

Settings



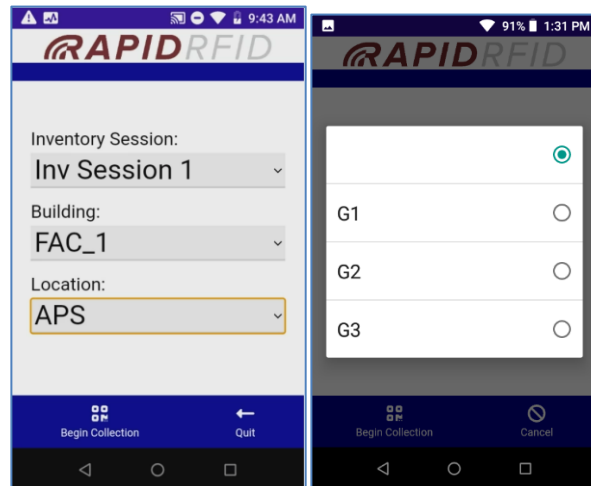
The Reader Power (Antenna) and the Service URL can be configured by selecting the App Settings button from the Login.

Home



Once logged into the application, the Home Screen will be displayed. It provides a summary of the application information and sync status (i.e. are there any records to be sent from previous mobile data collection events?).

Inventory



To start an inventory collection event, the user must start by selecting a valid Facility and Location.

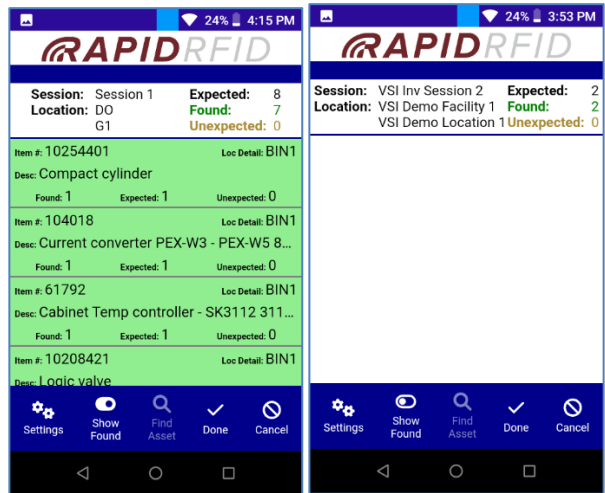
Inventory Collection



When you first open this feature, all expected inventory for the selected location will be displayed in the list (CLEAR/WHITE BACKGROUND) with the expected counts for each Item Number. As the RFID scans occur, you'll see the following occur:

- The Found count will be updated within the list on the individual items
- The Found and Expected Counts will update on the top right corner of the display
- If an item is partially found, it will change the color to blue
- Once the count matches the expected count for an item, it will change to green (all Green would mean that inventory is correct for the location/bin)
- If there are any items (by RFID tag) that were not expected to be in the location, they will show in the list as yellow (it may be yellow because a different RFID tag vs. the expected RFID tag was found)

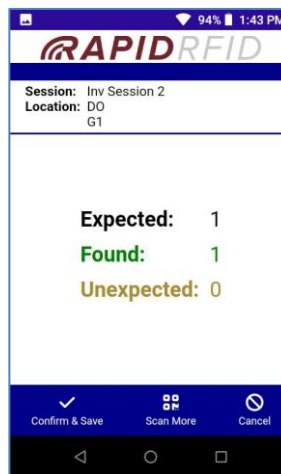
Inventory Collection



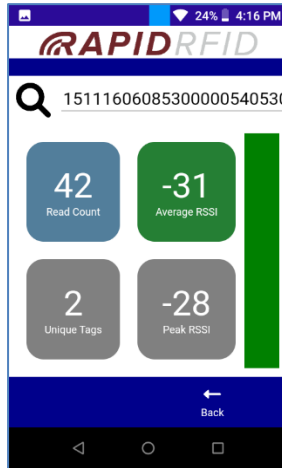
Found assets will turn green. Note the summary on the top showing 7 of 8 assets found for the location.

Page can also hide the found assets to only show remaining assets expected for the selected location.

Done - Confirmation

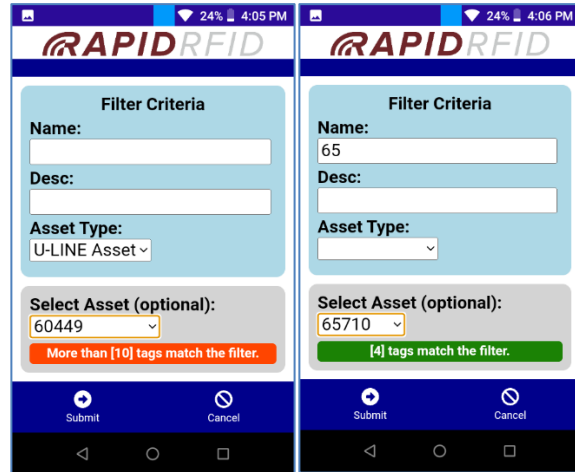


Geiger Counter – Find Single Asset



Geiger to show real-time status of desired tag/asset. Combined with sound, the green progress bar shows darkest green when asset is near the reader. The Unique tags will show that the device is reading other tags even if the primary tag has not been found. Note: RSSI = Read Signal Strength Indicator.

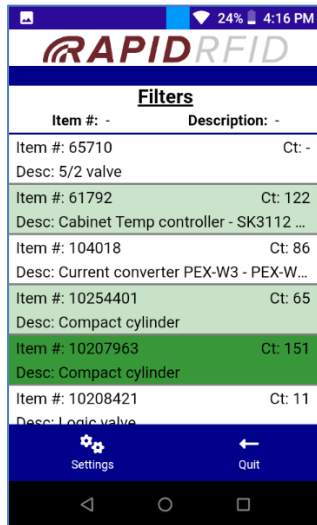
Find Assets Feature – Filter Criteria



Select Filter Criteria

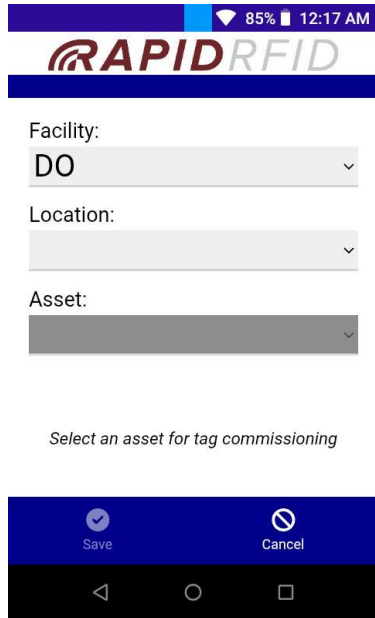
- Asset Type
- Name (partial accepted)
- Description (accepted)
- Specific Asset

Find Assets – Active Search



The list will start filtered by the Type, Name, Description per the selection criteria. The counts for each tag will increment in real-time. As the reader is closer to a tag, it will turn a darker shade of green. This is a powerful means of finding multiple items that match the desired asset attributes.

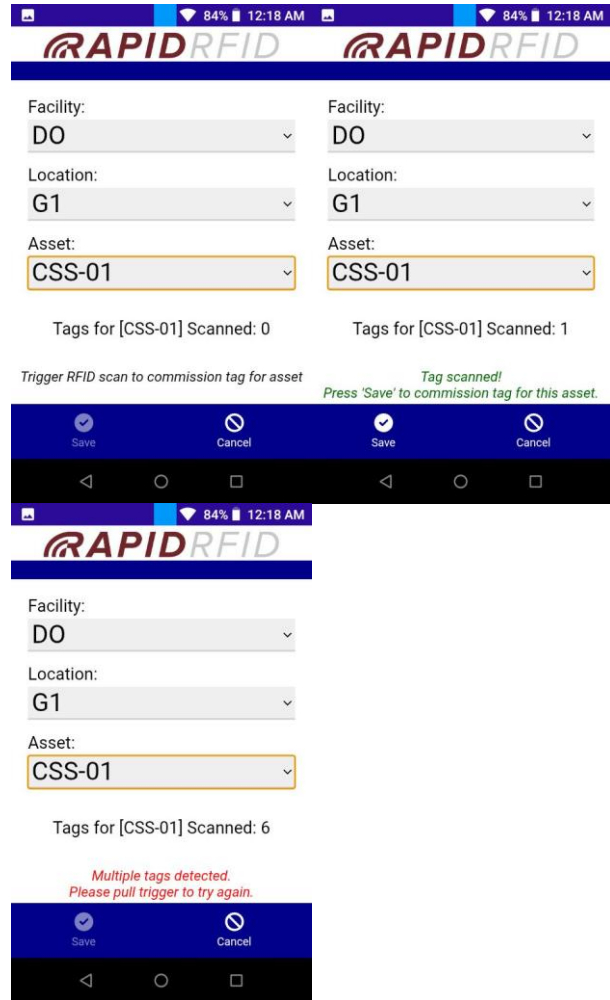
Tag Commissioning



When a user opens this page, a set of dropdown lists will be given for them to select the specific facility and location where the asset they want to commission is located. Once they're selected, the user can choose their desired asset from the Asset dropdown list and begin scanning to commission a tag for it.

Note: If no assets exist in a selected location, the asset dropdown list will be disabled and appear as dark gray.

Tag Commissioning



Once a single RFID tag is detected by the scanner, a block of text will appear at the bottom of the page telling the user that they are now able to save and commission their scanned tag to the selected asset.

Minimum Server Requirements

Note: Additional Memory and/or Cores may be required for controlling the Fixed Readers (after Pilot Engagement)

Processor	x86 CPU released within last 3 years with 4 or more cores <i>Considerations: Quad-core AMD Ryzen/Epyc or Intel Core/Xeon</i>
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OS	64-bit Windows Server 2016 or above or 64-bit Windows 10 or above Suggested: Windows Server 2022
RAM	16 GB or greater
Hard Drive	100 GB or greater Suggested: 512 GB or greater solid-state drive
Database	SQL Server 2017 or greater Suggested: SQL Server 2022 <i>Note: RAPID RFID can also work with SQLite if preferred.</i>