

# User's Guide

## Intelliguard Linked Visibility Inventory System Station

### Model 5600



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## Table of Contents

Introduction: .....	4
Intended Use .....	4
Symbols / Symboles .....	4
Best Practices when using LVIS .....	4
Before you start! .....	5
Specifications .....	5
Installation .....	5
Running on battery power .....	7
Storage/Transport.....	7
Authentication: .....	7
Keypad User Codes .....	8
Anesthesia staff member codes: .....	8
Using LVIS: Anesthesia .....	9
Accessing the drawers: .....	9
Using the read surface. ....	10
Returning tagged inventory to LVIS. ....	10
Managing inventory changes in the OR with LVIS .....	10
Ending an encounter and logging out. ....	11
Removing trays from LVIS: .....	11
Indicators .....	11
Active work surface indicator: .....	11
Drawer indicators: .....	12
Active Case Indicator: .....	12
Lock indicator: .....	13
Battery indicator: .....	13
Notes: .....	14
Network Indicator .....	14
FAQ.....	14
What if I leave one OR and go to another one in my facility? .....	14
What happens if I discover I accidentally carried a tagged medication to another OR?.....	14
Is LVIS mobile? .....	15

I received an alert that says I left unsecured narcotics in the OR, how do I resolve the problem and stop the alerts? .....	15
What happens in a power outage? .....	15
What if I can't get access to the LVIS drawers in an emergency? .....	15
Why am I not seeing some medications in my LVIS that are in the tray? .....	15
Is RFID safe in the operating room?.....	15
Troubleshooting:.....	15
Access:.....	15
My LVIS has no indicators lighting up and I can't log in.....	16
The LVIS is displaying flashing lights in all the indicators. ....	16
My battery indicator is red. ....	16
Using LVIS: Pharmacy.....	17
Stocking and restocking LVIS: .....	17
Alerts:.....	19
Reports:.....	20
Cleaning and Caring for LVIS .....	21
Maintenance .....	21
Disclaimer.....	21
Limited Warranty .....	21
Federal Communications Commission (FCC) Part 15 Compliance.....	22
Radio Frequency (RF) Information for the User or Nearby Persons.....	22
Industry Canada (IC) Compliance.....	23

## Introduction:

Welcome to the Intelliguard Linked Visibility Inventory Station. The Linked Visibility Inventory Station, also known as LVIS was developed for use at the point of care in a variety of environments where anesthesia medication is administered. The LVIS uses RFID and is the first real-time inventory station that records the inventory transactions continuously whenever a drawer is scanned.

Real-time inventory management eliminates the need for multiple types of complicated dose drawers and pop open containers that require multiple screen based interactions to access. The real time inventory allows your workflows and medication access to be simple and easy. The security of RFID with the simplicity of matrix drawer access.

Visibility to the medications in the LVIS at any given time ensures the inventory will always be available. The pharmacy will have visibility to the inventory always and will receive alerts when any par levels are reached. Because RFID inventory management is more accurate than self-reported transactions the LVIS will alert on true par levels and therefore avoid stock outs.



This user guide will describe several options that are available for you to use based on your facilities' preference. The Intelliguard implementation team will work with you to ensure training includes the specific needs your facility has when installing and implementing LVIS.

If you have any questions, please call our 24-hour customer support line using the contact information on the title page.

## Intended Use

The product is intended to be used by Anesthesia staff members (CRNA, Anesthetists or other authorized clinicians) using RFID technology to manage medication inventories, both narcotic and non-narcotic which are administered to patients during clinical encounters.

## Symbols / Symboles

Safety Symbol / Symbole	Reference / Référent	Description / Fonction
	ISO 7000-0434B	Caution, refer to accompanying documents. / Attention, consulter les documents joints.
	IEC 60417-5009	The switch does not fully disconnect the device from its power supply. / L'interrupteur ne déconnecte pas entièrement l'appareil de son alimentation.

## Best Practices when using LVIS

We recommend that your facility always keep code blue medications available for use in the event of an emergency. These medications should be stored outside the LVIS. We will provide a sample best

practices for your facility to implement when managing emergency medications and the emergency override access keys for LVIS.

LVIS works using RFID to track tagged medication inventory.

Best practices for using RFID tagged inventory include:

- Never return used or partially used vials or syringes. Returning such inventory items will cause inventory inaccuracies and potentially endanger patients when used medications are mistaken for unused.
- RFID Tracking requires tags that are associated (“encoded”) with critical information about the contents of the medicines they are attached to such as medication name, strength, expiration dates and manufacturer data. The LVIS should never be used to track untagged inventory to maintain correct inventory counts and ensure expiration dates are kept up to date.
- Users must follow the standard protocols in place for managing waste and sharps.
- Each of the three drawers has been designed to accommodate a tray in which tagged medicines are to be placed. Contact the appropriate Customer Service listed on the title page of this user’s guide with any questions related to tray loading.

## Before you start!

The LVIS uses an emergency access override to enable you to offer care for your patient even in the event of a power outage or other technology issue. Prior to using LVIS please familiarize yourself with the emergency access standard operating procedures supplied by your facility. The LVIS override has a sensor that will alert the pharmacy that an override event has occurred to ensure prompt attention to resolution of any impediment to using the product.

## Specifications

- Weight (empty): 175 lbs. (79.4kg) – 181 lbs. (82.1kg)
- External workstation dimensions:
  - Height: 41” (104 cm)
  - Width: cabinet-29” (74 cm); wheel-to-wheel-35” (89 cm)
  - Depth: 24” (61 cm); with drawer fully extended-43” (109 cm)
- System Power Requirements:
  - Connection: One three-prong (grounded) NEMA 5-15 utility outlet
  - Input: 120 VAC @ 50/60 Hz, 1.5A
  - Attached power cord length: 6-ft
- LAN Connection:
  - CAT-5e (or compatible) cable is required for data connectivity.

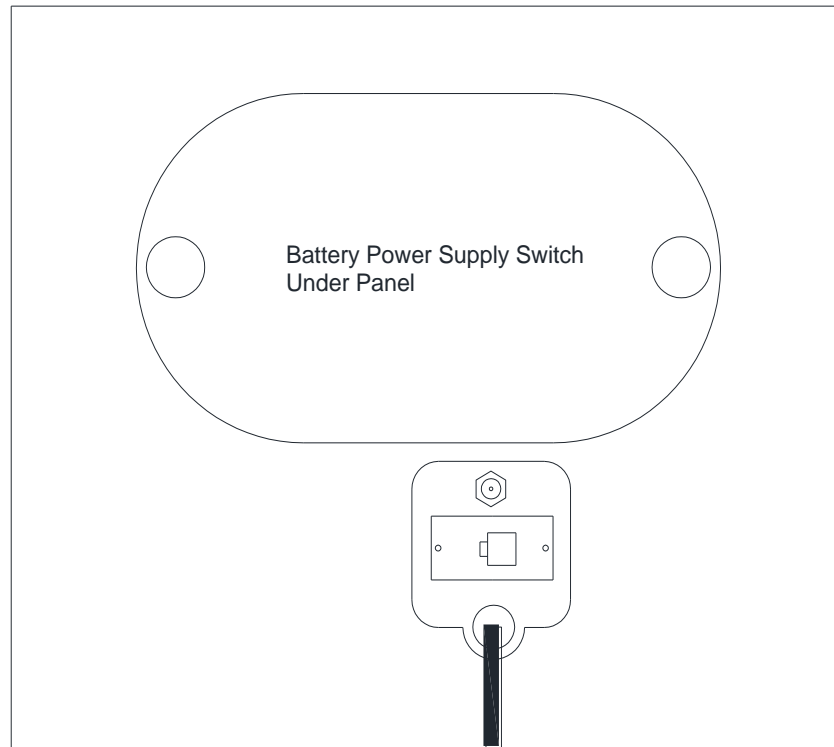
## Installation

- Locate LVIS near a power receptacle. Position LVIS such that the receptacle remains easily accessible.

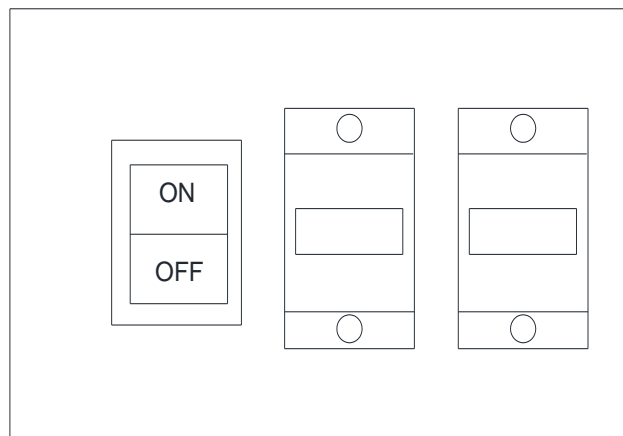
Note: Not for use in a computer room as defined in the Standard for the Protection of Information Technology Equipment, ANSI/NFPA 75.

Note: Ne peut être utilisé dans une sale d'ordinateurs telle que définie dans la norme ANSI/NFPA 75 Standard for Protection of Information Technology Equipment.

- Lock the front caster wheels.
- Before first use, remove the rear access panel shown below by unthreading the thumb-screws (no tool needed).



- Push the switch shown below to the "ON" position.



- Replace the rear access panel and tighten the thumb-screws.

Note: The connections under the rear access panel are for service only. The unit is intended to operate with the rear access panel installed.

- Verify that the LED in the battery icon on the front panel has illuminated.
- Plug the power cord into a grounded receptacle.
- Connect an CAT-5e (or compatible) Ethernet cable to the RJ45 port just above the power cord conduit shown in the illustration above.
- Plug the other end of the Ethernet cable into an active facility LAN port.

**Caution: The battery power switch does not disconnect or isolate unit from the facility (A/C) power circuit. If the unit is to be disconnected from facility power, it is to be un-plugged.**

### Running on battery power

Under normal operation, LVIS is intended to be plugged into a power receptacle. However, the unit does not need to be switched off between cases or when relocated as it will continue to operate as intended on battery power when fully charged for up to 4-hours.

Note: To ensure real-time data availability, an active LAN connection must be maintained while in use.

### Storage/Transport

If the unit will be left unplugged for more than 4 hours, or stored, the battery power switch must be switched to the “OFF” position. Wrap the power cord around the legs crossbar or utilize another method to ensure that the power cord and plug remain off of the floor and in contact with the unit during transport and storage.

Utilize the provided handles to roll LVIS about the facility after unlocking the casters. If the unit must be lifted, two persons are required. To lift, one person on each side of LVIS will reach below and grasp a leg with one hand and use their other hand to grasp the back handle to steady the unit.

### Authentication:

Your facility will specify the methods used to authenticate the user based on their Standard Operating procedures. They may include one factor or two factor authentications depending on your facilities best practices and regulatory requirements. If you are not registered to use LVIS please see your system administrator to get your authentication rights activated.

The LVIS offers three methods of authentication:

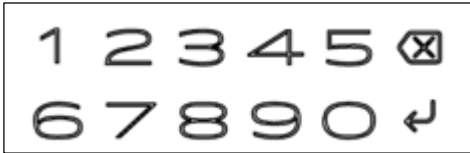
- Badge scan



- Finger print Bio-ID



- Individual user/PIN code.



It is important that you always use the authentication made available to you by your facility to ensure the transactions that occur while using LVIS are correctly accounted for. Do not use other staff member's authentication card or codes or allow others to use yours.

- The badge scan occurs at the icon displaying a hand with a badge (see above). Scanning your badge once will log you into the LVIS. A second scan will log you out. If the system has an auto log interval set, the second scan will log you in. Alternatively, you can select the auto log out code at the keypad.
- Your bio-ID, if available for your facility is indicated by a fingerprint icon (see above). Bio-Id is available for log in for both first and second level of authentication.
- Keypad entries use the keypad (See above). You can use the Keypad entry user/PIN code provided to you by your facility to log in. Keypad user/ PIN codes are available for log in for both first and second level of authentication. To use the keypad for authentication, enter your 4-digit user code supplied by your system administrator and then select the enter arrow. If you feel you have entered an incorrect number, you can use the backspace button (see picture) to remove one or all of the numbers.

*If your facility has decided to use the keypad to indicate the timeframe start and stop of the encounter for precise charge reconciliation, The LVIS Quick Reference Guide will list those codes and any others that can be used by LVIS. Please see the section regarding user codes for more information.*

## Keypad User Codes

The keypad can be used for authentication as well as to communicate important information from LVIS.

Here is a list of suggested codes.

Anesthesia staff member codes:

\*\*\* "111"-Start an encounter. This code will be the one your facility selected to "start an encounter with a specific patient. *Note: this will not be required if your facility has opted to use log in and log out as the method to start and end encounters.*



\*\*\* “222”-End encounter. This code will allow you to end the encounter when the encounter for the patient is complete. Generally, it is best practice to return all unused inventory items before using this code.

\*\*\*\* “333”-Continue encounter. If you entered the end code prematurely or the patient has returned you can enter this code to continue the previous encounter and link the two encounters for billing reconciliation.

## Using LVIS: Anesthesia

When you log into LVIS, the indicators for the read surface and drawers will turn green to indicate you have completed a successful log in (the lock indicator light will extinguish). If the indicators are red and the lock indicator is red, you may need to try again. If you are experiencing a problem, please see the trouble-shooting section in this document or your system administrator for assistance.

If the indicators are blue after they have displayed the green, the LVIS is scanning the inventory and preparing the LVIS for use. This should only take seconds.

Blue always indicates a scan. Every time one of the drawers close (provided all other drawers are also closed), LVIS will scan that drawer first, followed by a scan of the top surface. During an open case, the top surface will periodically perform a scan. Scanning will update the inventory in the LVIS and let the pharmacy know when inventory is running low and send alerts every time a medication gets to a predetermined par level.

*The LVIS has a lock indicator that will remain lit when not in use. If your system has a timeout function and you have not used the LVIS within the allotted time you may need to log back in to continue using LVIS. – see below for more information.*

### Accessing the drawers:

Upon log in the LVIS drawers will unlock. When you open a drawer, remove medications and then close the drawer the LVIS will scan the drawer record the transaction. When the drawers are scanning, the drawer indicator is blue. It is important to wait for the scanning to complete. Waiting for the few seconds it takes for the LVIS to scan ensures an accurate inventory count has occurred. You can open the drawer mid-scan but scanning will stop and the inventory count will not be used.

At any time, unused tagged items can be returned to the drawers. The LVIS will scan the drawers and will add any returned tagged inventory to the LVIS inventory.

**CAUTION: The three drawers represent pinch hazards. Utilize the drawer pulls provided to open and close a drawer. The drawers incorporate a self-close feature and will close on their own if closed to a distance of half-inch (1.3 cm) or less.**

### Notes:

*Used, and partially used vials or syringes, should never be returned to the LVIS as this will cause incorrect inventory levels and possibly impact patient safety.*

*Reminder: In some cases, where a second method of login is required for narcotics access you may need to complete a second authentication to open the drawers that store narcotics. If your facility wishes to lock the narcotic drawer upon every drawer closure you may need to use that second authentication every time the drawer needs to open.*

### Using the read surface.

Any medications removed from LVIS can be placed on the top surface. The surface will read the tags of the medications and consider the medications “in process”. Any medications that have been transported from another LVIS can be added simply by placing the medications on the read surface or added to the drawer of the LVIS. The top surface is effective at reading tagged medicines placed in the intended green tray.

Par level alerts will not be triggered when a medication is on the surface as the medication is still part of the inventory count until the inventory item leaves the surface and is not returned.

Medications/narcotics left on the surface are still considered part of your inventory. Items left on this surface after an encounter has ended will sent alerts to via text on the phone or email (depending on the facility setting) to anesthesia staff members and pharmacy to ensure compliance with regulatory requirements regarding unsecured narcotics.

Tagged medications that are removed from this surface but returned will be considered not used.

### Returning tagged inventory to LVIS.

Some users prefer to remove tagged inventory for LVIS in anticipation of a need but later discover the medications are not needed for that encounter. Any un-used vials or unused prefilled syringes should be returned prior to ending the encounter or logging out. This ensures the inventory is always correct and the medications are available for the next encounter. It also will assist in charge reconciliation for the pharmacy. It is important to never return used vials or syringes as they could be read as un-used inventory and impact the accuracy of the counts.

Note: LVIS is a medication inventory system but does not offer waste or sharps management. Users must follow the standard protocols for managing waste and sharps.

### Managing inventory changes in the OR with LVIS

Anesthesia users in the OR may add tagged medications or even swap trays to resolve inventory problems.

If the anesthesia user adds a tray the LVIS will read the tray and if it was prepared in the pharmacy and has a formulary tray tag the LVIS will calculate the pars based on the other items in the drawer and total up the pars to trigger the correct alerts. If there is no tray tag the system will add the trays contents as individual added medications.

Notes: any non- tagged items will not be read. Medications with tags that are not encoded or have not been approved for use by pharmacy in KTMS will be considered unknown items.

Individually added medications that are part of a trays formulary will resolve par level alerts and you will see any added medications on the dashboard history.

Individually added medications that are added to a drawer or the surface that do not belong to a formulary will be displayed as added on the dashboard history. Medications added that do not have a formulary within an LVIS drawer will not trigger par level alerts.

If the anesthesia user swaps trays from one drawer to another they can continue working and the system will recalculate the pars to the new locations. This will trigger a discrepancy in restock view to allow pharmacy to restock the LVIS properly. If the pharmacy decides to keep the new location, restocking will clear the discrepancy.

Ending an encounter and logging out.

Depending on your facilities' settings you can log out to end an encounter or you can enter the code that ends the encounter and then logout. This triggers a final scan to update the inventory.

Removing trays from LVIS:

You can remove a tray from the LVIS and replace it with another tray as needed. If the pharmacy is changing the tray, you may wish to allow them to log in and complete the inventory change for you. If you change the trays the pharmacy will be notified to allow them to resolve any inventory issues that arise.

## Indicators

Active work surface indicator:



The active work surface indicator tells you when the surface is reading the tags on the tagged inventory items on the top surface. The indicator is a flat line above the circular indicator.

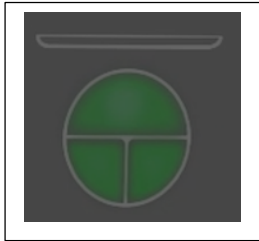
Before you log in the surface indicator will be dark.

- Blue indicates an active scan is occurring
- Red indicates a user left unattended medication on the top surface.

*Notes:*

- *You will receive an alert when you have logged out and left a controlled medication on the tray. Your pharmacy also receives an alert!*
- *The active work surface will only scan when all drawers are closed.*

## Drawer indicators:



The drawer indicators in the center of the LVIS indicate the status of each drawer. The half circle corresponds to the larger drawer and the two quarter circles indicate the status of the two half sized drawers. The drawer handles are the same shape for easy reference!

Before you log in the drawer indicators will be dark.

- Green indicates a successful log in.
- Blue indicates an active scan is occurring
- Red indicates the user does not have access to LVIS. Contact your LVIS administrator for access.
- Pulsing red indicates system lost connectivity with database.

### Notes:

- ✓ *The drawers will self-close when they are within a half inch (1.3 cm) of the cabinet. Any drawer left open more than a half inch will not self-close and will trigger an alert at log out.*
- ✓ *The LVIS has a lock indicator that is on when the station is locked. And turn off when the user logs in. If the LVIS has been set up with a timeout function and you have not used the LVIS within the allotted time you may need to log back in to continue using LVIS. – see lock indicators for more information.*
- ✓ *Red indicator: If you see a solid red indicator when attempting to log in, an unsuccessful log in event has occurred and no access is allowed. This might be because your badge is not registered or your user code is not valid, or your bio-ID is not linked to LVIS. Please contact your system administrator for access to LVIS.*
- ✓ *Depending on your facilities settings, the drawer(s) that do not contain controlled substances will only lock when you log out of the LVIS to ensure access to emergency medications at all times.*

## Active Case Indicator:



The active case check mark lets you know the current surgical encounter is being tracked for charge reconciliation. The Check indicator will be green when the event is started. When the event has ended the check mark will no longer be green.

Your facility may auto-activate the check mark upon log in and indicate the event end in gray when you log out. This is only available for facilities who do not use auto-log out time intervals or automatic locking for drawers.

Before the encounter starts the indicator will be extinguished.

- ✓ Green indicates the encounter has started and is active.

#### Lock indicator:



The lock indicator will let you know if you are logged in and if the LVIS is unlocked. Your facility may have different requirements for drawer locking depending on their standard operating procedures that will dictate how they comply with regulatory standards. The instructions below will describe different scenarios that may or not be covered by your facilities SOP's

If the indicator is gray you have not logged into the LVIS.

- Red indicates not logged into LVIS and one or more drawers are locked.

#### Notes:

- ✓ *If your facility requires the controlled substance drawer(s) lock upon every closure this indicator will be red when the drawers are closed and locked. This will require a badge scan to reopen just those drawers. One or all drawers that are locked will display the red lock indicator.*
- ✓ *If your facility does not require the drawers to be locked after every closure, they may set a timeout period where the drawers automatically lock based on a pre-set timeframe. In this scenario, The LVIS indicator will display a red lock and you may rescan your badge or enter a code re-log into the LVIS*
- ✓ *The drawer(s) that do not contain controlled substances will only lock when you log out of the LVIS to ensure access to emergency medications at all times*

#### Battery indicator:



#### Battery Level Status:

In the event the LVIS becomes unplugged, the LVIS will continue to operate on battery power. The battery alone will allow the LVIS to continue operating normally for up to 4 hours. The battery indicator will be green if the LVIS battery is sufficiently charged. If you do not wish to operate in battery mode,

please re-plug in the LVIS. If you wish to use LVIS as a mobile device, the battery will allow the LVIS to be used but it should be plugged in when close to an outlet to ensure optimum usability of the product.

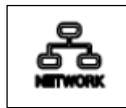
Alerts will be sent to your pharmacy when the LVIS is unplugged.

- Green indicates approximately >75% battery capacity remaining
- Yellow indicates 75-35% battery capacity remaining
- Red indicates <35% or battery capacity remaining

## Notes:

- ✓ As noted above, the battery indicator has three status indications. When the indicator is red, the LVIS will have <35% of battery capacity remaining. When you reach this level, we recommend closing the drawers to initiate a scan which will allow the pharmacy to see the updated inventory. You may log out and stop using the LVIS or log back in and leave the drawer open for access to emergency medications. In the event, you need to use the emergency access for medication inventory, please follow your facilities standard operating procedures for managing medication inventory while experiencing a power interruption.

## Network Indicator



The network indicator allows you to see if the LVIS is communicating with the network

- Green indicates successful communication
- Yellow indicates the LVIS is connected but not communicating
- Red indicates the LVIS is not connected or communicating

## Notes:

- ✓ Your pharmacy and system administrator will receive an alert when the LVIS indicators are red or yellow for a sustained period. Momentary color changes are not a concern.
- ✓ Please contact your system administrator when the indicator is yellow or red for an extended period for information about repairs or expected return of service.

## FAQ

What if I leave one OR and go to another one in my facility?

Your authentication credentials/badge or bio-ID will work for any LVIS at your facility.

What happens if I discover I accidentally carried a tagged medication to another OR?

Any tagged medications you take with you from one LVIS to another can be easily transferred by placing the tagged medication on the read surface or placing the tagged medication in the drawer. The LVIS will know you added that medication and will document a transfer of that tagged medication.

### Is LVIS mobile?

LVIS is mobile and is equipped with 4 medical grade casters, two are locking all will swivel. ELVIS can be locked in place or easily moved from one place to another. There is a battery that will keep allow the LVIS to be powered for up to 4 hours, however we recommend plugging in the LVIS when you have arrived at the next desired location to ensure best performance of the technology. To continue communicating with your pharmacy you should also connect the Ethernet cable to ensure the inventory transactions can be updated real-time. In mobile users use cases where mobility is planned we suggest using LVIS without the lower module.

### I received an alert that says I left unsecured narcotics in the OR, how do I resolve the problem and stop the alerts?

Go to the last OR and log into the LVIS you last used and secure the narcotics by returning any unused vials or syringes and wasting any that are used. The alerts will stop when the problem is resolved.

### What happens in a power outage?

Always follow the standard operating procedures of your facility should there be a power outage. The LVIS is equipped with a backup battery and will continue to be available for use up to 4 hours. Please see the battery mode section of this document for more information. The users will be able to continue using the LVIS and the cache memory will retain the utilization data for system updates when the power returns.

### What if I can't get access to the LVIS drawers in an emergency?

The LVIS has a rear panel that can easily unlocked with a key and three override buttons that will unlock each drawer for easy access. The LVIS will send an alert to pharmacy whenever the override is used to access medication inventory in LVIS. You should always follow your facilities standard operating procedures for accessing emergency medications and to locate the keys to access the rear panel.

### Why am I not seeing some medications in my LVIS that are in the tray?

If there are medications in the LVIS that don't have tags the LVIS can't accurately manage your inventory. Alert your pharmacy if you see a medication without a tag.

### Is RFID safe in the operating room?

MEPS Real-Time's Intelliguard products utilize ultra-high frequency (UHF) RFID which has not been associated with any adverse events reported to the (US) FDA as of 2014. The FDA maintains a web-page entitled "Radio Frequency Identification (RFID)" dedicated to RFID which should be referenced for additional information regarding the use of RFID in general. Further information is available by contacting the appropriate Customer Service shown on the title page of this user's guide as well as referencing the FCC bulletins listed in the following section in this user's guide entitled "Radio Frequency (RF) Disclosure Limits for the Operators of This Device". Also listed in this section are established limits for exposure for the safe use of this product.

## Troubleshooting:

### Access:

If you are unable to log in and you are sure your LVIS account has been created, please contact your system administrator for assistance.

If your LVIS drawers remain locked after log in, you may need to enter a code/use the bio-ID or scan your badge as a secondary authentication to unlock the drawers.

My LVIS has no indicators lighting up and I can't log in.

Check to ensure LVIS is plugged in and the power switch is in the ON position.

The LVIS is displaying flashing lights in all the indicators.

Occasionally the LVIS will need a reboot. Follow the instructions in the operation manual to reboot LVIS.

My battery indicator is red.

Please plug in the LVIS to an available powered outlet. If you continue to need access to the medications, you can open the drawers and use the LVIS as you would a cart that has no automation.

When power is available it is important to allow the drawers to complete a scan to ensure the pharmacy has the latest updates regarding the LVIS inventory.



## Using LVIS: Pharmacy

Please see the information in the anesthesia section for logging in. Your pharmacy leadership team will determine what methods of authentication are required for using the LVIS:

## Stocking and restocking LVIS:

*Please see the KTMS user guide for encoding medications and building trays.*

*Note that all formularies and trays built in KTMS will have a tray tag and par levels for min and max par will be associated at the time the tray is created. All LVIS can read the tray tag and will know how many medications belong in that formulary and all associated pars.*

Restocking LVIS is simple and fast!

Your pharmacy has set up a method of restocking based on your standard procedures already in place for managing medications and trays.

The pharmacy may select a one- step method where a pharmacist or technician will restock the LVIS and complete the inventory in the restock view, either at the LVIS or remotely after the restock is complete or a two-step restock where one pharmacy staff member completes the restock and the second member uses the approval view to approve the restock.

Please see notes in the anesthesia user section for managing inventory changes in the OR during anesthesia LVIS use.

## Restocking by tray

*NOTE: If your pharmacy wants each restock to be checked and completed at the LVIS you can bring a laptop or table to the LVIS and log in to the LVIS portal software to confirm, complete and approve the restocking activity. If you do not have a laptop or tablet you may check the status of the restock when you are back in the pharmacy*

Use the authentication method selected to open the LVIS. When the indicators are green and the drawer unlocked, you can insert the new tray (s) into the LVIS. When you close the drawers all the LVIS indicators will turn blue one at a time to indicate scanning or each is in process. When the scanning is complete the indicators will no longer be blue. Any discrepancy will be located with an orange indicator in the affected drawer

When the drawer scanning is done, you can select the restock view on your portal and filter your view by LVIS # and location. If you don't see any discrepancies, you can select the complete button for each drawer to complete the restock.

For restocking, the Restock View, Approval View and the Restock Picklist have filters that allow users to select all locations and LVIS stations or individual location and LVIS

If you wish to check the status of the drawer after the restock is complete you can view the current inventory in approval view.

If your pharmacy has selected a two-step restock process a second pharmacy staff member can use the approval view to review the restock and approve the inventory for use.

#### *Restocking multiple trays in one drawer:*

You can add more than one tray to a drawer. The LVIS will adjust the total quantity to the total number of items in all drawers and adjust par levels for the total number of any given medication. For example, two duplicate trays with 2 propofol in each would appear on the dashboard as 4 total and the par alerts would be triggered based on the collective set par for that medication in the drawer.

### Restocking reporting

Users can view restocking history at any time by viewing the restock history report. Discrepancy history can be viewed to see what types of discrepancies occur in your LVIS.

### Restocking by individual medication.

In some situations, users, may wish to restock the LVIS by obtaining tagged medications and adding them to the LVIS.

Users can decide what medications to add by viewing the par level alerts page for all LVIS on the portal for medications that might need urgent restocking or by viewing or printing the restock picklist by LVIS. The restock picklist can be filtered by LVIS and by drawer and will allow users to restock the total number of items needed to bring each LVIS to max par.

### Managing discrepancies

#### *Locating the discrepancy*

When a tray is restocked and a medication is missing, in the wrong drawer after use, expired or recalled, the indicator will turn yellow where the discrepancy occurs. Users can view the location of the discrepancy by looking at the restock view in the portal. The medication that is triggering the discrepancy can also be located by viewing the indicator lights that will turn orange to display the drawer where the medication is located.

#### *Resolving discrepancies*

The user has the option to resolve the discrepancy by adding missing meds, replacing expired or recalled meds or moving the miss-located medications to the correct tray within the correct drawer. If the user is unable to resolve the issue at the time of restock they can document the issue by selecting the resolve button and documenting why the discrepancy occurred. The system will keep a historical running total of all discrepancies resolved in the discrepancy report

## Alerts:

3 alert status views are available on the LVIS dashboard:

- Expired Products alerts which are based on dates set in KTMS and only triggered on expiration
- PAR level alerts which are based on par levels set in KTMS and displayed in order of 0 inventory, below par and at par. within the alert page
- Product Recalls. (set by setting a medication as recalled in KTMS) All alerts can be filtered by location and LVIS

LVIS users can also receive alerts on cell phones via text or in email. The types of alert vary based on your facilities use of alerts, here are examples of the types of alerts available for text and email.

ALERT NAME	WHO GETS THE ALERT	How is this alert resolved?
Par Level, at, below or 0 inventory	Pharmacy	When the LVIS is restocked
Emergency access override/Unauthorized access alert	Pharmacy	When the LVIS panel is put back in place and the admin from pharmacy scans their badge.
Expired/recalled medication alerts	Pharmacy	When the expired or recalled medications are removed from LVIS.
Power outage/network down alert	Pharmacy and Intelliguard	When the problem is resolved
Unsecured narcotics left on a read surface or in an unlocked drawer upon log out.	Pharmacy and Anesthesia staff member who was last logged into LVIS	When the drawer is closed, or tagged medications are secured.

## Reports:

All reports include filters for location, LVIS and start and stop date.

### Charge reconciliation:

This report documents medication inventory transactions during a patient encounter and by a specific anesthesia user. Any medications that are removed and later returned will not appear in the report as those medications will be considered unused by the system. This report can be used as a method to reconcile administration records against inventory used.

### Transaction history:

This report documents all medication inventory transactions including any medications that are returned. Pharmacy staff can use this to check to ensure returned medications were not used and should be discarded prior to the next use.

### Par level history:

This report documents all par levels by LVIS, user or Medication. This report gives a historical view of all par levels to allow the pharmacy to adjust medication inventory as needed and to analyze utilization patterns for unusually high par levels by LVIS or user.

### Utilization Report:

This report documents all par levels by LVIS, user or Medication. This report gives a historical view of all utilization to allow the pharmacy to adjust medication inventory as needed and to analyze utilization patterns for unusually high utilization levels by LVIS or user.

### Transfer history:

This report allows the system to track transfers of medications from one LVIS to another. An anesthesia user who moves from one OR to another might bring medications to the new LVIS from the previous LVIS. This report records all transfers that occur.

### Inventory Report:

This report allows a view of the current inventory by LVIS to check for par levels and confirm restocking is completed.

### Restock history:

This report can be filtered by LVIS or user (or all) to view all history of restocking events to show who restocked the LVIS by date and time, who approved the restock and what medications were restocked.

### Alert history:

This report documents all alerts over time that were triggered by LVIS, user and date alert was sent. The report can be filtered by alert type, LVIS and user.

### Discrepancy report:

The discrepancy report records every time a user documents resolving a discrepancy during restock that is not able to be physically resolved.

## Cleaning and Caring for LVIS

You can clean the exterior of the LVIS with slightly damp cloth taking care not to allow any liquid to seep into the interior of the LVIS. The cabinet was designed to withstand the typical cleaners used in healthcare facilities but like any technology based device limited fluid is preferred. Abrasive cleaners should never be used. Take care not to leave a wet surface to avoid dust accumulation.

Please do not store fluids or leave IV bags on top of LVIS for extended periods of time. If any fluid is spilled wipe it immediately.

## Maintenance

While there are no user serviceable components, MEPS Real-Time recommends performing the following at least every 6-months:

- Inspect the beige fiber RF seal around the perimeter of the drawer front, both on the back of the drawer front, and, on the mating seal on the chassis. Note any damage or gaps in seals.
- Open each drawer and ensure that each slide is uninhibited until their extension stops activate. Note If any drawer is cocked when closed.
- Inspect all handles as well as the lock catches under each of the three drawers for looseness.
- If repair is necessary, contact the appropriate Customer Service listed on the title page of this user's guide.

**Caution: Failure to perform the above maintenance increase the likelihood of identifying tagged medicines not actually present in the indicated drawer or on the top surface.**

**Caution: Failure to maintain the equipment as specified may increase its interference potential.**

## Disclaimer

Operations of any radio transmitting equipment, including the scanner, may interfere with the functionality of inadequately protected medical devices. Consult a physician or the manufacturer of the medical device if you have any questions. Other electronic equipment may also be subject to interference.

## Limited Warranty

MEPS® warrants the system to be free from defects in workmanship and materials, under normal use and service, for a period of 1-year from the receipt of the product. If the product does not operate during this applicable warranty period, MEPS® shall, at its option, repair the defective product or deliver to customer an equivalent product to replace the defective product. Replacement products may be new or reconditioned. MEPS® reserves the right to refuse to warranty repairs on any product that has been subjected to any abnormal electrical, mechanical, or environmental abuse. The manufacturer is not responsible for any injury while using the product in a manner other than what has been specified in this

Operations Manual. Any unauthorized modification or operation of the equipment may cause personal injury or equipment damage and will void the warranty. Do not modify the equipment.

## Federal Communications Commission (FCC) Part 15 Compliance

FCC ID: SOA-5600

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

This equipment will be tested to be sure it complies with the limits for Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## Radio Frequency (RF) Information for the User or Nearby Persons

Per the guidance specified in the FCC OET Bulletin 65, this product is considered a “mobile device” and complies with the limits for maximum permissible exposure (MPE) established in 47 CFR Part 1.1310 for the general population/uncontrolled exposure.

MEPS Real-Time, Inc., has evaluated the RF exposure for the body of the user or nearby persons and has determined that the greatest exposure to RF would occur to users’ extremities (wrists and hands) when they come into contact with or remain above the top surface tray while the antenna located just below the top surface is radiating. As a mobile device, it is assumed that users or nearby persons will normally maintain a separation distance of 20 cm or 8 in. from the antenna located under the top surface. The limits for MPE were determined based on a continuously radiating top antenna (no duty factor applied). The actual operation of the scanner is intermittent, with a scan time limited to 5-seconds for the top surface (the front panel work surface indicator will flash blue when the top antenna is radiating).

For more information, see the following

FCC bulletins:

- FCC OET Bulletin 65: Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields

- FCC OET Bulletin 56: Questions and Answers about Biological Effects and Potential Hazards of Radiofrequency Electromagnetic Fields

**CAUTION: Changes to this product or modifications not expressly approved by the party responsible for compliance could void your authority to operate per FCC Part 15.**

**ATTENTION: Les modifications apportées à ce produit ou modifications pas expressément approuvés par la partie responsable de la conformité peuvent annuler votre droit à utiliser par FCC Part 15.**

## Industry Canada (IC) Compliance

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

1. This device may not cause interference; and
2. This device must accept any interference, including interference that may cause undesired operation of the device.