

# Technical Guide

## Installation of software onto an LD900

### Introduction

Please read this document in its entirety prior to starting the upgrade process. Also note that this process should be undertaken at a time that will not impact operations.

This Technical Guide outlines how to install software onto the LD900. The upgrade should be conducted using a USB drive or web browser (via LAN2). The USB method requires a USB drive (FAT32 format only) with at least 512 MB free. The USB drive should be checked to ensure it is virus free.

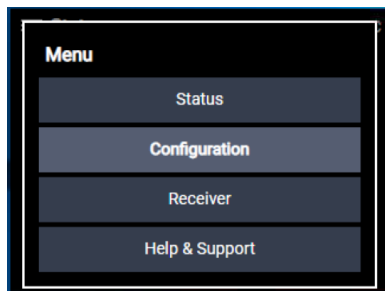
LD900 systems retain configuration during upgrade, however it is recommended to record a hard copy of the configuration prior to upgrading.

### Settings to Note Prior to Upgrade

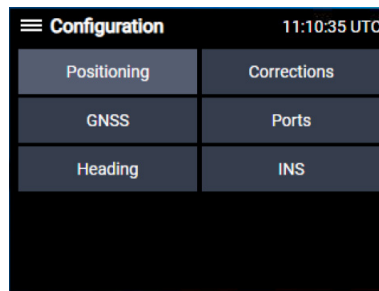
Please record the following LD900 settings before upgrading (menu guidance in *italics*):

#### PPP Mode Configuration > Positioning

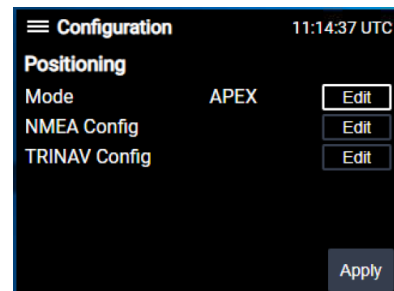
<b>GNSS1 Mode (PPP Mode)</b>	
------------------------------	--



Select Configuration



Select Positioning



Record mode setting

#### NMEA Config Configuration > Positioning > NMEA Config > Edit

<b>GGA Precision</b>	
----------------------	--

<b>PPP DQI</b>	
----------------	--

#### TRINAV Config Configuration > Positioning > Trinav Config > Edit

<b>Version</b>	
----------------	--

<b>Nav Point</b>	
------------------	--

#### RAIM Configuration > Positioning

<b>RAIM</b>	
-------------	--

**GNSS Configuration > Positioning > GNSS**

<b>Elevation Mask</b>	
<b>PPS</b>	
<b>Pulse Duration (ms)</b>	
<b>Interference Detection</b>	

**Signal Tracking Configuration > GNSS > Signal Tracking**

	<b>Disabled Signals</b>
<b>GPS</b>	
<b>GLONASS</b>	
<b>GALILEO</b>	
<b>BEIDOU</b>	

**VERIPOS LBAND Configuration > Corrections > VERIPOS LBAND > Edit**

<b>Beam</b>	
<b>Source Antenna</b>	
<b>HDR Mode</b>	

**VERIPOS GNSS1 Configuration > Corrections > VERIPOS GNSS1 > Edit**

<b>Beam</b>	
<b>Source Antenna</b>	
<b>HDR Mode</b>	

**Corrections MF (model dependant) Configuration > Corrections > MF**

<b>Mode</b>	
-------------	--

**Corrections UHF (model dependant) Configuration > Positioning > Corrections > UHF > Edit**

<b>Mode</b>	
<b>Frequency</b>	

**Corrections SBAS Configuration > Positioning > Corrections > SBAS**

<b>Mode</b>	
-------------	--

**Corrections RTK Configuration > Positioning > Corrections > RTK**

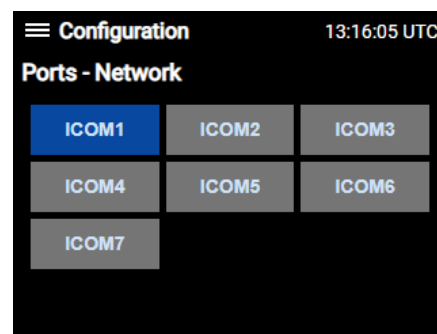
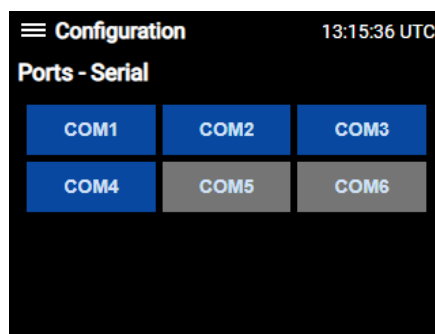
Mode	
------	--

**Corrections NTRIP Configuration > Positioning > Corrections > NTRIP**

Mode	
------	--

**Ports Configuration > Ports**

Only ports highlighted in Blue are active and therefore only these port settings need to be recorded. In the example below COM1 to 4 and ICOM1 are actively used:-



Work through the details for each active port and record the settings in the table below:-

	Interface Type	Type	Baud	Data Bits	Parity	Stop Bits	Data Information (e.g. NMEA logs selected)	
							Data Logs	Rate (Hz)
COM 1								
COM 2								
COM 3								
COM 4								
COM 5								
COM 6	INPUT							
ICOM 1 or P1*								
ICOM 2 or P2								
ICOM 3 or P3								
ICOM 4 or P4								
ICOM 5 or P5								
ICOM 6 or P6								
ICOM 7 or P7								

\*Note: P1 to P7 settings are applicable when the optional MOXA NPort port extension system is utilised.

**Network Settings** *Receiver > Network > LAN1 or LAN2 > Edit*

	LAN1	LAN2
Mode		
IP Address		
Subnet Mask		
Gateway		
DNS		N/A

**Antenna Voltage** *Receiver > Antenna Voltage*

GNSS Primary	
GNSS Secondary	
L-Band	
MF	

## Settings to Note Prior to Upgrade (model dependant)

Heading, SPAN and Secondary positioning are model dependant (authorisation code required). If any of the options below are enabled, then record the relevant settings.

### Heading Systems

**Heading** *Configuration > Heading*

State	
Heading Offset (c-o)	

### SPAN Systems

**INS** *Configuration > INS*

IMU Port	
IMU Type	
Heave Filter (secs)	

**IMU Offsets** *Configuration > INS (Antenna1 Offset & Installation Rotations)*

	Antenna1 Offsets (metres)	Installation Rotations (degrees)
X Axes		
Y Axes		
Z Axes		

**INS User Offset Configuration** > **INS** > **INS User Offset**

	INS User Offset (metres)
<b>X Axes</b>	
<b>Y Axes</b>	
<b>Z Axes</b>	

**Secondary Positioning (Optional) Configuration** > **Positioning**

<b>GNSS2 Mode (PPP Mode)</b>	
------------------------------	--

## Procedure for Upgrade

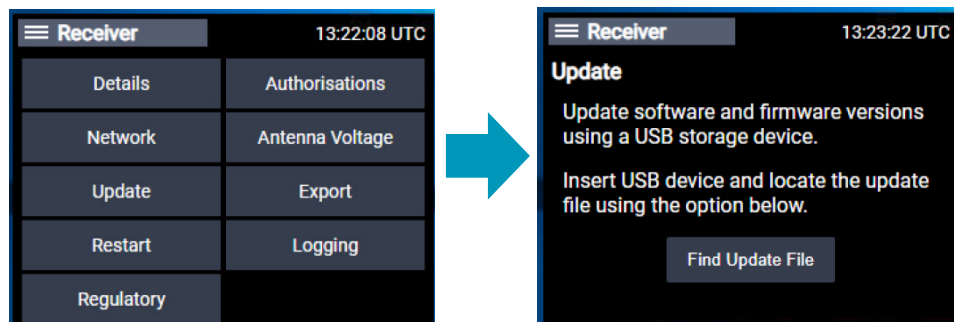
There are two methods for upgrading an LD900, one method is via the USB port on the LD900 front panel, and the alternative method uses an attached web browser connected to the LD900 ethernet LAN2 port. The latest LD900 build can be obtained from the [VERIPOS website](#).

Take care not to upgrade LD900 systems that are deployed with special firmware builds. To upgrade special builds there must be implicit guidance confirming the replacement of the special firmware. If clarification is required, please contact [Veripos Support](#).

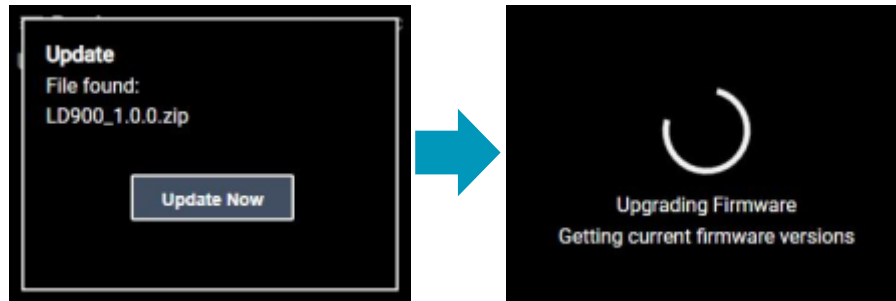
### LD900 Upgrade - USB Method

Place the zipped file into the root folder of the USB drive. Insert the USB drive into the front panel USB port.

Navigate to **Receiver > Update**. Within the **Update** menu page, a **Find Update File** option is available. This allows for a receiver update .zip file to be located and uploaded to the system:



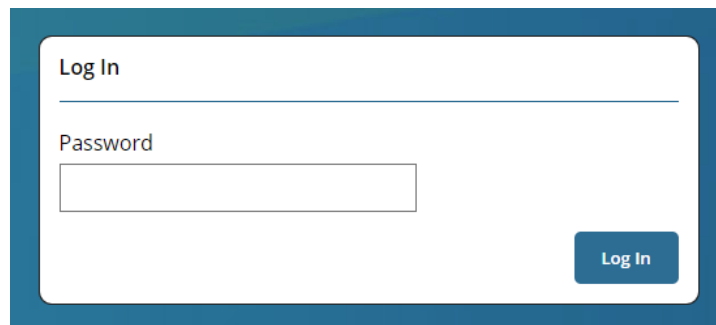
Once the update file has been located an option to **Update Now** will be presented. Once initiated, the receiver will reboot before starting the update process:



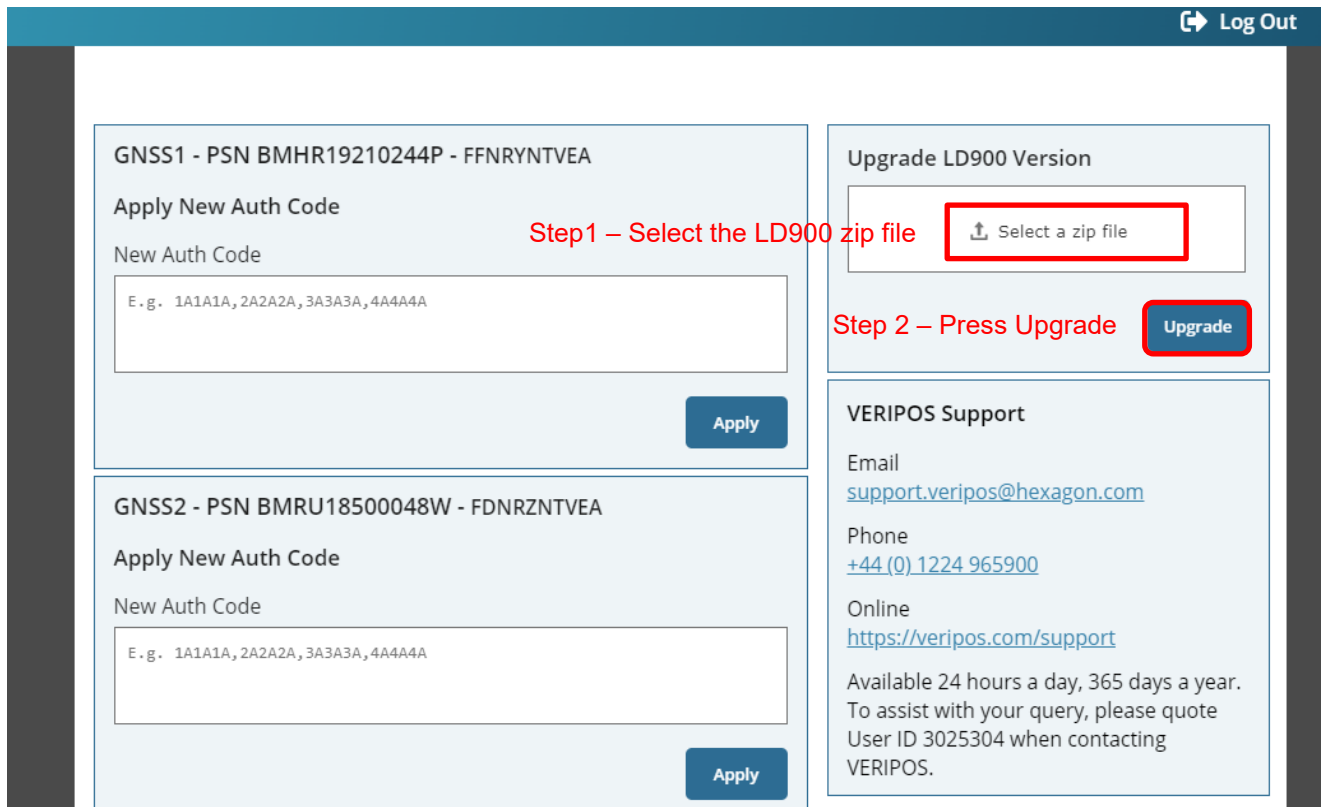
The upgrade may take up to 30 minutes to complete. Navigate to the **Receiver > Details** menu and confirm the installed version.

### LD900 Upgrade - Web Browser Method

Copy the LD900 firmware build (zip file) onto the desktop of the PC. Access the LD900 WebUI (the IP address on LAN2) using a web browser such as Chrome or Edge. The default IP address of LAN2 is 192.168.2.92. Once successfully connected a password prompt will appear:-



The WebUI password is the Veripos Unit ID (refer to the front panel label). Once the password is entered the following will be displayed:-



**GNSS1 - PSN BMHR19210244P - FFNRYNTVEA**  
 Apply New Auth Code  
 New Auth Code  
 E.g. 1A1A1A, 2A2A2A, 3A3A3A, 4A4A4A  
 Apply

**GNSS2 - PSN BMRU18500048W - FDNRZNTVEA**  
 Apply New Auth Code  
 New Auth Code  
 E.g. 1A1A1A, 2A2A2A, 3A3A3A, 4A4A4A  
 Apply

**Upgrade LD900 Version**  
 Select a zip file  
 Upgrade

**VERIPOS Support**  
 Email  
[support.veripos@hexagon.com](mailto:support.veripos@hexagon.com)  
 Phone  
[+44 \(0\) 1224 965900](tel:+44(0)1224965900)  
 Online  
<https://veripos.com/support>  
 Available 24 hours a day, 365 days a year.  
 To assist with your query, please quote  
 User ID 3025304 when contacting  
 VERIPOS.

As highlighted above, select the LD900 zipped file (step 1) from the desktop and initiate the upgrade by selecting the Upgrade Button (step 2). The upgrade may take up to 30 minutes to complete.

Once the upgrade is complete a confirmation message will appear briefly within the browser. It is also possible to check the LD900 front panel display, navigate to **Receiver > Details** menu and confirm the installed version.