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.

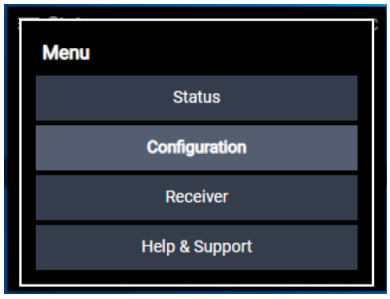
It is important to record a hard copy of the configuration prior to upgrading.

Settings to Note Prior to Upgrade

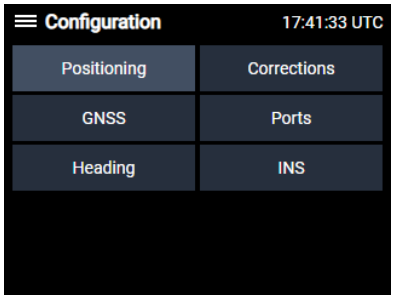
Please record the following LD900 settings before upgrading (menu guidance in italics):

PPP Mode *Configuration > Positioning*

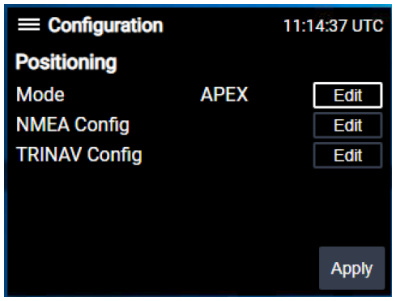
GNSS1 Mode (PPP Mode)	



Select Configuration



Select Positioning



Record mode setting

NMEA Config *Configuration > Positioning > NMEA Config > Edit*

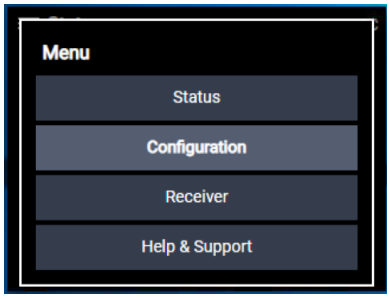
GGA Precision	
PPP DQI	

TRINAV Config *Configuration > Positioning > Trinav Config > Edit*

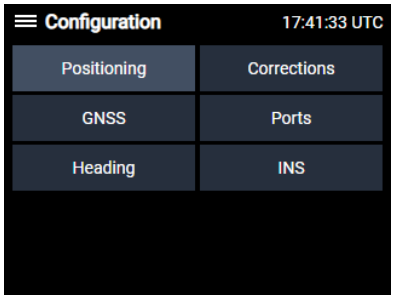
Version	
Nav Point	

RAIM *Configuration > Positioning*

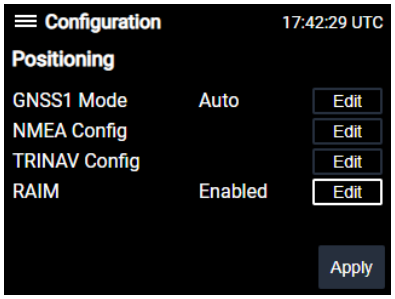
RAIM	



Select Configuration



Select Positioning



Record RAIM setting

GNSS *Configuration > Positioning > GNSS*

Elevation Mask	
PPS	
Pulse Duration (ms)	
Interference Detection	

Signal Tracking *Configuration > GNSS > Signal Tracking*

	Disabled Signals
GPS	
GLONASS	
GALILEO	
BEIDOU	

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

Beam	
Source Antenna	
HDR Mode	

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

Beam	
Source Antenna	
HDR Mode	

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

Mode	

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

Mode	
Frequency	

Corrections SBAS *Configuration > Positioning > Corrections > SBAS*

Mode	

Corrections RTK *Configuration > Positioning > Corrections > RTK*

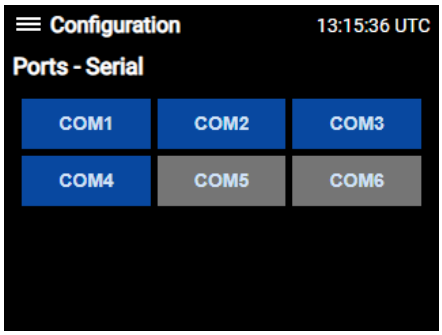
Mode	

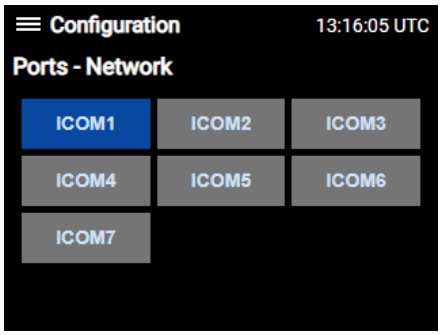
Corrections NTRIP *Configuration > Positioning > Corrections > NTRIP*

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)
X Axes	
Y Axes	
Z Axes	

Secondary Positioning (Optional) *Configuration > Positioning*

GNSS2 Mode (PPP Mode)	

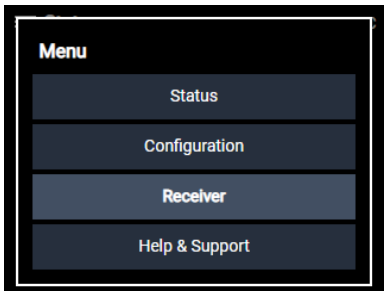
Procedure for Upgrade

The 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

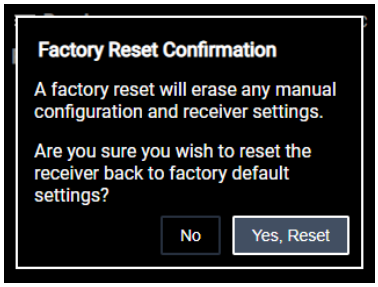
Once the settings have been recorded the LD900 must be factory reset before commencing the upgrade.



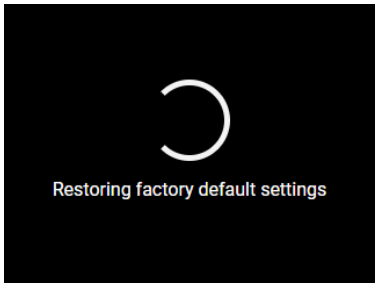
Select Receiver

Select Restart

Select Factory Reset



Select Yes, Reset

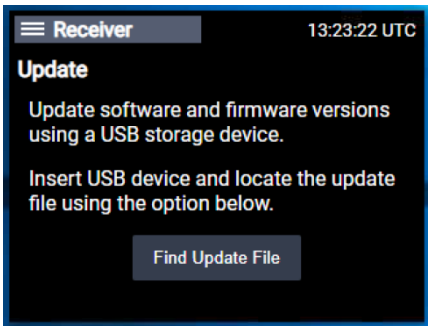


Factory Reset in progress

The factory reset will take approximately three minutes to complete. When the factory reset is complete Place the zipped file into the root folder of the USB drive. Insert the USB drive into the front panel USB port.

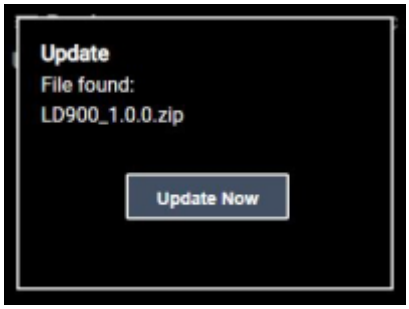
Navigate to **Receiver > Update**. Within the ***Update*** menu page, a **Find Update File** option is available. This allows for a receiver update .zip file to be located and uploaded to the system:

Select Receiver

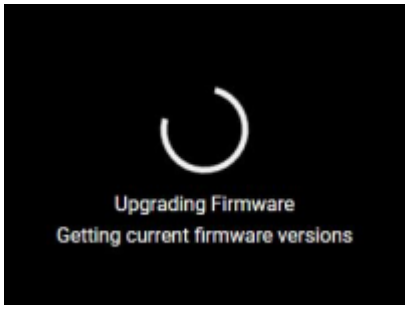


Select Find Update File

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:



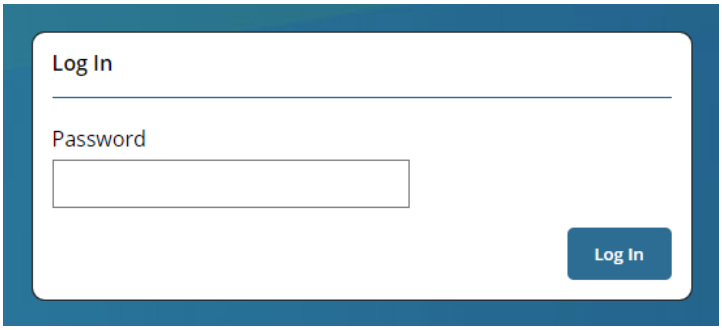
Select Update Now



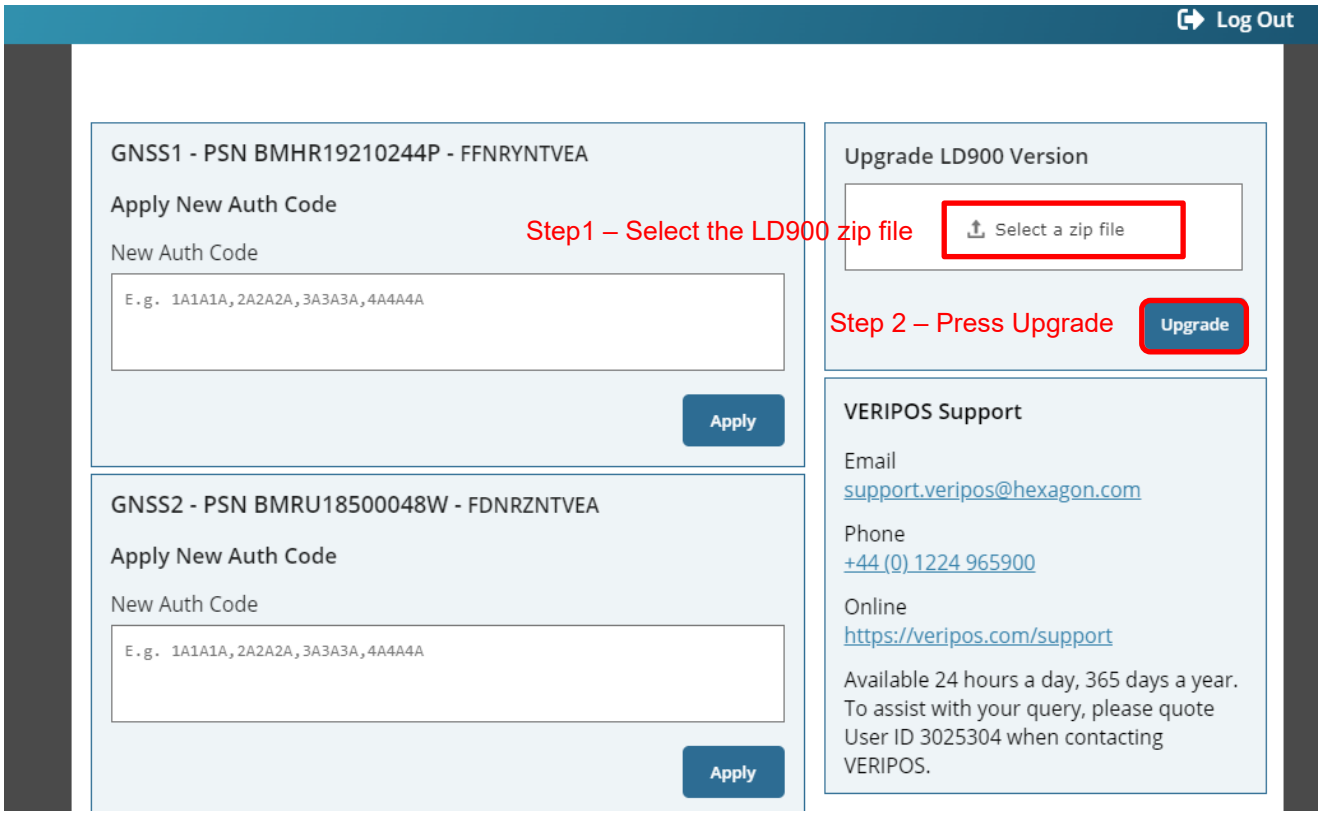
The upgrade may take up to 30 minutes to complete. Navigate to the **Receiver > Details** menu and confirm the installed version.

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 a 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:-



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.