DEEP SECURE

LRB00X Server Installation Guide

Table of Contents

1   Introduction

1.1   Scope

The Deep-Secure LRB00X range of hardware servers is described at www.deep-secure.com/platforms/. The range currently consists of LRB001, LRB002-TX and LRB002-RX. Details for the electrical ratings and operating conditions for the servers are contained in the relevant datasheet accessible from www.deep-secure.com/platforms/.

This document is the server installation guide, advising how the LRB00X server should be installed and deployed. The server will have been delivered with pre-installed Deep-Secure software. Reference should be made to the *Getting Started Guide* contained inside the box the server was shipped in to confirm the packing checklist and how to configure the software that has been installed by Deep-Secure.

1.2   Audience

Installation of an LRB00X server should only be performed by suitably trained service personnel. This guide is aimed at such personnel.

1.3   Conventions

This guide uses the conventions shown below:

Convention	Indicates
❌	**Important warning statement information that should not be ignored.**
⚠	**A caution statement that denotes a hazard that can cause damage to the equipment.**
Tip	**A tip that suggests an alternative method for applying a technique or procedure, or helps you to understand the benefits and capability of the product.**

1.4   Purpose

The guide covers the following installation steps:
- Rack Mounting Instructions;
- User Maintenance;
- Warranty and User Support.

  ❌ The Deep-Secure LRB00X server has no user serviceable parts.

  ❌ It is intended for indoor use only.

  ❌ The Deep-Secure LRB00X server is an EMC Class A product. In a domestic environment, this product may cause radio interference. The LRB00X server complies with the EMC Class A protection requirements when used in accordance with the installation requirements identified in this manual and the Getting Started Guide contained in the box the server was shipped in.

  ⚠ Read and obey all instructions before applying power to the server. Safety may be impaired if the instructions are not followed.

❌ Ethernet wiring made to the LRB00X server should be internal to the building containing the server, due to risk of lightning strikes.

⚠️ Only an appropriately rated and approved cord-set should be used with this equipment in accordance with the regulations of the country of use.

🗑️ This product must be disposed of in accordance with all applicable national and international waste disposal regulations.

2   Rack Installation

2.1   Overview

This chapter provides a quick setup checklist to install the server into a rack.

2.2   Unpacking the System

Decide on a suitable location for the rack unit that will hold your server. It should be situated in a clean, dust-free area that is well ventilated. Avoid areas where heat, electrical noise and electromagnetic fields are generated. You will also need it placed near a grounded power outlet.

2.3   Preparing for Setup

The box your server was shipped in should include two sets of rail assemblies, two rail mounting brackets and the mounting bolts/screws you will need to install the system into the rack. Please read this section in its entirety before you begin the installation procedure outlined in the sections that follow.

❌   Basic electrical safety precautions should be followed to protect yourself from harm and the LRB00X server from damage:

❌   Be aware of the locations of the power on/off switch on the server as well as the room's emergency power-off switch, disconnection switch or electrical outlet. If an electrical accident occurs, you can then quickly remove power from the system.

2.3.1   Choosing a Setup Location

Leave enough clearance in front of the rack to enable you to open the front door completely (~25 inches).

Leave approximately 30 inches of clearance in the back of the rack to allow for sufficient airflow.

This product is for installation only in a Restricted Access Location (for example dedicated equipment rooms).

2.3.2   Rack Precautions

Ensure that the levelling jacks on the bottom of the rack are fully extended to the floor with the full weight of the rack resting on them.

In single rack installation, stabilizers should be attached to the rack.

In multiple rack installations, the racks should be coupled together.

Always make sure the rack is stable before extending a component from the rack.

You should extend only one component at a time - extending two or more simultaneously may cause the rack to become unstable.

Tip   Use a regulating uninterruptible power supply (UPS) to protect the server from power surges, voltage spikes and to keep your system operating in case of a power failure.

2.3.3 Rack Mounting Considerations

Ambient Operating Temperature

If installed in a closed or multi-unit rack assembly, the ambient operating temperature of the rack environment may be greater than the ambient temperature of the room. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature (Tmra).

Reduced Airflow

Equipment should be mounted into a rack so that the amount of airflow required for safe operation is not compromised.

Mechanical Loading

Equipment should be mounted into a rack so that a hazardous condition does not arise due to uneven mechanical loading.

Circuit Overloading

Consideration should be given to the connection of the equipment to the power supply circuitry and the effect that any possible overloading of circuits might have on overcurrent protection and power supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

Reliable Ground

A reliable ground must be maintained at all times. To ensure this, the rack itself should be grounded. Particular attention should be given to power supply connections other than the direct connections to the branch circuit (such as the use of power strips and other devices).

2.4   Rack Mounting Instructions

This section provides information on installing the LRB00X server into a rack unit with the rails provided. There are a variety of rack units on the market, which may mean the assembly procedure will differ slightly.

> **Tip**   You should also refer to the installation instructions that came with the rack unit you are using.

2.4.1   Identifying the Sections of the Rack Rails

The chassis package includes two rack rail assemblies including the required bolts in the rack mounting kit, as identified below.
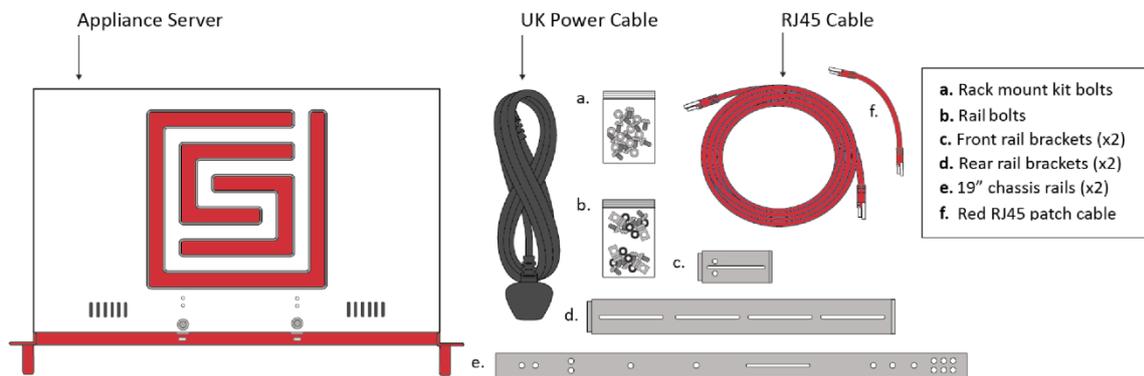
Each of the 19" chassis rails (e.) consists of two sections: an inner fixed chassis rail that secures directly to the server chassis, and an outer fixed rack rail that secures directly to the rack itself.
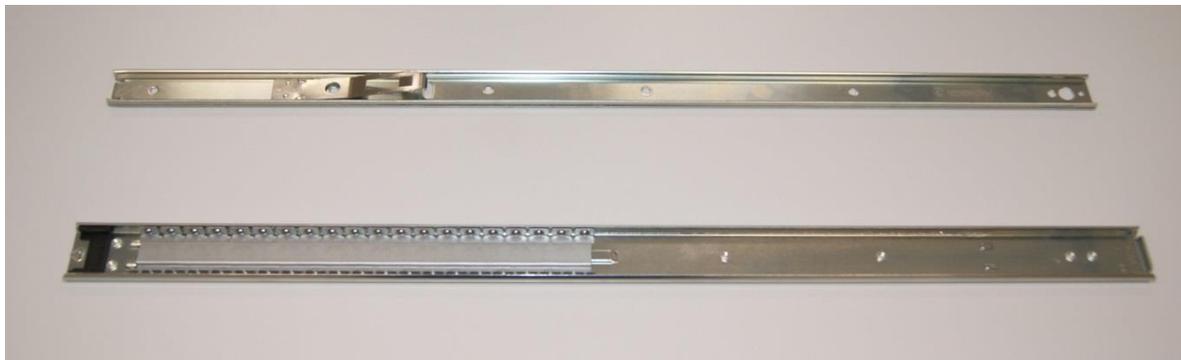
2.4.2 Installing the Inner Rail Extension

- Place the inner rail on the side of the chassis, aligning the screw holes.
- Secure to the chassis using three screws from the rack mount kit bolts (a.)

- Repeat the above steps for the other inner rail extension.

2.4.3   Assembling the Outer Rails

- Attach the rail bracket (c.) to the front of each outer rail using rack mount kit bolts (a.).
- Attach the rail bracket (d.) to the rear of each outer rail using rack mount kit bolts (a.) and adjust to the required length for the rack unit.

2.4.4   Installing the Outer Rails to the Rack

- Secure the rail bracket (c.) to the front side of the rack unit rail with two rail bolts (b.)
- Secure the rail bracket (d.) to the rear of the rack unit rail with two rail bolts (b.).
- Repeat the above steps for the other outer rail.
- Ensure all fixings are fully tightened
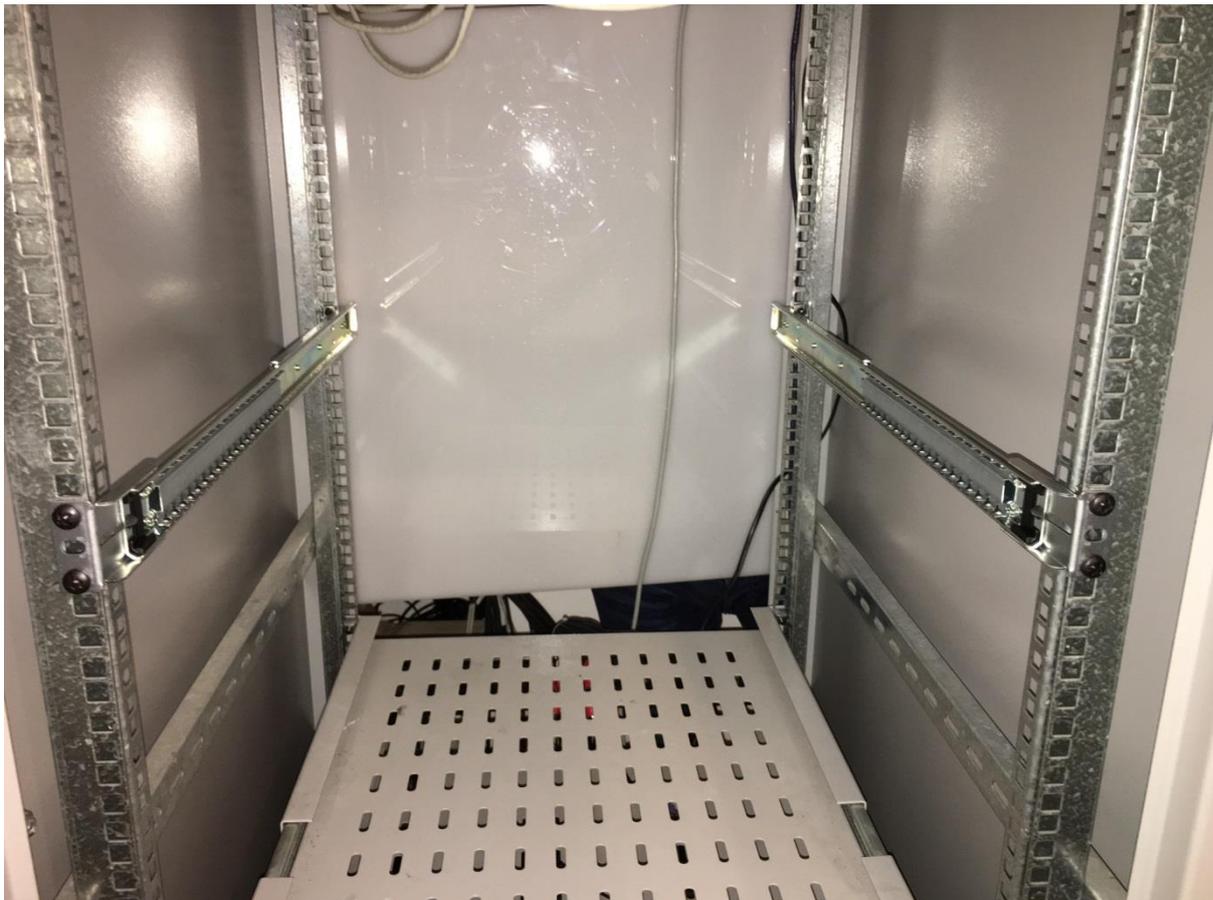
2.4.5   Installing the LRB00X Server into a Rack

- Confirm that the inner rails are attached to the server. Also, confirm that the outer rails are installed on the rack.
- Align chassis rails with the front of the rack rails.
- Slide the chassis rails into the rack rails, keeping the pressure even on both sides (It may be necessary to depress the locking tabs when inserting). When the server has been pushed in about 1/3 of the length of the rail a click should be heard (the safety catches engaging), push the server fully in.

2.4.6   Removing the LRB00X Server from a Rack

- Before removing the server from the rack ensure that all cables have been removed.
- Gently pull the server forward until a firm resistance is felt (around 2/3 of the inner rail length).
- Locate the spring releases on either side of the inner rail and depress both.
- Gently ease the server forward until the unit is free from the rack.

3   User Maintenance

Maintenance tasks are limited to routine cleaning and inspection.

> **Tip**   The warranty will be invalidated if any attempt is made to open the unit.

Check that all cables and connectors are undamaged and secure.

If required, clean the external surfaces with a dry, lint-free cloth.

4   Warranty and User Support

Warranty for the LRB00X servers is provided in accordance with the Deep-Secure Limited, Hardware Supply Agreement, Version 1.0.

For Warranty and Returns advice contact:

support@deep-secure.com

> **Tip**   No unit should be returned without prior arrangement with your supplier.