JIFELINE
NETWORKS

Local-10 server housing manual

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Introduction

This document has been set up with the aim to describe the Jifeline Networks 19" local server rack and to explain how to enable it within the customer's network.

Required Item list

The following items are required for enabling the local server rack:

Required items	Amount
10FT Ethernet cable	1 piece
230V power supply cable (EU)	1 piece
Server rail bolts and nuts	1 set
Layer 3 switch OR layer 2 switch	1 available socket
USB-A male to USB-A male cable	1 piece

1. Description of the local server rack

This description is based on 3 different views on the rack:
1. The local server - front view
2. The local server - mid view
3. The local server - back view

These views are defined as following:
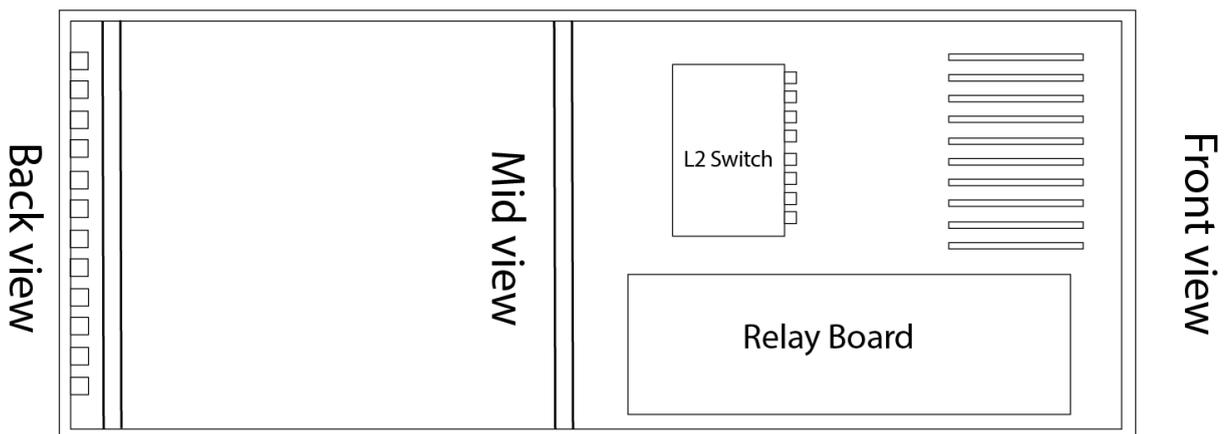
2. Local server views - description

2.1 Local server rack - front view

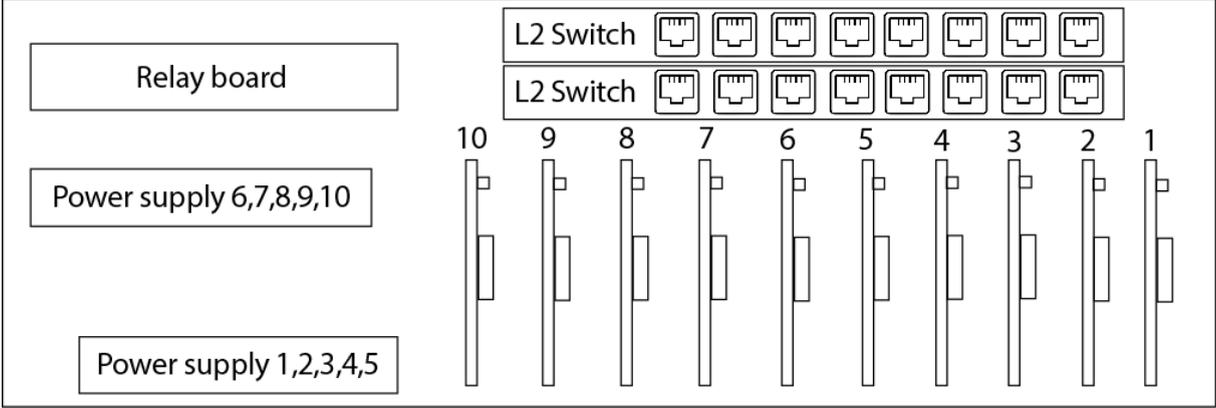At the front of the local server, there are 10 slots for local modules. The layout of the front side is as following:

2.2 Local server rack – mid view

The middle layout of the local rack consists of 10 On-board diagnostics ports with corresponding USB ports, each OBD port has its own USB port.

The On-board diagnostics socket numbering is equal to the local connection points shown in the front view drawing: On-board diagnostic port 1 with accompanying USB port 1.1 e.g. corresponds to local 1. This is similar for every connected local from number 1 to 10.
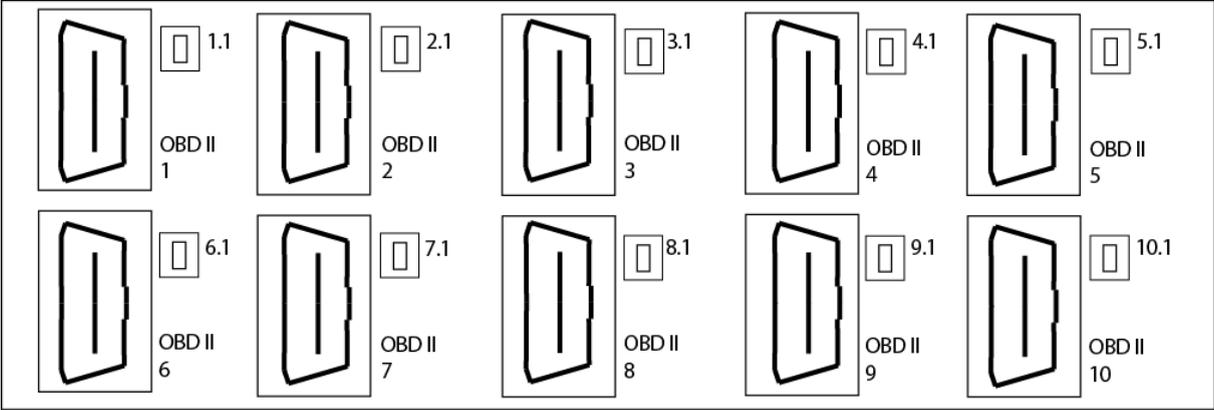
2.3 Local server rack - rear view

At the rear of the local server rack are 11 USB ports. The first 10 USB ports are used to connect the local rack to your server. The 11th USB port is used to manage your local server rack. USB ports 1 to 10 are connected to the corresponding connections in the front view and mid view drawings.

Example: USB port 1 at the rear of the server is connected to local 1 which again is connected to the mid view OBD 1 and corresponding USB port 1.1.
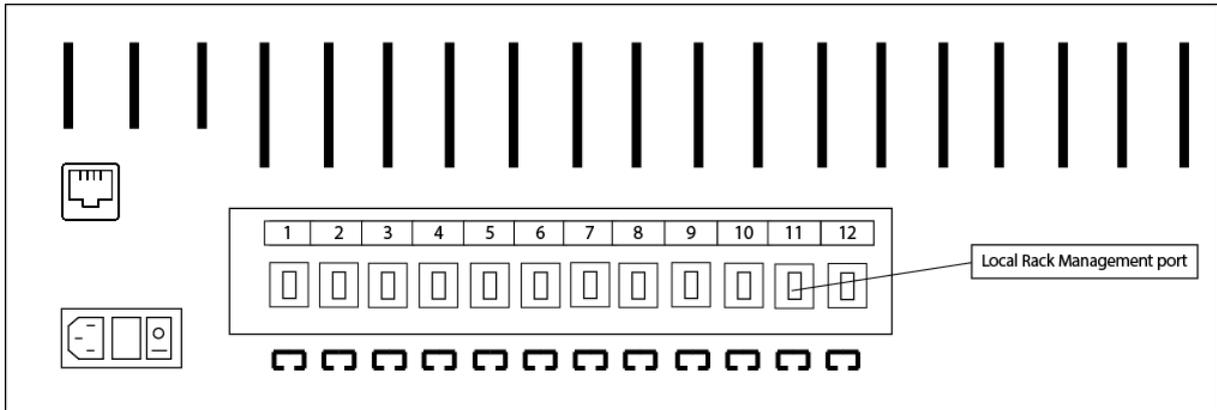
3. Setup

3.1 Connecting the local server rack - overview

Below, we describe the process for connecting the local server rack to your network. We assume the local server rack is already equipped with 10 locals.

3.1.1 Required item list for setup

Required items	Amount
10FT Ethernet cable	1 piece
230V power supply cable (EU)	1 piece
Server rail bolts and nuts	1 set
Layer 3 switch OR layer 2 switch	1 available socket
USB-A male to USB-A male cable	1 piece

3.2 Connecting the server rack

Make sure all items indicated in the requirement item list are present.

3.2.1 Layer 3 switch

In case a layer 3 switch is used, a network port must be configured to connect the local rack to the internet. It is recommended to use the QoS protocol or a traffic shaping protocol (because the connected locals will be linked to the same VLAN as the management IP address of the local server rack).

3.2.2 Layer 2 switch

When a layer 2 switch is used, we advise to guarantee the switch provides sufficient bandwidth, this to avoid possible issues with the latency times of the locals.

Note: make sure the subnet in which the local rack is placed has sufficient bandwidth. Low bandwidth can result in vehicle communication data losses.

3.2.2 Step-by-Step plan
1. Connect the power supply cable to a 230v power source.
2. Connect the network cable to the ethernet interface and to a designated patch panel or switch port.
3. Connect your laptop or desktop to port 11 of the local server rack using an USB male-to-male cable.
4. Turn the local server rack on.

*Note: when mounting a rack, make sure there is **0.25U** of space between the local server rack and other components.*

3.3 Connecting the local server rack
The 19" local server rack can be reached in two ways: a *config* way and a *standard* way to switch the locals and associated USB ports on and off.

3.3.1 DHCP lease
The Jifeline local rack IP address can be found by checking the leased DHCP IP address. The mac address associated with the IP address starts by default with the following:

04:91:61

3.3.2 Connecting to the configuration interface
The configuration interface can only be accessed by connecting a USB male to male from the management laptop to port 11 on the local server rack.

After the USB cable is connected, the configuration interface can be accessed on the local server rack using the DHCP assigned IP address.

The front-end can be accessed via a browser and http protocol, via the following URL:
http://<IP address>/_config.htm

3.3.3 Introduction to the configuration interface

When connecting to the configuration interface of the local server rack, you will enter the 'System Configuration' page (see the image below).

When you get to this page, it means you have successfully connected to the configuration interface.
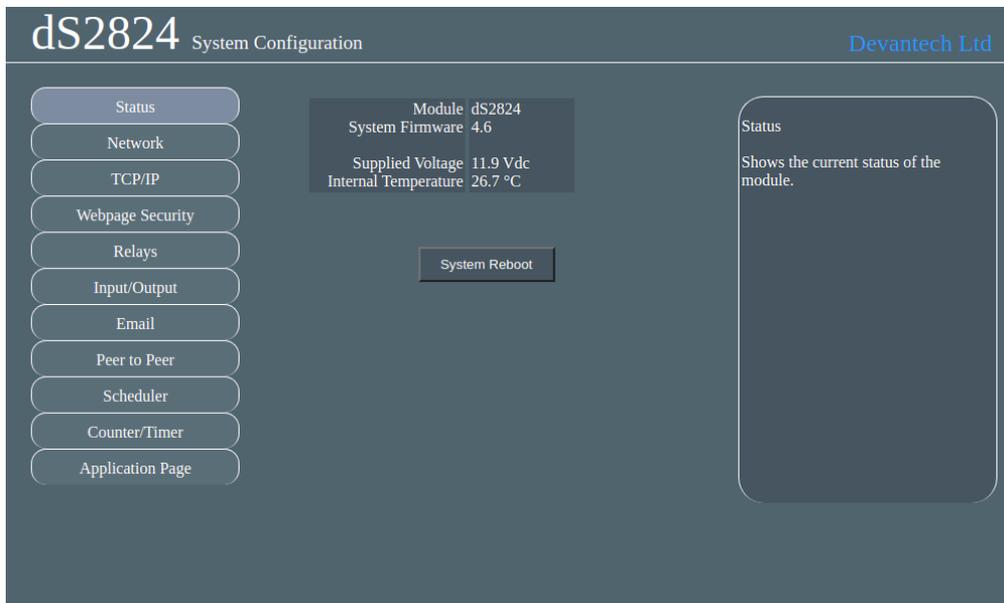
3.3.3.1 Assigning names to the relays

You can change the relays names to, for example, the name of a specific local or a tool.
For this, you can check the Relay option on the left-side of the System Configuration page.

We recommend activating the Power-up Restore check-box for each relay . Activating this function will ensure that the relays will be switched on automatically at a restart.

We advise to follow the table shown in chapter 4 for the configuration of the relays.
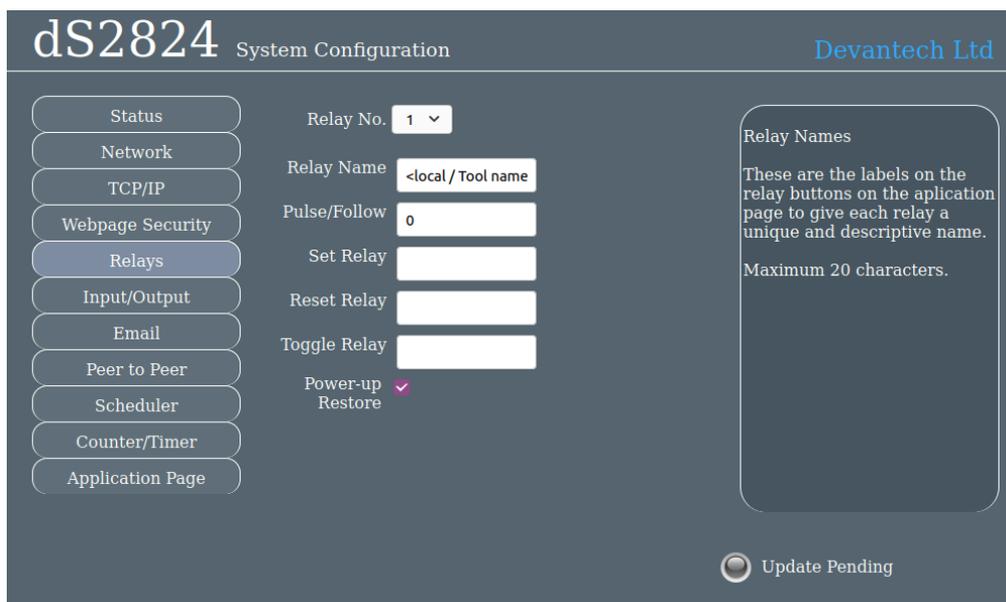
3.3.3.2 Validating the relay name on the controller page

When you have made the changes, you can check whether the changes have been successfully implemented by clicking on the application page option or by accessing the local server rack via the following url: http://<IP address>/index.htm

Local 1	Local 2	Local 3	Local 4
Local 5	Local 6	Local 7	Relay 8
Local 9	Local 10	Relay 11	Relay 12
USB 1	USB 2	USB 3	USB 4
USB 5	USB 6	USB 7	USB 8
USB 9	USB 10	Relay 23	Relay 24
Relay 25	Relay 26	Relay 27	Relay 28
Relay 29	Relay 30	Relay 31	Relay 32

3.3.4 The controller interface

The controller interface can be used to switch the locals and usb's on and off. Within the controller interface, it is not possible to make configuration changes to, for example, the button descriptions.

The controller interface can be reached via the following url:

http://<IP address>/index.htm

Relay 1	Relay 2	Relay 3	Relay 4
Relay 5	Relay 6	Relay 7	Relay 8
Relay 9	Relay 10	Relay 11	Relay 12
Relay 13	Relay 14	Relay 15	Relay 16
Relay 17	Relay 18	Relay 19	Relay 20
Relay 21	Relay 22	Relay 23	Relay 24
Relay 25	Relay 26	Relay 27	Relay 28
Relay 29	Relay 30	Relay 31	Relay 32

3.3.4.1 Relay states
The relays are connected as following:
- Relays 1 to 10: connected to switching the locals on and off
- Relays 13 to 22: connected to switch the USBs on and off
- Relays 11 & 12: reserved for possible future extensions

4. TCP IP relay connection diagram
Each supplied local rack is connected in a standardized manner.
- Relays to to 10: fulfill the connection of local 1 to 10
- Relays 13 to 22: fulfill the connection of USB 1 to 10
- Relay 23: turns local 1 OBD on or ff, blue state = ON
- Relay 24: Turns local 2 OBD on or off, blue state = ON
- Relays 11 & 12: reserved for possible future extensions

Relay	Connected to	Relay	Connected to
1	Local 1	13	USB 1.1
2	Local 2	14	USB 2.1
3	Local 3	15	USB 3.1
4	Local 4	16	USB 4.1
5	Local 5	17	USB 5.1
6	Local 6	18	USB 6.1
7	Local 7	19	USB 7.1
8	Local 8	20	USB 8.1
9	Local 9	21	USB 9.1
10	Local 10	22	USB 10.1
11	Extension	23	Local 1 OBD On/Off
12	Extension	24	Local 2 OBD On/Off