eppendorf

Software

VisioNize® Lab Suite

Software Manual
From software version 3.5.0

Table of contents

1 About this manual

1.1 About this manual

1. Please read this manual before you use the product.

2. Please ensure that you have the manual available during the use of the product.

   ⓘ You can find the current version of the manual at <u>www.eppendorf.com/manuals</u>.

   – Please contact Eppendorf SE to obtain a different version of the manual.

1.2 Symbols used

Graphic presentation	Meaning
1. 2.	Action steps
•	Bullet point
Text	Display text
Key	Name of a port, button, status display, or key
ⓘ	Important information
🔅	Hint

1.3 Additional documents

The following documents complement this manual:
- Operating manual "VisioNize box"
- Installation instructions "VisioNize box"
- Installation instructions "VisioNize sense"
- Installation instructions "VisioNize Lab Suite Setup Guide"

2 Safety

2.1 Intended use

VisioNize Lab Suite is a cloud-based platform intended to be used for:

- connecting IoT laboratory devices for data management, notification services by e-mail/SMS, remote monitoring, maintenance planning and accessing device-related documents
- manually managing non-IoT laboratory devices for data management, maintenance planning and accessing device-related documentation

VisioNize Lab Suite is intended for general lab use.

2.2 Residual risks when used as intended

To use the software in a safe environment, please observe the safety information in this chapter.

Please additionally observe all instructions given in the Safety chapters of the operating manuals of all devices which are connected to the software.

2.2.1 Material damage

2.2.1.1 Data loss

Malware can cause the loss and misuse of data as well as the loss of samples. Risks arise from computer viruses, trojans, spam mails, phishing mails, infected websites and apps.

- Always check all storage media with an up-to-date antivirus software before using them on the device and with the software.
- Do not download any software or apps from unknown or uncertified sources.
- Do not open any e-mail attachments or links from unknown sources.
- Contact your IT department in case of any problems.

2.2.1.2 Loss of samples

In case of infrastructure failures in the lab, such as blackouts or a disruption of the telephone network or Internet, notifications continue to be sent by the software. The notifications cannot be delivered to the end devices, e.g. desktop computers or mobile end devices such as laptops, tablets, or smartphones. If you do not perform the required actions on the device because a notification is not delivered, sample loss may occur.

- To ensure sample safety, implement additional measures.

2.3 Data security

The software is based on a commercially available state-of-the-art IoT infrastructure and uses the benefits of a wide range of safety tools and functions.

- All servers hosting software services are located inside the EU. The processed data is stored and transported on servers inside the EU.
- Integrated firewalls control and limit the access to network resources to prevent unauthorized access from uncertified sources.

- Security updates are provided on a regular basis and free of charge irrespective of the release cycle of new software versions.
- All data within the software is encrypted with utmost care to avoid any unauthorized third-party access. Precautions include a state-of-the-art approach for encrypting all data during transmission and in stand-by mode.

For more detailed information please refer to our data security whitepaper for the software which you will find on the following website: www.eppendorf.com/digital-lab-solutions.

2.4   Target groups

This manual is intended for the following target groups, who have different qualifications and levels of knowledge.

Owner

The owner is any natural or legal person who has an individual license for use.

The owner provides the infrastructure on site and is responsible for security.

User

The user operates the software and uses it to carry out work. The user must have read and understood the manual.

System administrator

The system administrator manages the information technology infrastructure (IT structure) and ensures that the requirements for software operation are met.

3 Product description

3.1 Software description

VisioNize Lab Suite is a cloud-based software used for device monitoring and laboratory management. The software is used online based on a customizable subscription. The software's user interface is in English.

The software provides various different services and functions for improving the efficiency in your laboratory, the safety of your samples, for maintenance management and to fulfill your compliance needs.

Monitoring

Monitor the status and performance of your laboratory equipment from any place and in real time using any end device with an Internet browser and access to the Internet.

Device Management

Add any type of laboratory device and enter device-specific information such as the location of the device.

Notifications

Receive notifications on device-related events, warnings, alarms, and errors from your laboratory devices. You can also configure time-based or response-based escalation plans and acknowledgment plans via e-mail and/or SMS.

Audit Trail

All device-specific and user-specific events and information are time stamped and documented in an uneditable log.

Task Management

Plan and manage non-recurring and recurring maintenance tasks and customizable tasks for each connected laboratory device and receive reminders via e-mail and/or SMS.

Booking

Plan and manage the usage of your devices clearly in a calendar. Indicate when a device is used by which user.

Document Management

Manage all device-specific documents of your connected Eppendorf devices such as manuals, application notes or certificates.

User Management

Manage user accounts by adding new ones, deleting existing ones or changing roles of existing users.

Remote updates

Automatically update the device software of connected Eppendorf devices and your VisioNize box and
VisioNize sense gateway router via the VisioNize Lab Suite cloud connection.

3.2 Product overview

Lab devices can be connected to the software via different hardware solutions dependent on the lab device
that should be connected to the VisioNize Lab Suite.
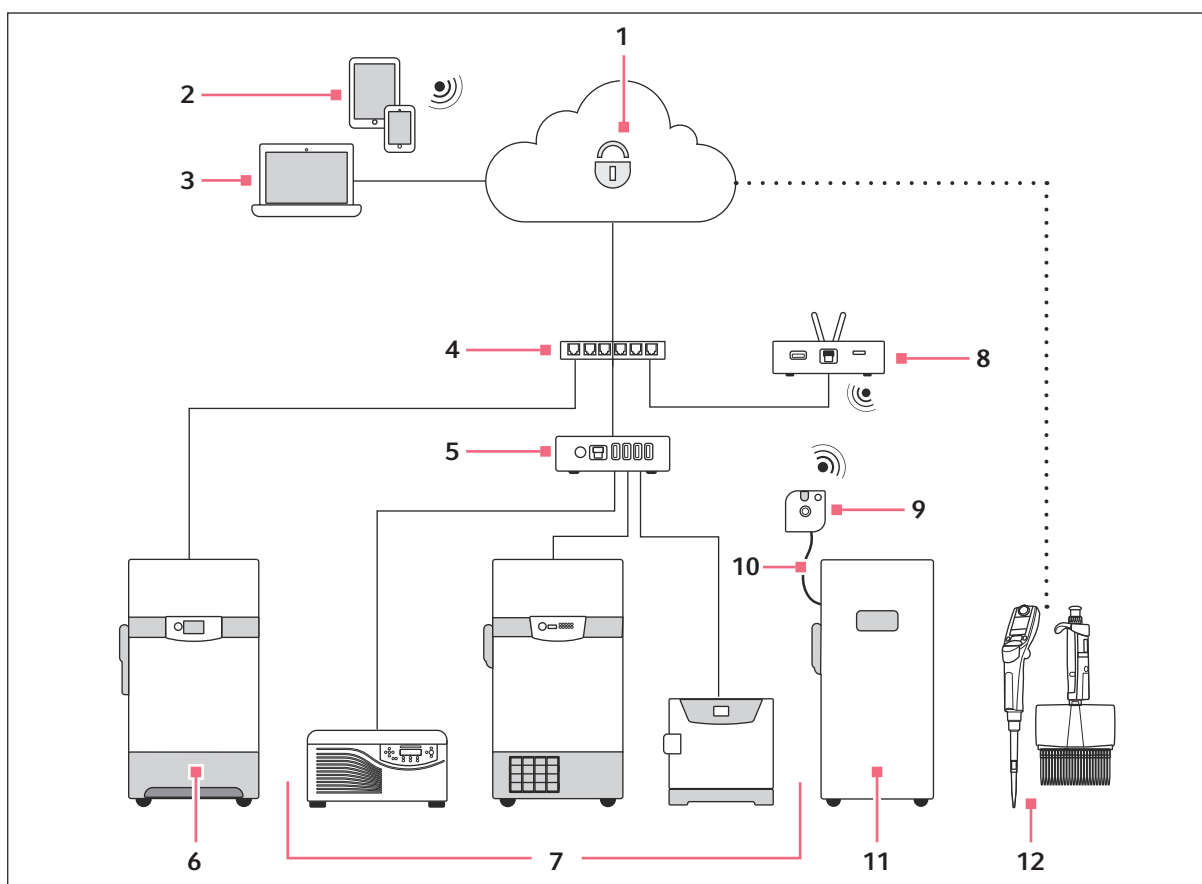
Fig. 3-1: Connection diagram

1	VisioNize Lab Suite	7	VisioNize box enabled devices
2	Mobile devices	8	VisioNize sense gateway router
3	Personal computer	9	VisioNize sense environmental monitor
4	Local network	10	VisioNize sense temperature sensor
5	VisioNize box	11	VisioNize sense enabled devices
6	VisioNize touch enabled devices	12	User enabled devices

VisioNize touch enabled devices

VisioNize touch enabled devices are Eppendorf devices equipped with a VisioNize touch screen. Lab devices that are connected to a local network with Internet connection can be connected to the VisioNize Lab Suite. For particular devices, it may be required to carry out an additional service upgrade (device software and/or hardware). Please contact your local Eppendorf representative for further information.

VisioNize touch enabled devices:
- CryoCube F740i series
- CellXpert C170i
- Innova S44i
- Mastercycler X50 series
- Centrifuge 5910 Ri

VisioNize box enabled devices

VisioNize box enabled devices are Eppendorf devices which must be connected to the software using a VisioNize box. The VisioNize box serves as a hardware hub and is used as a transmission system which enables the software to retrieve the device's data. One VisioNize box allows up to 4 Eppendorf devices to be connected. For particular devices, it may be required to carry out an additional service upgrade (device software and/or hardware). Please contact your local Eppendorf representative for further information.

Please refer to the website www.eppendorf.com/visionize-lab-suite-knowledge-base for a list of all VisioNize box enabled devices.

VisioNize sense enabled devices

VisioNize sense enabled devices are user enabled temperature control devices like freezers or incubators which must be connected to the software via VisioNize sense.

VisioNize sense is a monitoring kit composed of the following components:
- VisioNize sense gateway router - used for communication between the software and the connected sensors
- VisioNize sense environmental monitor - sensor unit which sends the collected data to the VisioNize sense gateway router using a wireless connection
- VisioNize sense temperature sensor - external temperature sensor for ULT freezers which is connected to the VisioNize sense environmental monitor

User enabled devices

User enabled devices are devices which are not network-enabled and which cannot be connected actively to the software. You have the option to add these devices by entering and managing their device data manually.

You can use VisioNize sense to monitor certain parameters of user enabled temperature control devices.

3.3 Further information and product demonstration

You will find further detailed information on all products of the VisioNize Lab Suite as well as a product demonstration on the website www.eppendorf.com/visionize.

4 Prerequisites

This chapter is intended for the system administrator.

All of the prerequisites stated in this chapter must be fulfilled to use the software in compliance with its intended use.

4.1 System requirements

4.1.1 Supported web browsers

• Google Chrome, latest version

4.2 Network requirements

4.2.1 Required network components

• DNS server
• NTP server

Use an automated NTP time server protocol to ensure smooth data transfer between your laboratory devices and the software.

4.2.2 Firewall settings

Define the following exception to allow your laboratory devices to communicate with the cloud-based VisioNize Lab Suite services.

URL	Interface	Log
*.eppendorf.com	443 TCP	MQTT via web sockets

4.3 Environmental conditions

Find out if and how your lab devices are compatible with the software on the website www.eppendorf.com/visionize-lab-suite-knowledge-base.

Refer to the website www.eppendorf.com/visionize-lab-suite-knowledge-base to find out whether your Eppendorf devices require a service upgrade (device software and/or hardware). Contact your local Eppendorf representative for further assistance.

VisioNize touch enabled devices

Make sure that VisioNize touch enabled devices are located close to active network connection ports. Use an Ethernet cable to connect the devices to your local network.

VisioNize box enabled devices

Make sure there is an active network connection port close to the VisioNize box. A standard USB data cable is required for connecting the devices to the VisioNize box. Use an Ethernet cable to connect the VisioNize box to your local network.

VisioNize sense enabled devices

Make sure there is an active network connection port close to the VisioNize sense gateway router. To ensure good signal transmission quality, make sure that the distance between your VisioNize sense gateway router and each of the connected VisioNize sense environmental monitor does not exceed 10 m. Note that concrete walls and other structural obstacles can affect the strength of the signal between the VisioNize sense gateway router and the VisioNize sense environmental monitor.

5 Subscription

5.1 Subscription service

1. Access the website www.eppendorf.com/visionize-subscription.

2. If you do not yet have a user account at myEppendorf, please register now.

3. If you already have a user account at myEppendorf, please use your credentials to log in.

4. Select *Industry Customer* or *Academic Customer*.

    > You can cancel your subscription at any time. Until the end of the subscription period you will maintain full access to the VisioNize Lab Suite and all your device data. If you do not cancel the subscription, it will be automatically renewed for one year.

5. Choose a subscription package:
    *   VisioNize Lab Suite Essentials, or
    *   VisioNize Lab Suite Sample Safety+

    > For a detailed description of the subscription packages, please visit the website www.eppendorf.com/visionize.

6. Select the number of device licenses in the desired subscription package.

    > – You need one device license for each laboratory device that you want to connect.
    > – Manually added devices, such as pipettes or microscopes, do not require a device license. You can manage an unlimited number of such devices.
    > – You may require additional hardware like the VisioNize box or VisioNize sense to connect some devices. This hardware must be ordered separately.
    > – You do not need a device license for a VisioNize box itself, but for those devices which are connected via the VisioNize box.
    > – For VisioNize sense, you need a device license for each connected VisioNize sense environmental monitor sensor unit.

7. Click on *Go to Checkout*.

    An overview of your selection is displayed.

8. Click on *Go to Checkout*.

    This opens a form for entering your invoicing data.

9. Fill out the form.

    > When entering your contact e-mail address, only use lower-case letters.

10. Click on *Continue*.

11. To finalize the purchase of your subscription, click on *Confirm purchase*.

    You will receive a welcome e-mail from VisioNize Lab Suite to the e-mail address you have registered. This e-mail has a validity of 24 hours and contains a unique and personalized VisioNize Lab Suite link and log-in information.

6   Getting started

6.1   Initial log-in

Prerequisites
 • You have purchased a subscription and received a welcome e-mail from VisioNize.

1. Open the welcome e-mail.

2. Click on the VisioNize Lab Suite link.

    VisioNize Lab Suite will open in your standard web browser.

    ⓘ We recommend to bookmark the VisioNize Lab Suite link in your standard web browser.

3. Enter your e-mail address in lower-case letters only.

4. Enter your user name.

5. Enter your password.

    Your password must consist of at least 8 characters and must contain the following:

    • at least one capital letter (A – Z)
    • at least one lower-case letter (A – Z)
    • at least one number (0 – 9)
    • at least one special character

6. Re-enter your password.

7. Click *Set Password* to confirm your password.

    You can now log in to the VisioNize Lab Suite.

6.2   Log-in

Prerequisites
 • You have created a password.

1. Click on the VisioNize Lab Suite link.

2. Enter your e-mail address and your password.

3. Click on *Login*.

    The VisioNize Lab Suite-home screen opens.

    ⓘ You have the option to reset your password, if you have forgotten your password.

6.3 Home screen

The home screen shows all the applications you have subscribed to as buttons. For further information on the different applications, please refer to ⬲ *Chapter 8 "Applications" on page 37*.

> ℹ️ The layout of the home screen may vary depending on the subscription package and the role of the user who has logged in.
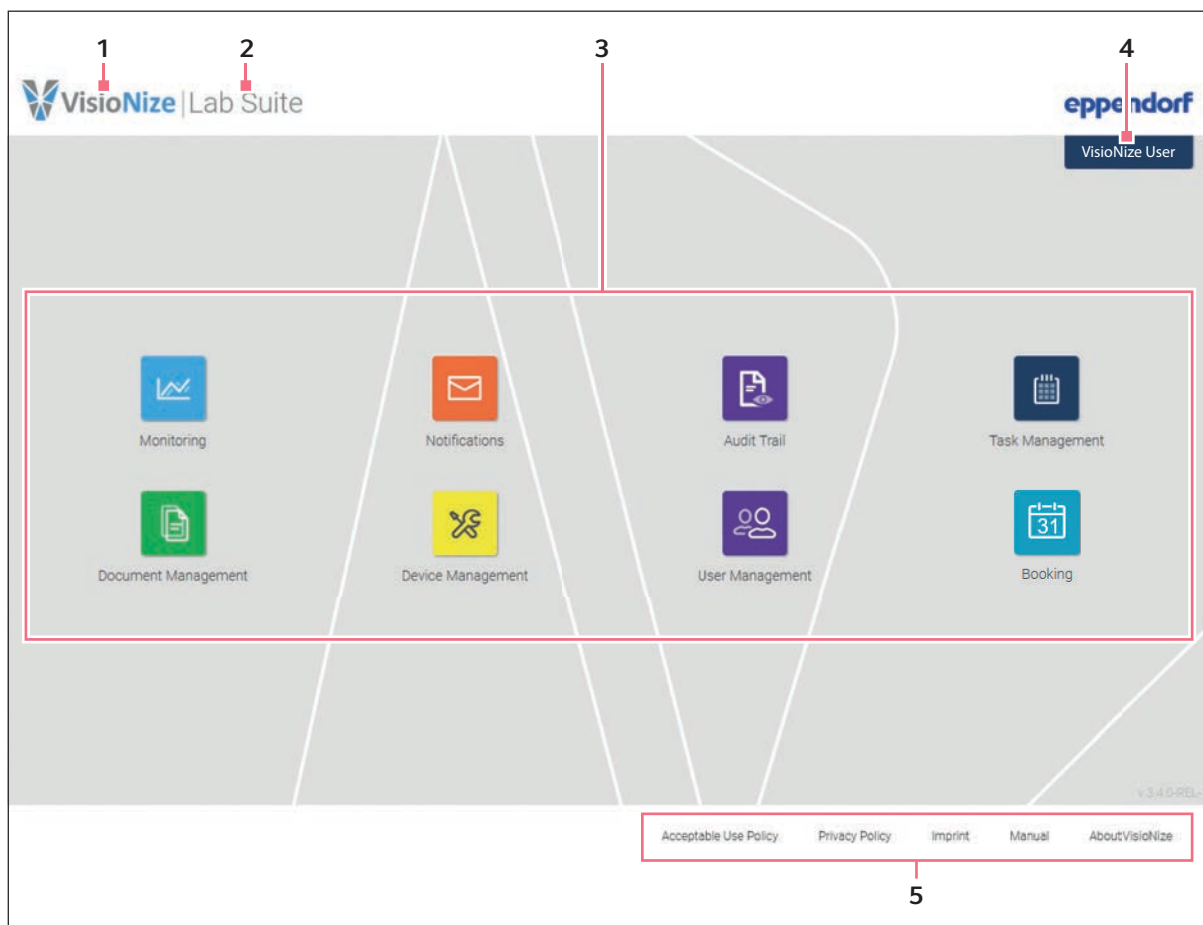
Fig. 6-1: Home screen

1	Home	4	User menu
2	Currently selected application	5	Additional information
3	Applications		

Home

This button is used to return to the home screen when you have accessed an application.

Currently selected application

This indicates which application you have currently accessed.

Applications

The overview shows the applications of your subscription package.

User menu

🠖	Log out
My User Profile	Open a user account
Privacy	Manage data protection settings
Change Password	Change password

6.4 User account

Name	Name
Phone number	Phone number
E-mail	E-mail address
Role	User role (see ⮎ *Chapter 8.1 "User Management" on page 37*)

6.5 Logging out

1. Click on your user name in the top right corner.

2. Click on the "Logout" button.

   The logout prompt opens.

   🛈 You will be logged out automatically if you have been inactive for more than 60 minutes.

7 Installation

This chapter is intended for system administrators.

Follow also the instructions in the Safety chapter of the operating manuals of all devices which you would like to connect.

Please refer to the website www.eppendorf.com/visionize-lab-suite-knowledge-base/ to find out if and how your laboratory device is supported by the software.

Refer to the website www.eppendorf.com/visionize-lab-suite-knowledge-base/ to find out whether your Eppendorf devices require a service upgrade (device software and/or hardware). Contact your local Eppendorf representative for further assistance.

7.1 Configuring VisioNize touch enabled devices

Please observe ↳ *"VisioNize touch enabled devices" on page 11*.

Prerequisites
- The requirements stated in ↳ *Chapter 4 "Prerequisites" on page 12* are met.
- The Eppendorf device that you want to connect is ready for operation.
- The most current version of the device software is installed on the Eppendorf device.
- You are logged in to the VisioNize Lab Suite as an administrator.

1. Use a standard Ethernet cable to connect the device with your local network.

2. Check whether the device is connected to the Internet and the VisioNize Lab Suite cloud servers by tapping on *Menu>Contacts & Supports>Diagnostics>Check Cloud Connectivity Prerequisites* on the device's touch screen.

   As soon as the device is connected to the Internet and the VisioNize Lab Suite cloud servers the top menu ribbon of the touch screen will display a cloud symbol.

   > ℹ If the cloud symbol is crossed out although all prerequisites are fulfilled and an Internet connection has been established, please contact your local Eppendorf representative.

3. Click on *Device Management* in the VisioNize Lab Suite.

4. Click on *Add Device +*.

5. Click on *A VisioNize Touch Enabled Device*.

6. Enter the serial number of the device which you want to connect.

   > ℹ You will find the serial number on the device's name plate on the rear of the device.

   The *Next Step* button is enabled.

7. Click on *Next Step*.

8. To send a registration request for the device, click on *Submit*.

> 🛈 You must send an individual registration request for each VisioNize touch enabled device that you want to register. This request can only be accepted or rejected by an administrator. If you have entered the wrong serial number, the registration request cannot be accepted.

The registration request is displayed in the *Requests* tab in the top left corner.

9. Click on the *Requests* tab.

10. Select the device from the list of registration requests.

11. Click on *Accept Device* to accept the registration request.

> 🛈 The device data are only documented after the registration request was accepted successfully.

The device is added to the device list in the *Device* tab.

The device is added to the device list of the *Monitoring* service.

7.2 VisioNize box

Please consider the information under ⇲ *"VisioNize box enabled devices" on page 11*.
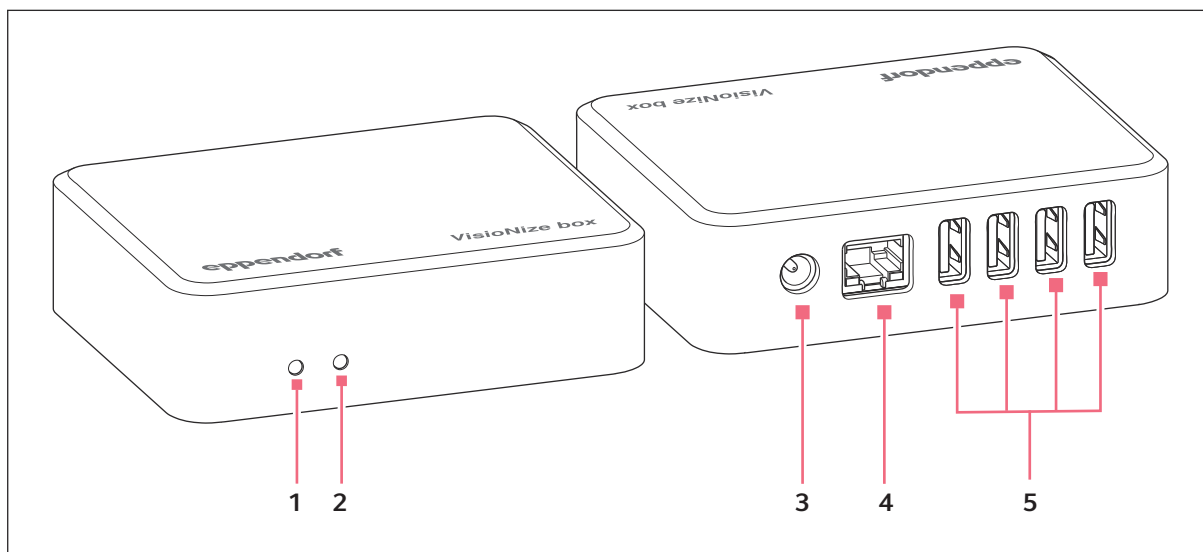
Fig. 7-1: VisioNize box

1	Power LED	4	Ethernet port
2	Status LED	5	USB-A ports
3	Port for mains power supply		

7.2.1 Setting up the VisioNize box

Prerequisites
- The requirements stated in ↪ *Chapter 4 "Prerequisites" on page 12* are met.
- The Eppendorf device that you want to connect is ready for operation.
- The most current version of the device software is installed on the Eppendorf device.
- You are logged in to the VisioNize Lab Suite as an administrator.

1. Use the AC adapter block provided to connect the VisioNize box to the mains power supply.

2. Use a standard Ethernet cable to connect the VisioNize box with your local network.

   ℹ️ You will find the serial number and the MAC address on the name plate on the rear of the VisioNize box.

3. Check whether the VisioNize box is connected to the internet and the VisioNize Lab Suite cloud servers by inserting a standard USB flash drive into one of the 4 USB-A ports.

4. Wait for 10 seconds.

5. Remove the USB flash drive.

   The system will automatically save a log file with all network and connectivity information.

6. Open the log file on a personal computer.

   The log file will show whether the VisioNize box is connected to the internet and the VisioNize Lab Suite cloud servers or not.

   ℹ️ If the device was not able to connect, check the network configurations.

7. Click on *Device Management* in the VisioNize Lab Suite.

8. Click on *Add Device +*.

9. Click on *VisioNize Box Or VisioNize Sense Gateway Router*.

10. Enter the serial number of the VisioNize box.

    ℹ️ You will find the serial number and the MAC address on the name plate on the rear of the VisioNize box.

    The *Next Step* button is enabled.

11. Click on *Next Step*.

12. To send a registration request for the device, click on *Submit*.

    ℹ️ You must send an individual registration request for each VisioNize box that you want to register. This request can only be accepted or rejected by an administrator.

    The registration request is displayed in the *Requests* tab in the top left corner.

13. Click on the *Requests* tab.

14. Select VisioNize box from the device list.

15. Click on *Accept Device* to accept the registration request.

> The VisioNize box is added to the device list in the *Device* tab.

7.2.2 Configuring the VisioNize box

The VisioNize box has its own web interface which is used in a similar way to that of a WLAN router. You can use this interface to change the general information and network settings and to manage the connected laboratory devices.

Prerequisites
- The requirements stated in ♦ *Chapter 4 "Prerequisites" on page 12* are met.
- The VisioNize box is connected to the mains/power line and to the Internet.
- There is a personal computer or a mobile device with Internet access in the same network as the VisioNize box.

1. Open the web browser on the personal computer or the mobile device with Internet access.

2. To access the VisioNize box web interface, enter the serial number or IP address of the VisioNize box in the address bar of the web browser using the following pattern:

   Serial number
   - https://epDevice<serial number_VisioNize_box>/login
     Example: http://epDevice1006AB900001/login

   IP address
   - https://<IP address_VisioNize_box>/login
     Example: http://192.168.1.74/login

   A dialog window opens.

3. Enter the password `Eppendorf`.

   The web interface opens.

4. If necessary, customize the settings of the interface. You can find the recommended settings in the following table.

Dashboard	Overview of all connected and available devices.
Settings>General	There is the option to rename the VisioNize box to make it easier to identify the device within your IT network.
Settings>General>Date & Time	Overview of the time zone settings of the VisioNize box and the web browser used. We recommend synchronizing the time zones of your end device with those of the VisioNize box to ensure that the data captured from the connected devices is processed correctly in the VisioNize Lab Suite. To do this, select *Save browser time to device*.

Settings>General>Password	We recommend setting a personal password for the VisioNize box to restrict access.
Settings>General>Factory settings	To reset the VisioNize box to the factory settings, select *Reset factory settings*. All settings entered manually will be lost.

7.2.3 Updating the VisioNize box

To ensure the optimal performance of the VisioNize box, it is necessary to keep the device software version of the VisioNize box up to date at all times.

The default setting for the updating process of the device software version is via OTA. For this process, the new device software versions are provided via the VisioNize cloud server and the connected devices can be updated using the *Device Management*.

ℹ️ You will find the current device software version of the VisioNize box in the *Device Management* service or in the web interface under *Info>System information*.

ℹ️ While rebooting the VisioNize box the device will not capture any data of the connected devices.

ℹ️ If the VisioNize box is reset to its default factory settings when rebooted, use the web interface to readjust the settings as needed.

ℹ️ You have the option to define whether the device software version should be updated via OTA or manually by making the corresponding selection under *Settings>Firmware update>Automatic update*. When selecting *Auto*, the update will be executed via OTA and thus via the VisioNize Lab Suite. When selecting *Manual*, you will have to start the update process manually via the web interface of the VisioNize box.

Updating via OTA

Prerequisites
- The VisioNize box is connected to the mains/power line and to the Internet.
- You are logged in to the VisioNize Lab Suite as an administrator.
- The *Device Management* is open.
- A new device software version is available. This is indicated by a green symbol next to the device name in the device list.

1. In the *Device* tab, click on the VisioNize box which you want to update in the device list.

2. Click on *Schedule Device Update* in the lower menu ribbon.

3. If you want to start the update process at a later time point, select a date and enter the time you wish the update to start.

4. To start the update process immediately, select *Update Now*.

5. Click on *Confirm*.

   During the update process, the status LED is lit in orange.

   The VisioNize box will reboot once or several times.

   The status LED will flash in green once the new device software version has been installed success-
   fully.

   The status LED will turn blue again after the update process is completed.

Manual update

If it is not possible to update the device software version via OTA, you have the option to start the update
process manually.

Prerequisites
  • The VisioNize box is connected to the mains/power line and to the Internet.
  • You are logged in to the VisioNize Lab Suite as an administrator.
  • The *Device Management* is open.
  • A new device software version is available. This is indicated by a green symbol next to the device
    name in the device list.

1. Download the most current device software version from the website
   www.eppendorf.com/service-support/knowledge-base/software-downloads/.

   The download will contain a ZIP file.

2. Unpack the Zip file to an empty USB flash drive (FAT32 format).

3. Insert the USB stick into one of the 4 USB-A ports of the VisioNize box.

   The update process starts automatically.

4. If the update is not started automatically, click on *Settings>Fimware update* in the web interface.

5. Click on *Install Firmware*.

   During the update process, the status LED is lit in orange.

   The VisioNize box will reboot once or several times.

   The status LED will flash in green once the new device software version has been installed success-
   fully.

   The status LED will turn blue again after the update process is completed.

6. Remove the USB flash drive.

7.2.4   Connecting devices to the VisioNize box

A standard USB cable is used to connect Eppendorf devices to the VisioNize box. Please refer to the web-
site www.eppendorf.com/visionize-lab-suite-knowledge-base/ for further installation-specific information
for the various devices.

Prerequisites
- The VisioNize box is configured.
- The most current device software version is installed on the VisioNize box.
- The Eppendorf device that you want to connect is ready for operation.
- The most current version of the device software is installed on the Eppendorf device.
- You are logged in to the VisioNize Lab Suite as an administrator.
- The *Device Management* is open.

1. Use a standard USB cable to connect the device to the VisioNize box.

    The device is added to the device list in the *Device* tab.

2. If the device list does not show the device, open the VisioNize box web interface.

    > *Dashboard>Selected devices* shows the registered devices. You have the option to register
    > 4 devices at the same time, any further connected devices will be listed under *Available devices*.
    > If you have already registered 4 devices, you will first have to deregister one device from the
    > *Selected devices* before you can register a new one.

3. Click on *Selected devices*.

4. Click on - *Deselect* next to the device you wish to deregister.

    This device is moved to the *Available devices* tab.

    The device is added to the *Device Management* service and appears in the device list in the *Device* tab.

7.2.5   Deregistering a device from the VisioNize box

Prerequisites
- You are logged in to the VisioNize Lab Suite as an administrator.
- The *Device Management* is open.

1. Switch off the device you wish to deregister or disconnect it from the Internet.

    > If the device is not switched off or disconnected before deregistering it, it will be reconnected
    > automatically and added to the device list.

2. Click on the *Device* tab.

3. Select the device you wish to deregister from the device list.

4. Click on *De-Register*.

    This device is deregistered and moved to the *Archive* tab.

7.2.6 Deregistering a device from the web interface of the VisioNize box

Prerequisites
• The VisioNize box web interface is open.

1. Click on *Dashboard>Selected devices*.

    The interface will show an overview of all registered devices.

2. Click on - *Deselect* next to the device you wish to deregister.

    This device is moved to the *Available devices* tab.

    In the *Device Management* service, the device is tagged with the status *Not Connected*.

7.3 VisioNize sense

Please consider the information under ⭾ *"VisioNize sense enabled devices" on page 11*.

7.3.1 Setting up the VisioNize sense gateway router

A VisioNize sense gateway router can connect to up to 50 VisioNize sense environmental monitor sensor units at the same time.
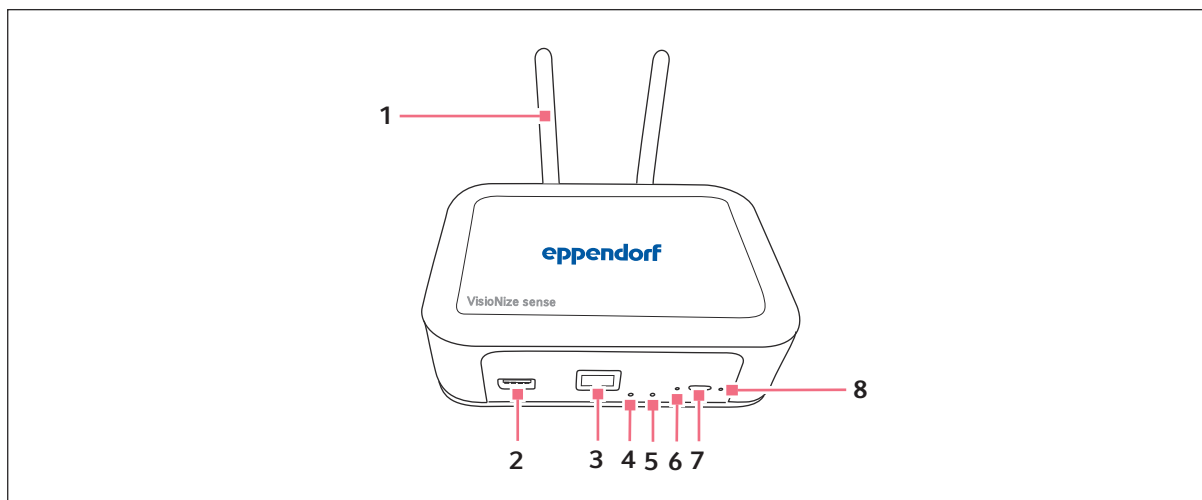
Fig. 7-2:   VisioNize sense gateway router

1	Antenna	5	Reset button
2	USB-A port	6	Status LED
3	Ethernet port	7	USB-C port for mains power supply
4	Function button	8	Power LED

Prerequisites
- The requirements stated in ↻ *Chapter 4 "Prerequisites" on page 12* are met.
- You are logged in to the VisioNize Lab Suite as an administrator.

1. Screw the two antennas into the threaded connection on the rear of the VisioNize sense gateway router.

2. Align the antennas in vertical direction. The 2 antennas should not touch each other.

3. Use the AC adapter block provided to connect the VisioNize sense gateway router to the mains power supply.

4. Use a standard Ethernet cable to connect the VisioNize sense gateway router with your local network.

   > You will find the serial number and the MAC address on the name plate on the rear of the VisioNize sense gateway router.

5. Check whether the VisioNize sense gateway router is connected to the internet and the VisioNize Lab Suite cloud servers by inserting a standard USB flash drive into the USB-A port.

6. Wait for 10 seconds.

7. Remove the USB flash drive.

   The system will automatically save a log file with all network and connectivity information.

8. Open the log file on a personal computer.

   The log file will show whether the VisioNize sense gateway router is connected to the internet and the VisioNize Lab Suite cloud servers or not.

   > If the device was not able to connect, check the network configurations.

9. Click on *Device Management* in the VisioNize Lab Suite.

10. Click on *Add Device +*.

11. Click on *VisioNize Box Or VisioNize Sense Gateway Router*.

12. Enter the VisioNize sense gateway router's serial number.

   > You will find the serial number and the MAC address on the name plate on the rear of the VisioNize sense gateway router.

   The *Next Step* button is enabled.

13. Click on *Next Step*.

14. To send a registration request for the device, click on *Submit*.

   > You must send an individual registration request for each VisioNize sense gateway router that you want to register. This request can only be accepted or rejected by an administrator.

   The registration request is displayed in the *Requests* tab in the top left corner.

15. Click on the *Requests* tab.

16. Select the VisioNize sense gateway router from the device list.

17. Click on *Accept Device* to accept the registration request.

   The VisioNize sense gateway router is added to the device list in the *Device* tab.

7.3.2 Configuring the VisioNize sense gateway router

The VisioNize sense gateway router has its own web interface which is used in a similar way to that of a WLAN router. You can use this interface to change the general information and network settings and to manage the connected sensor units.

Prerequisites
- The requirements stated in ⮎ *Chapter 4 "Prerequisites" on page 12* are met.
- The VisioNize sense gateway router is connected to the mains/power line and to the Internet.
- There is a personal computer or a mobile device with Internet access in the same network as the VisioNize sense gateway router.

1. Open the web browser on the personal computer or the mobile device with Internet access.

2. To access the VisioNize sense gateway router web interface, enter the serial number or IP address of the VisioNize sense gateway router in the address bar of the web browser using the following pattern:

   Serial number
   - https://epDevice<serial number_VisioNize_sense_gateway_router>/login
     Example: http://epDevice1006AB900001/login

   IP address
   - https://<IP address_VisioNize_sense_gateway_router>/login
     Example: http://192.168.1.74/login

   A dialog window opens.

3. Enter the password `Eppendorf`.

   The web interface opens.

4. If necessary, customize the settings of the interface. You can find the recommended settings in the following table.

Dashboard	Overview of all connected and available devices.
Settings>General	There is the option to rename the VisioNize sense gateway router to make it easier to identify the device within your IT network.
Settings>General>Date & Time	Overview of the time zone settings of the VisioNize sense gateway router and the web browser used. We recommend synchronizing the time zones of your end device with those of the VisioNize sense gateway router to ensure that the data captured from the connected devices is processed correctly in the VisioNize Lab Suite. To do this, select *Save browser time to device*.
Settings>General>Password	We recommend setting a personal password for the VisioNize sense gateway router to restrict access.
Settings>General>Factory settings	To reset the VisioNize sense gateway router to the factory settings, select *Reset factory settings*. All settings entered manually will be lost.

7.3.3   Updating the VisioNize sense gateway router

To ensure the optimal performance of the VisioNize sense gateway router, it is necessary to keep the device software version of the VisioNize sense gateway router up to date at all times.

The default setting for the updating process of the device software version is via OTA. For this process, the new device software versions are provided via the VisioNize cloud server and the connected devices can be updated using the *Device Management* service.

ⓘ   You will find the current device software version of the VisioNize sense gateway router in the *Device Management* service or in the web interface under *Info>System information*.

ⓘ   While rebooting the VisioNize sense gateway router the device will not capture any data of the connected sensor units.

ⓘ   If the VisioNize sense gateway router is reset to its default factory settings when rebooted, use the web interface to readjust the settings as needed.

> You have the option to define whether the device software version should be updated via OTA or manually by making the corresponding selection under *Settings>Firmware update*. When selecting *Auto*, the update will be executed via OTA and thus via the VisioNize Lab Suite. When selecting *Manual*, you will have to start the update process manually via the web interface of the VisioNize sense gateway router.

Updating via OTA

Prerequisites
- The VisioNize sense gateway router is connected to the mains/power line and to the Internet.
- You are logged in to the VisioNize Lab Suite as an administrator.
- The *Device Management* is open.
- A new device software version is available. This is indicated by a green symbol next to the device name in the device list.

1. In the *Device* tab, click on the VisioNize sense gateway router which you want to update in the device list.

2. Click on *Schedule Device Update* in the lower menu ribbon.

3. If you want to start the update process at a later time point, select a date and enter the time you wish the update to start.

4. To start the update process immediately, select *Update Now*.

5. Click on *Confirm*.

   During the update process, the status LED is lit in orange.

   The VisioNize sense gateway router will reboot once or several times.

   The status LED will light up in green once the new device software version has been installed successfully and the update process is completed.

Manual update

If it is not possible to update the device software version via OTA, you have the option to start the update process manually.

Prerequisites
- The VisioNize sense gateway router is connected to the mains/power line and to the Internet.
- You are logged in to the VisioNize Lab Suite as an administrator.
- The *Device Management* is open.
- A new device software version is available. This is indicated by a green symbol next to the device name in the device list.

1. Download the most current device software version from the website www.eppendorf.com/service-support/knowledge-base/software-downloads/.

   The download will contain a ZIP file.

2. Unpack the Zip file to an empty USB stick (FAT32 format).

3. Insert the USB stick into the USB-A port of the VisioNize sense gateway router.

   If a valid device software version is detected on the USB stick, the status LED will flash in orange.

   The update process starts automatically.

4. If the update is not started automatically, click on *Settings>Fimware update* in the web interface.

5. Click on *Install Firmware*.

   During the update process, the status LED is lit in orange.

   The VisioNize sense gateway router will reboot once or several times.

   The status LED will light up in green once the new device software version has been installed success-fully and the update process is completed.

6. Remove the USB stick.

7.3.4 Setting up the VisioNize sense environmental monitor

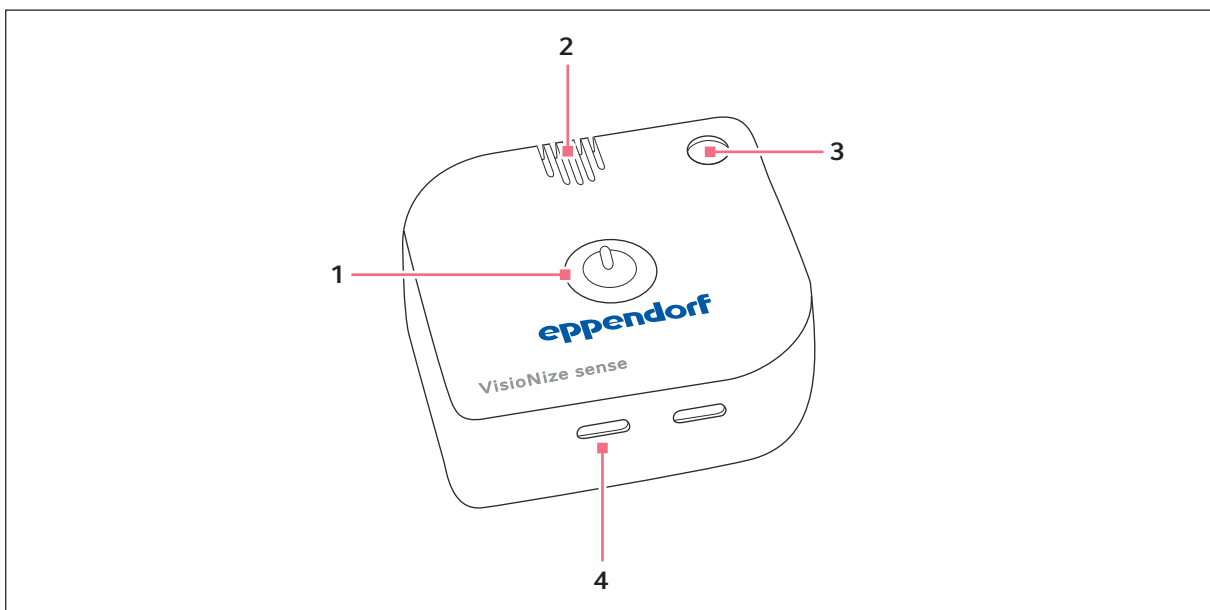
Fig. 7-3: VisioNize sense environmental monitor

1	On/Off button	3	Status LED
2	Ventilation slots for capturing the measured values	4	USB-C port for charging and connecting external sensors

Prerequisites
- The requirements stated in ♤ *Chapter 4 "Prerequisites" on page 12* are met.
- The VisioNize sense gateway router is set up and within range.

- The VisioNize sense environmental monitor is fully charged or connected to the mains/power line. For further information, please refer to the VisioNize sense installation instructions.
- You are logged in to the VisioNize Lab Suite as an administrator.

1. To connect the VisioNize sense environmental monitor to the VisioNize sense gateway router, press the On/Off button of the VisioNize sense environmental monitor once.

   While the device is trying to establish the connection, the status LED will flash in blue.

   The status LED will flash in green once the device is connected.

   The VisioNize sense environmental monitor is automatically added to the *Device Management* service and appears in the device list in the *Device* tab.

2. Position the VisioNize sense environmental monitor in the place you wish to use it. You can also use the adhesive surface at the rear of the device to attach it.

7.3.5   Assigning the VisioNize sense environmental monitor to a particular device

User enabled devices

Prerequisites
- The VisioNize sense environmental monitor is configured.
- The device you wish to monitor is registered in the *Device Management* service.
- The *Monitoring* is open.

1. Click on the *Device* tab.

2. Click on *Add VisioNize User Enabled Device* + in the bottom left corner.

3. Select the device you wish to monitor with the VisioNize sense environmental monitor from the device list.

   A dialog window opens which shows all the sensor units that are connected with their respective parameters.

4. Select the parameter of the sensor unit that you wish to monitor.

   > In the parameters, a VisioNize sense temperature sensor is either displayed as *Temperature (Right) (ID7)* or as *Temperature (Left) (ID7)* depending on the USB-C port of the VisioNize sense environmental monitor it is plugged into.

5. Click on *Confirm*.

   The device is added to the device list in the *Device* tab and displayed with a sensor symbol. The figure next to the sensor symbol indicates the number of parameters that are monitored.

   It is possible to adapt the selected parameters in the *Sensor Association* tab.

Network-enabled devices

Prerequisites
- The VisioNize sense environmental monitor is configured.
- The device you wish to monitor is registered in the *Device Management* service.
- The *Monitoring* is open.

1. Click on the *Device* tab.

2. Select the device you wish to monitor with the VisioNize sense environmental monitor from the device list.

3. Click on the *Sensor Association* tab.

4. Select the parameter of the sensor unit that you wish to monitor.

   > In the parameters, a VisioNize sense temperature sensor is either displayed as *Temperature (Right) (ID7)* or as *Temperature (Left) (ID7)* depending on the USB-C port of the VisioNize sense environmental monitor it is plugged into.

5. Click on *Save Changes*.

   The device is added to the device list in the *Device* tab and displayed with a sensor symbol. The figure next to the sensor symbol indicates the number of parameters that are monitored.

   It is possible to adapt the selected parameters in the *Sensor Association* tab.

7.3.6 Setting up the VisioNize sense temperature sensor

Prerequisites
- The VisioNize sense environmental monitor to which the VisioNize sense temperature sensor is to be connected is set up.

1. Connect the VisioNize sense temperature sensor to the VisioNize sense environmental monitor via a USB-C port.

   > The USB-C ports allow connecting up to 2 external temperature sensors in parallel.

2. Identify the location at which you wish to install an external temperature sensor in your laboratory device.

   > The operating manual of your laboratory device provides information on whether the device is equipped with a preinstalled port for external temperature sensors or whether the external temperature sensor needs to be installed through the door.

3. Install the VisioNize sense temperature sensor in the laboratory device.

4. Attach the VisioNize sense environmental monitor via the adhesive surface to the laboratory device.

   > If you remove and reconnect external temperature sensors, previously set alarm settings may be lost. Check the alarm settings if you reconnect removed external temperature sensors to the VisioNize sense environmental monitor.

7.3.7 Assigning the VisioNize sense temperature sensor to a particular device

Prerequisites
- The VisioNize sense temperature sensor is configured.
- The device you wish to monitor is registered in the *Device Management* service.
- The *Monitoring* is open.

1. Click on the *Device* tab.

2. Click on *Add VisioNize User Enabled Device* + in the bottom left corner.

3. Select the device you wish to monitor with the VisioNize sense temperature sensor from the device list.

   A dialog window opens which shows all the VisioNize sense environmental monitor sensor units that are connected with their respective parameters.

4. Select the parameter *Temperature (Right) (ID7)* or *Temperature (Left) (ID7)* depending on which USB-C port the VisioNize sense temperature sensor is plugged into.

5. Click on *Confirm*.

7.4 User enabled devices

Please consider the information under ↳ *"User enabled devices" on page 11*.

7.4.1 Registering user enabled devices

For information on how to register pipettes, please refer to ↳ *Chapter 7.4.2 "Registering pipettes" on page 35*.

Prerequisites
- You are logged in to the VisioNize Lab Suite as an administrator.
- The *Device Management* is open.

1. Click on *Add Device* +.

2. Click on *Non-Eppendorf Device Or Eppendorf Device Without Network Connection*.

3. The dialog window *Add Device* opens.

4. Enter the requested data into the input boxes.

   > For devices for which Eppendorf provides a QR code or a Datamatrix code you can use these codes to automatically fill out the registration form. To do this, click on *Scan Eppendorf QR- Or Datamatrix Code* and use a barcode scanner or the camera of your mobile device to scan the code.

5. Click on *Next Step*.

6. Enter a unique name for the device into the input box *Nickname*.

7. Also enter a registration number to facilitate the identification of the device.

8. Click on *Next Step*.

9. Use the respective input boxes to add additional information on the device location.

10. Click on *Next Step*.

11. Use the respective input boxes to enter an address for the device.

12. If you want to register further user enabled devices, select *Add another*.

13. Click on *Confirm* to confirm all entries.

    The device is added to the device list in the *Device* tab.

    If you have selected *Add another*, repeat the process starting with ⮏ *Step 4 on page 34*.

7.4.2   Registering pipettes

Prerequisites
  • You are logged in to the VisioNize Lab Suite as an administrator.
  • The *Device Management* is open.

1. Click on *Add Device +*.

2. Click on *Pipette*.

    The dialog window *Add Device* opens.

3. Enter the requested data into the input boxes. Some of the requested information can be selected from a drop-down menu.

    > For pipettes for which Eppendorf provides a QR code or a Datamatrix code you can use these codes to automatically fill out the registration form. To do this, click on *Scan Eppendorf QR- Or Datamatrix Code* and use a barcode scanner or the camera of your mobile device to scan the code.

    > If you enter the serial number for an Eppendorf pipette, some of the entry boxes in the subsequent dialog window will be filled out automatically.

4. Click on *Next Step*.

5. Enter the requested data into the input boxes. Some of the requested information can be selected from a drop-down menu.

6. Click on *Next Step*.

7. Use the respective input boxes to add additional information on the location of the pipette.

8. Click on *Next Step*.

9. Use the respective input boxes to enter an address for the pipette.

10. If you want to register further pipettes, select *Add another*.

11. Click on *Confirm* to confirm all entries.

    The pipette is added to the device list in the *Device* tab.

    If you have selected *Add another*, repeat the process starting with ⮏ *Step 3 on page 35*.

7.4.3 Bulk import of user enabled devices

Prerequisites
- You are logged in to the VisioNize Lab Suite as an administrator.
- The *Device Management* is open.

1. Click on the bulk import button in the bottom left corner.

2. Click on *Pipettes Template.csv* or *Other Devices Template.csv* to download a bulk import template.

3. Save the template to your personal computer.

4. Open the software program Microsoft Excel.

5. Open an empty Excel spreadsheet.

6. In the *Data* tab, click on *From text/CSV*.

7. Select the template that you have downloaded.

8. Click on *Import*.

   A file preview is opened.

9. Click on *Load*.

10. Complete all mandatory fields.

11. Save the file to your personal computer in the file format CSV.

12. Drag the file into the bulk import window or click on *browse* and select the file.

13. Click on *Upload*.

   The display will show a message stating the number of devices that are imported.

   The imported devices are added to the device list in the *Device* tab.

8 Applications

The home screen shows all the applications you have subscribed to as buttons. For further information, please refer to ↻ *Chapter 6.3 "Home screen" on page 17*.

	Monitoring
	Notifications
	Audit Trail
	Task Management
	Document Management
	Device Management
	User Management
	Booking

8.1 User Management

8.1.1 Description

The User Management is a standard feature of your subscription. This application is used for user management and can only be used by a user with administrator rights (user role Lab Manager).
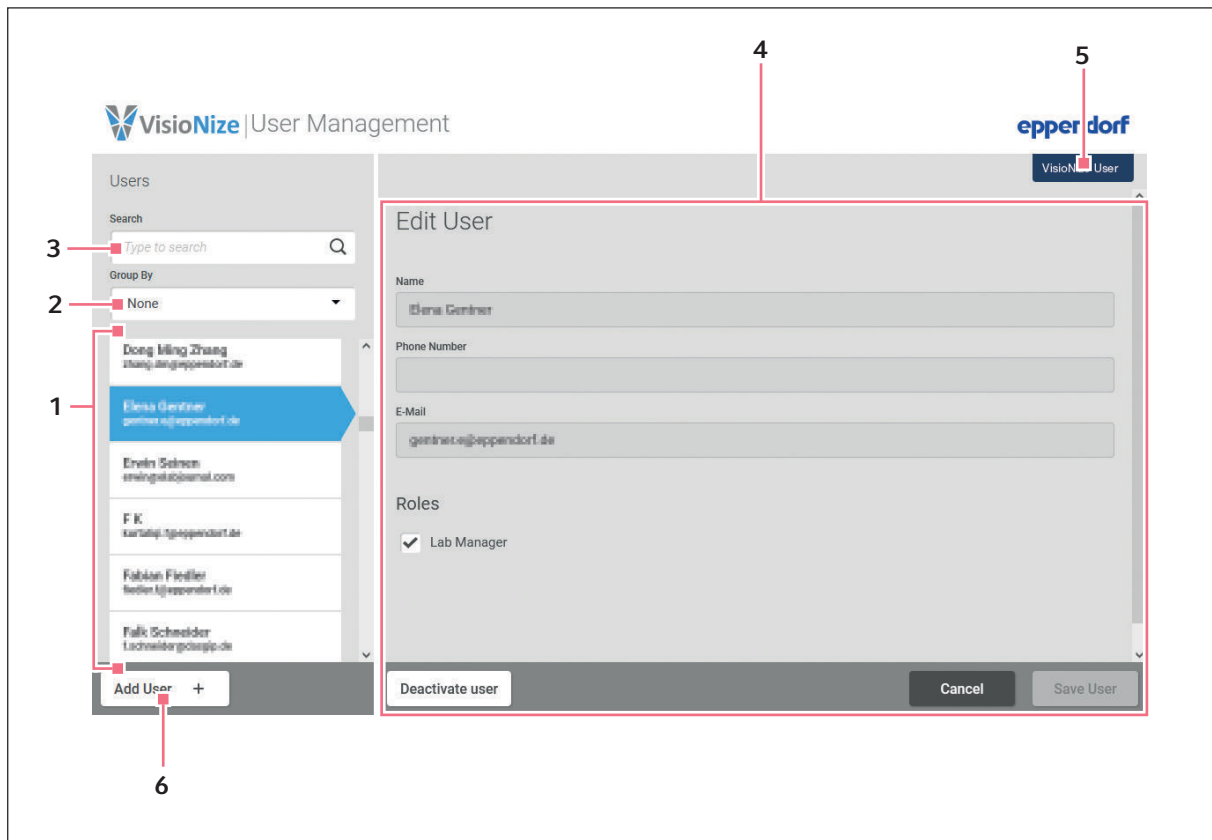
Fig. 8-1:   User Management Main view

1	User list	4	User information
2	Sorting	5	User menu
3	Search field	6	Create a user account

User list

The user list shows all registered users.

Sorting

The users in the user list are grouped in categories and can be sorted using the drop-down menu.

Search field

The search field can be used to search the user accounts for the names and the e-mail address.

User information

Information on the selected user is displayed here.

User menu

In the User menu, you can log off, open your user account, manage the data protection settings and change your password.

8.1.2   Roles and rights

The user account used for subscribing to the VisioNize Lab Suite service will be assigned administrator rights by default. Two user roles are available for you.

Tasks	*Lab Manager* **(Administrator)**	*Standard User*
Creating or deleting user accounts	×	–
Assigning user roles	×	–
Creating registration requests for devices	×	×
Accepting or rejecting registration requests for devices	×	–
Using applications (except User Management)	×	×
Using User Management	×	–
Adding, editing or deleting a booking for another user (Booking)	×	–
Adding, editing or deleting your own booking (Booking)	×	×

8.1.3   Creating a user account

Prerequisites
  • You are logged in as an administrator.
  • The *User Management* is open.

1. Click on *Add User*.

2. In the *E-Mail* edit box in the *New User* window, enter an active e-mail address of the user to be invited.

3. Select a user role under *Roles*.

> If you do not select a role, the user role *Standard User* is automatically assigned to the user account.

4. Click on *Invite User*.

   The new user account is listed in the user list.

   The user receives an e-mail with a request to enter a name, phone number and password.

8.1.4   Deactivating a user account

> The user is not notified about the deactivation of his/her user account. When a user account is deactivated, the user can no longer access the software.

Prerequisites
- You are logged in as an administrator.
- The *User Management* is open.

1. Click on the user account you wish to deactivate.

2. Click on *Deactivate User*.

   The user account is deactivated.

8.1.5   Activating a user account

The user is not notified about the activation of his/her user account.

Prerequisites
- You are logged in as an administrator.
- The *User Management* is open.

1. Click on the user account you wish to activate.

2. Click on *Activate User*.

   The user account is activated.

8.1.6   Editing a user role

Prerequisites
- You are logged in as an administrator.
- The *User Management* is open.

1. From the user list, select a user whose role you wish to edit.

2. Under *Roles* in the *Edit User* window, select a user role.

   If you do not select a role, the user role *Standard User* is automatically assigned to the user account.

3. Click on *Save User*.

   The user role is changed according to your input.

8.2   Device Management

8.2.1   Description

The Device Management is a standard feature of your subscription. You can use this application to register and manage devices.
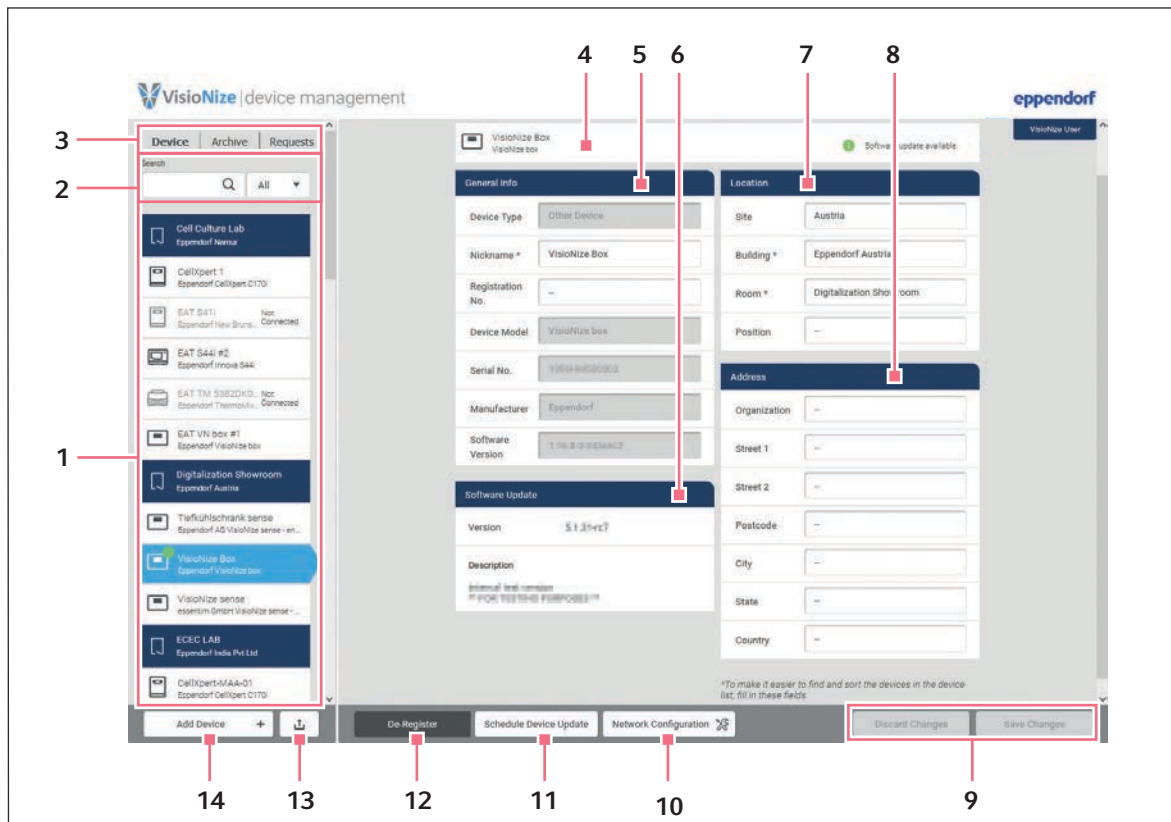
Fig. 8-2:   Device Management

1	Device list	8	Physical address
2	Search field	9	Save/discard the entered value
3	Tabs	10	Change the network settings
4	Device name	11	Start device software update
5	General information	12	Deregister a device
6	Device software update information	13	Bulk import
7	Location information	14	Register a device

Device list

The device list shows all registered devices.

Search field

The search field can be used to search the device lists of the *Device* and *Archive* tabs. You can use the drop-down menu to select additional predefined filters.

Tabs

The *Device* tab shows all the registered devices.

The *Archive* tab shows all the deregistered devices.

The *Requests* tab is used to manage all registration requests. This tab is only displayed for users with administrator rights and only as long as there are pending registration requests.

General information

General information on the selected device from the device list.

Device software update information

The *Software Update* window is only displayed if a device software update is available for the selected device. This window contains the new device software version number and a description.

Location information

Location information on the selected device from the device list.

Physical address

The physical address at which the selected device from the device list is located.

Changing the network settings

This button is only available for VisioNize box and VisioNize sense gateway router. You can use this button to manually change the network settings.

Start device software update

This button can be used to start a device software update available in the service. Whenever there is an update available for a device, this is indicated by a green symbol next to the device name in the device list.

Deregistering a device

This button can be used to deregister a device from the device list. This device is moved to the *Archive* tab.

Bulk import

The bulk import function can be used to simultaneously import several user enabled devices.

8.2.2   Symbols

Symbol	Description
	Cyclers
	Incubators

Symbol	Description
	Mixers and temperature control systems
	Pipettes
	Shakers
	Freezers
	VisioNize box, VisioNize sense gateway router or user enabled devices without a specific device type
	VisioNize sense environmental monitor
	VisioNize sense temperature sensor
	Centrifuges

8.2.3 Registering a device

Information on how to register a VisioNize touch enabled device can be found under ⮑ *Chapter 7.1 "Configuring VisioNize touch enabled devices" on page 19*.

Information on how to register a VisioNize box can be found under ⮑ *Chapter 7.2.1 "Setting up the VisioNize box" on page 21*.

Information on how to register a VisioNize sense gateway router can be found under ⮑ *Chapter 7.3.1 "Setting up the VisioNize sense gateway router" on page 26*.

Information on how to register a User enabeld device can be found under ⮑ *Chapter 7.4.1 "Registering user enabled devices" on page 34*.

8.2.4 Adding device information

Prerequisites
- You are logged in as an administrator.
- The *Device Management* is open.
- The device is connected and featured in the device list in the *Device* tab.

1. Click on the *Device* tab.

2. Select the device for which you want to add information from the device list.

3. Enter the requested data into the input boxes.

    For a VisioNize sense environmental monitor the *Nickname* is limited to 16 characters.

4. Click on *Save Changes* to confirm the data you have entered.

    The devices are sorted by the device-specific information in the device list.

    The devices are sorted by the device-specific information in the *Monitoring* service.

8.2.5   Deregistering a device

Information on how to deregister a device connected to a VisioNize box can be found under
Ⴇ *Chapter 7.2.5 "Deregistering a device from the VisioNize box" on page 25*.

Prerequisites
  • You are logged in as an administrator.
  • The *Device Management* is open.

1. Select the device you wish to deregister from the device list.

2. Click on *De-Register*.

    This device is moved to the *Archive* tab.

8.2.6   Reregistering a device

You can reregister currently not registered user enabled devices without creating a registration request by
clicking the *Re-Register* button. For all other devices, refer to Ⴇ *Chapter 8.2.3 "Registering a device"
on page 43*.

Prerequisites
  • You are logged in as an administrator.
  • The *Device Management* is open.

1. Click on the *Archive* tab.

2. Select the device or the pipette you wish to reregister from the device list.

3. Click on *Re-Register*.

    A dialog window opens.

4. Click on *Re-Register*.

    The device or the pipette is moved to the *Device* tab.

8.2.7   Updating the device software

Information on how to update the device software of the VisioNize box can be found under Ⴇ *Chapter
7.2.3 "Updating the VisioNize box" on page 23*.

Information on how to update the device software of the VisioNize sense gateway router can be found under ↻ *Chapter 7.3.3 "Updating the VisioNize sense gateway router" on page 29*.

Prerequisites
- You are logged in as an administrator.
- The *Device Management* is open.
- A green symbol is shown next to the device name of the VisioNize touch enabled device in the device list.
- The device is connected to the mains/power line and to the Internet.

1. Click on the *Device* tab.

2. Select the device you wish to update from the device list.

3. Click on *Schedule Device Update*.

4. To start the update process immediately, click on *Update Now*.

5. If you want to start the update process at a later time point, select a date and a time.

   > ℹ️ Consider the user settings on the device. Not all users are allowed to carry out device software updates.

6. Confirm the device software update on the device.

   The status of the update process is shown on the device.

8.3   Monitoring

8.3.1   Description

The Monitoring is a standard feature of your subscription. You can use this application to monitor your connected devices. Current device parameters such as temperature, rotation and run time are displayed in real time and visualized in a chart with configurable viewing options. All device-specific events and user interactions are time stamped and displayed in an event list.

The VisioNize Lab Suite Essentials subscription package provides access to the relevant device data for 7 days. The VisioNize Lab Suite Sample Safety+ subscription package allows data access for 1 month.
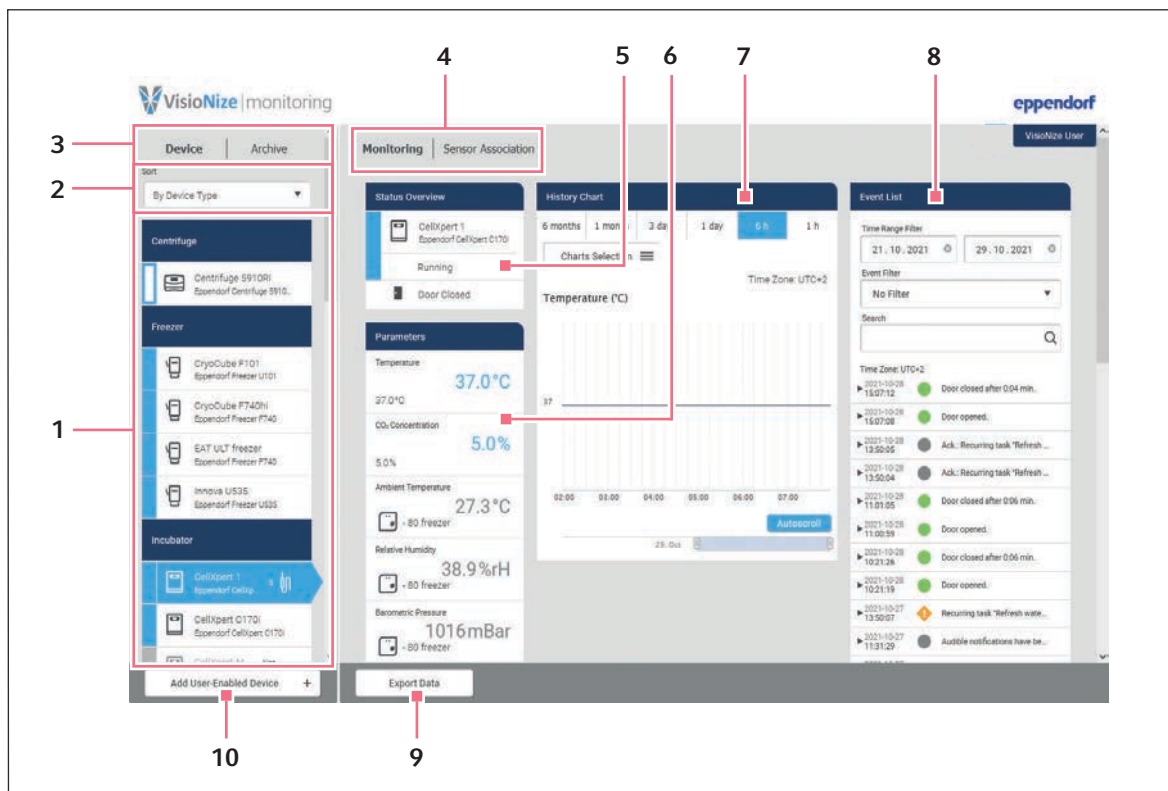
Fig. 8-3:   Monitoring

1	Device list	6	Parameters
2	Sorting	7	History chart
3	Tabs *Device* and *Archive*	8	Event list
4	Tabs *Monitoring* and *Sensor Association*	9	Export data
5	Status indicator	10	Monitor a user-enabled device

Device list

The device list shows all devices to be monitored.

Sorting

The devices in the device list are grouped in categories and can be sorted using the drop-down menu.

Tabs *Device* and *Archive*

The *Device* tab contains the device list.

The *Archive* tab shows all the deregistered devices.

Tabs *Monitoring* and *Sensor Association*

The *Monitoring* tab displays the device information and events of the currently selected device.

The *Sensor Association* tab shows all connected VisioNize sense environmental monitor sensor units. In the parameters, a VisioNize sense temperature sensor is either displayed as *Temperature (Right) (ID7)* or as *Temperature (Left) (ID7)* depending on the USB-C port of the VisioNize sense environmental monitor it is plugged into.

Status display

Detailed information on the device type, device name and current status with color-coded status symbol for the selected device.

Parameters

Display of the device parameters for the selected device in real time.

History chart

All device data that are captured are visualized in the history chart.
- You can use the time tabs to change the displayed period. The VisioNize Lab Suite Essentials subscription package provides access to the relevant device data for 7 days. The VisioNize Lab Suite Sample Safety+ subscription package allows data access for 1 month.
- The *Charts Selection* allows you to display different parameters in separate history charts.
- For displaying parameter information for a specific time point within a chart, hover the mouse pointer above the period in question.
- You can open a zoom window within a chart by selecting a specific area of the chart.
- You can export the history chart data and save them in an Excel file.
- The *Autoscroll* button is used to automatically adjust the chart to the selected period. Below the button, it is possible to manually adjust the chart.

Event list

Overview of all device-specific events and user interactions with time stamp. The overview can be filtered by period and type of event. The search field is used to search for a particular entry.

Data export

You can export various data from a selected period of time and save them in an Excel file.

Monitoring a user enabled device

The *Add VisioNize User Enabled Device* + button is used to assign a sensor to a user enabled device. It is possible to adapt the parameters of the assigned sensors in the *Sensor Association* tab.

Color code

Nickname Device Model	In operation	

			Program completed
	回	Nickname Device Model	
	回	Nickname Device Model	Not in operation
	回	Nickname Device Model	Paused or stopped
	回	Nickname Device Model	Preparing or updating
	回	Nickname Device Model	Not available, not connected or switched off
	回	Nickname Device Model	Device failure or system error

8.3.2 Assigning a sensor to a device

Information on how to assign the VisioNize sense environmental monitor to a particular device can be found under ↳ *Chapter 7.3.5 "Assigning the VisioNize sense environmental monitor to a particular device" on page 32*.

Information on how to assign the VisioNize sense temperature sensor to a particular device can be found under ↳ *Chapter 7.3.7 "Assigning the VisioNize sense temperature sensor to a particular device" on page 34*.

8.3.3 Setting the set values for the parameters

For VisioNize touch enabled and VisioNize box enabled devices, the set values must be configured directly on the device. These are displayed in the *Parameters* window and the history chart.

> For information on how to configure the set values on your device, please refer to the device's operating manual.

8.3.4 Setting warning limits and alarm limits

It is possible to set alarm limits for individual parameters for temperature control devices that are monitored by VisioNize sense.

> For VisioNize touch enabled and VisioNize box enabled devices, warning and alarm limits must be configured directly on the device. For information on how to set warning and alarm limits on your device, please refer to the device's operating manual.

Prerequisites
• A VisioNize sense environmental monitor or a VisioNize sense temperature sensor is assigned to the device.
• The *Monitoring* is open.

1. Click on the *Device* tab.

2. Select the device for which you want to define the warning and alarm limits from the device list.

3. Click on a parameter in the window *Parameters*.

   This opens a dialog window.

4. Select *Alarm Enabled*.

5. Enter the required warning and alarm limits.

6. Enter the required delay for the alarm.

7. Click on *Save Changes*.

   When warning and alarm limits are exceeded, the system will produce an entry in the event list.

   If you have configured notifications for this device in the *Notifications* service, you will also be notified via e-mail and/or SMS, depending on your settings.

8.3.5   Data export

Prerequisites
• The *Monitoring* is open.

1. Click on the device in the device list whose date you wish to export.

2. Click on *Export Data*.

   This opens the *Export data report* window.

3. Select the desired time period.

4. Select the parameters you wish to export.

   The file format XLSX is preselected by default.

5. Click on *Start Export*.

   ⓘ   Depending on the amount of data, the export process can take several minutes.

   One Excel file is generated for each of the selected parameters.

   Once the export is completed, the system will display a corresponding message.

8.4   Notifications

8.4.1   Description

The Notifications is a standard feature of your subscription. You can use this application to manage customizable e-mail notifications for alarms, warnings and reports on devices.

To receive the notifications additionally via SMS, subscribe to the VisioNize Lab Suite Sample Safety+ subscription package.

For an additional time-based and response-based alarm escalation regime to several recipients and recipient groups, please subscribe to the VisioNize Lab Suite Sample Safety+ subscription package.
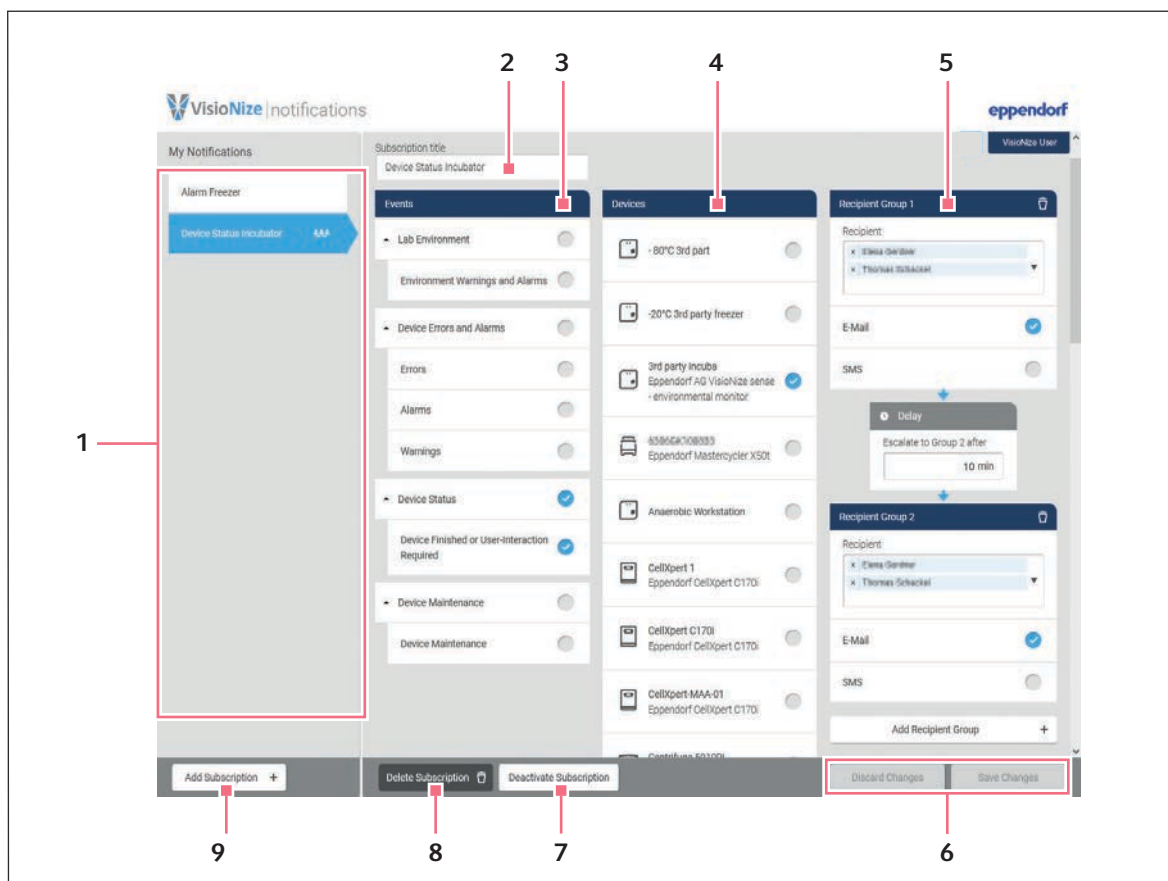
Fig. 8-4:   Notifications

1	List of notifications	6	Save/discard the entered value
2	Title of the notification	7	Disable the notification
3	Event categories	8	Delete the notification
4	Device list	9	Add a notification
5	Recipient's details and alarm escalation		

List of notifications

A list of all notifications that were configured for the user who is currently logged in.

Title of the notification

An individual title can be defined for each notification.

Event categories

List of drop-down-menus for each category of device-specific events which can trigger a notification.
- The *Lab Environment* category will trigger notifications relating to changes in the laboratory environment. These parameters can only be captured by VisioNize touch enabled devices and VisioNize sense.
- The *Device Errors and Alarms* category will trigger notifications for device-specific warnings, alarms and errors.
- The *Device Status* category will trigger notifications for changes in the device status such as the end of a particular procedure or a user intervention that is required.
- The *Device Maintenance* category will trigger notifications according to the maintenance status requesting of the device, e.g yearly maintenance due.

Device list

The device list shows all devices for which notifications can be assigned. All devices that are not connected or available are grayed out and tagged as *Not Connected*.

Recipient's details and alarm escalation

All recipients must have their own user account. The default settings are the current user and a notification via e-mail.

The *Delay* window allows the entry of a delay in minutes which indicates how long the system will wait until a second group of recipients will be notified in the *Recipient Group 2* window if none of the users from the first group of recipients has responded to the notification. The delay should be more than 0. We recommend a delay of at least 10 minutes.

If you have subscribed to the VisioNize Lab Suite Sample Safety+ subscription package, you can define alarm escalation schemes and use an additional information channel via SMS.

8.4.2   Setting up notifications

Prerequisites
- All recipients have a user account.
- For a notification via SMS, the VisioNize Lab Suite Sample Safety+ subscription package is subscribed. Every user who wants to be notified via SMS has specified a telephone number in their user account.
- The *Notifications* is open.

1. Click on *Add Subscription +*.

2. Enter a title for the notification.

3. Select one or multiple event categories.

4. Assign the notification to one or multiple devices.

5. Enter the names of the users who are supposed to receive the notification.

6. Choose the type of notification (e-mail, SMS or both).

> 🛈 Only users who have specified a telephone number in their account can receive a notification via SMS.

7. Click on *Save*.

The notification is enabled and displayed in the list of notifications.

8.4.3 Setting up alarm escalations

Prerequisites
- The VisioNize Lab Suite Sample Safety+ subscription package is subscribed.
- All recipients have a user account.
- For a notification via SMS, the VisioNize Lab Suite Sample Safety+ subscription package is subscribed. Every user who wants to be notified via SMS has specified a telephone number in their user account.
- The *Notifications* is open.

1. Click on *Add Subscription +*.

2. Enter a title for the notification.

3. Select one or multiple event categories.

4. Assign the notification to one or multiple devices.

5. Enter the names of the users who are supposed to receive the notification.

6. Choose the type of notification (e-mail, SMS or both).

7. To add additional groups of recipients, click on *Add Recipient Group +*.

8. Enter the names of the users who are supposed to receive the notification.

9. Choose the type of notification (e-mail, SMS or both).

> 🛈 Only users who have specified a telephone number in their account can receive a notification via SMS.

10. Use the window *Delay* to enter a delay in minutes for the time the system will wait until a second group of recipients, will be notified if none of the users from the first group of recipients has responded to the notification.

> 🛈 The time specified in the window *Delay* should be more than 0. We recommend a delay of at least 10 minutes.

11. Click on *Save*.

The notification is enabled and displayed in the list of notifications.

8.4.4 Responding to alarm escalations

Prerequisites
- The VisioNize Lab Suite Sample Safety+ subscription package is subscribed.
- An alarm escalation has been set up.
- An event has triggered a notification.
- You have received a notification.

ⓘ   When an event that corresponds to the configured alarm escalation occurs, the recipients of the first group of recipients will receive a message from VisioNize Lab Suite. This message contains detailed information about the device and the event which has triggered the notification. Furthermore, the message will contain a link which will lead you directly to the Notifications screen.

1. Click on the link in the notification.

   The link will guide you to the Notifications application.

2. If you are not already logged in, please log in now.

3. Click on *Yes* to acknowledge the notification.

   This will stop the escalation of additional notifications. No other recipient will receive a notification.

   In the *Monitoring* service, the event is listed in the event list for the affected device.

   If you have subscribed to the VisioNize Lab Suite Sample Safety+ subscription package, the event is documented in the *Audit Trail*.

4. To reject the notification, click on *No*.

   If all recipients reject the notification, the escalation is stopped.

   If none of the recipients responds to the notification, the system will go through the escalation chain for a total of 3 rounds. After the last round, all recipients will receive a message stating that the notification will be terminated.

   In the *Monitoring* service, the event is listed in the event list for the affected device.

   If you have subscribed to the VisioNize Lab Suite Sample Safety+ subscription package, the event is documented in the *Audit Trail*.

8.4.5 Disabling a notification

Prerequisites
- The *Notifications* is open.

1. Select the notification that you want to disable from the list of notifications.

2. Click on *Deactivate Subscription*.

   The button *Deactivate Subscription* changes to *Activate Subscription*.

   The notification is disabled and tagged with *Deactivated* in the list of notifications.

8.4.6   Deleting a notification

Prerequisites
  • The *Notifications* is open.

1. Select the notification that you want to delete from the list of notifications.

2. Click on *Delete Subscription*.

   This opens a dialog window.

3. To permanently delete the notification click on *Yes*.

   The notification will be removed from the list of notifications.

8.4.7   Enabling a disabled notification

Prerequisites
  • The *Notifications* is open.
  • The list of notifications contains a disabled notification.

1. Select the disabled notification that you want to enable from the list of notifications.

2. Click on *Activate Subscription*.

   The button *Activate Subscription* changes to *Deactivate Subscription*.

   The tag *Deactivated* in the title of the notification in the list of notifications is removed.

8.5   Task Management

The Task Management is a standard feature of all subscription packages. You can use this application to manage all maintenance activities of your connected devices and to assign customizable tasks to your devices.

8.5.1   *Device* tab
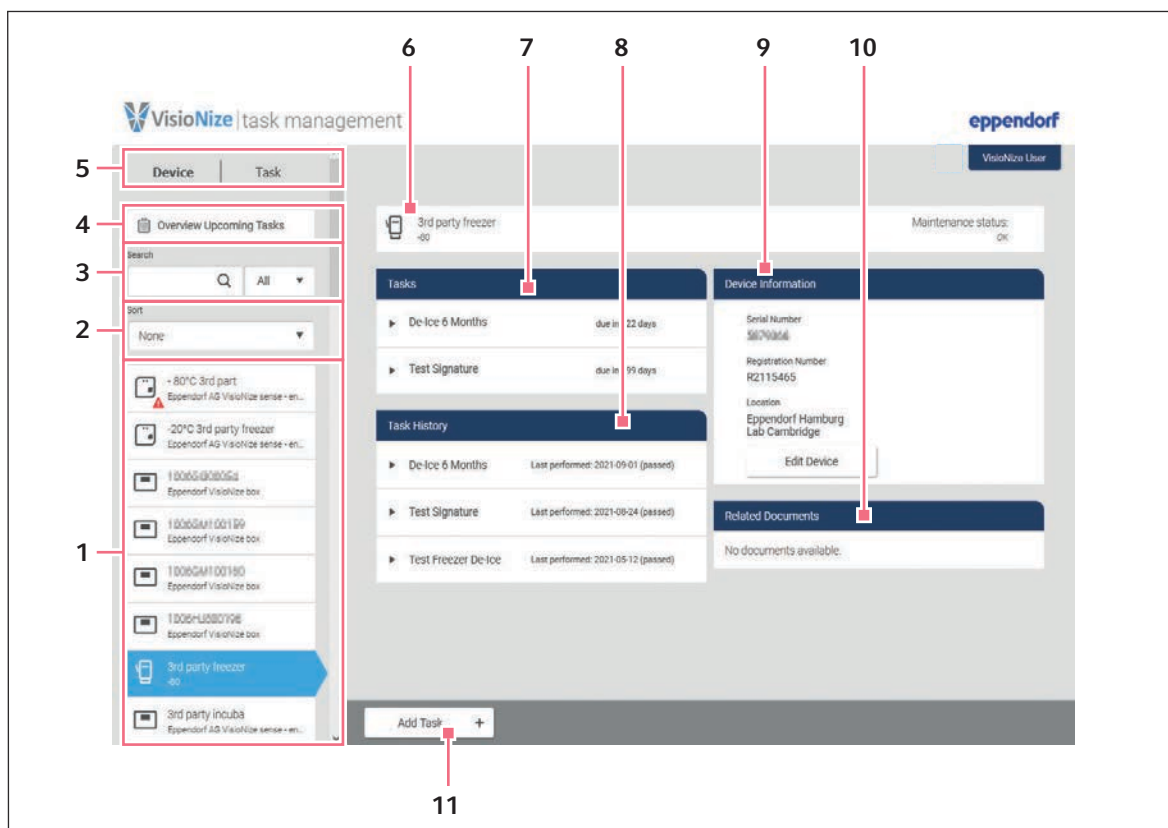
Fig. 8-5:   Task Management tab *Device*

1	Device list	7	Assigned tasks
2	Sorting	8	*Task History*
3	Search field	9	Device information
4	Calendar	10	Related documents
5	Tabs	11	*Add Task +*
6	Selected device		

Device list

The device list shows all registered and activated devices in the *Device Management* service.

Sorting

The devices in the device list are grouped in categories and can be sorted using the drop-down menu.

Search field

The search field can be used to search the device list. You can use the drop-down menu to select additional predefined filters.

Calendar

This button opens a calendar which shows all tasks and their respective due date.

Tabs

The *Device* tab contains the device list.

The *Task* tab contains all tasks. For further information, please refer to ⬙ *Chapter 8.5.2 "Task tab" on page 57*.

Selected device

Name, device type and status of the selected device.

Assigned tasks

Tasks which are assigned to the selected device.

Task History

Tasks which were completed for the selected device.

Device information

Information on the selected device. The *Edit Device* button opens a new tab of the *Device Management* application in the web browser. If required, you can change the device information in this tab.

Related documents

List of all available documents relating to the selected Eppendorf device. Clicking on the listed document types opens a new tab with the Document Management application in the web browser. You can download the document in this tab.

Add Task +

This button opens the *Add Task* window, which you can use to add a new task.

8.5.2 *Task* tab
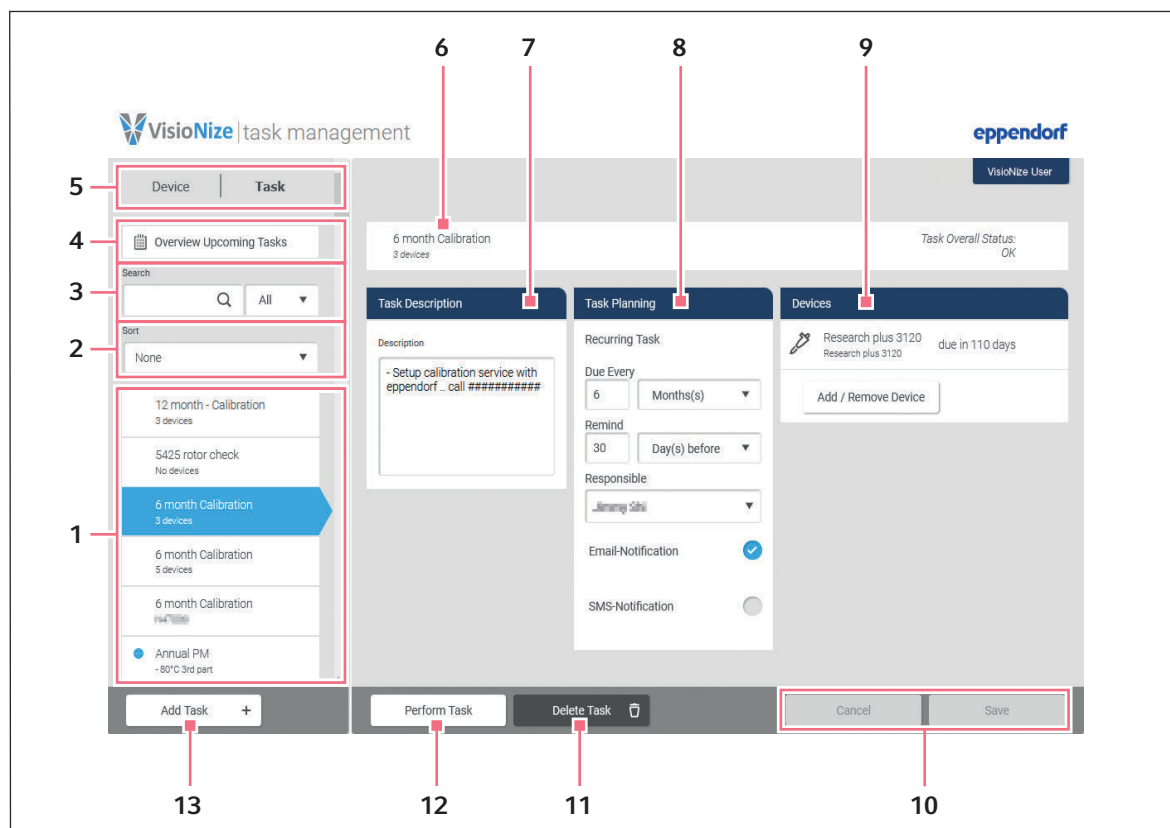
Fig. 8-6:   Task Management tab *Task*

1	Task list	8	*Task Planning*
2	Sorting	9	Assigned devices
3	Search field	10	Save/cancel the entered value
4	Calendar	11	*Delete Task*
5	Tabs	12	*Perform Task*
6	Selected task	13	*Add Task +*
7	Task description		

Task list

The task list displays all tasks.

Sorting

The tasks in the task list are grouped into categories and can be sorted using the drop-down menu.

Search field

The search field can be used to search the task list. You can use the drop-down menu to select additional predefined filters. The search is case sensitive.

Calendar

This button opens a calendar which shows all tasks and their respective due date.

Tabs

The *Task* tab contains the task list.

The *Device* tab contains the device list. For further information, please refer to ↻ *Chapter 8.5.1 "Device tab" on page 55*.

Selected task

Title, number of assigned devices and status of the selected task.

Assigned devices

Overview of all devices which are assigned to the selected task. The *Add / Remove Device* button can be used to delete assigned devices from the task or add additional devices to the task.

Delete Task

The *Delete Task* button can be used to delete tasks. Maintenance tasks for VisioNize touch enabled devices are automatically added and cannot be deleted.

Perform Task

This button opens the *Perform Task* dialog window which can be used to change the status of the selected task. Maintenance tasks for VisioNize touch enabled devices can only be carried out directly on the device. The status is updated automatically after completing the task.

Adding a task

This button opens the *Add Task* dialog window which you can use to add a new task. Maintenance tasks for VisioNize touch enabled devices are added automatically.

8.5.3 Adding a task

Existing maintenance tasks of a VisioNize touch enabled device are automatically added in the *Task Management* service and can only be edited directly on the device. You can assign a person to the task who shall be responsible for performing the task and select the type of notification.

Prerequisites
- The *Task Management* is open.

1. Click on the *Task* tab.

2. Click on *Add Task +*.

   The dialog window *Add Task* opens.

3. Enter a title for the task.

4. If required, enter a description of the task.

5. Click on *Continue*.

6. In the input box *First due date*, enter the date on which the task must be performed for the first time.

7. Use the drop-down menu *Responsible* to select the person to whom the task will be assigned.

   > 🛈 The drop-down menu will contain all user accounts.

8. Use the slider *Recurring Task* to determine whether this is a non-recurring task or a recurring task.

9. For recurring tasks, define the corresponding time interval.

10. Define, whether and when the responsible person shall receive a notification with a reminder.

11. Choose whether the responsible person shall be notified via e-mail and/or SMS.

    > 🛈 To receive the notifications via SMS, subscribe to the VisioNize Lab Suite Sample Safety+ sub-scription package. For further information, please refer to ↻ *Chapter 8.4 "Notifications" on page 49*.

12. Click on *Continue*.

13. Select one or multiple devices which you want to assign to the task.

14. If you want to search for a particular device, you can use the search field and the predefined filters in the drop-down menu. Please keep in mind that the search is case sensitive.

15. Click on *Confirm*.

    The task will be listed according to the entries in the task list.

8.5.4 Editing existing tasks

> 🛈 Existing maintenance tasks of a VisioNize touch enabled device are automatically added in the *Task Management* service and can only be edited directly on the device. You can assign a person to the task who shall be responsible for performing the task and select the type of notification.

Using the *Device* tab

Prerequisites
- The *Task Management* is open.

1. Click on the *Device* tab.

2. Select a device from the device list.

3. In the *Tasks* window, click on a task which you want to edit.

4. Click on *Edit Task*.

   The screen changes to the *Task* tab.

5. Change the entries according to your wishes.

6. Click on *Save*.

   The task is changed according to your input.

Using the *Task* tab

Prerequisites
- The *Task Management* is open.

1. Click on the *Task* tab.

2. Select a task from the task list.

3. In the *Tasks* window, click on a task which you want to edit.

4. Change the entries according to your wishes.

5. Click on *Save*.

   The task is changed according to your input.

8.5.5 Performing a task

Using the *Device* tab

Prerequisites
- The *Task Management* is open.

1. Click on the *Device* tab.

2. Select the device from the device list for which you want to carry out the assigned task.

3. In the *Tasks* window, click on a task which you want to edit.

4. Click on *Perform Task*.

   🛈 The button *Perform Task* is disabled if the task must be carried out directly on the device.

   The *Perform Tasks* window opens.

5. Select the device for which you want to carry out the assigned task.

6. To select all devices at the same time, click on *Select all*.

7. To change the status of the task, click on *Move To* ….

   This opens a drop-down menu under the button.

8. Now, select a status from the drop-down menu.

   The device will be moved to *In Progress* or *Complete* depending on the status.

   When the task is set to *Complete*, the symbol next to the device name will disappear.

9. Click on *Confirm*.

   The executed task will now be displayed with a time stamp in the window *Task History* of the device.

   If you have subscribed to the VisioNize Lab Suite Sample Safety+ subscription package, the event is documented in the *Audit Trail* with a time stamp.

Using the *Task* tab

Prerequisites
  • The *Task Management* is open.
  • The execution of a task is due.

1. Click on the *Task* tab.

2. Select the task you wish to carry out from the task list.

3. Click on *Perform Task*.

   The button *Perform Task* is hidden if the task must be carried out directly on the device.

   The *Perform Tasks* window opens.

4. Select the device for which you want to carry out the assigned task.

5. To select all devices at the same time, click on *Select all*.

6. To change the status of the task, click on *Move To* ….

   This opens a drop-down menu under the button.

7. Now, select a status from the drop-down menu.

   The device will be moved to *In Progress* or *Complete* depending on the status.

   When the task is set to *Complete*, the symbol next to the device name will disappear.

8. Click on *Confirm*.

   The executed task will now be displayed with a time stamp in the *Device* tab in the window *Task History* of the device.

   If you have subscribed to the VisioNize Lab Suite Sample Safety+ subscription package, the event is documented in the *Audit Trail* with a time stamp.

8.5.6   Deleting a task

ℹ️ Existing maintenance tasks of a VisioNize touch enabled device are automatically added in the *Task Management* service and can only be deleted directly on the device.

Prerequisites
• The *Task Management* is open.

1. Click on the *Task* tab.

2. Select the task you wish to delete from the task list.

3. Click on *Delete Task*.

ℹ️ The button *Delete Task* is hidden if the task must be deleted directly on the device.

This opens a dialog window.

4. To permanently delete the task click on *Yes*.

The task is deleted from the task list.

If you have subscribed to the VisioNize Lab Suite Sample Safety+ subscription package, the event is documented in the *Audit Trail* with a time stamp.

8.6   Booking

8.6.1   Description

The Booking is a standard feature of all subscription packages. You can use this application to plan and manage the usage of your devices. You can assign a responsible person and a time period to the devices.
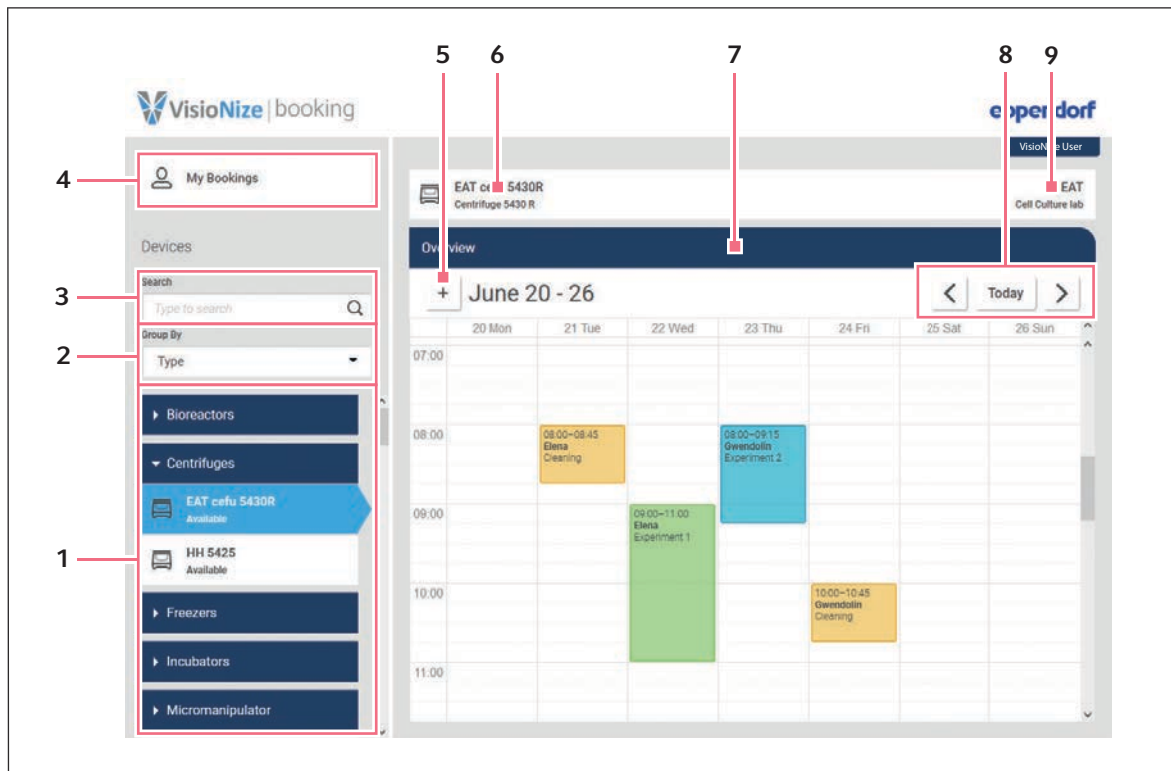
Fig. 8-7:   Booking

1	Device list	6	Selected device
2	Sorting	7	Calendar
3	Search field	8	Calendar navigation
4	Open calendar	9	Device location
5	Add booking		

Device list

The device list shows all devices listed in the *Monitoring*.

Sorting

The devices in the device list are grouped in categories and can be sorted using the drop-down menu.

Search field

The search field can be used to search the device list.

Open calendar

This button opens the calendar. If no device is selected in the device list, all bookings assigned to the currently logged-in user are displayed.

Calendar

The calendar shows a weekly overview. The current time is represented by a red line. If a device is selected in the device list, all bookings for this device are displayed. If no device is selected in the device list, all bookings assigned to the currently logged in user are displayed.

Bookings of the *Normal Use* type assigned to the current user are displayed in green.

Bookings of the *Normal Use* type assigned to another user are displayed in blue.

Bookings of the *Maintenance* type are displayed in orange.

Calendar navigation

Use the arrow keys to navigate through the calendar. The *Today* button is used to go to the current weekly overview.

8.6.2   Adding a booking

An administrator can assign bookings to all users. A user without administrator rights can only assign bookings to herself/himself.

Prerequisites
 • The *Booking* is open.

1. Select the device for which you want to make a booking from the device list.

   The calendar of the device opens.

2. To go to the desired date, use the calendar navigation.

3. In the calendar, click on the desired booking time or on the + symbol next to the month.

   The dialog window *Add Booking* opens.

4. From the *Owner* drop-down menu, select the person for whom you want to book the device.

5. From the *Purpose* drop-down menu, select whether you want to book the device for maintenance or normal use.

6. If necessary, adjust the time period in the *Start* and *End* edit boxes.

   🛈   The selected time period must be in the future.

7. If necessary, enter a title for the booking in the *Title* edit box.

8. If necessary, enter additional information in the *Notes* edit box.

9. Click on *Add Booking*.

   The booking is displayed in the calendar.

8.6.3   Editing a booking

An administrator can edit all bookings. A user without administrator rights can only edit the bookings assigned to herself/himself. For bookings that are in the past, only the *Notes* edit box can be edited.

Prerequisites
- The *Booking* is open.

1. Select the device for which you want to edit the booking from the device list.

   The calendar of the device opens.

2. To go to the desired date, use the calendar navigation.

3. In the calendar, click on the booking you want to edit.

   The dialog window *Edit Booking* opens.

   > Under *My Bookings*, you can view all cross-device bookings assigned to you.

4. Change the entries according to your wishes.

   > In the weekly overview, you can move a booking by drag and drop. You can increase or decrease the time window by dragging the bottom edge of the booking.

5. Click on *Save Booking*.

   The booking is changed according to your input.

8.6.4 Deleting a booking

An administrator can delete all bookings. A user without administrator rights can only delete the bookings assigned to herself/himself.

Prerequisites
- The *Booking* is open.
- The booking is in the future.

1. Select the device for which you want to delete a booking from the device list.

   The calendar of the device opens.

   > Under *My Bookings*, you can view all cross-device bookings assigned to you.

2. To go to the desired date, use the calendar navigation.

3. In the calendar, click on the booking you want to delete.

   The dialog window *Edit Booking* opens.

4. Click on the trash can symbol.

   The booking is deleted from the calendar.

8.7 Audit Trail

Audit Trail is available if you subscribe to the VisioNize Lab Suite Sample Safety+ subscription package. In the Audit Trail application, all device-specific and user-specific events and information are time stamped and documented in a non-editable format.

The VisioNize Lab Suite Sample Safety+ subscription package allows data access for 1 month.
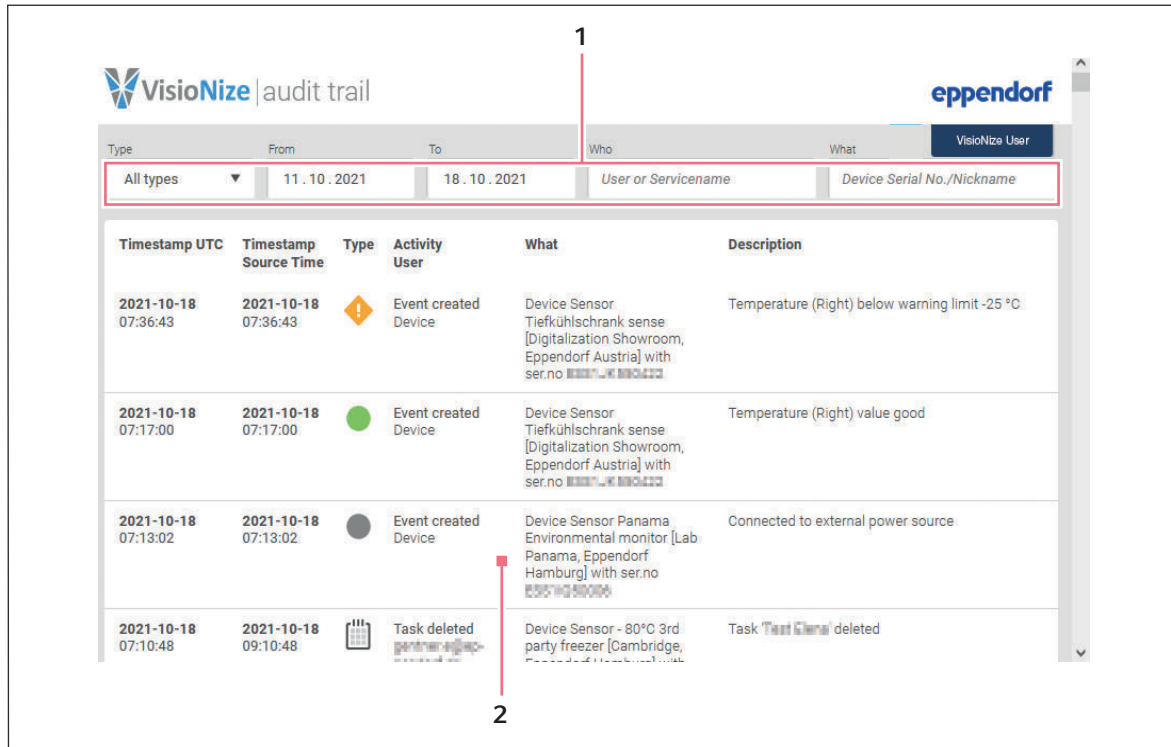

Fig. 8-8:   Audit Trail

1   Filter options   2   Event list

8.7.1   Filtering the event list

Prerequisites
 • The VisioNize Lab Suite Sample Safety+ subscription package is subscribed.
 • The *Audit Trail* is open.

1. Select a type of event from the drop-down menu *Type*.

2. Use the drop-down menus *From* and *To* to select the period for filtering the list.

3. If you want to filter by a particular user account, enter the name of the user account in the input box *Who*. Please keep in mind that the search is case sensitive.

4. If you want to filter by a serial number or a device name, enter the respective information in the input box *What*.

   The event list is filtered according to the values you have entered.

8.8 Document Management

The Document Management is a standard feature of all subscription packages. You can use this application to manage all device-specific documents of your connected Eppendorf devices such as manuals, application notes, or certificates.
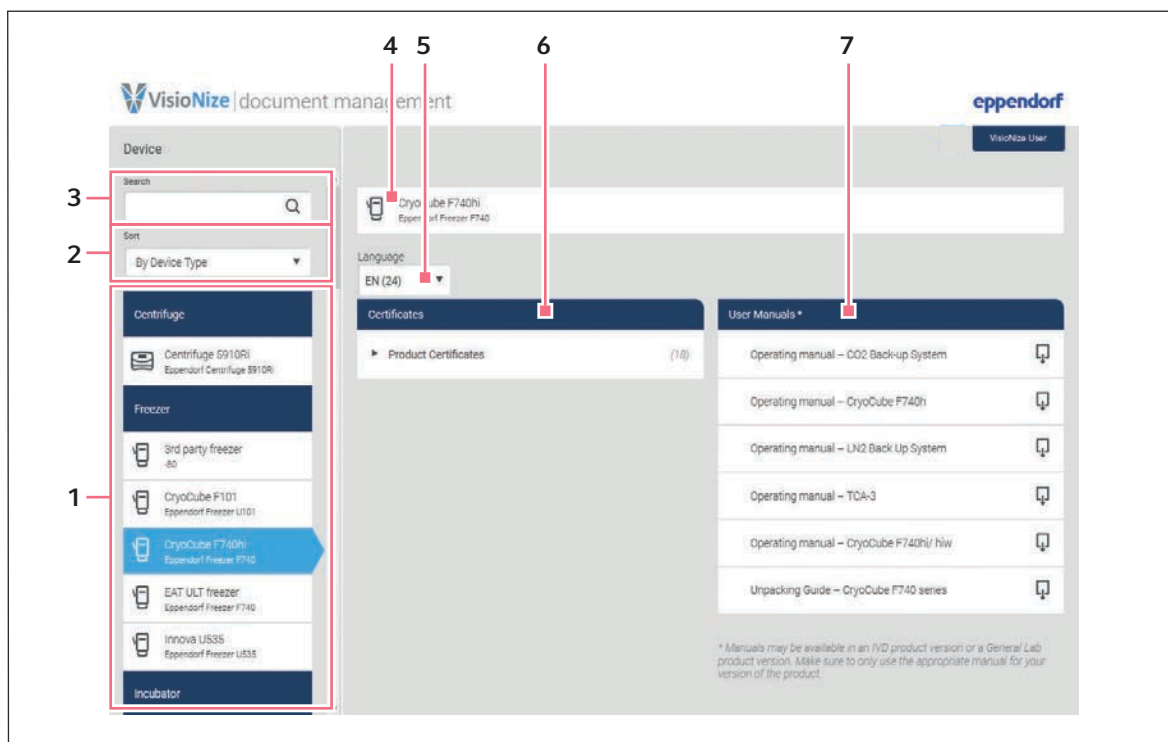
Fig. 8-9: Document Management

1	Device list	5	Language setting
2	Sorting	6	Certificates
3	Search field	7	User Manuals
4	Selected device		

Device list

The device list shows all devices registered in the *Device Management* service.

Sorting

The devices in the device list are grouped in categories and can be sorted using the drop-down menu.

Search field

The search field can be used to search the device list. You can use the drop-down menu to select additional predefined filters.

Certificates

The window *Certificates* shows all available certificates for the selected device. Click the download button next to the certificate name to download a PDF version of the certificate.

User Manuals

The window *User Manuals* shows all available manuals for the selected device. Please remember to use only the manuals for the product version you have purchased. Click the download button next to the name of the manual to download a PDF version of the manual.

9 Troubleshooting

9.1 VisioNize Lab Suite

Problems during log-in

Error description	Cause	Solution
Not received a welcome e-mail after subscription.	The firewall settings for external e-mails prevent receiving the e-mail.	Check your firewall settings and adjust them, if necessary.
	The spam filter settings prevent receiving the e-mail.	Check your spam filter settings and adjust them, if necessary.
	Contact e-mail address is not correct.	Check the e-mail address in the Eppendorf eShop and in your sub-scription package.
Failed to log in for the first time.	The inital log-in to VisioNize Lab Suite was not completed within 24 hours after receiving the welcome e-mail.	Open your welcome e-mail and click on the VisioNize Lab Suite link. Click on *Forgot Password*. Enter your registered e-mail address. Click on *Send recovery email*. Open the e-mail you have received with the subject line "VisioNize Lab Suite – Reset Your Password" Follow the instructions in the e-mail to reset your password.
Log-in failed and the message *Invalid login attempt* is displayed.	The e-mail address was not entered correctly.	Check the e-mail address you have entered and correct it, if necessary.
	Password incorrect.	Check the password you have entered and correct it, if necessary.

Problems during device registration

Error description	Cause	Solution
Device information such as the device type are not automatically populated after entering the serial number.	The serial number entered during the registration process was not correct.	Check the serial number you have entered and correct it, if necessary.
It is not possible to select the device type during the registration process. The *VisioNize Touch Enabled Device*, *An Eppendorf Device*	No device license/s available.	Access the website www.eppendorf.com/visionize-subscription. Log in to the website.

Error description	Cause	Solution
Connectable Via A VisioNize Box Or VisioNize Sense Gateway Router and *VisioNize Box Or VisioNize Sense Gateway Router* buttons are grayed out.	No device license/s available.	Purchase the required device licenses, if necessary.
The *Requests* tab is not displayed in the *Device Management* application.	You are logged in with the user role *Standard User*.	Only the user role *Lab Manager* has administrator rights and has the right to acknowledge or reject registration requests.
The registration request cannot be acknowledged because the *Accept Device* button is grayed out.	The serial number entered during the registration process was not correct.	Check the serial number you have entered and correct it, if necessary.
	The device is not connected to the Internet and the VisioNize Lab Suite cloud servers.	Check whether the device is connected to your local network. Check the firewall settings and adjust them, if necessary.
	No device license/s available.	Access the website www.eppendorf.com/visionize-subscription. Log in to the website. Purchase the required device licenses, if necessary.

Problems in device management

Error description	Cause	Solution
User enabled devices which were registered manually are not automatically listed in the *Monitoring* application.	Only connected network-enabled compatible devices are listed automatically.	Open *Monitoring*. Click on *Add VisioNize User Enabled Device +*. Select the device. Assign a VisioNize sense environmental monitor or a VisioNize sense temperature sensor to the device.
The device is displayed with the status *Not Connected*, even though it is switched on.	The device is not connected to the VisioNize Lab Suite cloud servers.	Check whether the device is connected to your local network and the Internet.

Error description	Cause	Solution
It is not possible to carry out the annual maintenance for a device in the *Notifications* application because the *Perform Task* button is grayed out.	Maintenance tasks for VisioNize touch enabled devices must be executed directly on the device.	Carry out the maintenance task directly on the device.
The history chart for centrifuges in the *Monitoring* application is empty and the current temperature differs from the set value.	Centrifuges do not constantly transmit their data.	The data is only captured and displayed in the history chart when the centrifuges are started.

9.2 VisioNize box

General errors

Error description	Cause	Solution
The status LED turns red.	Internal error.	Restart the VisioNize box. Update the device software. Reset the VisioNize box to its default factory settings in the web interface under *Settings>Reset factory settings*. Contact your local Eppendorf partner.
The VisioNize box is displayed with the status *Not Connected* in the *Device Management* application.	The connection between the VisioNize box and the VisioNize Lab Suite cloud servers was interrupted.	Check the cable connection and correct it, if necessary. Check the firewall settings and adjust them, if necessary. Restart the VisioNize box.

Errors occurring during the registration process

Error description	Cause	Solution
The registration request for a VisioNize box cannot be confirmed.	The VisioNize box is not switched on.	Switch on the VisioNize box.
	The VisioNize box is not connected to your local network or the Internet.	Check the cable connection and your network configuration and correct them, if necessary.
	The VisioNize box requires a device software update.	Open the web interface of the VisioNize box and update the device software using a USB stick.

Error description	Cause	Solution
The registration request for a VisioNize box cannot be confirmed.	The serial number entered during the registration process was not correct.	Check the serial number you have entered and correct it, if necessary.
A VisioNize box enabled device is displayed with the status *Not Connected* in the *Device Management* and *Monitoring* applications.	The device is not switched on.	Switch the device on.
	The device is not connected correctly.	Check the cable connection and correct it, if necessary.
	The firewall settings for your local network prevent the connection of the device.	Check your firewall settings and adjust them, if necessary.
The VisioNize box is not displayed in the *Monitoring* application.	The VisioNize box serves as a hardware hub and is used as a transmission system which enables the software to retrieve the device's data. It is not displayed in the *Monitoring* application.	The VisioNize box is only displayed in the device list of the *Device Management* application.
A VisioNize box enabled device cannot be deregistered.	All devices connected to the VisioNize box are automatically registered. As long as the device stays connected it cannot be deregistered.	Switch off the device and disconnect it from the VisioNize box before deregistering it in the *Device Management* application.
A connected device is not displayed in the VisioNize box web interface.	The VisioNize box does not support this device.	Refer to the website www.eppendorf.com/visionize to check whether the software on the device has the required device software version.
	The device is not connected correctly.	Check the cable connection and correct it, if necessary.
	The device is not displayed in the *Selected devices* tab.	You have the option to register 4 devices at the same time, any further connected devices will be listed under *Available devices*. If you have already registered 4 devices, you will first have to deregister one device from the *Selected devices* before you can register a new one.
A connected VisioNize box enabled device is not displayed in the VisioNize Lab Suite.	Some devices need to be restarted to complete the registration process.	Restart the device and/or the VisioNize box.

Errors occurring during the device software update process

Error description	Cause	Solution
The update via OTA does not start automatically.	The firewall settings for downloads prevent an automatic update.	Check your firewall settings and adjust them, if necessary.
	In the *Device Management* application, there is neither a date and time selected for the update under *Schedule Device Update* nor the option *Update Now*.	Select *Update Now* or define the date for the update.
The update using a USB stick does not start automatically.	The device software version on the USB stick is older than the one on the VisioNize box.	Download the most current device software version from the website www.eppendorf.com/service-support/knowledge-base/software-downloads/.

If you want to install an older device software version, you have to open the web interface of the VisioNize box and install the software manually by selecting *Settings>Firmware Update>Install Firmware*. |
During the update process, the status LED turns from yellow to red.	The update process was not completed.	Restart the update from the VisioNize Lab Suite or restart it manually with a USB stick via the web interface by selecting *Settings>Firmware Update>Install Firmware*.
The VisioNize box does not recognize the USB stick.	The USB stick does not have the required FAT32 format.	Format the USB stick to the FAT32 format and retry.
The VisioNize box does not recognize the device software file on the USB stick.	The device software file is corrupted.	Download the most current device software version from the website www.eppendorf.com/service-support/knowledge-base/software-downloads/.
	The USB flash drive is not empty.	Use an empty USB flash drive.

9.3 VisioNize sense

General errors

Error description	Cause	Solution
The status LED of the VisioNize sense gateway router turns red.	Internal error.	Restart the VisioNize sense gateway router.

Update the device software. |

Error description	Cause	Solution
The status LED of the VisioNize sense gateway router turns red.	Internal error.	Reset the VisioNize sense gateway router to its default factory settings in the web interface under *Settings>Reset factory settings*. Contact your local Eppendorf partner.
The VisioNize sense gateway router is displayed with the status *Not Connected* in the *Device Management* application.	The connection between the VisioNize sense gateway router and the VisioNize Lab Suite cloud servers was interrupted.	Check the cable connection and correct it, if necessary. Check the firewall settings and adjust them, if necessary. Restart the VisioNize sense gateway router.
The graphs in the history charts in the *Monitoring* application are displayed as a broken line.	If you use more than one VisioNize sense gateway router, their wireless networks will partly overlap causing the VisioNize sense environmental monitor to switch back and forth between the wireless networks.	Block the VisioNize sense environmental monitor sensor units in the web interface of individual VisioNize sense gateway router. To do this, select the corresponding sensor and click on the + *Blacklist* button to disable it. Now, the sensor will stop sending data using this VisioNize sense gateway router.

Errors occurring during the registration process

Error description	Cause	Solution
The registration request for a VisioNize sense gateway router cannot be confirmed.	The VisioNize sense gateway router is not switched on.	Switch on the VisioNize sense gateway router.
	The VisioNize sense gateway router is not connected to your local network or the Internet.	Check the cable connection and your network configuration and correct them, if necessary.
	The VisioNize sense gateway router requires a device software update.	Open the web interface of the VisioNize sense gateway router and update the device software using a USB stick.
	The serial number entered during the registration process was not correct.	Check the serial number you have entered and correct it, if necessary.
The VisioNize sense gateway router is not displayed in the *Monitoring* application.	The VisioNize sense gateway router serves as a hardware hub and is used as a transmission system which enables the software to retrieve the device's data. It is not displayed in the *Monitoring* application.	The VisioNize sense gateway router is only displayed in the device list of the *Device Management* application.

Error description	Cause	Solution
The VisioNize sense environmental monitor does not establish a connection to the VisioNize sense gateway router.	The VisioNize sense environmental monitor is not switched on.	Switch the VisioNize sense environmental monitor on.
	The VisioNize sense environmental monitor is not charged.	Charge the VisioNize sense environmental monitor.
	The VisioNize sense environmental monitor is not within range of the VisioNize sense gateway router.	Reduce the distance between the VisioNize sense environmental monitor and the VisioNize sense gateway router.
The VisioNize sense environmental monitor is displayed as inactive in the web interface of the VisioNize sense gateway router.	The VisioNize sense environmental monitor is not within range of the VisioNize sense gateway router.	Reduce the distance between the VisioNize sense environmental monitor and the VisioNize sense gateway router.
The VisioNize sense environmental monitor does not send any data.	The VisioNize sense environmental monitor is not charged.	Charge the VisioNize sense environmental monitor.
	The wireless network connection between the VisioNize sense environmental monitor and the VisioNize sense gateway router is inconsistent.	Reduce the distance between the VisioNize sense environmental monitor and the VisioNize sense gateway router and/or remove all obstacles that might interfere with the network communication.

Errors occurring during the device software update process

Error description	Cause	Solution
The update via OTA does not start automatically.	The firewall settings for downloads prevent an automatic update.	Check your firewall settings and adjust them, if necessary.
	In the *Device Management* application, there is neither a date and time selected for the update under *Schedule Device Update* nor the option *Update Now*.	Select *Update Now* or define the date for the update.
During the update process, the status LED turns from orange to red.	The update process was not completed.	Restart the update from the VisioNize Lab Suite or restart it manually with a USB stick via the web interface by selecting *Settings>Firmware Update>Install Firmware*.
The VisioNize sense gateway router does not recognize the USB stick.	The USB stick does not have the required FAT32 format.	Format the USB stick to the FAT32 format and retry.

Error description	Cause	Solution
The VisioNize sense gateway router does not recognize the device software file on the USB stick.	The device software file is corrupted.	Download the most current device software version from the website www.eppendorf.com/service-support/knowledge-base/software-downloads/.
	The USB flash drive is not empty.	Use an empty USB flash drive.

10 Ordering information

10.1 VisioNize Lab Suite

Description	Order no.
VisioNize Lab Suite subscription	www.eppendorf.com/visionize-subscription

10.2 VisioNize box

Description	Order no.
VisioNize box	1006 000 009
Ethernet cable for the VisioNize box 5 m	1006 073 006

10.3 VisioNize sense

Description	Order no.
VisioNize sense gateway router	ESS1 000 001
VisioNize sense environmental monitor	ESS1 000 002
VisioNize sense temperature sensor	ESS1 000 003
VisioNize sense monitoring kit Complete package including 1 VisioNize sense gateway router, 1 VisioNize sense environmental monitor and 1 VisioNize sense temperature sensor	ESS1 000 004

11　　　Glossary

OTA

Over The Air - A method to update the device software which uses an existing internet connection to carry out the update from Eppendorf's servers.

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Evaluate Your Manual

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