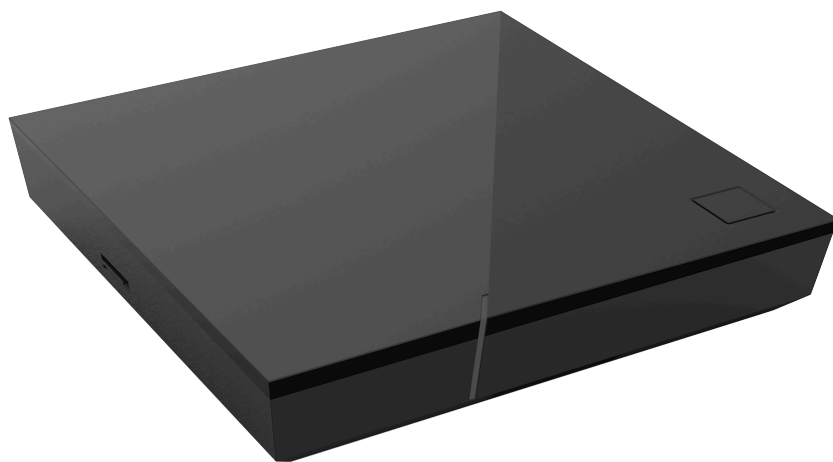


P520 IP

IPTV set-top box

Instructions for use



Important: Read carefully before use
and retain for future reference.

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1 Safety information

Please read the following information carefully before you start using the product. This helps prevent misuse and resulting personal injury, faults and/or damage to the hardware and software.

Save these instructions for use in case of future questions and pass them on to future users.

1.1 Signs and symbols used

Please make yourself familiar with the signs and symbols used in this instructions for use.



WARNING

Indicates a potential risk. If not avoided, it can result in serious injury or death.

ATTENTION

Indicates a potentially damaging situation. If not avoided, the component or an object in its vicinity may be damaged.



Additional information

1.2 General safety information

- The devices are for indoor use only.
- Only operate the set-top box with the power supply unit and connecting cables included in the package contents.
- Regularly check the cable of the power supply unit for damage. In case of damage, disconnect the power supply unit from the mains network and contact your provider.
- Always replace damaged cables with equivalent cables.
- Only connect the power supply unit of the set-top box to the specified mains voltage.
- The set-top box has to be connected to an outlet that is easily accessible. You must be able to disconnect the set-top box from the mains network at any time.
- Maintain the following minimum clearances around the set-top box: 10 cm above, 5 cm behind, 2 cm on the sides.
- Never put the set-top box into a cabinet or shelf with insufficient ventilation.

- Do not let the devices fall on the floor. Do not install the set-top box more than 2 metres above the floor.
- Do not try to repair the set-top box yourself. Doing so could put electrical safety at risk. If the set-top box was dropped or if water got into the unit, disconnect the set-top box from the mains network immediately and contact your provider.
- Protect the devices against moisture and dripping or splashing water.
- Do not place objects filled with liquids, such as a vase, on top of the set-top box.
- Only operate the devices in a dry, dust-free environment.
- Protect the devices and the batteries of the remote control against direct sunlight, open flames and other heat sources, such as radiators.
- Do not place objects such as other devices or candles on top of the set-top box.
- In case of an extended absence and during thunder storms, disconnect the power supply unit of the set-top box from the mains network.
- Also disconnect all devices connected to the set-top box.
- Do not use hard or sharp objects such as fingernails or knives when operating the remote control.
- The batteries included in the package contents are not rechargeable.
- Take the batteries out of the remote control if you will not be using it for an extended period of time.
- If the remote control is defective, remove the batteries and contact Customer Service.
- Keep the devices out of reach of children.



Heating of the set-top box

- The heating of the set-top box is in the permissible range. However, sensitive furniture finishes may become discoloured over time due to ongoing heat exposure.
- The base can cause discolouration of furniture finishes. Place the set-top box on a suitable underlay if needed.

2 Intended use

The set-top box is intended to receive TV and radio signals in conjunction with IPTV systems. The remote control is intended for operating the set-top box and TV sets. Any other use constitutes improper use. The manufacturer assumes no liability for errors, faults or damage caused by improper use. This includes the following in particular:

- Improper connection and operation
- Use of unsuitable data media or accessories
- Failure to comply with the installation and storage conditions
- Infection of software components with computer viruses
- Modification of the hardware and software

3 Scope of delivery

- Set-top box
- Power supply
- High speed HDMI® Cable (1,5 m)
- Network cable (3 m)
- Remote control
- 2 x alkaline batteries type AAA
- Instructions for use

4 Connections

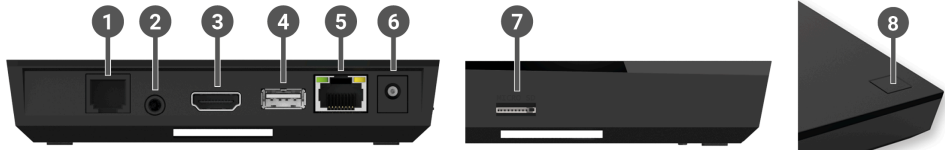


Figure 1: Connections

- | | |
|---|--|
| 1 RJ12 (RS232 and IR Input) | 5 LAN |
| 2 S/PDIF optical / 3.5 mm jack ¹⁾ | 6 Power |
| 3 HDMI® output | 7 Micro SD card slot ²⁾ |
| 4 USB ²⁾ | 8 On/off, remote control pairing (Bluetooth mode) ³⁾ |

- 1) Combined connection for 3.5 mm jack (e.g. for headphones) and optical TOSLink (S/PDIF)
- 2) For service use only, or as instructed by your provider. The connection of media can influence the serviceability of the set-top box.
- 3) Depending on the configuration of the IPTV system, the set-top box and the operating mode of the remote control.

5 Getting started



WARNING

Danger due to electrical voltage and resulting fire hazard

→ The cables must not be kinked or trapped.

ATTENTION

Risk of malfunctions or defects of the device

Incorrect installation

→ Connect the cables to the set-top box in the correct order. Make sure that the network cable engages audibly.

Interrupting the power supply during installation

→ Never disconnect the power to the set-top box during installation or when updating the software. This avoids possible damage.

i The set-top box requires an active internet connection to connect with an IPTV system. Use either a network cable or WiFi to establish the connection. Please note, however, that if you connect to WiFi and other devices simultaneously use this internet connection, the bandwidth may be limited. This can cause issues with playback or interruptions.

5.1 Inserting the batteries into the remote control

1. Insert the batteries into the remote control (see Figure 2 on page 7). To do so, press down the battery cover at the mark and slide it back **1**, to open the battery compartment.
2. Place the batteries in the battery compartment **2**, making sure the polarity is correct (see markings on the bottom of the battery compartment).
3. Insert the lug of the cover into the opening **3** on the battery compartment and push the battery compartment cover forward **4** until it audibly latches into place.

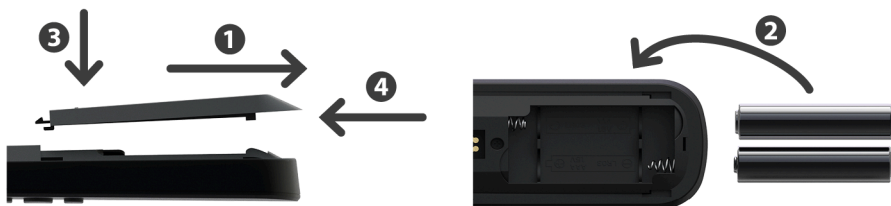


Figure 2: Inserting the batteries

5.2 Cable connections

1. Connect the set-top box as shown in Figure 3 on page 8. Observe the correct connection sequence:
 - 1** HDMI® cable
 - 2** Network cable
 - 3** Power supply
2. Turn on your TV set.

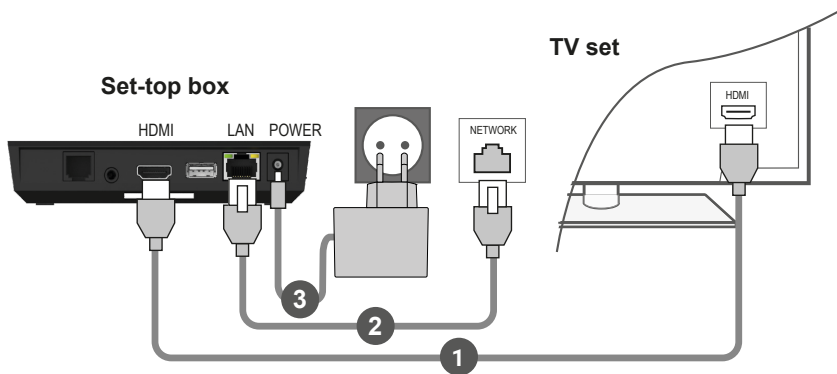


Figure 3: Cable connections

5.3 Pairing the remote control with the set-top box

When the set-top box is used for the first time, the remote control is automatically detected.

1. Wait until a remote control symbol is displayed on the TV set.
2. Press the button **OK** to start the automatic detection.
3. The remote control is now paired with the set-top box. Pairing can take a few minutes.

5.4 Choosing the menu language

After the remote control is paired with the set-top box, the language selection options are displayed. Select the language of your choice for the user interface.

1. Select the language you want.
2. Confirm your selection by pressing the **OK** button.

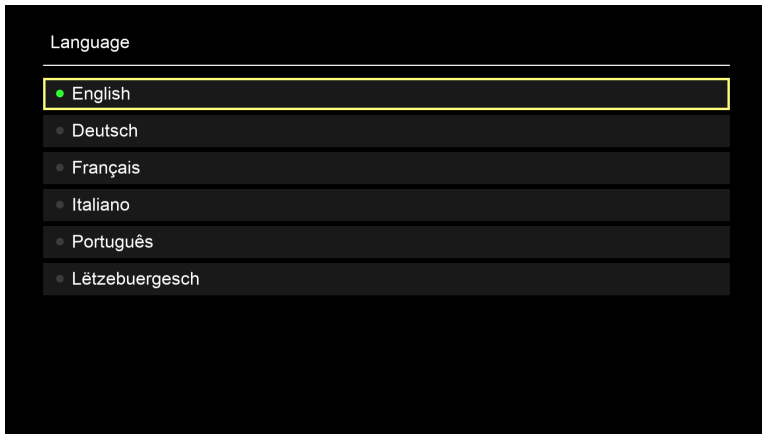


Figure 4: Language selection

5.5 Establishing the network connection



If you have already established the network connection with a network cable and want to switch to WiFi, disconnect the network cable and power supply unit. Reconnect the power supply unit to the set-top box after about 5 seconds to open the setup menu.

If you have established the network connection with a network cable, you are forwarded automatically. To establish the network connection with WiFi, continue reading in Section "Establishing a WiFi connection" on page 9.

5.5.1 Establishing a WiFi connection

Various methods are available for establishing a WiFi connection:

- **Search:** The set-top box searches for available WiFi networks.
- **Advanced:** Use WPS, or enter the SSID manually.

5.5.1.1 WiFi search

1. In the setup menu, select the menu item **Connecting to WiFi**.
2. Activate the button **Search** by pressing **OK** (see Figure 5 on page 10).
3. Select the WiFi network you want to use from the list that is displayed. Make sure the signal strength is adequate (see Figure 6 on page 11).
4. Use the on-screen keyboard that is displayed to enter the WiFi password and confirm your input by pressing **OK**.
5. Wait until the connection is established and then press **Quit** repeatedly until the message **Successfully established the network connection.** is displayed.

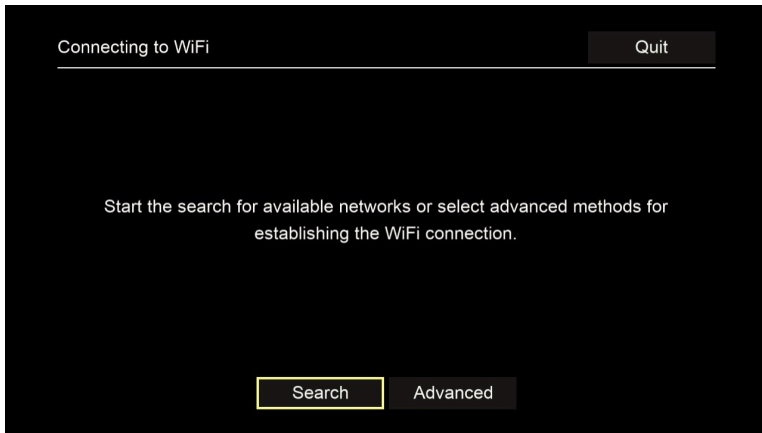


Figure 5: WiFi setup

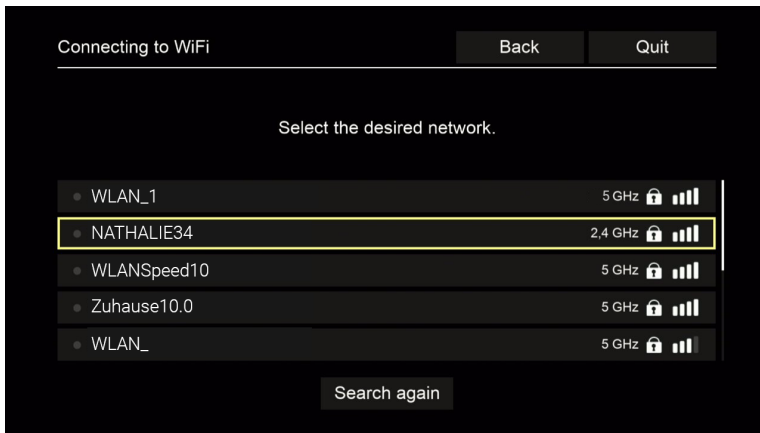


Figure 6: Available WiFi networks

5.5.1.2 Advanced WiFi setup



Not all of the methods described here may be compatible with your router.

You can select from various methods in the advanced WiFi setup.

- **WPS button:** The connection is established automatically after you press the WPS button on your router.
- **WPS PIN:** The connection has to be enabled by entering the PIN on the router web page.
- **SSID:** Manually enter the network name.
- **Search:** Search for available networks (see Section "WiFi search" on page 10).

To establish a WiFi connection using the advanced WiFi setup, proceed as follows:

1. In the setup menu, activate the button **Advanced**.
2. Navigate to the setup method of your choice.
3. Then follow the instructions on the TV set.

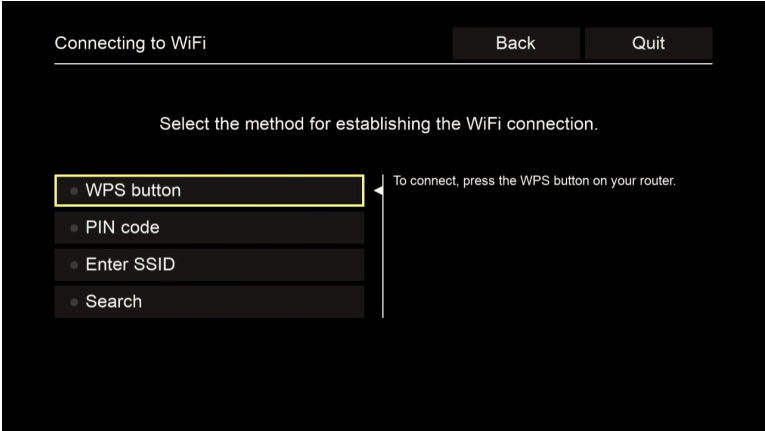


Figure 7: Advanced WiFi setup

5.5.2 Checking the WiFi status

In the **WiFi status:** menu, you can access the current data for your WiFi connection such as the signal strength or the MAC address of your WiFi adapter.

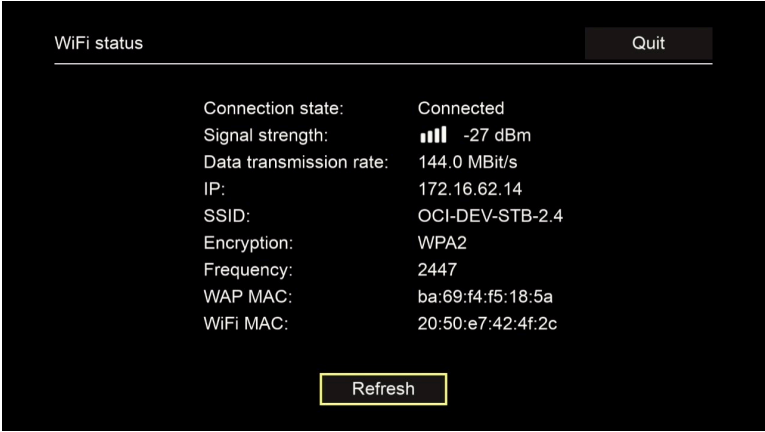


Figure 8: WiFi status overview

5.5.3 Disconnecting the WiFi connection

To disconnect the WiFi connection, navigate in the setup menu to **Disconnecting the WiFi connection**. Then you can do the following:

- **Connect the set-top box to a different WiFi network:** Proceed as described in Section "Establishing a WiFi connection" on page 9.
- **Establish the network connection using a network cable:** Connect the network cable included in the package contents as described in Section "Cable connections" on page 7.

5.6 Software updates

Software updates are installed automatically. If a software update is already available when you first start using the product, you have to install the software update first. To do so, follow the instructions on the TV set.

6 Remote control

The remote control has an automatic power saving mode to increase the battery life. Power saving mode has ended when the green LED flashes twice in quick succession.

The remote control can be used in Bluetooth or infrared mode. You can also program in a TV set. This allows you to control the set-top box and your TV set with the remote control. To change the operating mode (Bluetooth or infrared), see Section "Changing the operating mode" on page 16.

6.1 Button functions

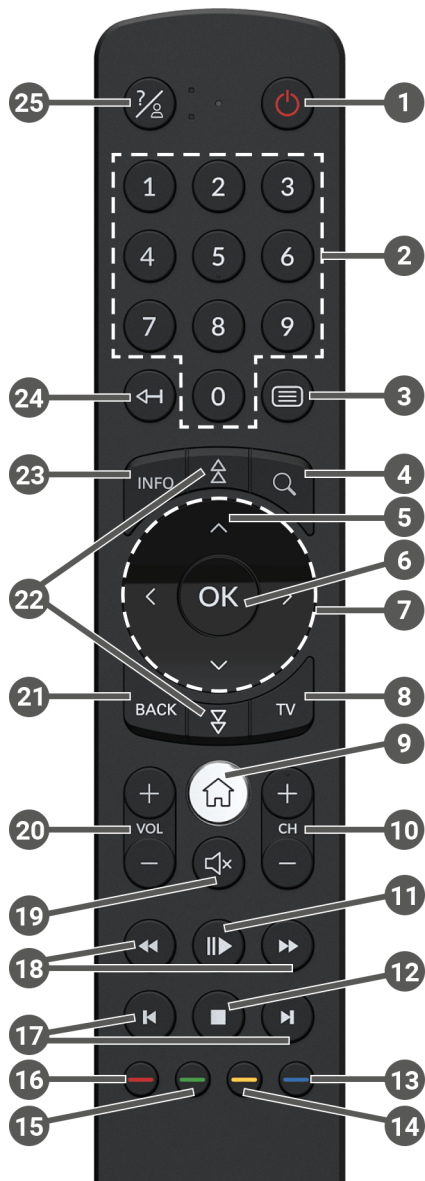


Figure 9: Button functions

i The button functions and the range of functionality may differ.

i The functions of some remote control buttons depend on the respective function being performed and the screen in the user interface. Go to Help in the respective screen for more information.

1 On/off (standby)	Select date/time (TV guide/EPG)
2 Number buttons	14 Negative content rating
3 Open teletext	Reset channel sorting/list of favourites
4 Open search	15 Positive content rating
5 Show programme	Record programme/ delete recording
6 Confirm input	16 Delete search term
Show context menu	Remove mobile device
7 Navigation buttons	17 Fast forward/reverse
8 Open TV guide	18 Forward/reverse
Show menu	19 Mute
9 Change source on set-top box	20 Volume up (+) and down (-)
10 Channel up (+) and down (-)	21 Back
11 Pause/continue playback (recorder/replay/video on demand)	22 Page up/down
End playback (recorder/replay/ video on demand)	23 Show quick guide
Current programme (TV guide)	Show programme details
Open stream settings	Delete character
13 Turn screen off (radio)	24 Go to previous programme
Show list of favourites	25 Show help

6.2 Changing the operating mode

The remote control is in Bluetooth mode on delivery. To change the operating mode, proceed as follows:

1. Press and hold down the **7** and **9** buttons simultaneously for at least 3 seconds.
✓ The green LED on the remote control is lit.
2. Enter the code you want (see Table 1).
✓ The green LED on the remote control flashes twice in quick succession.

The selected operating mode is now active. You can change the operating mode in the same way at any time. For instructions to reset the remote control to factory defaults, see the section "Resetting the remote control" on page 20.

Operating mode	Description	Code
Bluetooth (default)	Controls the set-top box in Bluetooth mode. The remote control must be paired with the set-top box for this.	1
Infrared	Controls the set-top box in infrared mode.	2

Table 1: Operating modes

6.3 Programming the TV set

i The remote control may not be compatible with your TV set.





i Note the specifications for the respective programming type. If you deviate from them or do not press a button for 15 seconds, the programming process is cancelled. This is shown by the green LED flashing once.

The remote control has an integrated database with TV codes for numerous brands. Depending on the brand of your TV set, you can program a TV code in different ways:

- **Manual programming:** you need to enter the TV code manually.
- **Brand code search:** you can search for the desired TV code within a brand.
- **Automatic code search:** you can search the entire TV database for a suitable TV code.






6.3.1 Manual programming

For manual programming, you have to enter the corresponding TV code directly. Depending on the brand of your TV set, you may have to try several TV codes before you find the right one. A list of all supported devices is provided at www.ocilion.com/gebrauchsanleitungen. If you know the TV code for your TV set, this is the fastest programming method.

1. Switch on your TV set
2. Press and hold the  and  buttons at the same time for at least 3 seconds.
 - ✓ The red LED is lit.
3. Enter the 3-digit code according to the TV code list.
 - ✓ If the TV code is valid, the red LED flashes twice in quick succession.
4. Press and hold the  button and then press .
 - ✓ If the TV set is switched off, the TV code is correct.
 - ✓ If the TV set does not respond to the command, complete steps 2 through 4 using other codes from the TV code list until the TV set turns off.
5. Switch the TV set on again and repeat step 4 to try other buttons, checking whether they work correctly.

6.3.2 Brand code search

During a brand code search, you search the list of TV codes for a specific brand. The following table lists 10 TV brands. If the brand of TV set is not listed in the table, use a different type of code search.


- 1. Switch on your TV set
- 2. Press and hold down the  button and the matching code from Table 2 simultaneously for at least 3 seconds.
 - ✓ The red LED is lit.
- 3. Press the  button, and then the  button.
 - ✓ If the TV set is switched off, the TV code is correct. Switch the TV set back on and try out other buttons to see if they work correctly.
 - ✓ If the TV does not respond to the command, repeat step 3 until the TV is switched off or the other buttons work correctly.
 - ✓ Pressing the  button terminates programming without saving.
- 4. Press the  button to confirm the TV code.
 - ✓ The red LED flashes twice in quick succession.

Brand	Code
Samsung	1
LG	2
Sony	3
Philips	4
Panasonic	5







Brand	Code
Loewe	6
Grundig	7
Sharp	8
Toshiba	9
JVC	0

Table 2: Brand codes


6.3.3 Automatic code search


 The automatic code search can take several minutes. Therefore use this method only if none of the other methods worked.

The automatic code search, searches through the TV codes for ALL TV brands.

1. Switch on your TV set
2. Press and hold down the  and  buttons simultaneously for at least 3 seconds.
 - ✓ The red LED is lit.
3. Press the  button, and then the  button.
 - ✓ If the TV set is switched off, the TV code is correct. Switch the TV set back on and try out other buttons to see if they work correctly.
 - ✓ If the TV does not respond to the command, repeat step 3 until the TV is switched off or the other buttons work correctly.
 - ✓ Pressing the  button terminates programming without saving.
4. Press the  button to confirm the TV code.
 - ✓ The red LED flashes twice in quick succession.

6.4 Controlling the TV

 Which buttons of the remote control are compatible with your TV set depends on the buttons of your TV set's original remote control.


After programming a valid code, you can control your TV set. Press and hold the  button, and then press the desired button to control your TV set.

6.5 Unpairing the remote control (Bluetooth mode)

When you replace the remote control with a new one or reset the paired remote control to the factory settings, you have to unpair the remote control from the set-top box.

1. In the user interface of the IPTV system, go to the **Settings > Remote control** screen or press the button on the set-top box.
2. Follow the instructions to unpair the remote control.
 - ✓ The set-top box restarts.
 - ✓ The screen for pairing the remote control is shown.
3. Follow the instructions to pair the remote control.

6.6 Resetting the remote control

 When you reset the remote control to the factory settings, you also have to unpair the remote control from the set-top box (see Section "Unpairing the remote control (Bluetooth mode)" on page 20). Only then can you pair a remote control with the set-top box again (see Section "Pairing the remote control with the set-top box" on page 8).

To reset the remote control to the factory settings, proceed as follows:

1. Press and hold down the red and blue function buttons simultaneously for at least 5 seconds.
 - ✓ The green LED on the remote control flashes twice in quick succession.
2. Enter the digits **9999**.
 - ✓ If the green LED flashes twice in quick succession, the remote control has been reset to the factory settings.

The remote control is in Bluetooth mode. The Bluetooth connection to the set-top box and the programmed TV code (if any) have been erased.

7 Cleaning



WARNING

Danger due to electrical voltage and resulting fire hazard

- Disconnect the set-top box from the mains power supply before cleaning.
 - Clean with a dry, lint-free cloth.
 - Only clean the surface of the devices.
 - Never open the devices.
 - Do not use cleaning agents that contain solvents.
-

8 Returning used devices

Applicable in the European Union and other European states with systems for the separate collection of recyclable materials.



Disposing of electronic equipment and batteries in household waste is not permitted. At the end of their life, return devices to the appropriate public collection centre or the point of sale. Details are governed by the respective national laws. The symbol on the product, the instructions for use or the packaging points out these provisions.

Reusing materials and recycling used devices makes an important contribution to protecting our environment.

To facilitate the disposal of used devices containing batteries, the batteries have to be removed before the devices are brought to a public collection centre.

9 Troubleshooting

Problem	Possible cause	Remedy
The LED on the set-top box does not light up	No mains voltage or the set-top box is defective.	Check that the power supply unit and cable are properly connected. If the error persists, contact your provider.
The set-top box cannot establish a WiFi connection	The MAC address of the set-top box is not allowed by the router.	Check the router and enable the MAC address of the set-top box.
Support info 30 – 34 is shown for more than 3 minutes	Technical error while establishing the network connection.	Disconnect the set-top box from the mains network for about 5 minutes. Contact your provider if necessary.
Support info 40 – 85	Technical error during a software update.	Disconnect the set-top box from the mains network for about 5 minutes. Contact your provider if necessary.
Support info 65	No connection to the NTP server.	Check the network settings of the router. Contact your provider if necessary.
The LED on the remote control permanently flashes green	The remote control has not been paired.	Pair the remote control (see Section "Pairing the remote control with the set-top box" on page 8)
	The remote control is unable to establish a connection to the set-top box.	Check if the set-top box is connected to the mains network. If the problem persists, you have to pair the remote control again (see Section "Pairing the remote control with the set-top box" on page 8).

Problem	Possible cause	Remedy
The set-top box does not respond to the remote control	The batteries are not correctly installed in the remote control.	Check if the batteries are installed correctly or whether they are drained.
	The batteries of the remote control are low or drained.	Go as close as possible to the set-top box and press any number buttons on the remote control. If the set-top box responds now, this means the batteries are low. Replace the batteries with new ones in this case.
	The remote control software has crashed.	Take out the batteries and put them back in after about 3 minutes.
	The Bluetooth receiver on the set-top box has crashed.	Disconnect the set-top box from the mains network for about 5 minutes. Contact your provider if necessary.
	The remote control was paired with another nearby device.	Reset the remote control to the factory settings (see Section "Resetting the remote control" on page 20). Deactivate pairing mode on any other nearby devices and repeat the pairing process (see Section "Pairing the remote control with the set-top box" on page 8).
No picture	No mains connection.	Check that the power supply unit and cable are properly connected.
	Defective cable connection.	Check cable connections to make sure they are tight.

Problem	Possible cause	Remedy
	Incorrect HDMI source.	Configure the HDMI source of the TV set on the set-top box.
Poor picture quality	Incompatible HDMI cable.	Only use the supplied high-speed HDMI® cable.
Jerky picture	The WiFi signal is too weak.	Go to setup and check the signal strength under WiFi status (see page 12).
	Limited bandwidth due to multiple users.	Use the network cable instead of WiFi.
The brand of your TV set is not in the code list or brand list		Perform the automatic code search (see Section "Automatic code search" on page 19).
The TV set does not respond even though the automatic code search was performed	The automatic code search performs the search on all codes. This may take up to 15 minutes.	Perform the automatic code search for at least 15 minutes.

Table 3: Troubleshooting

In case of further issues, contact your network operator.

10 Legal notes

10.1 Registered trademarks and notes on licences



Dolby, Dolby Audio and the double-D symbol are registered trademarks of Dolby Laboratories Licensing Corporation.



The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc. in the United States and other countries.

Customer notes on MPEG LA licences are available on

www.ocilion.com/lizenzhinweise

10.2 Open Source Software

The product also contains open source software. This software was developed by a third party and is subject to copyright. You are entitled to use the open source software in line with the applicable licence conditions.

For details of the licence conditions and further information, see

www.ocilion.com/opensource

11 Declaration of conformity

The manufacturer hereby declares that the CE marking has been affixed to the devices in accordance with the essential requirements and other relevant provisions of the following directives:

- 2014/53/EU - RED Directive
- 2009/125/EG - Ecodesign Directive
- 2011/65/EU - RoHS Directive

The full text of the EU Declaration of Conformity is available at

www.ocilion.com/ce

12 Technical specifications

Item information	
Item no.	STB-P520/020
Colour	Black
Weight	202 g
Dimensions (W x H x D)	130 x 130 x 25 mm
Environmental conditions	
Temperature	+5 - +40 °C
Humidity	20 - 80 %
Power / energy consumption	
Deep standby	0,3 W
Normal operation	2,9 W
Supported formats and codecs	
Audio codecs	ac3, wma2, mp3, aac, aiff, pcm, wav, mp2, aif
Video codecs	xvid, m-jpeg, H.263, H.265, H.264, MPEG4, MPEG1, MPEG2, avc
Video resolutions	1080p, 2160p, 720p, 576p, 1080i, 576i
External connections	
<div><div>■ 1 x Ethernet (RJ45)</div><div>■ 1 x HDMI® output</div><div>■ 1 x USB 3.0</div><div>■ 1 x S/PDIF optical / 3,5 mm jack (stereo)</div><div>■ 1 x RS232 and IR input (RJ12)</div><div>■ 1 x Micro SD card slot</div></div>	
Interfaces	
Bluetooth	5.0
Infrared	36 KHz (RC-5:SAT2 / r-Step)
Wifi	IEEE 802.11 b/g/n/ac/ax (2,4 / 5 GHz)
Wifi security	WPA / WPA2 PSK
Copy protection	
DRM	Verimatrix Viewright
HDMI®	HDCP 2.2

Table 4: Technical specifications of the set-top box

Power supply	
Name of manufacturer	Ocilion IPTV Technologies GmbH Schärdinger Straße 35 4910 Ried im Innkreis / AUSTRIA
Model identifier	STB-P490/0
Input voltage	100 - 240 V
Input A/C current frequency	50 - 60 Hz
Output voltage	12,0 V
Output current	1,0 A
Output power	12,0 W
Average efficiency in operation (min)	83,3 %
Efficiency at low load (10 %) (min)	73,3 %
Power draw at zero load (max)	0,10 W

Table 5: Technical specifications of the power supply

Item information	
Item no.	T4HU2020/41k / T4HU2020/41kA
Colour	Black
Environmental conditions	
Temperature	+5 - +40 °C
Humidity	20 - 80 %
Details of the radio standard	
Frequency band	2,402 - 2,480 GHz
Max. transmitter power	1 mW

Table 6: Technical specifications of the remote control

Version 2.7
Date 02-10-2023

Manufacturer:
Ocilion IPTV Technologies GmbH
Schärdinger Straße 35 • 4910 Ried im Innkreis / AUSTRIA
Telephone: +43 7752 2144-0 • Internet: www.ocilion.com



In the course of product improvements, we reserve the right to make technical and visual changes to the devices described in these instructions for use. The current instructions for use are available on

www.ocilion.com/gebrauchsanleitungen.

Changes and printing errors excepted.