



Consumer TV equipment




AOSP

# B-OPTIX W2

The upgraded B-OptiX IPTV set-top box, specifically designed for TV operators to deliver IPTV services.




S905W2



FullHD (1080)@60K



Wi-Fi 2.4/5 GHz



Bluetooth 5.1

## Main features

| Model           | BO400W            | BO400W2G          |
|-----------------|-------------------|-------------------|
| Chipset         | S905W2            | S905W2            |
| RAM             | 1 GB              | 2 GB              |
| ROM             | 8 GB              | 8 GB              |
| Ethernet        | 10/100 Base-T     | 10/100 Base-T     |
| Wi-Fi           | 802.11ac 2,4+5GHz | 802.11ac 2,4+5GHz |
| Bluetooth       | Bluetooth 5.1     | Bluetooth 5.1     |
| Max. resolution | Full HD & 60 FPS  | Full HD & 60 FPS  |




ATV


AOSP

# VERMAX UHD Y


The upgraded B-OptiX IPTV set-top box delivers smooth 4K 60FPS streaming on Android 11. Available in a classic design or as a compact dongle for hidden placement behind your TV.




S905Y4



Android TV



4K@60FPS



LAN 10/100 Base-T

## Main features

| Model           | UHD250Y2G     | UHD300Y2G         |
|-----------------|---------------|-------------------|
| Form factor     | Classic STB   | Classic STB       |
| Chipset         | S905Y4        | S905Y4            |
| RAM             | 2 GB          | 2 GB              |
| ROM             | 8 GB          | 8 GB              |
| Ethernet        | 10/100 Base-T | 10/100 Base-T     |
| Wi-Fi           | -             | 802.11ac 2,4+5GHz |
| Bluetooth       | -             | Bluetooth 5.1     |
| Max. resolution | 4K @ 60 FPS   | 4K @ 60 FPS       |



ATV

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# VERMAX UHD Y

The upgraded B-OptiX IPTV set-top box delivers smooth 4K 60FPS streaming on Android 11. Available in a classic design or as a compact dongle for hidden placement behind your TV.



S905Y4



Android TV



4K@60FPS



Bluetooth 5.1

## Main features

| Model           | UHD450Y2G         | UHD400Y2G         |
|-----------------|-------------------|-------------------|
| Form factor     | Dongle            | Dongle            |
| Chipset         | S905Y4            | S905Y4            |
| RAM             | 2 GB              | 2 GB              |
| ROM             | 8 GB              | 8 GB              |
| Ethernet        | 10/100 Base-T     | -                 |
| Wi-Fi           | 802.11ac 2,4+5GHz | 802.11ac 2,4+5GHz |
| Bluetooth       | Bluetooth 5.1     | Bluetooth 5.1     |
| Max. resolution | 4K @ 60 FPS       | 4K @ 60 FPS       |



# Remote controls

The remote isn't just another accessory bundled with the device — it's the primary way users interact with your TV box. It's the first thing viewers pick up, their gateway to controlling content, adjusting settings, and unlocking the full potential of the system. The remote's ergonomic design and intuitive layout directly shape the overall user experience.

We offer a wide range of solutions – from basic models to advanced, fully customizable remotes. Each is designed with the end-user in mind, delivering maximum comfort and ease of use.



## IR remote

- One remote to control both your set-top box and TV
- Low cost
- Compatibility with all models
- Presence of a numeric keypad



## Bluetooth remote control

- Integration of app launch with a button press
- Voice transmission capability
- Some models feature an air mouse
- Some models come with a dongle for connecting to devices without built-in Bluetooth



## Premium remotes

- Built-in rechargeable battery
- Backlighting
- Full button functionality via IR+Bluetooth (except voice input). Supports IR/BT mode switching.
- Premium materials



## Project remotes

- Any design according to the client's project
- Voice transmission capability
- Full customization options – including body and button silkscreen printing for complete branding control.

# Testing

Testing for SNR is not just a formality – it's a mission-critical process that ensures the highest quality of our products. Through rigorous testing, we verify that every TV set-top box, remote control, power adapter, HDMI cable, packaging, and included components meet our strict quality standards.

## Test program and methodology

We follow a rigorously approved testing program that verifies all key operational parameters of the device. Developed in compliance with international quality standards (ISO 9001) and our internal corporate requirements, the program covers mechanical, electrical, thermal, and functional performance of every component.

### Approved testing program

Our testing program was developed in collaboration with electronics experts, ensuring its effectiveness and reliability. It comprehensively covers all operational and environmental aspects of the TV set-top box.

### Testing all samples on a single PMI, with documentation of results

Our testing program was developed in partnership with electronics experts to ensure maximum reliability and effectiveness. It covers every operational and environmental aspect of the TV set-top box.

## Kit testing

- Signal transmission range test (IR and Bluetooth), microphone sensitivity test
- Verification of the power supply's output voltage compliance with the specified characteristics
- Testing the stability of the video signal at resolutions up to 8K. Data transfer speed testing

## Component base testing

- Wi-Fi and Bluetooth chips are tested for data transfer speed, connection stability, power consumption, and compatibility with various devices.
- RAM and Flash memory are tested for read/write speed, actual available storage capacity, and operational stability.
- Microphones and speakers are tested for sound quality and operational stability.

## Case testing, typography

- Plastic components are tested for defects during manufacturing and transportation. Impact resistance and thermal stability tests are conducted.
- The box is tested for material density and the wear resistance of the applied liner.
- All printed materials are tested for paper quality, text clarity, and image sharpness.



# Branding

Our customization capabilities extend to all components of the device, including boxes, internal parts, silk-screen printing, and much more. We offer flexible integration of animation, allowing you to create a product that precisely matches your preferences. Bring your vision to life with our personalized solutions.

Development of unique packaging design in line with the customer's corporate identity. We provide a full cycle of work, from layout creation to printing the final product.  
Choice of materials: cardboard of varying density, matte or glossy finishes, textured effects (embossing, debossing), lamination.

## Box and sleeve

### Box design

Development of unique packaging design tailored to the customer's brand identity. We provide a full production cycle: from layout design to printing the final product.

### Internal elements of the box

Inserts, holders, dividers for components

## Set-top box

### Device casing

Customizable console housing color schemes to match the client's brand identity. Options for various materials (metal, plastic) and finishes (matte, glossy surfaces).

### Logos and labeling

Application of logos, serial numbers, and other markings using silkscreen printing or laser engraving.



# Branding

## Remote

### Casing design

Full customization of remote control shape, color, and materials.  
Option to add branded elements (logos, patterns).

### Buttons and silkscreen printing

Customizable button layout, shape, and color.  
Silk-screen printing of symbols, logos, and text on buttons.

### Functionality

Custom button programming for specific functions (e.g., quick launch of dedicated applications).

## Launcher

### Customization of basic launchers

Customization of background images, animations, and color schemes.  
Pre-installed app package configuration (streaming services, games, utilities).  
Integration of branded logos and brand identity elements.

### Animations and transitions

Creation of unique animations for loading screens.  
The possibility of adding branded sound effects.

### Technical integration

Support for various API for integrating third-party services.  
Configuration of security settings, access control, and network operations.





# STB Tools

STB-Tools is a service designed for fast and easy modification of firmware for Vermax and B-Optix set-top boxes.

- It allows you to:
- change boot logos
  - install and remove applications
  - modify system settings

This enables you to create a fully customized STB under your own brand. The solution does not require qualified specialists or deploying your own Linux-based servers — all you need is to access a dedicated web interface.

No programming knowledge is required, making the system accessible to any user.

## Ease of use

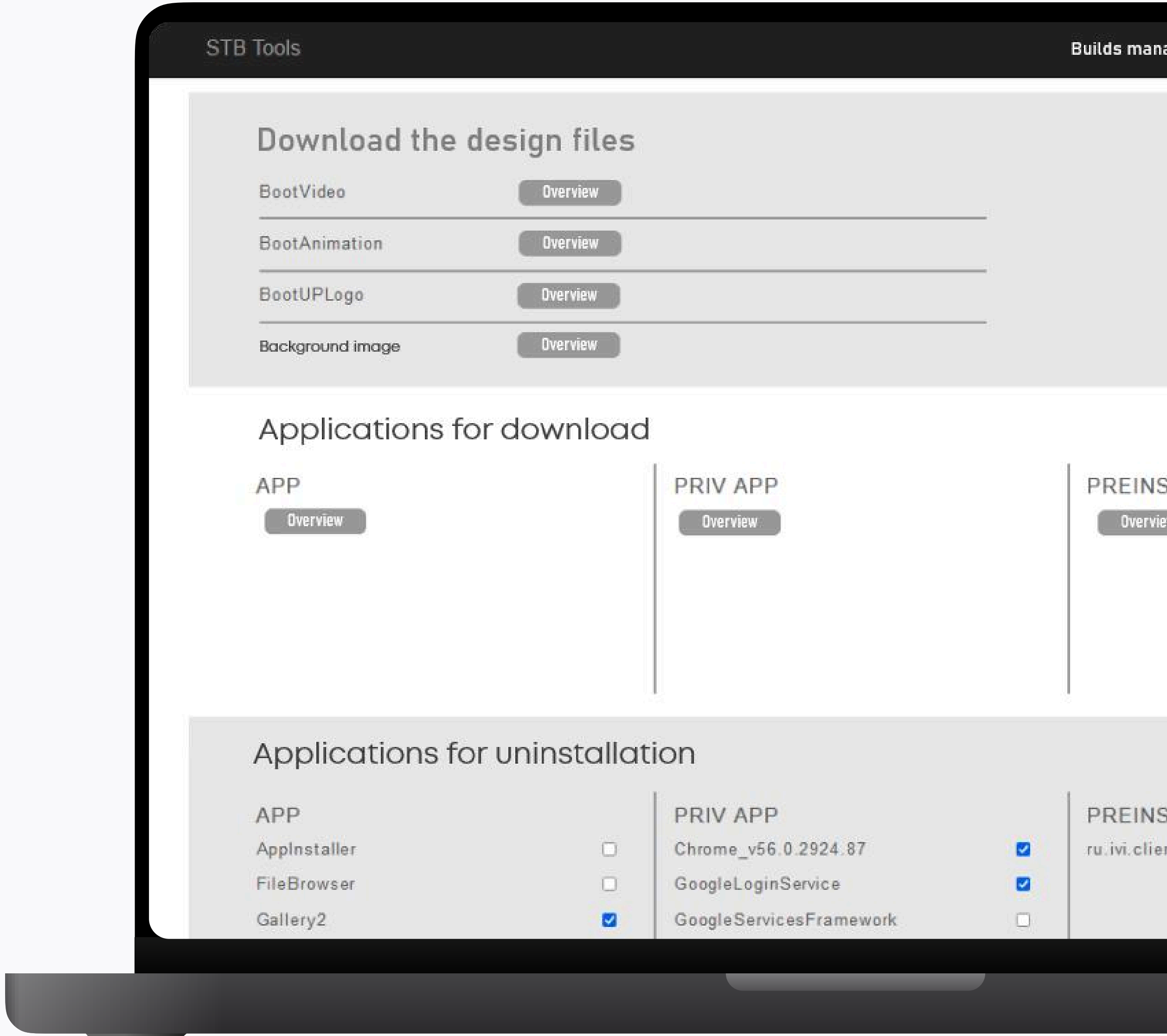
Firmware creation and modification is no longer the prerogative of developers. With STB Tools, no programming skills are required. The entire process is intuitive, even for those without technical expertise.

## Flexibility without additional costs

No more resources are needed for setting up and maintaining your own Linux-based servers. STB Tools provides you with powerful tools that run on our dedicated cloud service.

## Seamless collaboration to enhance productivity

STB Tools is not just about individual work and management. Our system allows multiple users to be united under one company, enabling effective team collaboration.



# Set-Top Box Management Server

The Set-Top Box Management Server allows both software updates and remote blocking (disabling) of set-top boxes (via MAC, serial number, or IP address).

The Set-Top Box Management Server is a service that provides comprehensive control. It is a reliable tool that enables software updates, ensuring your set-top boxes remain on the cutting edge of technological progress.

## Remote firmware update

The firmware update configuration is created individually for each set-top box model in the operator's network, depending on the brand and chipset used. The Vermax Update service is designed for the joint use of B-Optix and Vermax set-top boxes within the same network.

When a device requests the server, it is directed to its designated configuration based on the model, IP address, or subnet mask to which the configuration is assigned.

## Adding new features

Firmware updates allow for the expansion of device functionality without the need for physical hardware replacement or a visit to the subscriber.

## Improved security

Vulnerabilities in software can be exploited by attackers to gain unauthorized access to the device. Regular firmware updates help close such "gaps" and protect user data.

## Compatibility with new technologies

With the advancement of technologies (such as the introduction of new Wi-Fi or HDMI standards), firmware updates ensure that the device remains compatible with modern equipment and services.

Firmware updates can be assigned to a specific set-top box: individually by MAC/IP address, to a group of set-top boxes based on a subnet mask, or according to predefined groups.

## Remotely install and update applications

Many applications, especially streaming services, are regularly updated to support new features or improve content quality. Without updates, users may lose access to new features or content. By using this feature, you can be sure that the user will receive the latest version of the application.

With our service, you can remotely update the device firmware with incredible precision. From a single device to an entire fleet – it's all in your hands.

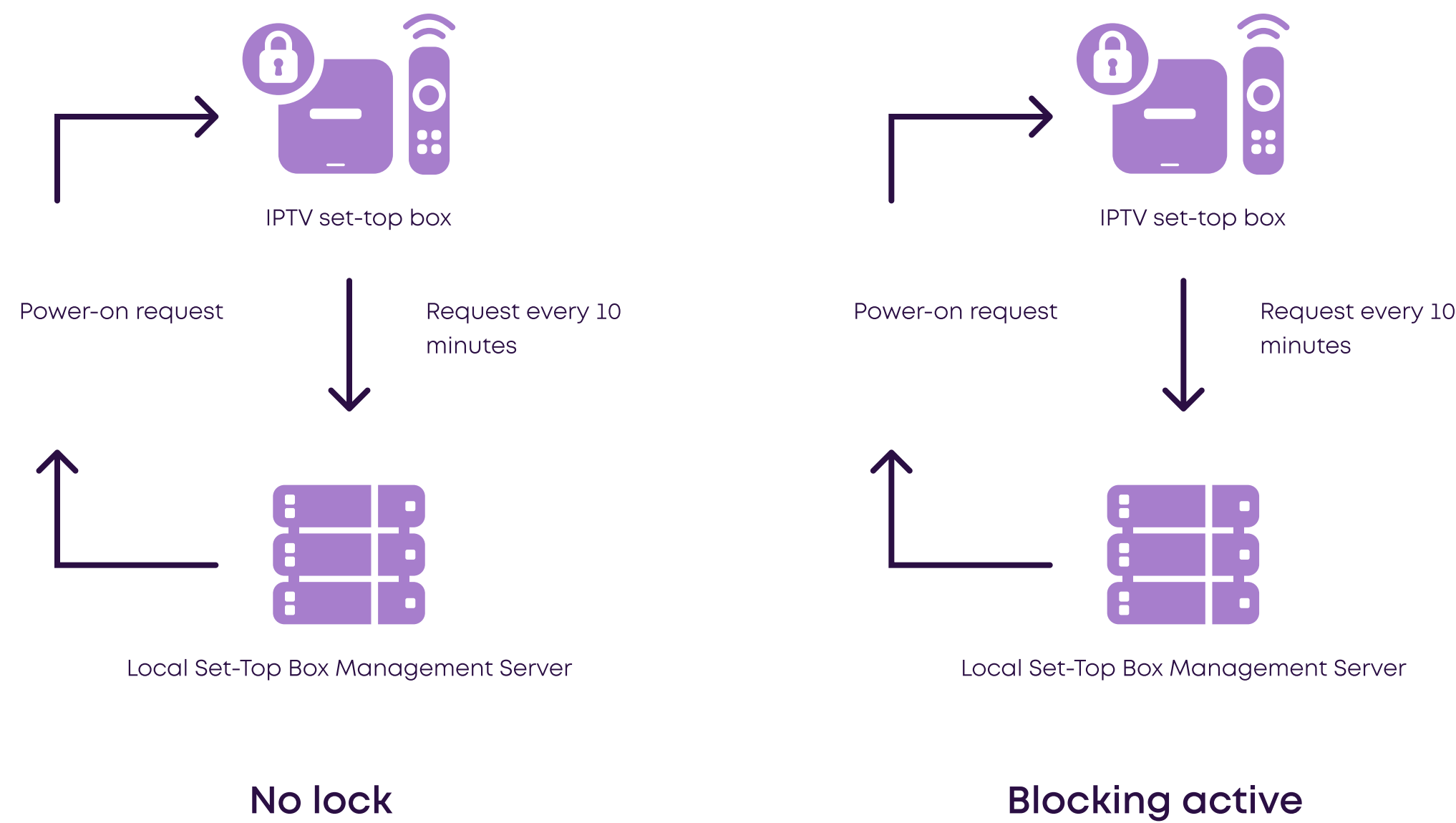
## How does it work?

- When the device connects to the Vermax Update server, it receives a list of the current applications and their versions.
- If the version of the application in the list is newer than the one on the set-top box, the application will be updated.
- If the application is absent on the set-top box, it will be installed.

# Set-top box management server

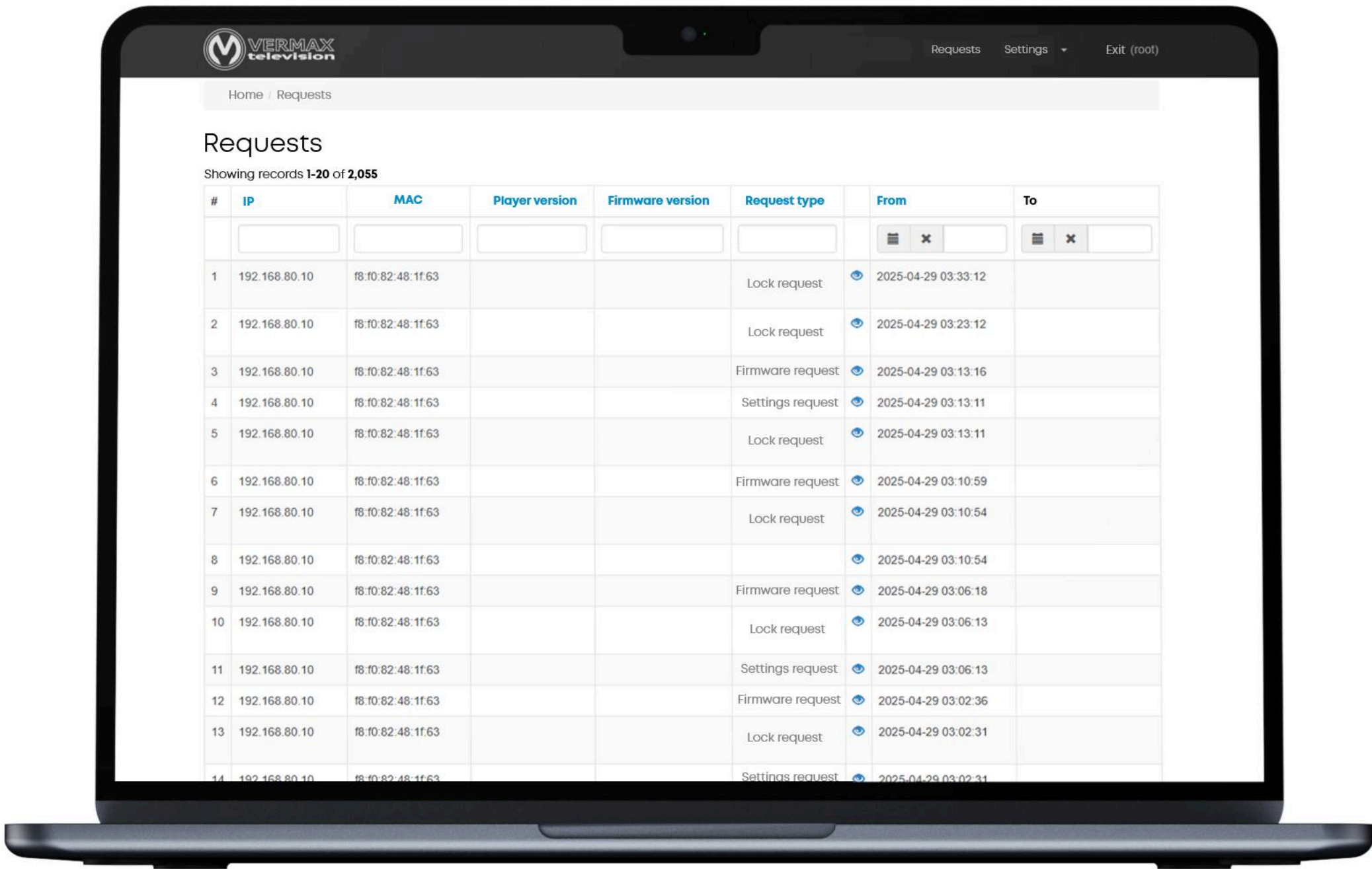
## Remote lockout

The ability to set a lock mode. Using the Set-Top Box Management Server, you can restrict the functionality of the set-top box, for example, in case of non-payment. You can limit the operation of the set-top boxes outside the provider's network or due to non-payment via billing. For the lock functionality to work, access to the Vermax Update server is allowed only from IP addresses belonging to the provider. If the client changes the provider and the set-top box does not receive a response from the server within 10 minutes, the operation of the set-top box will be restricted.



# Simple performance

Gone are the days when client base administration was solely in the hands of specialized professionals. Thanks to the Set-Top Box Management Server, you won't need to be an expert. The entire process is presented at an intuitive level, so even someone without technical knowledge will be able to navigate it with ease.






# TR-069


TR-069 provides full control over the functionality of set-top boxes. You will be able to easily manage devices, check their status, transmit important information, and perform remote operations. Now, you can effectively administer and monitor your set-top boxes using all available capabilities.

## Key features




### Compatibility with open-source GenieACS and freeACS

Our solution is fully compatible with the free platforms GenieACS and freeACS, ensuring efficient device management, easy integration into existing infrastructures, and guaranteed security.




### Transmission of IP and MAC address information of the STB

The system can transmit data about the device model and the version of the firmware installed on it, simplifying device fleet management and software updates for the team.




### STB reboot

The ability to remotely reboot the set-top box allows for quick resolution of technical issues without the need for physical access to the device.




### Checking the STB status

Monitoring the set-top box status allows you to determine whether it is in "Online" or "Offline" mode. This helps to quickly respond to potential connectivity issues.



### Transmission of information about the selected video resolution

Administrators can receive and track the IP and MAC addresses of each set-top box, which is crucial for network security and management.



### Factory reset

Administrators can remotely reset the set-top box to its factory settings, which is useful when preparing the device for transfer to another user or when resolving complex technical issues.

# How to purchase?


We offer a wide range of solutions to meet all your set-top box needs. Our catalog features various models with different capabilities and settings, so you can choose the optimal option for your business.

The table below highlights the key differences between ATV and AOSP firmware, helping you understand the features and limitations of each firmware branch, so you can make the right choice based on your needs:


| ATV  |                          | AOSP  |
|--|--------------------------|---|
| Operator   | Retail                   | Standard Launcher / Operator Launcher         |
| Operator Launcher  | Standard Launcher        |   |
| Strict branding requirements                                   | Branding is not possible | Any branding                                  |
| Strict requirements for regular updates of security components |                          | No need for regular updates                   |
| Certification procedure required                               |                          | No certification requirements                 |
| Google services are available (YouTube, Google play, etc.)     |                          | Only analogs of Google services are available |
| Engineered for TV use  |                          | Adaptation                                    |

# Useful resources


## Warranty and support



Technical support at [snr.support](https://snr.support)



Releasing fixes when bugs are discovered



Software development and support

# About the company



Since its establishment in 2006, the company has become one of the leading global suppliers of networking and switching equipment, with its own research and development (R&D) and manufacturing facilities.

SNR offer a wide range of our own products and turnkey solutions to meet the needs of clients.

- Data transmission networks and corporate IT infrastructure
- Solutions for mobile operators
- Optical transport networks (DWDM)
- Data center solutions
- Cloud solutions and network security
- Voice and unified communication solutions

Commitment to continuous development and innovation enables us to provide our clients with the most modern and efficient solutions.



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