IPDEX

REMOTE DESKTOP & SERVER CONTROL

USER MANUAL

Designed and Manufactured in the USA

Smart-AVI

1-800-284-2131
www.smartavi.com

OVERVIEW

TECHNICAL SPECIFICATIONS

VIDEO	
Format	HDMI2.0
HDCP Compliance	1.0/1.1
Video Bandwidth	Single-link 340MHz [10.2Gbps]
Resolution	Up to 4K @ 60 Hz
Input Interface	(1) HDMI [7.1ch audio & video]
Connector	Type A [19-pin female]
Maximum Distance	25 ft
USB	
Signal Type	USB 2.0
Input Interface	(1) USB Type A
CONTROL	
RS232	Via Control @ 115200 bps
OTHER	
Power Adapter	12VDC
Dimensions	8.8” W × 1.0” H × 3.9” D
Weight	1.6 lbs
Approvals	UL, CE, ROHS Compliant
Operating Temperature	+32 to +104°F (0 to +40°C)
Storage Temperature	-4 to 140°F (-20 to +60°C)
Humidity	10 to 70% (No Condensation)
Emulation	Keyboard and Mouse

WHAT'S IN THE BOX?

PART NO.	Q-TY	DESCRIPTION
IPDSK-100	1	Remote Desktop & Server Control
	1	12VDC Power Adapter
	1	User Manual

FRONT AND BACK

IPDex Front Panel

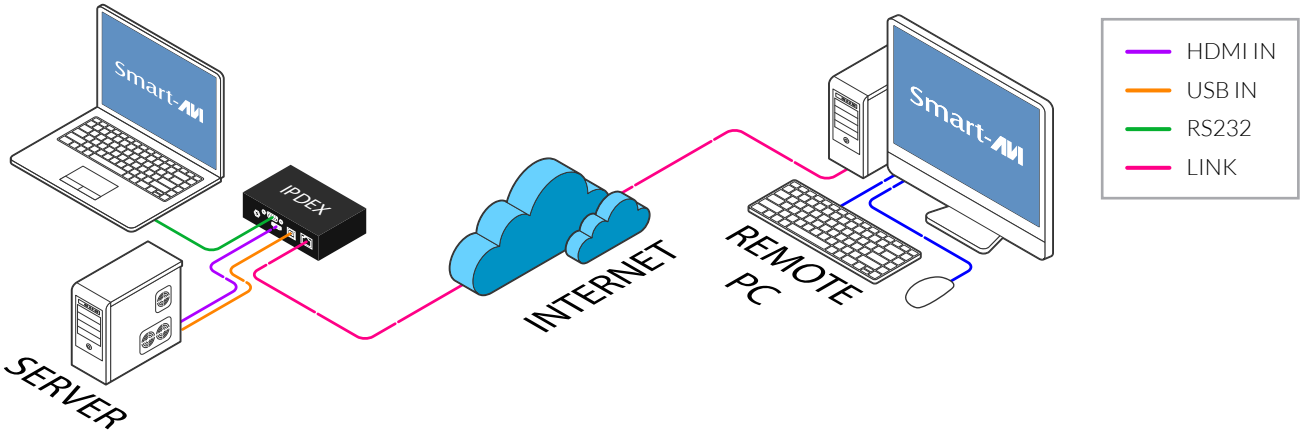
IPDex Back Panel

HARDWARE INSTALLATION

Follow these simple steps to set up your IPDex and get it running smoothly. No special tools or software are required.

1. Place the device within cable reach of the computer you want to control. Ensure there is adequate ventilation around the unit.
2. Plug one end of an HDMI cable into the HDMI output port on the host computer, and the other end into the HDMI IN port on the rear of the IPDex.
3. Plug a USB Type-B cable into the USB IN port on the IPDex, and the other end into a USB port on the host computer. This is what allows the IPDex to send keyboard and mouse inputs to the host.
4. Plug an Ethernet cable into the LAN port on the IPDex and connect the other end to your network switch, router, or patch panel.
5. Plug the 12V DC power adapter into the 12VDC port on the IPDex, then connect it to a power outlet. The front display will illuminate when the device powers on.

Note: Ensure all cables are securely connected to avoid signal issues.



LOGGING IN

The IPDex is controlled entirely through a web interface — no special software is needed on the computer you use to connect.

Accessing the web interface

1. Open a web browser. On any computer or tablet connected to the same network as the IPDex, open a web browser (such as Chrome, Firefox, Edge, or Safari).
2. Type in the IP address. In the address bar at the top of the browser, type the IP address of the IPDex (for example: http://192.168.1.50) and press Enter.
3. The login screen will appear. You will see the Smart-AVI login page with fields for Username and Password, and a language selector at the top.
4. Enter your credentials. Type your username and password, then click the Log In button.

Note: The default login credentials are set by your system administrator. If this is a first-time setup, contact Smart-AVI or your IT team for the initial credentials.

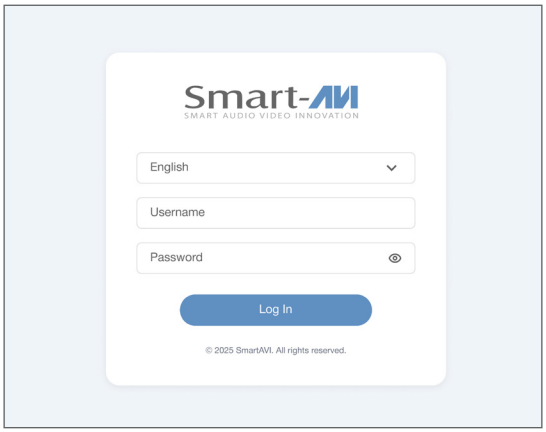
Selecting a language

Before logging in, you can change the display language using the dropdown at the top of the login screen. Select your preferred language from the list and the interface will update accordingly.

The header bar

Once logged in, you will see a header bar at the top of every page. This bar gives you at-a-glance status information:

Health	Shows the overall health of the system. A red icon means there are critical issues that need attention.
Power	Shows whether the host machine is currently powered on or off.
Remote host	The hostname or address of the IPDex device.
Refresh	Click to reload the current page and get the latest data.
Username	Your currently logged-in account. Click to access account options or log out.



THE OVERVIEW PAGE

The Overview page is the first thing you see after logging in. It gives you a summary of the system's current status in one place.

BMC date and time

At the top of the page, you will see the current date and time as reported by the IPDex device itself. This is the device's internal clock and is shown in UTC (Coordinated Universal Time).

There is also a SOL Console button here — this is a quick shortcut to the Serial Over LAN console, which is an advanced access method described in Section 9.

System information

This section shows four summary cards about the host system:

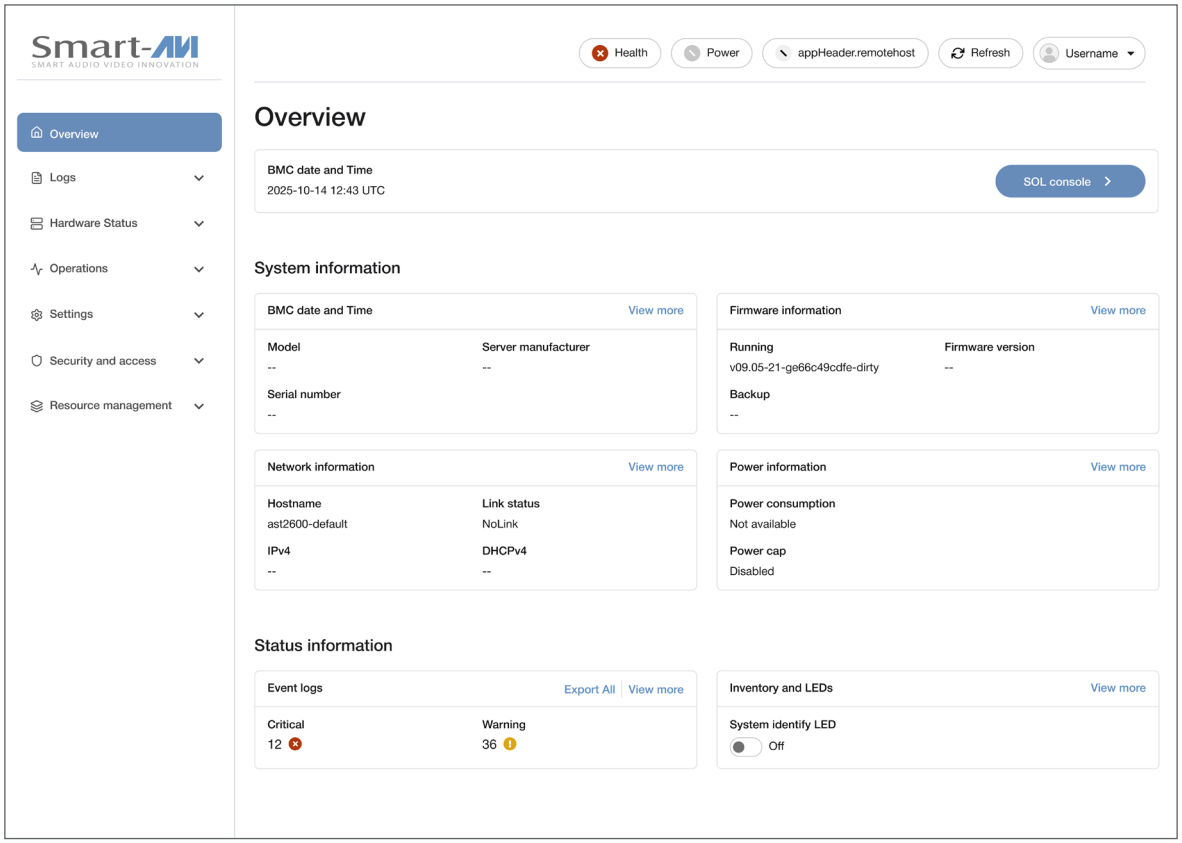
BMC date and time	The internal device clock. Click 'View more' to see full time settings.
Firmware information	The version of firmware currently running on the IPDex, plus the backup version.
Network information	The hostname, IP address, link status, and network configuration of the IPDex.
Power information	Current power consumption and whether a power cap is enabled.

You can click 'View more' on any of these cards to go to the full detail page for that section.

Status information

The lower section of the Overview page shows two status panels:

- Event logs — shows how many Critical and Warning events have been recorded. You can click Export All to download all logs, or View more to see the full event log list.
- Inventory and LEDs — shows the current state of the System Identify LED, which can help you physically locate a device in a rack.

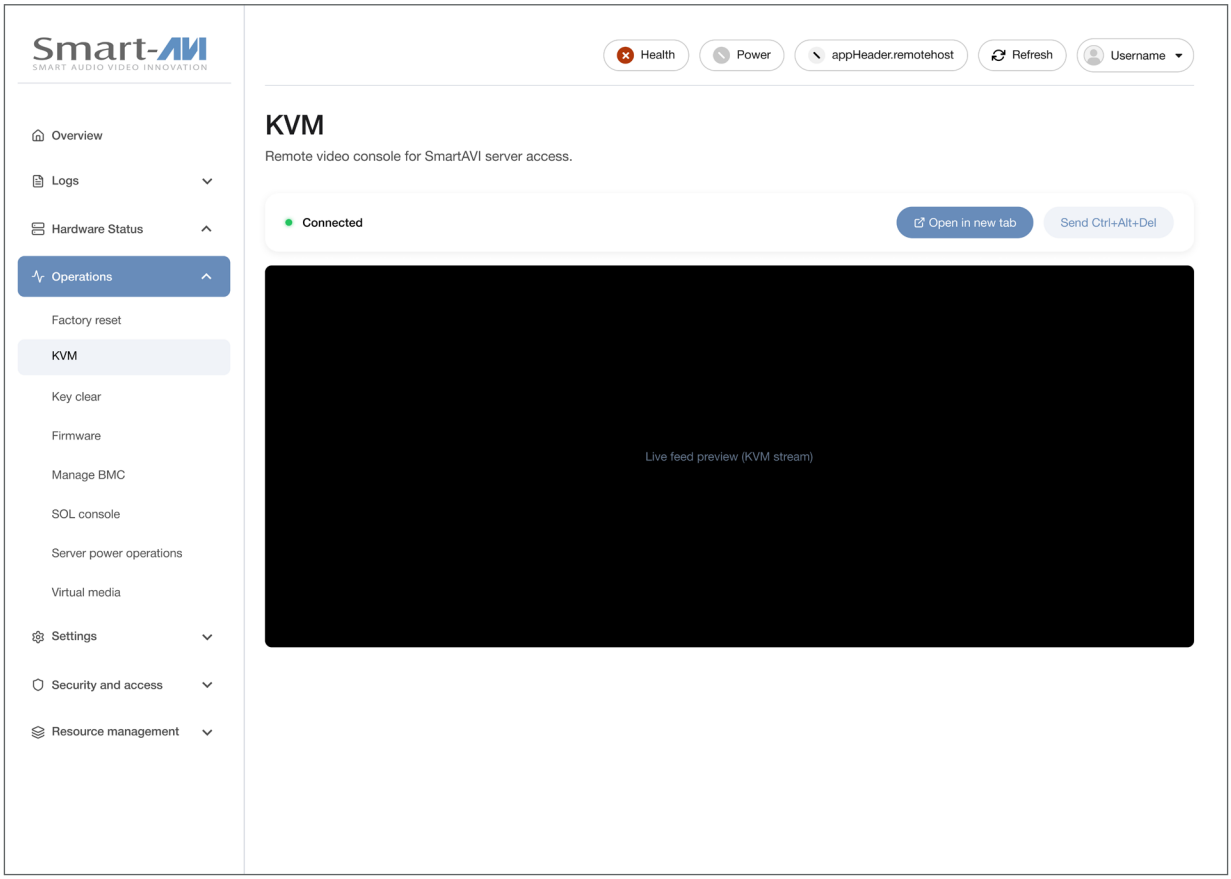


KEYBOARD, VIDEO & MOUSE

KVM stands for Keyboard, Video, and Mouse. This is the core feature of the IPDex — it lets you see the screen of the host computer and control it as if you were sitting right in front of it.

Launching KVM

1. Click 'Operations' in the left sidebar. This expands the Operations menu.
2. Click 'KVM'. The KVM viewer will open in a new window or tab in your browser.
3. The remote screen will appear. You will see a live view of the host computer's display. You can now use your keyboard and mouse normally — all inputs are passed through to the host computer.



Tip: KVM works even before the operating system has started. You can use it to access BIOS settings, watch the boot process, or recover from a failed system start.

What you can do in KVM

- See the host screen in real time
- Type using your keyboard — keypresses are sent to the host
- Move and click the mouse — mouse movements are sent to the host
- Enter BIOS or firmware setup screens
- Navigate boot menus
- Interact with the operating system as if physically present

Note: KVM requires the HDMI cable and USB cable to both be connected between the IPDex and the host computer. If the screen appears black, check that the host computer is powered on and that the HDMI cable is firmly seated.

VIRTUAL MEDIA

Virtual Media lets you attach an ISO file or a USB drive image to the host computer over the network — as if you had physically plugged in a USB stick or inserted a disc. This is useful for installing an operating system, running a rescue tool, or loading diagnostics software without being physically present.

Mounting a virtual drive

1. Click 'Operations' in the left sidebar
2. Click 'Virtual media'. The virtual media panel will open.
3. Select your file. Choose an ISO image or USB disk image from your computer.
4. Click Mount. The file will be attached to the host computer as if it were a physical drive. You can verify this by checking the host computer's boot menu or file system via the KVM viewer.

Common uses

- Installing a fresh operating system on a new or wiped machine
- Booting into a recovery or diagnostic environment
- Running a live operating system without modifying the host's storage
- Loading firmware update utilities that require bootable media

Warning: Do not disconnect virtual media while the host computer is actively reading from it. This may cause the host system to crash or data to become corrupted.

EVENT LOGS

The IPDex keeps a detailed record of system events. These logs help you understand what has happened on the host system — including errors, warnings, and normal operational messages.

Opening the event log

In the left sidebar, click Logs, then click Event logs. You will see a table listing all recorded events.

Understanding the log table

Each row in the event log represents one event. The columns are:

ID	A unique reference number for each event.
Severity	How serious the event is: Critical (red), Warning (yellow), or Ok (green).
Date	The date and time the event was recorded, shown in UTC.
Description	A plain-language description of what happened.
Status	Whether the event has been marked as Resolved or remains Unresolved.

Filtering and searching logs

- Use the Search logs box to filter events by keyword.
- Use the From date and To date fields to narrow results to a specific time period.
- Use the page navigation at the bottom to browse through all records.

Resolving and deleting events

Each event has a toggle in the Status column. Switch it on to mark an event as resolved. You can also delete individual events using the bin icon on the right of each row.

EVENT LOGS (CONTINUED)

Exporting logs
To save a copy of all event logs, click the Export All button at the top of the page. This will download the logs as a file that can be opened in a spreadsheet application or shared with your IT team.

POST code logs
The IPDex also records POST codes — diagnostic codes generated by the host computer during the boot process. These are useful for diagnosing hardware problems that prevent the system from starting. Access them by clicking Logs, then POST code logs in the left sidebar.

SOL CONSOLE

SOL stands for Serial Over LAN. The SOL console gives you a text-based connection to the host computer's serial port over the network. This is an advanced feature used when the regular screen (KVM) is not available or when working with servers that use serial for system management.

To access the SOL console:
1. Click 'Operations' in the left sidebar
2. Click 'SOL console'. A terminal window will open in your browser showing the serial output of the host machine.

Note: The SOL console is primarily used by IT administrators and server operators. If you are unsure whether you need this feature, you likely do not need it for everyday use.

SERVER POWER OPERATIONS

The IPDex allows you to control the power state of the host computer remotely. This includes powering it on, off, or performing a restart — without physically touching the machine.

Accessing power controls
In the left sidebar, click Operations, then Server power operations. You will see buttons for the available power actions.

Available power actions

Power on	Turns the host computer on.
Power off	Performs a graceful shutdown of the host computer.
Force power off	Immediately cuts power to the host computer. Use only if the system is unresponsive.
Restart	Performs a graceful restart of the host computer.
Force restart	Immediately restarts the host computer without a graceful shutdown.

Warning: Force power off and Force restart cut power without warning. Any unsaved work on the host computer will be lost. Only use these options if the system is completely unresponsive.

HARDWARE STATUS — INVENTORY & LEDS

The Hardware Status section shows you a full inventory of the components inside or attached to the host system, along with their current health status.

Opening the inventory
In the left sidebar, click Hardware Status, then Inventory and LEDs. The page is divided into sections for each type of hardware component.

Component sections

System	The main system board (mainboard) and any expansion boards.
BMC manager	The built-in management controller on the host system.
Chassis	The physical enclosure or rack unit containing the system.
DIMM Slot	Memory modules (RAM) installed in the system.
Fans	Cooling fans and their operational status.
Power Supplies	Power supply units (PSUs) installed in the system.
Processors	CPUs, their current state, and operating speed.
Assemblies	Other hardware assemblies such as controllers or fan modules.

Health status indicators
Each component shows a health badge:
- Ok (green) — the component is working normally
- Warning (yellow) — the component has a non-critical issue that should be investigated
- Critical (red) — the component has a serious problem that needs immediate attention

Identify LEDs
Many components have an Identify LED toggle. Turning this on causes a physical LED on that component to light up, making it easy to locate the correct component in a rack or server room. This is especially useful when working with multiple servers.

To turn on an Identify LED, find the component in the list and click the toggle in the Identify LED column. Toggle it off again when you have finished.

Quick links
At the top of the Inventory and LEDs page, there is a row of icons providing quick navigation to each component section: System, Power Supplies, Processors, DIMM Slot, Chassis, BMC Manager, Fans, and Assemblies.

FIRMWARE UPDATES

Firmware is the built-in software that runs on the IPDex device itself. Smart-AVI periodically releases updated firmware versions with improvements, new features, and fixes. This section explains how to update the firmware on your IPDex.

Checking the current version
In the left sidebar, click Operations, then Firmware. The page shows two sections:
- Running image — the firmware version currently active on the device.
- Backup image — a previously installed version stored as a fallback. You can switch back to this version using the 'Switch to running' link if needed.

FIRMWARE UPDATES (CONTINUED)

Updating the firmware

1. Download the new firmware file. Obtain the latest firmware file from Smart-AVI. It will be a single file with a .tar or similar extension.
2. Go to Operations > Firmware. In the left sidebar, navigate to the Firmware page.
3. Click 'Add file'. A file picker will open. Navigate to the firmware file you downloaded and select it. Alternatively, drag and drop the file into the upload area.
4. Click 'Start update'. The IPDex will begin the update process. Do not close the browser window or power off the device during this process.
5. Wait for the update to complete. The update may take several minutes. The device will restart automatically once the new firmware has been applied. You will need to log in again after the restart.

Warning: Do not power off the IPDex or close your browser during a firmware update. Interrupting the process may leave the device in an unrecoverable state.

MANAGE BMC

The Manage BMC page allows you to reboot the IPDex device itself and control the power state of the remote host PC directly.

To access this page, click Operations in the left sidebar, then Manage BMC.

Rebooting the IPDex

If the IPDex becomes unresponsive or you need to apply a configuration change, you can reboot it from this page.

1. Click 'Reboot BMC'. A confirmation prompt may appear.
2. Confirm the reboot. The IPDex will restart. Your browser will lose contact with the device for several minutes.
3. Wait and refresh. After a minute or two, refresh your browser. The login page will reappear once the device is back online.

Note: Rebooting the IPDex does not affect the host computer — the host will continue running normally during and after the IPDex reboot.

Remote PC power control

The Manage BMC page also shows the current power state of the remote host PC and provides buttons to power it on or off:

- Remote PC power OFF — turns off the remote host computer.
- Remote PC power ON — turns on the remote host computer.

Port controls

The page displays up to 8 switchable ports, each with On and Off buttons. These allow you to control power to individual connected devices on a per-port basis. Contact your system administrator for guidance on which ports correspond to which devices in your installation.

SETTINGS

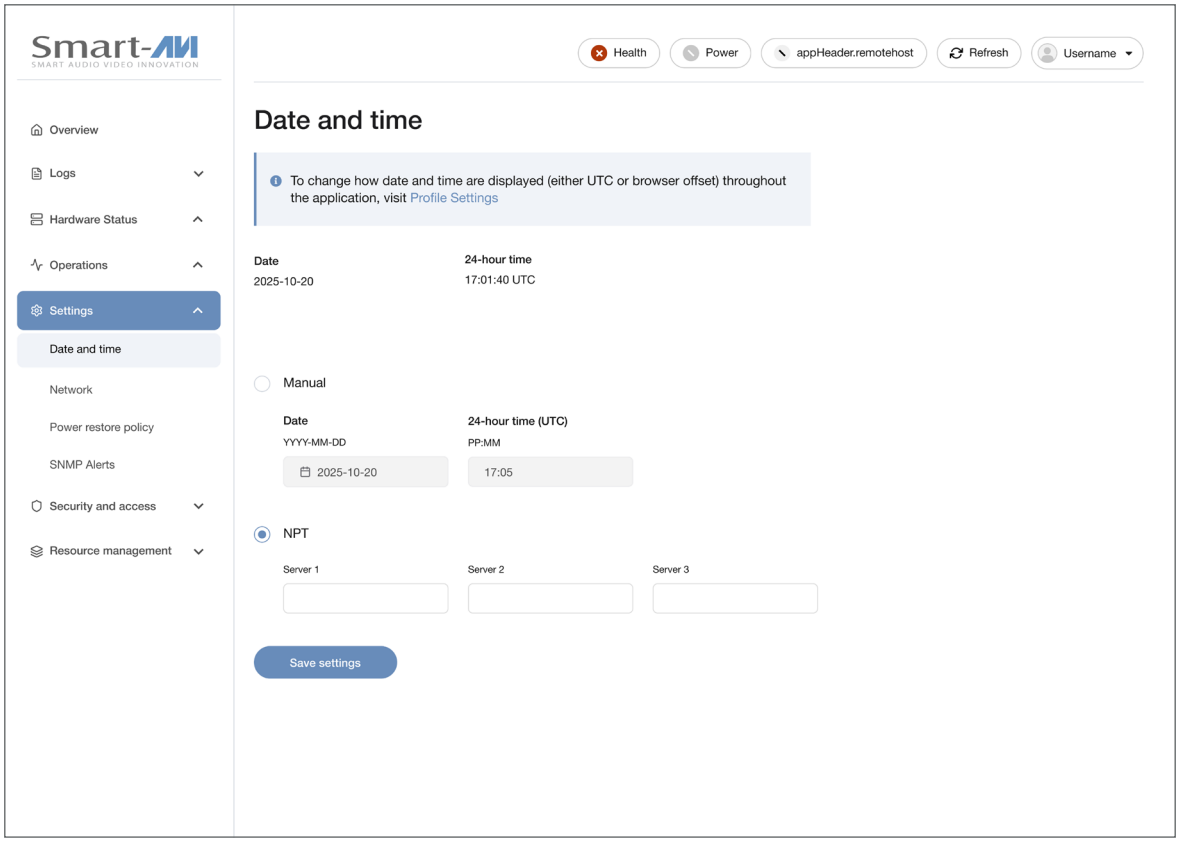
The Settings section contains configuration options for the IPDex device. These are typically configured once during initial setup and rarely need to be changed.

Access settings by clicking Settings in the left sidebar. The menu will expand to show available sub-sections.

Note: Changing settings incorrectly can make the device inaccessible on the network. If you are unsure about a setting, consult your IT administrator before making changes.

Date and time

The date and time settings allow you to synchronise the IPDex's internal clock with a time server (NTP) or set it manually. Accurate time is important for event logs and security certificates.



Network settings

Network settings control how the IPDex connects to your local network. By default, the device uses DHCP to obtain an IP address automatically. You can change this to a fixed (static) IP address if your network requires it.

Other settings

Additional settings may be available depending on your firmware version, including SNMP (network monitoring alerts) and other system preferences. Refer to the tooltips within each settings page for guidance on individual options.

SECURITY & ACCESS

The Security and Access section controls who can log in to the IPDex and what they are allowed to do. This section is primarily managed by an Administrator.

Click Security and access in the left sidebar to expand the menu. The available sections are:

- Sessions — view who is currently logged in to the IPDex.
- LDAP — configure integration with a company directory service for centralised login management.
- User management — add, remove, and manage user accounts.
- Policies — configure account security rules such as password requirements and login lockouts.
- Certificates — manage SSL certificates for secure browser connections.

User management

The User management page shows a list of all user accounts on the IPDex. Administrators can add new users by clicking the Add role group button in the top right corner.

Each user is assigned one of four privilege levels:

Permission	Administrator	Operator	Read Only	No Access
Configure components managed by this service	☑	☑	☒	☒
Configure manager resources	☑	☒	☒	☒
Update password for current user account	☑	☑	☑	☒
Configure users and their accounts	☑	☒	☒	☒
Log in to the service and read resources	☑	☑	☑	☒

Sessions

The Sessions page shows all active login sessions. Administrators can view or terminate sessions from here. This is useful for security auditing or if you need to force a user to log out.

FACTORY RESET & KEY CLEAR

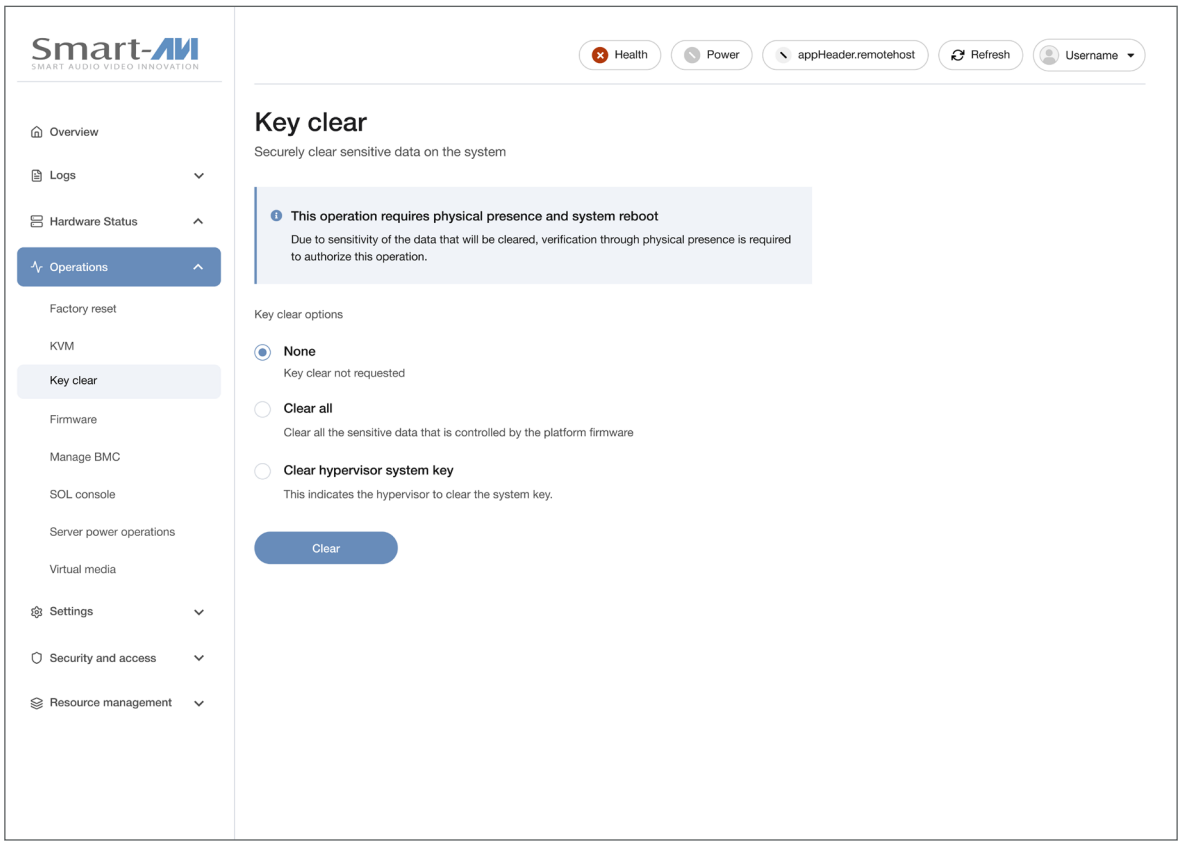
These options are found under Operations in the left sidebar. Both are advanced operations that should only be performed when necessary.

Factory reset
A factory reset returns the IPDex to its original out-of-the-box settings. All custom configuration, user accounts, and network settings will be erased.

Warning: A factory reset is irreversible. All settings, user accounts, and configurations will be permanently deleted. Make sure you have noted down any important settings before proceeding.

To perform a factory reset, click Operations in the sidebar, then Factory reset, and follow the on-screen confirmation prompt.

Key clear
Key clear removes stored cryptographic keys from the device. This is an advanced security operation typically performed when decommissioning a device or transferring it to a new owner. Contact Smart-AVI support before using this option if you are unsure.



TROUBLESHOOTING

No Power

- Make sure that the power adapter is securely connected to the power connector of the unit.
- Check the output voltage of the power supply and make sure that the voltage value is around 12VDC.
- Replace the power supply.

No Video

- Check if all the video cables are connected properly.
- Connect the computer directly to the monitor to verify that your monitor and computer are functioning properly.
- Restart the computers.

Keyboard is not working

- Check if the keyboard is properly connected to the unit.
- Check if the USB cables connecting the unit and the computers are properly connected.
- Try connecting the USB on the computer to a different port.
- Make sure that the keyboard works when directly connected to the computer.
- Replace the keyboard.

Mouse is not working

- Check if the mouse is properly connected to the unit.
- Try connecting the USB on the computer to a different port.
- Make sure that the mouse works when directly connected to the computer.
- Replace the mouse.

No Audio

- Check if all the audio cables are connected properly.
- Connect the speakers directly to the computer to verify that the speakers and the computer audio are functioning properly.
- Check the audio settings of the computer and verify that the audio output is through the speakers.

TECHNICAL SUPPORT

For product inquiries, warranty questions, or technical questions, please contact info@smartavi.com.

LIMITED WARRANTY STATEMENT

A. Extent of limited warranty
SmartAVI, Inc. warrants to the end-user customers that the SmartAVI product specified above will be free from defects in materials and workmanship for the duration of 1 year, which duration begins on the date of purchase by the customer. Customer is responsible for maintaining proof of date of purchase.

SmartAVI limited warranty covers only those defects which arise as a result of normal use of the product, and do not apply to any:

a. Improper or inadequate maintenance or modifications
b. Operations outside product specifications
c. Mechanical abuse and exposure to severe conditions

If SmartAVI receives, during applicable warranty period, a notice of defect, SmartAVI will at its discretion replace or repair defective product. If SmartAVI is unable to replace or repair defective product covered by the SmartAVI warranty within reasonable period of time, SmartAVI shall refund the cost of the product.

SmartAVI shall have no obligation to repair, replace or refund unit until customer returns defective product to SmartAVI.

Any replacement product could be new or like new, provided that it has functionality at least equal to that of the product being replaced.

SmartAVI limited warranty is valid in any country where the covered product is distributed by SmartAVI.

B. Limitations of warranty
To the extant allowed by local law, neither SmartAVI nor its third party suppliers make any other warranty or condition of any kind whether expressed or implied with respect to the SmartAVI product, and specifically disclaim implied warranties or conditions of merchantability, satisfactory quality, and fitness for a particular purpose.

C. Limitations of liability
To the extent allowed by local law the remedies provided in this warranty statement are the customers sole and exclusive remedies.

To the extant allowed by local law, except for the obligations specifically set forth in this warranty statement, in no event will SmartAVI or its third party suppliers be liable for direct, indirect, special, incidental, or consequential damages whether based on contract, tort or any other legal theory and whether advised of the possibility of such damages.

D. Local law
To the extent that this warranty statement is inconsistent with local law, this warranty statement shall be considered modified to be consistent with such law.

Smart-AVI
SMART AUDIO VIDEO INNOVATION

NOTICE

20240506

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