

# iSwitch 2000-CTL

AV over IP Controller

*Hardware User Manual V1.0*



## CONTENT

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|                                            |          |
|--------------------------------------------|----------|
| <b>Important Safety Instructions .....</b> | <b>2</b> |
| <b>1. Introduction .....</b>               | <b>3</b> |
| 1.1 Overview .....                         | 3        |
| 1.2 Features .....                         | 3        |
| 1.3 Package Contents .....                 | 3        |
| 1.4 Specifications .....                   | 3        |
| <b>2. Panel Overview .....</b>             | <b>4</b> |
| 2.1 Front Panel .....                      | 4        |
| 2.2 Rear Panel .....                       | 4        |
| <b>3. Installation .....</b>               | <b>5</b> |

## IMPORTANT SAFETY INSTRUCTIONS



**1.** Do not expose this apparatus to rain, moisture, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.



**6.** Clean this apparatus only with dry cloth.



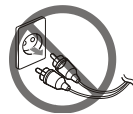
**2.** Do not install or place this unit in a bookcase, built-in cabinet or in another confined space. Ensure the unit is well ventilated.



**7.** Unplug this apparatus during lightning storms or when unused for long periods of time.



**3.** To prevent risk of electric shock or fire hazard due to overheating, do not obstruct the unit's ventilation openings with newspapers, tablecloths, curtains, and similar items.



**8.** Protect the power cord from being walked on or pinched particularly at plugs.



**4.** Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.



**9.** Only use attachments / accessories specified by the manufacturer.



**5.** Do not place sources of naked flames, such as lighted candles, on the unit.



**10.** Refer all servicing to qualified service personnel.

# 1. INTRODUCTION

## 1.1 OVERVIEW

The **iSwitch 2000-CTL** AVoIP controller provides centralized configuration and management for encoders and decoders over an AV over IP network. It supports device discovery and system control through Ethernet and RS-232 interfaces. It can also be integrated with an external control system. Supports **iSwitch 2000HC-T/ iSwitch 2000HC-R/ iSwitch 2000U-TR/ iSwitch 2000H-TR**.

## 1.2 FEATURES

- **Automatically discovers** compatible encoders and decoders on the network.
- Supports configuration and management of connected encoders and decoders.
- Supports integration with external control systems.

## 1.3 PACKAGE CONTENTS

- 1 x iSwitch 2000-CTL Controller Unit
- 1 x 12V DC 2A Power Adapter (US/EU/UK/AU)
- 1 x 3.5mm 6-pin Phoenix Male Connector
- 4 x Wall-Mount Brackets
- 4 x Screws

## 1.4 SPECIFICATIONS

| Video                              |                                                                                                  |
|------------------------------------|--------------------------------------------------------------------------------------------------|
| I/O Connections                    | 1 x AV(PoE) (10/100/1000 Mbps)<br>1 x CONTROL (10/100/1000 Mbps)<br>1 x RS232                    |
| LED                                | 1 x POWER LED<br>1 x STATUS LED                                                                  |
| Button                             | 1 x RESET Button                                                                                 |
| Control                            |                                                                                                  |
| Control Method                     | LAN (Web UI & Telnet), RS-232 and third party controllers                                        |
| General                            |                                                                                                  |
| Operating Temperature/<br>Humidity | 32°F – 113°F (0°C – 45°C), 10% – 90%, non-condensing                                             |
| Storage Temperature/<br>Humidity   | -4°F – 158°F (-20°C – 70°C), 10% – 90%, non-condensing                                           |
| ESD Protection                     | Human body model:<br>±8kV (air-gap discharge) / ±4kV (contact discharge)                         |
| Power Supply                       | 12V DC 2A; PoE                                                                                   |
| Power Consumption                  | <ul style="list-style-type: none"><li>• No load: 2.1W</li><li>• Max.: 8.9W (full load)</li></ul> |
| Device Dimension<br>(W x H x D)    | 8.46" x 0.98" x 4.73" (215 mm x 25 mm x 120.2 mm)                                                |
| Net Weight                         | 1.50lbs (0.68kg)                                                                                 |

## 2. PANEL OVERVIEW

### 2.1 FRONT PANEL

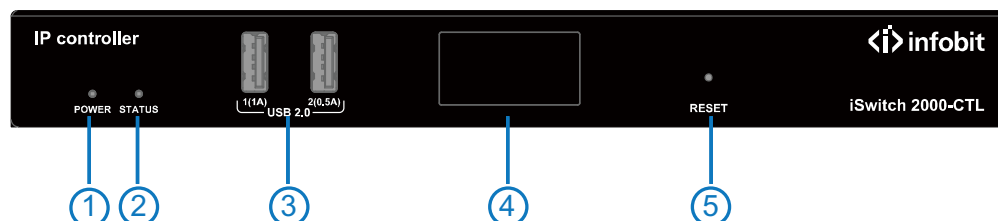


Figure 1: Front Panel

| # | Name          | Description                                                                                                                                                                                                                                                                                |
|---|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | POWER LED     | <ul style="list-style-type: none"> <li>On: The device is powered on.</li> <li>Off: The device is powered off.</li> </ul>                                                                                                                                                                   |
| 2 | STATUS LED    | <ul style="list-style-type: none"> <li>On: The device is operating normally.</li> <li>Off: The device is booting or powered off.</li> </ul>                                                                                                                                                |
| 3 | USB 2.0 (1–2) | 2 × USB 2.0 Type-A ports. Connect to USB 2.0 peripherals. Port 1 provides 5V DC at up to 1 A, and Port 2 provides 5V DC at up to 0.5 A.                                                                                                                                                    |
| 4 | OLED Screen   | Displays the IP addresses of AV(POE) and CONTROL ports, along with the device firmware version.                                                                                                                                                                                            |
| 5 | RESET         | <p>Press and hold the recessed button for at least 10 seconds, then release to restore the device to its factory default settings.</p> <p><b>Note:</b> Restoring factory default settings erases all configurations and custom data. Back up any important settings before proceeding.</p> |

### 2.2 REAR PANEL



Figure 2: Rear Panel

| # | Name    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | 12V     | 12V DC power connector. Connect to the included power adapter.                                                                                                                                                                                                                                                                                                                                                                                    |
| 2 | AV(POE) | <ul style="list-style-type: none"> <li><b>AV (POE):</b> Connect to the AV network for communication with encoders and decoders.<br/>Default IP setting: DHCP</li> <li><b>CONTROL:</b> Connect to a control network for configuration and management of the controller, encoders, and decoders.<br/>Default IP setting: <ul style="list-style-type: none"> <li>IP Address: 192.168.11.243</li> <li>Subnet Mask: 255.255.0.0</li> </ul> </li> </ul> |
| 3 | CONTROL |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| # | Name  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   |       | <ul style="list-style-type: none"> <li>- Gateway: 192.168.11.1</li> <li>- DHCP: Off</li> </ul> <p><b>Note:</b><br/>The AV (POE) port supports PoE power input from compatible power sourcing equipment (e.g. a PoE-enabled Ethernet switch), eliminating the need for a nearby power outlet.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 4 | RS232 | <ul style="list-style-type: none"> <li>• <b>DEBUG:</b> The TX, RX, G pins are used for device troubleshooting only.<br/>RS-232 parameters: <ul style="list-style-type: none"> <li>- Baud Rate: 115,200bps</li> <li>- Data Bits: 8 bits</li> <li>- Parity: None</li> <li>- Stop Bits: 1</li> </ul> </li> <li>• <b>CTRL:</b> The G, TX, and RX pins are used for device control, configuration, and management through an RS-232 connection or an external controller.<br/>RS-232 parameters: <ul style="list-style-type: none"> <li>- Baud Rate: 9600 bps</li> <li>- Data Bits: 8 bits</li> <li>- Parity: None</li> <li>- Stop Bits: 1</li> </ul> </li> <li>• <b>12V:</b> The 12V and G pins provide 12V DC 0.5A output.</li> </ul> <p><b>Note:</b><br/>Connect the appropriate pins for debugging and device control. When the device is powered by a DC power adapter, if the CTRL pins are connected after a connection has been established through the DEBUG pins, reboot the device before performing control operations.</p> |

## 3. INSTALLATION

**Note:** Ensure the device is disconnected from the power supply before installation.

### Installing Wall-Mount Brackets

1. Attach the two wall-mount brackets to the enclosure using the screws provided, as shown in the figure below.

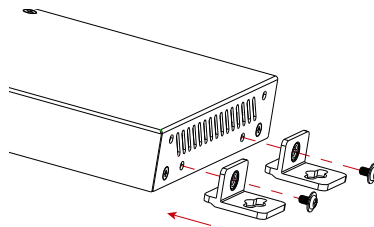


Figure 3: Wall-Mount Bracket Installation

2. Repeat the above step for the other side of the device.
3. Mount the brackets at the desired location using user-supplied screws (not included).