

## Grandstream HA100

# Grandstream HA100 High-Availability Controller User Manual

Model: HA100 | Brand: Grandstream

## 1. PRODUCT OVERVIEW

The Grandstream HA100 is a High-Availability Controller specifically designed to work with two Grandstream UCM6510 IP PBXs. Its primary function is to provide an automatic failover solution, ensuring an always-on, redundant voice system for businesses. The HA100 continuously monitors the operational status of both connected UCM6510 units. In the event of a primary device failure, it automatically switches all system control to the hot-standby secondary UCM6510, minimizing service interruptions.



**Figure 1:** Front panel of the Grandstream HA100 High-Availability Controller.

This image displays the front panel of the Grandstream HA100. From left to right, it features WAN A/B ports, LAN A/B ports, T1/E1/J1 A/B ports, FXO 1 A/B ports, FXO 2 A/B ports, FXS 1 A/B ports, and FXS 2 A/B ports. To the right of the ports, there are LED indicators for FXO1, FXO2, WAN, LAN, T1/E1, and a power indicator. These ports facilitate connection to two UCM6510 IP PBXs for high availability.

## 2. SETUP AND INSTALLATION

Proper installation of the HA100 is crucial for its high-availability functionality. Follow these steps for a successful setup:

- 1. Prepare UCM6510 Units:** Ensure you have two Grandstream UCM6510 IP PBX units, one designated as primary and the other as secondary (hot-standby). Both units should be configured and ready for high-availability pairing according to their respective manuals.

2. **Power Off Devices:** Before making any connections, ensure both UCM6510 units and the HA100 are powered off.
3. **Connect Network Ports:**
  - Connect the WAN port of UCM6510 (Primary) to the HA100's WAN A port.
  - Connect the WAN port of UCM6510 (Secondary) to the HA100's WAN B port.
  - Connect the LAN port of UCM6510 (Primary) to the HA100's LAN A port.
  - Connect the LAN port of UCM6510 (Secondary) to the HA100's LAN B port.
4. **Connect Telephony Ports (if applicable):**
  - Connect T1/E1/J1 ports from UCM6510 (Primary) to HA100's T1/E1/J1 A port.
  - Connect T1/E1/J1 ports from UCM6510 (Secondary) to HA100's T1/E1/J1 B port.
  - Repeat for FXO and FXS ports, connecting primary UCM6510 ports to 'A' labeled ports on HA100 and secondary UCM6510 ports to 'B' labeled ports on HA100.
5. **Power On:** Once all connections are secure, power on the HA100 first, then the primary UCM6510, and finally the secondary UCM6510.
6. **Verify Connections:** Observe the LED indicators on the HA100's front panel. The corresponding LEDs for WAN, LAN, T1/E1/J1, FXO, and FXS ports should illuminate, indicating active connections.

### 3. OPERATION

The HA100 operates primarily in an automated fashion to ensure high availability for your UCM6510 IP PBX system. Key operational aspects include:

- **Continuous Monitoring:** The HA100 constantly monitors the operational status of both the primary and secondary UCM6510 units. This includes checking network connectivity, system health, and service availability.
- **Automatic Failover:** In the event that the primary UCM6510 unit becomes unresponsive or fails, the HA100 automatically detects this condition and initiates a failover process. It seamlessly switches all system control and active connections to the pre-configured hot-standby secondary UCM6510.
- **Fast Switching Time:** The system switching time typically ranges from 10 to 50 seconds, depending on the number of registered endpoints and the complexity of the configuration. This rapid transition minimizes service disruption.
- **Gratuitous ARP:** The HA100 utilizes Gratuitous ARP (Address Resolution Protocol) to force SIP endpoints to refresh the MAC address of the active UCM6510. This ensures that endpoints quickly re-register with the newly active UCM6510 without manual intervention or significant interruptions.
- **LED Indicators:** The front panel features up to 14 LED indicators that provide real-time status of all telecom lines and network links, allowing for quick visual confirmation of the system's operational state and active UCM6510.

### 4. MAINTENANCE

To ensure the longevity and optimal performance of your Grandstream HA100, consider the following maintenance practices:

- **Physical Inspection:** Periodically inspect the device for any visible damage, loose cables, or excessive dust accumulation.
- **Cleaning:** Gently clean the exterior of the device with a soft, dry cloth. Avoid using liquid cleaners or abrasive materials. Ensure ventilation openings are clear of obstructions.

- **Firmware Updates:** While the HA100 operates largely autonomously, it is good practice to check the Grandstream official website periodically for any firmware updates. Updates can provide performance enhancements, bug fixes, or new features. Follow the manufacturer's instructions carefully when performing firmware upgrades.
- **Environmental Conditions:** Ensure the HA100 is operated within its specified environmental conditions (temperature, humidity) and in a well-ventilated area to prevent overheating.
- **Connection Integrity:** Occasionally verify that all network and telephony cables are securely connected to their respective ports on both the HA100 and the UCM6510 units.

## 5. TROUBLESHOOTING

If you encounter issues with your Grandstream HA100, refer to the following common troubleshooting steps:

- **No Power:**
  - Ensure the power adapter is securely connected to the HA100 and a working power outlet.
  - Verify the power outlet is active.
  - Check the power LED on the HA100. If it's off, try a different power adapter (if available and compatible).
- **Failover Not Occurring:**
  - Confirm that both UCM6510 units are properly configured for high availability according to the UCM6510 manual.
  - Check all cable connections between the HA100 and both UCM6510 units (WAN, LAN, T1/E1/J1, FXO, FXS). Ensure they are firmly seated.
  - Observe the HA100's LED indicators. Are they showing the expected status for both UCMs?
  - Ensure the primary UCM6510 is genuinely experiencing a failure that the HA100 is designed to detect (e.g., power loss, network link down).
- **Connection Issues (Network/Telephony):**
  - Verify the integrity of the Ethernet and telephony cables. Try replacing them if suspected faulty.
  - Check the corresponding LED indicators on the HA100 for the affected ports (WAN, LAN, T1/E1/J1, FXO, FXS). If an LED is off or blinking unexpectedly, it may indicate a connection problem.
  - Ensure the UCM6510 units themselves have proper network and telephony configurations.
- **SIP Endpoints Not Re-registering After Failover:**
  - While the HA100 uses Gratuitous ARP, some older or specific SIP endpoints might require a manual restart to refresh their network information.
  - Verify network settings on the UCM6510s and the network infrastructure to ensure ARP broadcasts are not being blocked.

For more detailed troubleshooting or complex issues, please refer to the official Grandstream support resources or contact their technical support.

## 6. SPECIFICATIONS

|                                |                    |
|--------------------------------|--------------------|
| Model Number                   | HA100              |
| Product Dimensions (L x W x H) | 20 x 12 x 2 inches |

|                    |                 |
|--------------------|-----------------|
| Item Weight        | 5 pounds        |
| Color              | Black           |
| Material           | Plastic         |
| Power Source       | DC Power Supply |
| Compatible Devices | UCM6510         |

### Key Features:

- Connects and constantly monitors two UCM6510 units for high availability.
- Smart failover solution that automatically switches to a hot-standby secondary UCM6510.
- Features up to 14 LED indicators showing real-time status of all telecom lines and network links.
- Utilizes Gratuitous ARP to force SIP endpoints to refresh the MAC address of the UCM6510 without interruptions.
- Achieves a fast system switching time, typically between 10 to 50 seconds, depending on the number of registered endpoints.

## 7. WARRANTY INFORMATION

Specific warranty terms and conditions for the Grandstream HA100 are typically provided with the product packaging or can be found on the official Grandstream website. Please refer to the documentation included with your purchase or visit [www.grandstream.com](http://www.grandstream.com) for the most current warranty details and registration information.

## 8. TECHNICAL SUPPORT

For technical assistance, product inquiries, or further support regarding your Grandstream HA100, please utilize the following resources:

- **Grandstream Support Portal:** Visit the official Grandstream support portal for FAQs, knowledge base articles, and firmware downloads.
- **Contact Grandstream:** Contact information for technical support, including phone numbers and email addresses, can be found on the Grandstream website's support section.
- **Community Forums:** Grandstream often hosts community forums where users and experts can share information and solutions.

Always provide your product model (HA100) and a detailed description of your issue when seeking support to ensure efficient assistance.

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### ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

**Name**

Anonymous

**Email**

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

**Question**

Example: How do I reset this device or fix this error?

**Details**

Model number, symptoms, what you tried, or the section of the manual you are using.

**Submit question**