

DINSTAR SBC300 SBC Series Session Border Controller Installation Guide

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DINSTAR SBC300 SBC Series Session Border Controller

Product Information

The SBC series devices (SBC300, SBC1000, SBC3000) are products manufactured by Dinstar. They are Session Border Controllers (SBCs) designed for network communication and management. The devices come with various technical specifications and indicators to provide efficient networking capabilities.

Technical Specifications

- **Network Port:** The devices have 4 network ports for service.
- **Network Port for Management:** SBC300 and SBC1000 have 1 network port for management, while SBC3000 does not have a network port for management.
- **Max Concurrent:** The maximum number of concurrent connections supported by each device is as follows: SBC300 – 50, SBC1000 – 500, SBC3000 – 2,000.
- **Max Registration:** The maximum number of registered users supported by each device is as follows: SBC300 – 1,000, SBC1000 – 5,000, SBC3000 – 10,000.

Indicators and Ports

The devices have various indicators and ports for monitoring and connectivity purposes. The indicators and their definitions are as follows:

- **PWR RUN (Power Indicator):** ON – The device is switched on, OFF – The power is switched off or there is no power supply, Blinking slowly – The device is running properly.
- **Running Indicator:** ON/OFF – The device goes wrong.
- **ALM (Alarm Indicator):** OFF – The system is working properly, ON – The system is down.
- **GE (Network Link):** Blinking quickly – The device is properly connected to the network, OFF – The device is not connected to the network or the network connection is improper.
- **Yellow Indicator (Network Speed):** ON – Work at 1,000Mbps, OFF – Network speed lower than 1,000Mbps.

Ports and Buttons

The devices have different ports and buttons for connectivity and management purposes. The ports and buttons

are labeled as follows:

- **SBC300:** PWR, RUN, ALM, SIM, TF, E1/T1, Console, MGMT, GE0, GE1, GE2, GE3, RST.
- **SBC1000:** PWR, RUN, ALM, SIM, Console, E1/T1, MGMT, GE0, GE1, RST.
- **SBC3000:** MFU PWR RUN (Media processor), GE2, GE3, MCU PWR RUN (Media processor), GE0, GE1, CONSOLE, RST.

Product Usage Instructions

Before installing the SBC series devices, please follow these instructions:

1. The mounting cabinets for SBC1000/SBC3000 should be 19 inches in width and 550 mm or more in-depth. Dinstar provides the required brackets for installation.
2. The humidity of the equipment room where the device is installed should be maintained between 10% and 90% (non-condensing), and the temperature should be between 0°C and 45°C.
3. It is recommended that personnel with experience or related training be responsible for installing and maintaining the device.
4. The power supply for SBC300 should be 12V DC, and the power supply for SBC1000/SBC3000 should be 100~240V AC. It is advised to adopt an uninterruptible power supply (UPS).
5. When installing the device, please wear an ESD wrist strap to prevent electrostatic discharge.
6. Do not hot plug cables. Ensure that the equipment room is well-ventilated and clean.

THANKS FOR CHOOSING DINSTAR'S SBC!

Please read this guide carefully before installing the device. If you need any technical support, please contact us.

Tel: +86 755 61919966

Email: support@dinstar.com

Web: www.dinstar.com

Note: This guide is for all hardware SBC series devices

SBC Series Technical Specifications

Indicators and Ports

Attention before Installing

The SBC1000/SBC3000 mounting cabinets should be 19 inches in width and 550 mm or more in-depth (Dinstar provides the required brackets for installation);

To guarantee the device works normally and to lengthen the service life of the device, the humidity of the equipment room where the device is installed should be maintained at 10%-90% (non-condensing), and temperature should be 0 °C ~ 45 °C;

It's suggested that personnel who has experience or who has received related training be responsible for installing and maintaining device;

Power supply of SBC300 should be 12V DC, and power supply of SBC1000/SBC3000 should be 100~240V AC;

It's advised to adopt uninterruptible power supply (UPS);

Please wear ESD wrist strap when installing device;

Please do not hot plug cables;

Ensure the equipment room is well-ventilated and clean.

5 Installation Instruction

Connection Diagram for SBC300

Connect to the network, and connect to the power supply

Connection Diagram for SBC1000

Connect to the network, and connect with power input and grounding lug

Connection Diagram for SBC3000

Connect to the network

Modify PC's IP Address To log in the Web Management System of the SBC, you need to modify the IP address of PC first to make it at the same network segment with the SBC. Connect PC with the SBC, and then add an IP address of 192.168.11.XXX on the PC

1. On the PC, click 'Network (or Ethernet) → Properties
2. Double-click 'Internet Protocol Version 4 (TCP/IPv4)'
3. Select 'Use the following IP address', and then enter an available IP address
'192.168.11.XXX'

Log in Web Management System

Connect the computer to the GE1 port of SBC3000 (or the MGMT port of SBC300/SBC1000), then open the browser, enter the IP address ([https:// 192.168.11.1](https://192.168.11.1)) in the browser, press enter, and the login GUI will be displayed. Enter username and password in the displayed login GUI. The default username is admin, while the default password is admin@123#.

8 Modify IPAddress of Network Port for Service

After logging in the SBC, user needs to modify the IP address of the network port for service. After that, please restart the device for the configurations to take effect.

Note: The GE1 port of SBC3000 also can be used as a network port for service, but the MGMT port of SBC300/SBC1000 is only used for local management and maintenance.

Configure Access Network

On the 'Service – Access Network' page, users can configure the Access Network to use SBC for proxy registration

The signaling and media interfaces are the same as the corresponding network port for service. The local SIP listening port is 5090(customizable), and other configuration items keep the default

Configure Access SIP Trunk

On the 'Service – Access Network' page, users can configure the Access SIP Trunk to connect SBC with service provider or third-party SIP line provider.

The signaling and media interfaces are the same as the corresponding network port for service. The local SIP listening port is 5070 (customizable), and the Remote IP: Port is the server IP and port provided by the Service Provider.

Configure Call Routing

Configure Call Routing(Core SIP Trunk→ Access SIP Trunk)

On 'Service – Routing Profile – Call Routing' page, add an outbound route, select Core SIP Trunk as the source and Access SIP Trunk as the destination, and keep the other configuration items as default.

Set the priority (the smaller the number, the higher the priority) and the description:

Select Core SIP Trunk as the source:

Select Access SIP Trunk as the destination:

Configure Call Routing(Access SIP Trunk → Core SIP Trunk)

On 'Service – Routing Profile – Call Routing' page, add an inbound route, select Access SIP Trunk as the source and Core SIP Trunk as the destination, and keep the other configuration items as default.

Set the priority (the smaller the number, the higher the priority) and the description:

Select Access SIP Trunk as the source:

Select Core SIP Trunk as the destination:

Note: Based on the above steps, users can configure the call routing in the direction of Access Network → Core SIP Trunk or Core SIP Trunk → Access Network.

2 Trouble Shooting

(1) Unable to access the device WEB GUI.

First, check whether the access network port is the Network Port for management, the Network Port for service is not allowed to access the Web GUI by default;

To access the WEB GUI of SBC, you need to use HTTPS method, default port 443;

Using Ping to check whether the network works normally. If the network is not accessible, you need to check whether the IP address of the device is correct and whether the indicator of the network port is normal.

Why the extension fails to register through the access network?

First, check the basic configuration of the SBC, such as whether the network port, SIP listening port and Call Routing are correct;

Then check that the Server IP and port of the end device are the same as the IP and port of the SBC Access Network;

Capture the network packets (on the Maintenance page), and check whether the SBC has received the registered packets and whether they have been successfully forwarded to the Core SIP Trunk.

Why the call through SBC is failed?

First, check whether the Access Network registration is successful and whether the status of the Access SIP Trunk and Core SIP Trunk is True;

Checking that Call Routing is configured correctly;

Capture the network packets (on the Maintenance page), and check that the SBC has received the Call Request message;

Log in to SSH command line to capture call logs and provide them to technical support.

Forget the management port IP address of the device.

If other service ports can access the device, you can try to use the IP access of the service ports;

Prepare an RS232 Console cable and a computer with a COM interface, then connect the device's Console port to access the device Command line interface, enter the command "show int" in ROS# mode to get the IP address of the device.

1 Tips for security settings

To protect the system service security, please configure the security rules according to the specific service requirements. For example: IP anti-attack policy, SIP anti-attack policy, system security, access control, black and white list, IP address whitelist, etc. If you have any questions about the configuration and parameters, please contact technical support.

IP COMMUNICATION SOLUTIONS

Shenzhen Dinstar Co., Ltd.

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<div><div>Quick Installation Guide</div><div><div><div>SBC300</div><div>SBC1000</div><div>SBC3000</div></div></div><div><div>THANKS FOR CHOOSING DINSTAR'S SBC</div><div>© 2014 DINSTAR TECHNOLOGY CO., LTD. All rights reserved.</div><div>100% RECYCLED PAPER</div></div></div>	<div><div><div>DINSTAR SBC300 SBC Series Session Border Controller</div><div>[pdf] Installation Guide</div></div><div>SBC300, SBC1000, SBC3000, SBC300 SBC Series Session Border Controller, Session Border Controller, Border Controller, Controller</div></div>
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