

# Quick Installation Guide

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- UC120-1V1S10
- UC120-1V2S
- UC120-1V2O
- UC120-1S1O
- UC120-2S
- UC120-2O

## Thanks for Choosing Dinstar's VoIP Gateway

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

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Website: [www.dinstar.com](http://www.dinstar.com)

## 1 UC120 Model and Interfaces

Model \ Interface	WAN	LAN	LTE	FXS	FXO
UC120-1V1S1O	1	1	1	1	1
UC120-1V2S	1	1	1	2	0
UC120-1V2O	1	1	1	0	2
UC120-1S1O	1	1	0	1	1
UC120-2S	1	1	0	2	0
UC120-2O	1	1	0	0	2

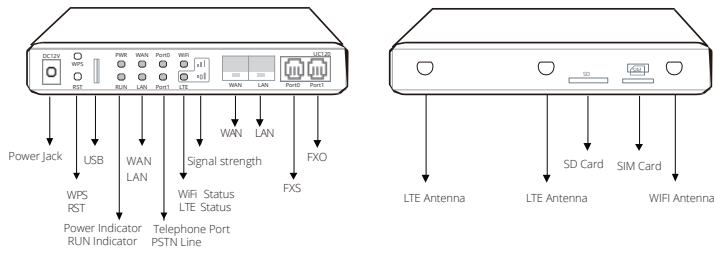
## 2 Indicators

Indicators	Definition	Status	Description
PWR	Power Indicator	ON	The device is powered on
		OFF	The device is powered off or there is no power supply
RUN	Running Indicator	Slow Flashing	The device is running properly
		Fast Flashing	The device is initializing
		ON/OFF	The device is running improperly
FXS	In-use Indicator	ON	FXS Port in-use
		OFF	FXS port faulty
		Slow Flashing	FXS port in idle status
FXO	In-use Indicator	ON	In-use
		OFF	FXO port faulty
		Slow Flashing	FXO port in idle status
WAN/LAN	Network Link Indicator	Fast Flashing	The device is properly connected to network
		OFF	The device is not connected to network or network connection is improper
Wi-Fi	WiFi Enable/Disable Indicator	ON	WiFi modular faulty
		OFF	WiFi disabled or faulty
		Fast Flashing	WiFi enabled
SIM	LTE Indicator	Fast Flashing	SIM card is detected and registered to mobile network successfully. The Indicator flash every 2 seconds.
		Slow Flashing	The device can not detect LTE/GSM module, or LTE /GSM module is detected but SIM card is not detected; The indicator flash every 4 seconds.

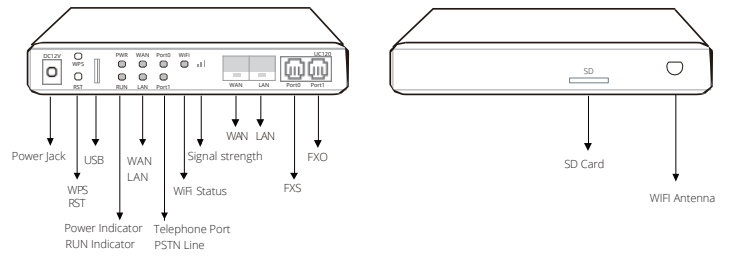
Note: some UC120 models do not have all the indicators described above. Please refer to the corresponding instructions above according to the indicator displayed on the front panel of the product.

### 3 Indicators and Ports

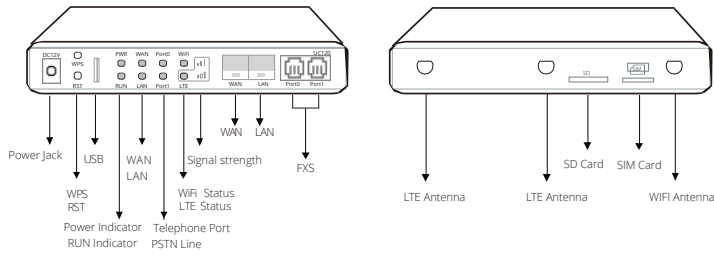
#### ▶ UC120-1V1S10



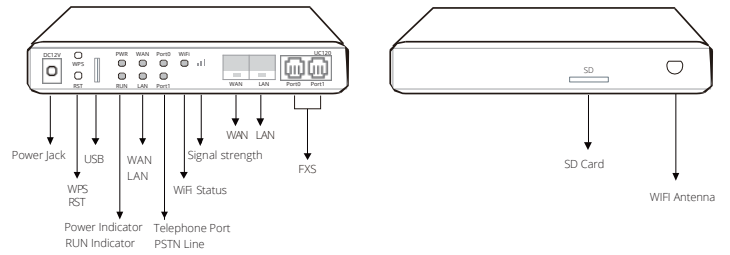
#### ▶ UC120-1S10



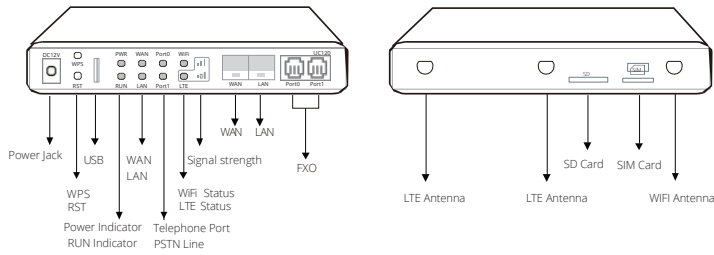
#### ▶ UC120-1V2S



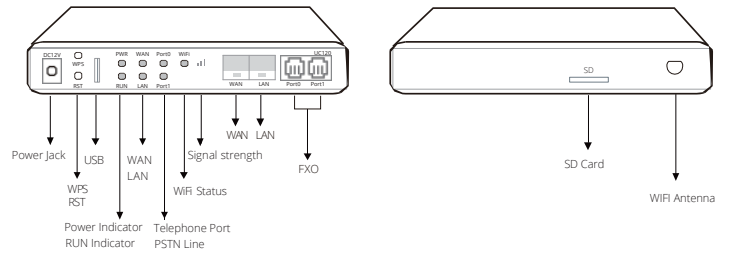
#### ▶ UC120-2S



#### ▶ UC120-1V20



#### ▶ UC120-20



### 4 Installation Attentions

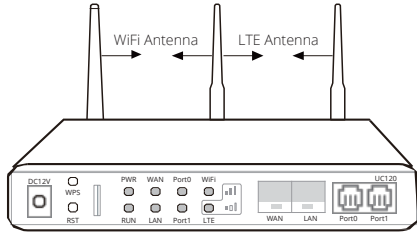
- The device accepts DC12V input. Please ensure stable and safe power supply
- To reduce the interference with telephone calls, it's highly recommended that telephone lines connected to the gateway should be placed away from power cables
- Please ensure there is enough network bandwidth so as to guarantee stabilized running of the device
- If WiFi is turned on, please ensure the WiFi antennas are well connected with the device
- If you want the device to communicate with the LTE network, please insert an SIM card

## 5 Installation Instruction

### ▶ Antenna Installation

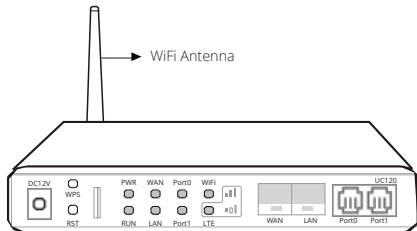
#### • UC120-1V1S1O/1V2S/1V2O

Install WiFi antenna (foldable antenna) and install LTE antenna (flat paddle antenna) on the rear panel.

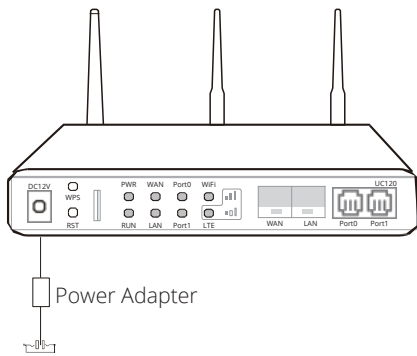


#### • UC120-1S1O/2S/2O

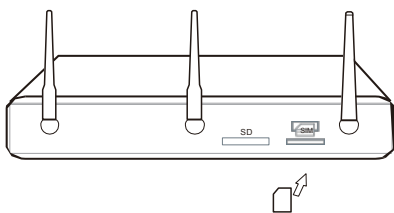
Install WiFi antenna (foldable antenna) on the rear panel of the device.



### ▶ Connect the power adapter to power jack (All models).

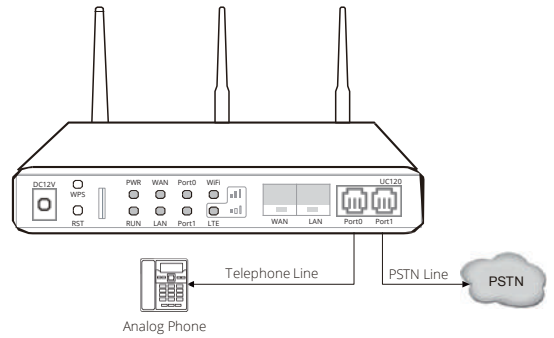


### ▶ Insert SIM card to SIM slot (UC120-1V1S1O/1V2/1V2O).



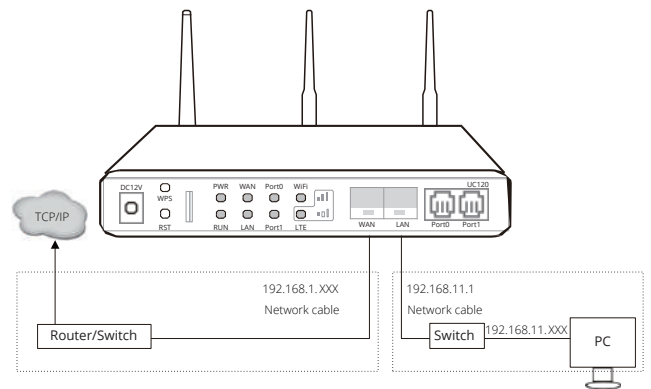
Insert (with the chip facing downwards)

### ▶ Connect analog phone to FXS or connect landline to FXO (All models).



### ▶ Connect network cable to WAN and LAN (All models)

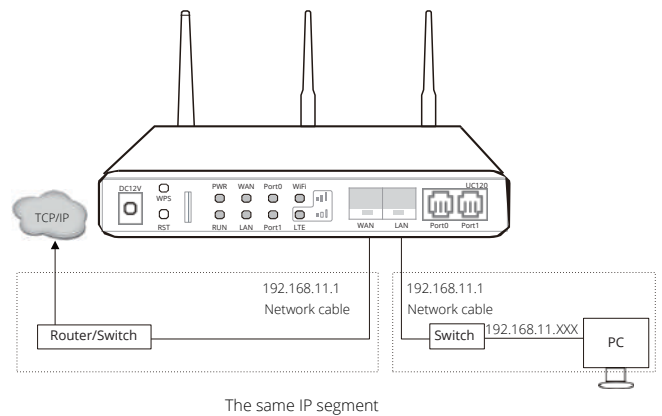
#### • Router mode



UC120 supports router mode and bridge mode.

The above figure shows the network connection in router mode. In router mode, the default IP of WAN port is DHCP, and the default IP of LAN port is 192.168.11.1.

#### • Bridge mode

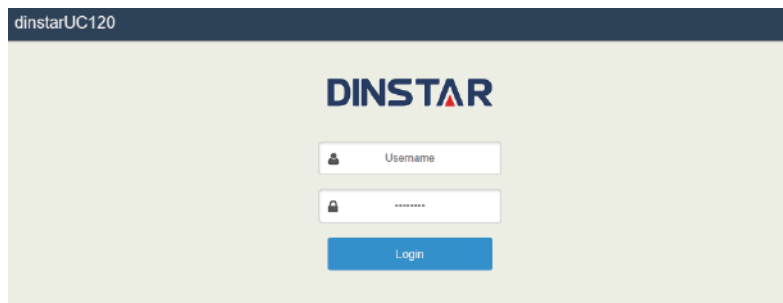


The above figure shows the network connection in bridge mode. In bridge mode, WAN and LAN port use the same IP address. The default IP address is 192.168.11.1.

Note: UC120 can also be connected through Wi-Fi. The default SSID of the device is "domain\_ [last 6 digits of MAC address]" without password.

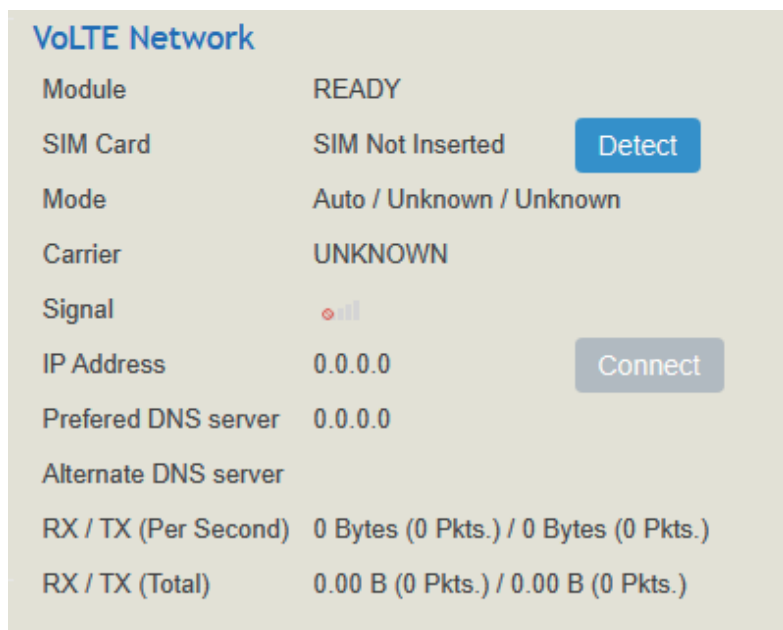
## 6 Login Web Management System

Open a web browser and enter the IP address of LAN port (the default IP is 192.168.11.1). You also can enter the IP address of WAN port, but it's required to modify the IP address of PC to make it at the same network segment with that of WAN port. By default, the username is admin, while the password is admin@123#.



## 7 Check Mobile Network Status

For LTE device, view the SIM card status and signal strength on the "status → Overview" page, while for GSM devices, check the status on the "status → PSTN" page.



## 8 Modify Network Configuration

Please log into the device and click "network → settings" at the top menu bar to configure IP addresses of WAN and LAN port.

**Network / Setting**

Network Model: Route

**WAN**

Protocol: Static address

IP Address: 172.19.211.110

Netmask: 255.255.0.0

Default Gateway: 172.19.1.1

Preferred DNS server: 114.114.114.114

Alternate DNS server: 8.8.8.8

Disable Private Internets(RFC1918) DNS responses:

IP Address 2:

Netmask 2: 255.255.255.0

MTU: 1500

**LAN**

IP Address: 192.168.11.1

Netmask: 255.255.255.0

MTU: 1500

Buttons: Cancel, Save, Reset

The default network mode of UC120 is router mode, and it can be set to bridge mode. In router mode, the IP address of WAN port and LAN port should be in different network segments. The default IP address of WAN port is obtained by DHCP, while the default IP address of LAN port is 192.168.11.1. In bridge mode, WAN port and LAN port use the same IP address. After modification, you need to click "apply" to make the settings take effect

## 9 Modify WiFi Settings

WiFi is enabled by default. Go to "network → WLAN" page to turn off the wireless or modify relevant parameters.

**Network / WLAN**

SSID: Training\_UC120

Channel: 11

Encryption: None

Status: Enable

Buttons: Cancel, Save, Reset

The default SSID of the device is "domain"\_[last six digits of MAC address] ". Except default SSID, users can create three more SSIDs. After modifying the WLAN parameters, you need to click "apply" to make the settings take effect.

## 10 Create SIP Extensions

On the **Extension** → **SIP** interface, you can configure the SIP accounts registered in the UC120 by SIP clients (hereby UC120 is regarded as a SIP server ).

**Extension / SIP / Edit**

SIP Extension SIP Phone

Index 14

Name 1001

Extension 1001

Password \*\*\*\*\*

Classification Tag

test

Outbound CID

DID

Max Concurrent Register 1

Max Concurrent Call 1

Ring Timeout(s) 50

Original Called Number Location(Send INVITE) Off

Register Source Any

Register User Agent Any

Call Pickup Ring Group

Call Waiting Off

Do Not Disturb Off

Call Forward Unconditional Off

Call Forward Unregister Off

Call Forward Busy Off

Call Forward No Reply Off

NAT Off

Call In Filter Off

Call Out Filter Off

Speed Dial Off

Allow Being Monitored

Monitor Mode Disable

Voicemail Off

Recording Profile Off

SIP Profile 2-< wan\_default >

PIN Code 1001

Status Enable

Cancel Save Reset

If the status of new added SIP account is "enabled", it means that the UC120 accepts the registration of the extension.

If the status of the SIP account is "disabled", it means that the UC120 rejected to register the extension. Up to 60 SIP accounts can be configured.

The registration status of SIP extension and SIP trunk can be checked on the "status → SIP" page.

After setting, you need to click "apply" to make the settings take effect.

## 11 SIP Trunk

SIP trunk can realize the connection between UC120 and IP PBX or SIP servers.

### Trunk / SIP / New

Index	3
Name	
Address	
Port	
Outbound Proxy	
Port	
Transport	UDP
Register	Off
From Header User Part	Caller's Number
From Header Display Name	Caller's Number
From Header Host	Local Address
Heartbeat	Off
AutoCLIP Profile	Off
DNIS	Off
SIP Profile	1-< lan_default >
Outbound Codec Profile	1-< default >
Extra Param	
Status	Enable

Cancel Save Reset

If UC120 is regarded as a terminal and intends to register to a server, you need to configure a SIP trunk connecting UC120 and the server, and then enable register for the SIP trunk.

If the FXS f UC120 intends to register to a server, you need to configure a SIP trunk connecting UC120 and the server, then enable register for the port and designate the SIP trunk to it.



## 12 Configure outbound/inbound rule

On the Call Control → Route interface, you can configure routes for incoming calls and outgoing calls.

**Call Control / Route / New**

Priority: 32

Name:

**Condition**

Source: SIP Trunk / test

Number Profile: Off

Caller Number Prefix:

Called Number Prefix:

Time Profile: Any

**Action**

Callback:

Distinctive Ringtone(Alert-Info): None

Manipulation: Off

Destination: SIP Trunk / test

Password Type: Off

Recording Profile: Off

Failover Action:

For the outbound route rule, destination can be FXO trunk, GSM trunk and SIP trunk;

For the inbound route rule, the destination can be SIP extension, FXS extension, local extension, ring group or IVR

## 13 Regular Expression

Caller/Called number prefix supports regular expression

Regular Expression Syntax

^	Matches the starting position in a number string. For example, ^134 matches the numbers starting with 134.
\$	Matches the ending position of a string. For example, 2\$ matches the numbers ending with 2.
	Separates alternate possibilities. For example, 2 3 4 means 2, 3 or 4.
\	Marks the next character as a special character, a literal, a backreference, or an octal escape.
[ ]	Matches a single character that is contained within the bracket. For example, [123] matches 1, 2, or 3. [0-9] matches any digit from "0" to "9".
[ ^ ]	Matches any one character except those enclosed in [ ]. For example, [^9] matches any character except 9.
.	Matches any single character except the newline character. For example, 3.4 matches 314, 324, 334, 344.
?	Indicates there is zero or one of the preceding element. For example, colour?r matches both color and colour.
*	Indicates there is zero or more of the preceding element. For example, ab*c matches ac, abc, abbc, abbbc, and so on.
+	Indicates there is one or more of the preceding element. For example, ab+c matches abc, abbc, abbbc, and so on, but not ac.
/d	Mark any digit, equal to [0-9].
/D	Mark any character that is not a digit, equal to [^0-9].
/s	Mark any blank character such as a space or a tab.
/S	Mark any character that is not a blank character.

Example:

^0755 matches the phone number start with 0755;

^0755\d{8,9} matches the phone number start with 0755 and following 8 or 9 digits number length;

^0755|^8899|^0110 matches the phone numbers with starting digits of 0755, 8899 or 0110.

## 14 Basic Operation

Dial \*158# to query the IP address of LAN port of the device;

Dial \*159# to query the IP address of WAN port of the device;

Dial \*114# to query the telephone number of a FXS port;

**Restart the device:**

(1) Dial \*111# to restart the device;

(2) Click "system->Reboot" menu to perform reboot;

**RST button:**

(1) Under normal running status, press RST button 3 to 6 seconds will restore default username/password, and network mode will be changed to route mode as well. Other configurations will keep the same;

(2) Under normal running status, press RST button 6 to 12 seconds, the device will restore factory default and reboot automatically;

(3) When the device is power off, press RST button more than 30 seconds after it power on, the device will clear all the configurations and restore to mini-system management;

## 15 More Details

This document only provides instructions for quick installation and basic configuration. For detailed configuration and parameter explanation, please make reference to User Manual, or ask for online technical support.

## 16 Frequently Asked Questions

### (1) UC120 call priority (from high to low)

- a. For the call between extensions, it is not necessary to configure any route, but to dial the extension number directly, which has the highest priority;
- b. DID;
- c. The route rule in the "call control → routing" page (the rule with lower index has higher priority);
- d. Port registration configured in FXS extension, FXO trunk and GSM trunk.

### Can the call between extensions be disabled?

Yes, disable internal call between extensions under the "call control → settings" page.

### How many SIP extensions and concurrent calls can UC120 support?

UC120 supports 60 SIP extensions and 15 concurrent calls at max.

### Can access the Internet through UC120 during making call through VoLTE?

If the operator's network supports VoLTE and the SIM card used has already enabled VoLTE service, the call will go to volte network. At this time, the Internet connection of SIM card will not be disconnected during the call;

If the operator's network does not support VoLTE or the SIM card does not enable volte service, the call will automatically fall back to 2G / 3G network, at this time, the SIM card Internet connection will be automatically disconnected (that is, the Internet cannot be accessed during the call).