

# ARTDio

## Voice Internet Phone Gateway



## Quick Installation Guide

### IPC 1000 Series

**ARTDio Company Inc.**

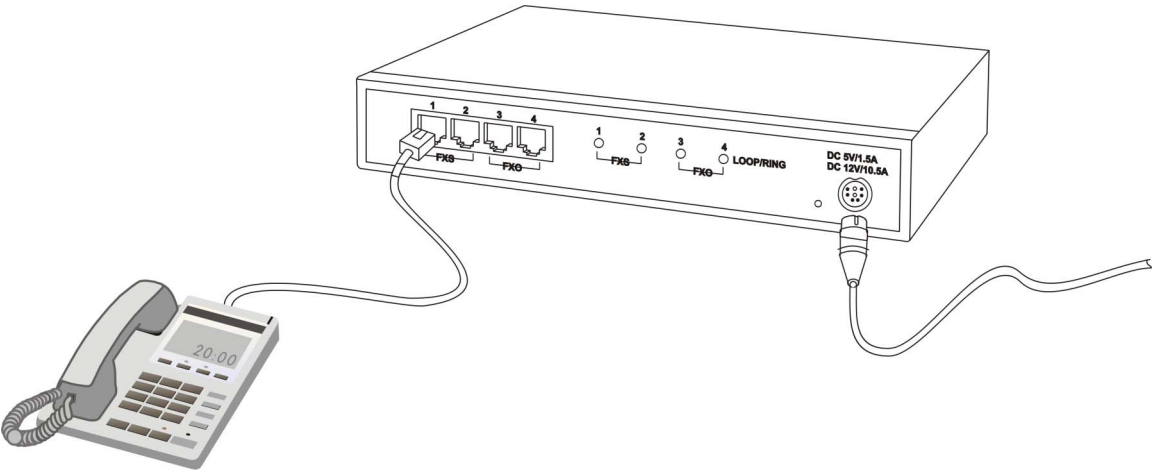
**Edition 1.0**

Note: For more detailed hardware installation instructions, please refer to the [IPC 1000 series User's Manual](#).

Step 1. Preparation

Connect the phone to perform basic configurations

Connect an analog phone to the FXS port of IPC 1000 series unit as the picture below and power on.  
Please notices that do not connect phone line of the telephone company to the FXS port as doing so may cause damage to the product!






Connect a phone to the IPC 1000 series unit

Step 2. Configure Region ID

Skip this step if you are installing your IPC 1000 series unit in the default region. The default Region ID is printed on the label located outside the box. If you are installing your IPC 1000 series unit at any region other than that which is specified, you will need to configure the IPC 1000 series unit to the correct Region ID.

Region ID

MODEL NAME:	XXXXXX
PRODUCT S/N:	 XXXXXXXXXXXXXXXXXXXX 1
MAC ADDRESS:	 XXXXXXXXXXXX
Input Rating :	9V / 0.5A DC
This unit complies with Part 15 & 68 of FCC Rules.	
FCC REG.NO:	US: VTLMF06B0024202A
REN:	0.6B 
USOC JACK: RJ11C Operation is subject to following two conditions: (1)This device may not cause harmful interference (2)This device must accept any interference received,including interference that may cause undesired operation.	
Region :	XXXXX
MADE IN TAIWAN 61300000480C	

The Region ID is coded as follows:

ID NO.	Country	ID NO.	Country	ID NO.	Country	ID NO.	Country
01	Argentina	02	Australia	03	Philippines	04	Portugal
05	Brazil	06	Canada	07	China	08	Russia
09	Sweden	10	Vietnam	12	France	13	Germany
15	Hong Kong	18	India	22	Italy	23	Japan
24	Korea	26	Malaysia	27	Mexico	28	Netherlands
29	New Zealand	36	Singapore	38	Slovenia	39	South Africa
40	Spain	42	Switzerland	43	Taiwan	44	Thailand
46	British	47	USA	60	Iran	61	Dubai

(Note: If your Region ID is not listed on the chart above, please refer to the [\*IPC 1000 series User's Manual\*](#))



**Using a phone to configure the region ID**

1. Pick up the phone and press

2. ##0000

3. 9507#

4. 971#

5. Hang up the phone
- You will hear 3 short tones.

Assuming you are modifying for China, the last 2 digits "07" are China's regional ID.

Enable the new region ID. (This action will change all setting values to return to their default values)

**Step 3.Configure Phone number, IP address and WEB password**

The configuration procedure depends on the way you get the IP address, static IP, DHCP and PPPoE. According to the network condition, you can select one of them to do the configuration.

**1. Static IP Address**



**Using a phone to configure basic information**

1. Pick up the phone and press

2. ##0000

3. 012#

4. 0282261111#
- You will hear 3 short tones.

The number "2" represents the Taipei area code.

The phone number is 82261111

5. 030# Enable "static" IP mode.
6. 04210\*62\*149\*250# Configures the IP Address "210.62.149.250".
7. 05255\*255\*255\*128# Configures the Subnet Mask "255.255.255.128".
8. 06210\*62\*149\*254# Configures the Default Gateway "210.62.149.254".
9. 882834# The numbers "2834" in this string are the web based management password.
10. 981# Restarts. (The system should be restarted immediately)
11. Hang up the phone

**Note:** This is the area code of the phone number. For example, "2" for Taipei, "21" for Shunghai, "10" for Peking and "408" for San Jose (USA).

## 2. DHCP Mode

If want to setting the DHCP mode to get an IP, please follow the actions:



### Using a phone to configure basic information

1. Pick up the phone and press
2. #0000 You will hear 3 short tones.
3. 012# The number "2" represents the Taipei area code.
4. 0282261111# The phone number is 82261111
5. 031# Enable "DHCP" IP mode.
6. 882834# The numbers "2834" in this string are the web based management password.
7. 981# Restarts. (The system should be restarted immediately)
8. Hang up the phone

## 3. PPPoE Mode

PPPoE modes use dynamically assigned IP addresses and because of this there are difficulties with regards to Web based management. We strongly suggest that you use a private and fixed IP address such as 192.168.0.2 (default setting) so that you can use the web based interface to configure the IPC 1000 series unit's other advanced configurations.

### 1. Using a phone to configure information

1. Pick up the phone and press
2. ##0000 You will hear 3 short tones.
3. 012# The number "2" represents the Taipei area code.
4. 0282261111# The phone number is 82261111
5. 04192\*168\*0\*2# Configures the IP Address "192.168.0.2".
6. 05255\*255\*255\*0# Configures the Subnet Mask "255.255.255.0".

7.

882834#

The numbers "2834" in this string are the web based management password.
8.

981#

Restarts. (The system should be restarted immediately)
9.

Hang up the phone

2. Configure the TCP/IP Properties of the PC connected to the IPC 1000 series unit

You can use a popular browser such as IE or Netscape to perform further configurations. You need to use Ethernet connection to connect a PC to the IPC 1000 series unit and modify the PC's TCP/IP properties (IP Address and Subnet Mask) so that they are located in the same subnet. You can then use the browser to configure the device.

Network

Configuration | Identification | Access Control

The following network components are installed:

NetBEUI -> IBM 10/100 EtherJet PCI Adapter

TCP/IP -> Accton EN1207D-TX PCI Fast Ethernet Adapter

TCP/IP -> Dial-Up Adapter

TCP/IP -> IBM 10/100 EtherJet PCI Adapter

File and printer sharing for Microsoft Networks

Add...

Remove

Properties

Primary Network Logon:

Client for Microsoft Networks

File and Print Sharing...

Description

TCP/IP is the protocol you use to connect to the Internet and wide-area networks.

OK

Cancel

Click to highlight your Network Card's TCP/IP options.

1

2

Click the "Properties"

TCP/IP Properties

Bindings | Advanced | NetBIOS | DNS Configuration

Gateway | WINS Configuration | IP Address

An IP address can be automatically assigned to this computer. If your network does not automatically assign IP addresses, ask your network administrator for an address, and then type it in the space below.

☐ Obtain an IP address automatically

☒ Specify an IP address:

IP Address:

192 . 168 . 0 . 5

Subnet Mask:

255 . 255 . 255 . 0

☒ Detect connection to network media

OK

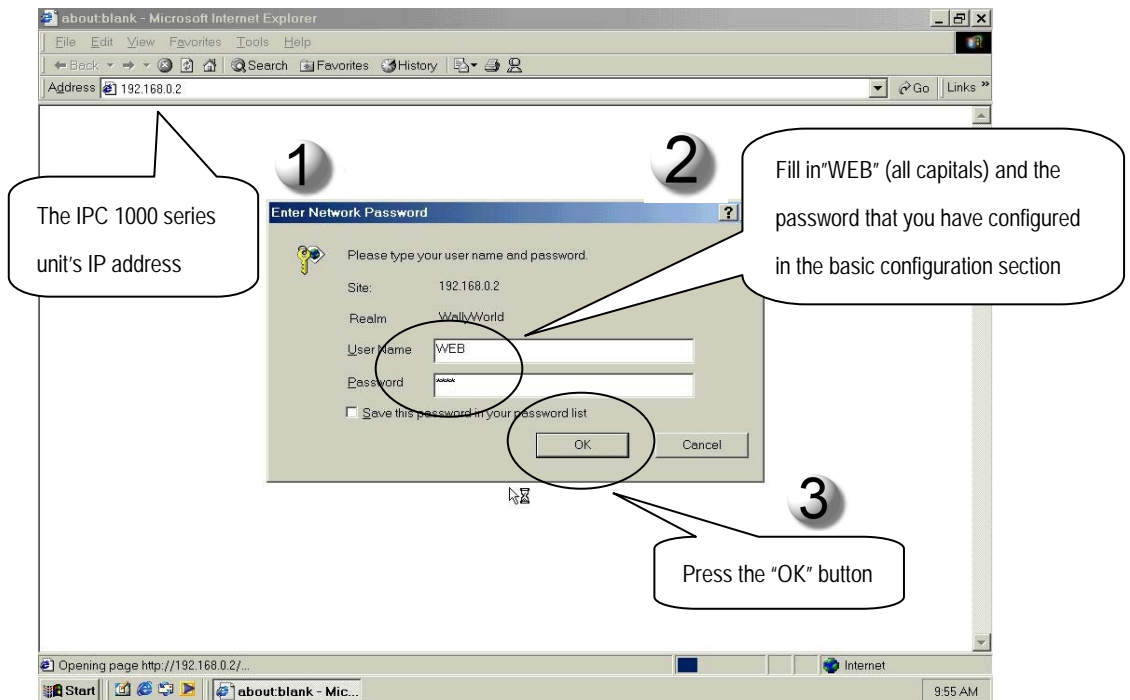
Cancel

3

Fill in the IP Address and Subnet Mask. They must be in the same subnet as the IPC 1000 series unit.

**Note:** If the IPC 1000 series unit's IP address has been set to public or static IP mode; you must configure the IP Address and Subnet Mask of the PC to be in the same subnet as the IPC 1000 series unit rather than using IP address "192.168.0.5" and Subnet Mask "255.255.255.0" as the above illustration demonstrates.

### 3. Entering the Web Based Management Interface



### 4. Configuring the IPC 1000 series unit's IP Modes using the Web Based Interface

**Note:** If you need to configure any other parameters after the IP mode configuration is done, do not restart the IPC 1000 series unit as it will use the new IP setting. When this happens, you may no longer be able to access the IPC 1000 series unit using a web browser. You will then need to use a phone or console to configure the IP back to its default or fixed IP address such as "192.168.0.2".

The screenshot shows a web interface for configuring IP settings. A red vertical bar is on the left. The top navigation bar includes links: HOME, BASIC, IP S, CHANNEL, PHONEBOOK, and ACCESSCODE. The 'BASIC' tab is selected.

**1. Select BASIC Button.** (Callout pointing to the BASIC tab)

**2. Select PPPoE** (Callout pointing to the PPPoE radio button under IP State)

**4. Click the "Apply" button to apply any** (Callout pointing to the Apply button)

**3. Enter the PPPoE information.** (Callout pointing to the PPPoE Settings section)

**Fill in the (PPPoE) account username and password, re-enter the password to confirm** (Callout pointing to the Password and Confirm Password fields)

**IP Settings**

IP State: ☒ PPPoE

**Current Settings**

IP Address	10.13.6.222
Subnet Mask	255.255.255.0
Default Gateway	10.13.6.130

**Change To: (Restart is required)**

IP Address	<input type="text" value="10.13.6.222"/>
Subnet Mask	<input type="text" value="255.255.255.0"/>
Default Gateway	<input type="text" value="10.13.6.130"/>

**PPPoE Settings: (Restart is required)**

Account	<input type="text" value="854321@hinet.net"/>
Password	<input type="password" value="*****"/>
Confirm Password	<input type="password" value="*****"/>
Service Name	<input type="text"/>

## 10. Using a phone to restart the System

After you have set all the parameters, you need to restart IPC 1000 series to start PPPoE and get a new IP address.

1. Pick up the phone and press

2. ##0000

You will hear 3 short tones.

3. 981#

Restarts the IPC 1000 series unit.

4. Hang up the phone.

## 4. Editing Phone book or IP learning

You have to configure the IP of the called number or doing the IP learning before making IP phone calls. If the recipient IPC 1000 series unit is using a public and static IP address, you can manually edit the IP address and phone number in your phone book and then directly call the recipient phone number over IP. However if the recipient IPC 1000 series is using DHCP or PPPoE, it requires an IP learning process to acquire recipient IP address. You can also join an IPN series to get the recipient IPC 1000 series' IP address. Following shows you how to edit phone book and IP learning.

Editing Phone Book

1. Click the PHONEBOOK button to go to the phonebook configuration page.

HOMEBASICIP SETTINGSADVANCEDCHANNELPHONEBOOKACCESSCODE

FONEMOSA

SIP

Phone IP Search

Phone Number

IP1 / Port

IP2 / Port

Phone Book Add

Phone Number

IP/Control Port

Phone Book Delete

Phone Number

Delete All Static

Maximum:

Entered:

Enteries List:

886282263368

210.67.96.188

2000

No

100

0

2. Fill in the country code, area code and phone number

3. Fill in the IP address

4. Fill in the signaling UDP port.

5. Click the "Apply" button to apply any changes

Apply

Revert

(IP:Port)

IP Learning

Unless the party receiving the call is using a fixed IP address which can be manually added to the static phone book, you will have to "learn" the IP address of the called party's phone number before making calls to that particular number. Following table shows you how to do it.

Local IPC 1000 series	Remote IPC 1000 series
1. Assuming the user makes a traditional phone call through the PSTN to reach a remote IPC 1000 series unit, for example "002862164458275" (You will then hear the ring back tone).	After a few seconds the phone will begin ringing. (The FXO LED should be flashing)
2. Waiting for the recipient to answer the phone, ask called party to press the " # " key twice. (Within one second)	Pick up the phone and press the " # " key twice, the learning procedure will begin.
3. Waiting for the recipient press the " # " key twice, the learning procedure should then begin. Later you will hear short sounds that should continue for about 15 seconds	At this point the user will hear short sounds that should continue for about 15 seconds
4. If the learning procedure was successful, you will hear three short sounds in rapid succession.	Confirm that the learning process has completed successfully. You should now be almost ready to commence voice communication.
5. Hang up the phone to end the IP learning process procedure.	Hang up the phone
The user can retry dialing a VoIP phone number, for example "#002862164458275#"	The phone should ring. Pick up the phone to begin voice communication over IP.

## Join IIPN service

Contact your distributor and ask for a IPN service. After connecting to the IPN, you can get an IPN ID and make a VOIP call.

Example: # IPN ID #

## 5 . Placing VoIP Calls

The way making VoIP calls are almost the same as making traditional phone calls that you would use every day. If the recipient IPC 1000 series is located in local, the number is the same as the destination number with leading and ending '#' keys. If the recipient IPC 1000 series is located in different area (long distance call), place the long distance access code and area code in front of the destination number and leading and ending '#' keys. If the recipient IPC 1000 series is located in different country (international call), you must add international access code + country code + area code + destination number and leading and ending '#' keys.

How to dial	Description
Traditional Phone Calls	
Phone Number	Making traditional phone calls through the PSTN
On-net calls (between two IPC 1000 series units) and Outbound Transit Calls	
"##" + phone number + "##"	For on-net calls and outbound transit calls
"##" + fax number + "*"	For on-net FAX and outbound transit FAX
Inbound Transit Calls – Making local calls from a traditional phone to a local IPC 1000 series unit first and then transferring it to another IPC 1000 series unit	
"##" + Inbound Transit Password + "##" + phone number + "##"	Inbound transit calls
"##" + Inbound Transit Password + "##" + fax number + "*"	Inbound transit FAX

## 6. SIP Configuration

Before configuring SIP, you need an SIP proxy's domain name or IP address if you are making SIP calls through SIP proxy. Following pictures guide you configuring the SIP Proxy's parameters.

The screenshot shows the SIP Configuration page with the following sections and callouts:

- 1. Click the ADVANCED button to go to the configuration page.** (Points to the ADVANCED button in the top navigation bar)
- 2. Click the SIP COMMON button to go to the SIP configuration page.** (Points to the SIP COMMON button in the left sidebar)
- 3. Enter domain name or IP address of Proxy Server and select Enable** (Points to the Domain Name field in Outbound Proxy Setting)
- 4. Enter domain name or IP address of Proxy Server and select Enable** (Points to the Domain Name field in Registrar Setting)
- 5. Select a port to configure.** (Points to the Channel dropdown menu in Channel Specific Registration)
- 6. Enter SIP phone number.** (Points to the Name field in Contact Address Setting)
- 7. Enter the contact address** (Points to the ADDRESS field in Public Address Setting)
- 8. Click the "Apply" button to apply any changes** (Points to the Apply button in the top right)

**Page Structure:**

- Navigation Bar:** BASIC, IP SETTINGS, **ADVANCED**, CHANNEL, PHONEBOOK, ACCESSCODE
- Left Sidebar:** SET REMOTE SOHO/FONEMO, **SIP COMMON**, SIP OUTBOUND AUTHENTICATION, SIP INBOUND AUTHENTICATION, STUN
- Section Headers:** Port and Header, Outbound Proxy Setting, Registrar Setting, RFC 2833 DTMF Redundance, Channel Specific Registration, Public Address Setting, Contact Address Setting, RFC 2833 DTMF
- Fields and Controls:**
  - Port and Header:** port (5060), Header Form (Standard)
  - Outbound Proxy Setting:** Domain Name (iptel.org), Port (5060), Enable (dropdown)
  - Registrar Setting:** Domain Name (iptel.org), Enable (dropdown)
  - RFC 2833 DTMF Redundance:** Times (0)
  - Channel Specific Registration:** Channel (1), Select, Register, De-Register, Register Status FAIL
  - Public Address Setting:** ADDRESS (sipmosal@iptel.org)
  - Contact Address Setting:** Name (sipmosal), Current Setting (sipmosal)
  - RFC 2833 DTMF:** 2833 DTMF (Never), 2833 In Use (FALSE)

Configure outbound authentication if SIP proxy server or other SIP phone request for authentication.

The screenshot shows the Asterisk SIP Outbound Authentication configuration page. The page has a red sidebar on the left with navigation links: GENERAL, SIP OUTBOUND AUTHENTICATION (selected), SIP INBOUND AUTHENTICATION, and STUN. The main content area has a top navigation bar with tabs: HOME, BASIC, IP SETTINGS, ADVANCED (selected), CHANNEL, PHONEBOOK, and ACCESSCODE. Below the tabs, there are 'Apply' and 'Revert' buttons. The main heading is 'SIP Outbound Authentication'. Below it, there are fields for 'Port' (50) and '2'. A table lists authentication entries with columns: Port, Realm, Username, and Password. The table has two rows: Port 1 with Realm 'iptel.org' and Username 'sipmosa1', and Port 2 with Realm 'iptel.org' and Username 'sipmosa2'. Below the table, there are fields for 'Update Entry' (Realm: 'iptel.org', Username: 'sipmosa1', Port: '1'), 'Confirm Password' (Password: '\*\*\*\*', Confirm Password: '\*\*\*\*'), and 'Delete Entry' (Realm: empty, Port: '1').

1. Click the ADVANCED button to go to the configuration page.

2. Click the SIP OUTBOUND AUTHENTICATION link in the sidebar.

3. Enter information for authentication including realm, username, port and password.

4. Click the "Apply" button to apply any changes.

## 7 . SIP Phone Books

Configure SIP phone book to map SIP phone number with index. Making a SIP call by using analogy phone, just pick up the phone and dial \*# index #.

1. Click the PHONEBOOK button to go to the configuration page.

2. Click the SIP button.

6. Click the "Apply" button to apply any changes

5. Select via proxy or not.

3. Enter numbers.

4. Enter information of other SIP phone number including name, host and port.

The screenshot shows the 'SIP Phone Book' configuration page. At the top, there are navigation tabs: HOME, BASIC, IP SETTINGS, ADVANCED, CHANNEL, PHONEBOOK, and ACCESSCODE. The 'PHONEBOOK' tab is selected. Below the tabs are 'Apply' and 'Revert' buttons. On the left sidebar, there are buttons for 'FONEMOSA' and 'SIP'. The 'SIP' button is highlighted. The main content area is titled 'SIP Phone Book' and contains the following information:

Maximum: 150  
Entered: 3

Page: 1 / 1 [Select]

index	Name	Host	Port	Proxy
126	jyoung	61.222.217.2	5060	Yes
145	sipmosa5	iptel.org	5060	Yes
127	calvin4	iptel.org	5060	Yes

Below the table, there is a form to 'Update Entry'. The 'index' field contains '123'. The 'Name' field contains 'sipmosa3'. The 'Host' field contains 'iptel.org'. The 'Port' field contains '5060'. The 'Via Proxy' dropdown menu is set to 'Yes'.

## 8 .Placing SIP Calls

After you have configured the SIP phone on the SIP phone book, you can easily make SIP call as follow:

1. Pick up the phone
2. Dial " \*# " + Index + " #"