



**VigorTalk ATA-24**  
**24-Port Analogue Terminal Adapter**  
**User's Guide**

**Version: 1.01**

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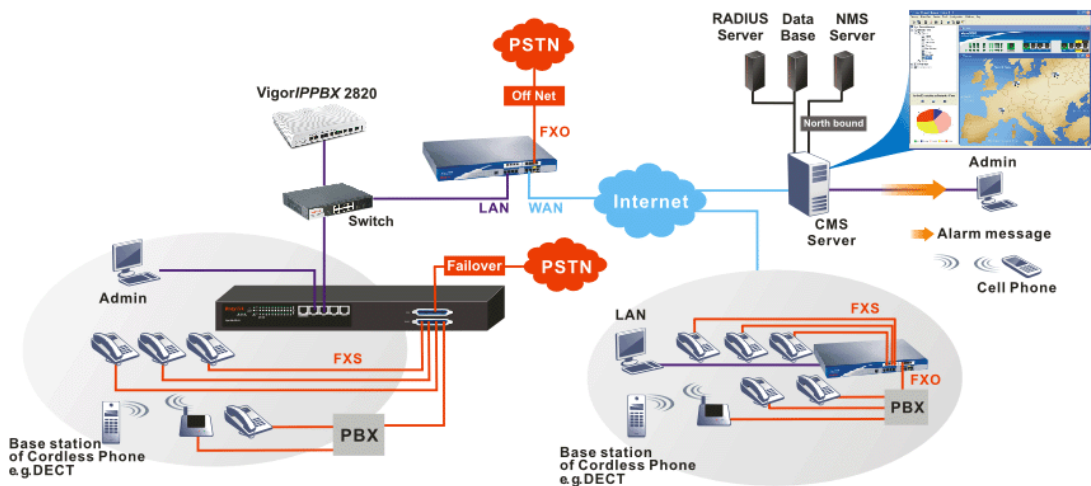
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# 1

## Preface

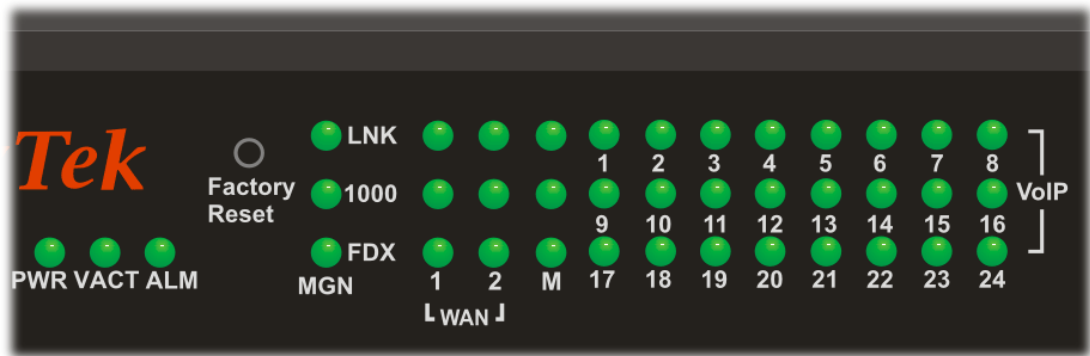
The VigorTalk ATA-24 series integrates a rich suite of functions. These products are very suitable for providing multi-integrated solutions to SME markets. An application scenario for the VigorTalk ATA-24 is depicted in Figure 1-1, which illustrates interconnections among branch offices through the Internet via the VigorTalk ATA-24 adapter. By combining with an existing PBX, an Internet phone from a remote branch can also access any extension number on a local PBX or a traditional phone via PSTN. Also, with Internet phone features, the company can benefit from reducing operation fees.



Internet Telephony, also known as Voice over Internet Protocol (VoIP), is a technology that allows you to make telephone calls using a broadband Internet connection instead of a regular (analog) phone line. Combining a PBX with the adapter allows you to call anyone who has an Internet phone or a traditional telephone number – including local, long distance, mobile, and international numbers. Internet Telephony offers features and services that are unavailable with a traditional phone at no additional cost. Because Internet Telephony requires strictly minimal packet delay and jitter (since voice quality is intolerant of packet loss), the adapter integrates VoIP feature with QoS and packet loss concealment mechanisms to effectively transport high priority voice traffic over IP with low latency. Another feature is T.38 fax relay. By enabling and configuring fax rate on a dial peer, the originating and the terminating adapter can enter fax relay transfer mode. By using the T.38 function, customers can also save on fax expenses.

## 1.1 LED Indicators and Connection

The VigorTalk ATA-24 has 2 WAN interfaces. Each interface can be connected to an individual Internet Service Provider. The VigorTalk ATA-24 also supports a backup function for WAN interfaces – a user can select one WAN interface to be a backup interface. If the master interface fails, the backup interface will take the place of the master interface immediately.



LED	Status	Explanation	
PWR	On	The adapter is powered on.	
	Off	The adapter is powered off.	
VACT	On/Blinking	The system is active.	
	Off	The system is hanged.	
ALM	On	The system alarm is active.	
MGN	LNK	On	The Ethernet link is established.
		Blinking	The data transmission is done through the corresponding port.
		Off	No Ethernet link is established.
	1000	On	It means that a normal 1000 Mbps connection is through its corresponding port.
		Off	It means that a normal 100/10 Mbps connection is through its corresponding port.
	FDX	On	It means a full duplex connection on corresponding port.
Off		It means a half duplex connection on corresponding port.	
WAN/MIR	LNK	On	The Ethernet link is established on corresponding port.
		Off	No Ethernet link is established.



LED	Status	Explanation	
ROR	1000	On	It means that a normal 1000 Mbps connection is through its corresponding port.
		Off	It means that a normal 100 Mbps connection is through its corresponding port.
	FDX	On	It means a full duplex connection on corresponding port.
		Off	It means a half duplex connection on corresponding port.
VoIP (1-24)	On	The phone is off hook (the handset of phone is hanging).	
	Blinking	A phone call is incoming or on-line.	

#### Factory Reset:

Used to restore the default settings. Turn on the adapter (**VACT** LED is blinking). Press the hole and hold for more than 5 seconds. When you see the **VACT** LED begins to blink rapidly than usual, release the button. Then the adapter will restart with the factory default configuration.



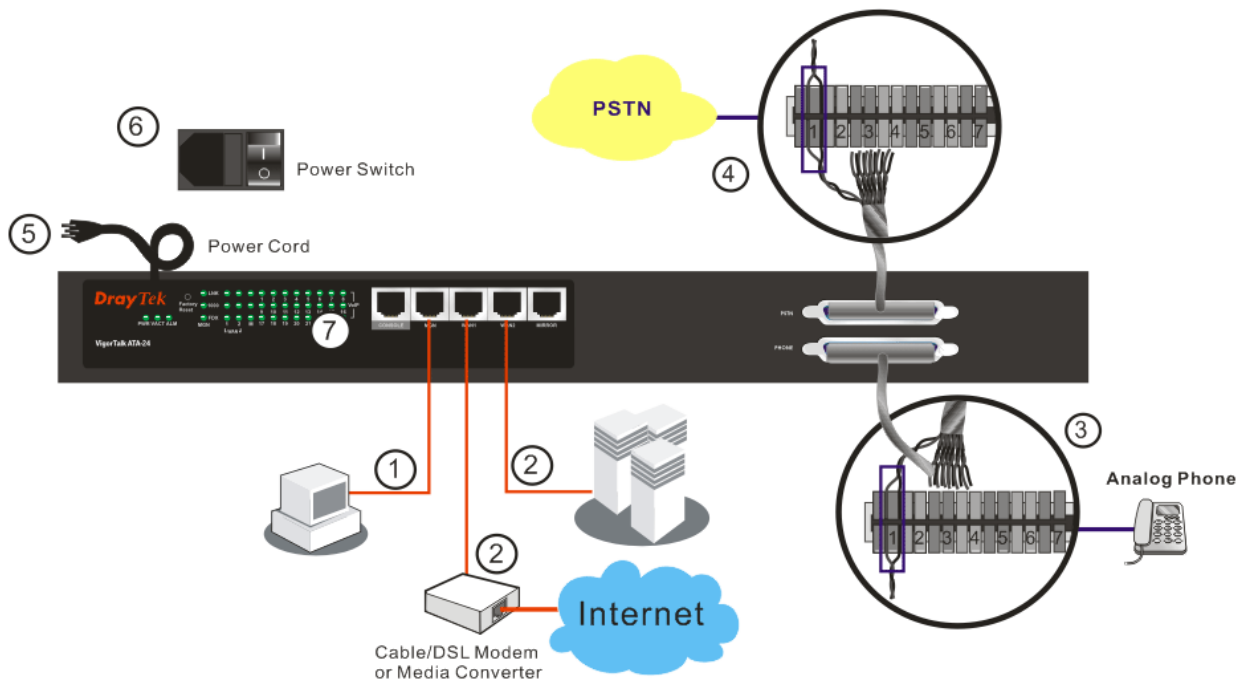
Interface	Description
CONSOLE	Provided for technician use.
MGN	Connector for local management.
WAN (WAN1 ~ WAN2)	Connector for remote networked devices.
MIRROR	Connector for security monitor.

## 1.2 Hardware Installation

Before starting to configure the adapter, you have to connect your devices correctly.

1. Connect one end of an Ethernet cable (RJ-45) to the **MGN** ports of VigorTalk ATA-24. Connect the other end of the cable (RJ-45) to the Ethernet port on your computer.
2. Connect a server/modem/adapter (depends on your requirement) to any available WAN port of the device with Ethernet cable (RJ-45).
3. Connect telephone sets to the **Phone** port of VigorTalk ATA-24 with telephone lines (RJ-11 to RJ-11).
4. Connect the **PSTN** port to PABX.
5. Connect the power cord to the power port of VigorTalk ATA-24 adapter on the rear panel, and the other side into a wall outlet.
6. Power on the device by pressing the power switch on the rear panel.
7. The system starts to initiate. The **PWR** LED should be **ON**. After completing the system test, the **ACT** LED will light up and start blinking. The **MGN/WAN** LED for that port on the front panel will light up.

Below shows an outline of the hardware installation for your reference (take VigorTalk ATA-24 as an example).



## 1.2.1 Detailed Explanation for the Connector

Here provides you detailed explanation for some specific connectors that you have to be familiar.

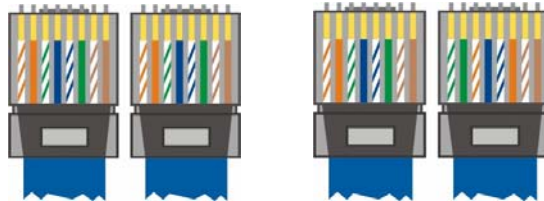
### The RS232 Connector

The RJ45 connection jet is used for CLI commands for system configuration and control functions in the VigorTalk ATA-24. The jet is used for initialization of the VigorTalk ATA-24 during preliminary installation. The “management cable”, as shown below, converts the RJ45 to the RS232 interface. The RJ45 jet connects to a console interface in the VigorTalk ATA-24, while the RS232 DB9 connects to a console port on the computer. The default setting of the console port is “**baud rate 57600, no parity, and 8 bit with 1 stop bit.**”



### Standard 10/100 Base-T Ethernet Interface Connector

RJ45 jets provide 10/100 Base-T Ethernet interfaces. The interface supports MDI/MDIX auto-detection of either straight or crossover RJ45 cables. These cables are used on WAN, LAN, and DMZ interfaces.



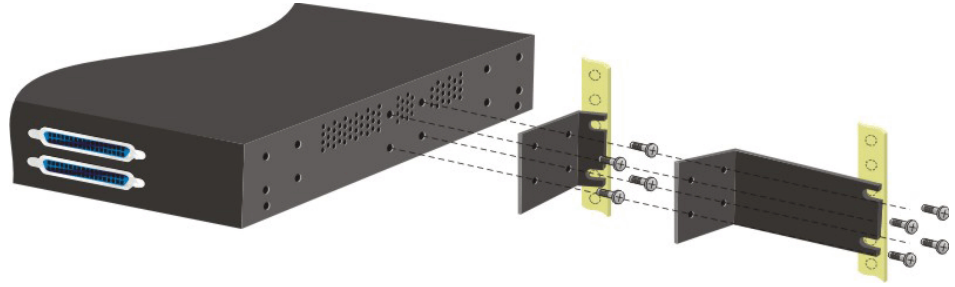
### Chassis Connections

The VigorTalk ATA-24 can be mounted on a rack by using standard brackets in a 19-inch rack or optional larger brackets on 23-inch rack (not included). The bracket for 19- and 23-inch racks are shown below.

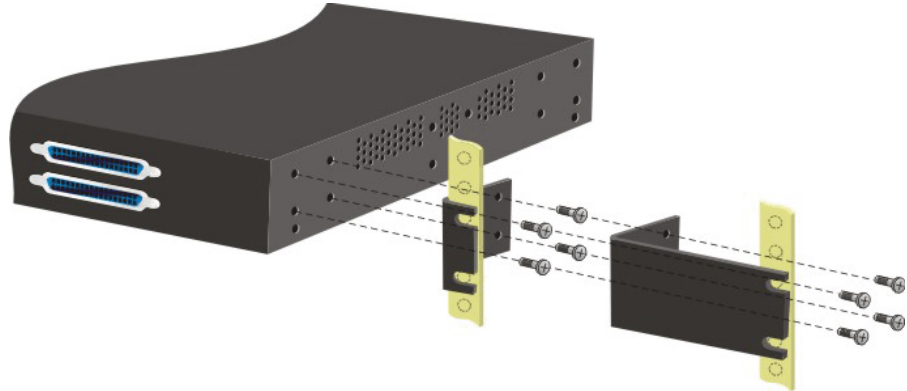


Attach the brackets to the chassis of a 19- or a 23-inch rack (as shown in the figures below). Repeat the above procedure for the second bracket, which attaches the other side of the chassis.

1



2



After the bracket installation, the VigorTalk ATA-24 chassis can be installed in a rack by using four screws for each side of the rack.

### **Desktop Type Installation**

Rubber pads are included with the VigorTalk ATA-24. These rubber pads improve the air circulation and decrease unnecessary rubbing on the desktop.

# 2

## Configuring Basic Settings

For use the adapter properly, it is necessary for you to change the password of web configuration for security and adjust primary basic settings.

This chapter explains how to setup a password for an administrator and how to adjust basic settings for accessing Internet successfully.

### 2.1 Changing Password

To change the password for this device, you have to access into the web browser with default password first.

1. Make sure your computer connects to the adapter MGN port correctly.

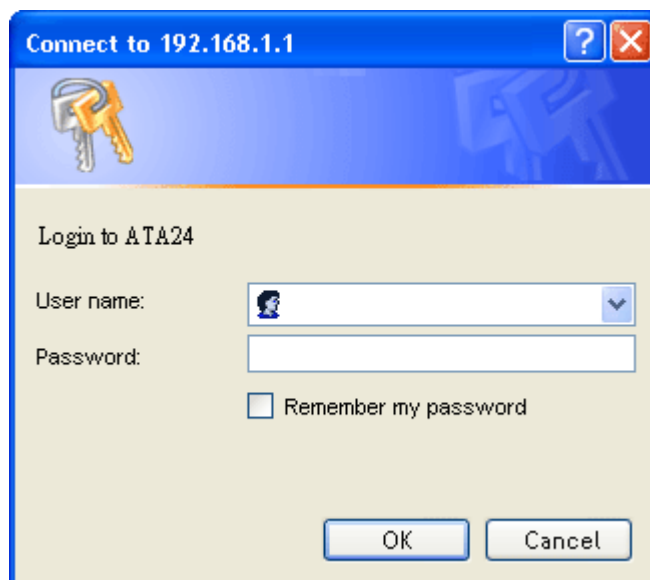


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**Notice:** You may set up the IP address of the computer to be the same subnet as **the default IP address of Vigor adapter 192.168.1.1**. For the detailed information, please refer to the later section - Trouble Shooting of this guide.

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2. Open a web browser on your PC and type **http://192.168.1.1**. A pop-up window will open to ask for username and password. Please type default values on the window for the first time accessing. The default value for user name is **admin** and the password is **1234**. Next, click **OK**.



- Now, the **Main Screen** will pop up.

Basic Status	LAN Status	WAN Status
Model :	ATA24 system	
Hardware Version :	0	
Firmware Version :	V2.0.3.0	
Build Date&Time :	Fri Jan 16 13:50:11 CST 2009	
System Uptime :	0 days 0 hours 34 minutes 12 seconds	
CPU Usage :	0.0000%	
Memory Size :	128 MBytes	
Memory Usage :	33.0435%	
Current System Time :	1970-01-01 00:34:12	

- Go to **System** page and choose **Change Password**.

- Status
- Time
- Syslog
- Access Control
- Change Password**
- Configuration
- Firmware Upgrade
- Reboot
- D Diagnostic Tools

- The following screen will appear.

Old Password : ●●●●

New Password : ●●●●

Confirm Password : ●●●●

Apply Cancel

- Enter the login password (1234) on the field of Old Password. Type a new one in the field of New Password and retype it on the field of Confirm Password. Then click **Apply** to continue.
- Now, the password has been changed. Next time, use the new password to access the Web Configurator for this adapter.
- Next, you will see the login screen after clicking **Apply**. Please use new password to re-enter the system configuration.



## 2.2 Quick Setup

Quick Setup is designed for configuring your broadband adapter accessing Internet with simply steps. There are two phases of quick setup, one is WAN configuration and the other is LAN configuration.

### 2.2.1 Adjusting WAN Connection Mode

In the **Quick Setup** group, you can configure the adapter to access the Internet with different modes such as Static and DHCP modes. For most users, Internet access is the primary application. The adapter supports the Ethernet WAN interface for Internet access. The following sections will explain in more detail the various broadband access configurations. All settings in this section will be applied in the first WAN1 interface.

Now, you have to select an appropriate WAN connection type for connecting to the Internet through this adapter according to the settings that your ISP provided.

**MAC Address**                      *Adapter Default-*

Use the default Mac address stored originally in adapter.

*User Definition-*

Use a MAC address defined by the user.

**Downstream Rate**

Assign the downstream rate for this WAN interface. The default value is 102400 kbps (100 Megabit). This setting is very important

for VigorTalk ATA-24 incoming buffer adjustment. If you use a DSL subscriber service with a 2Mbps downstream, please set the downstream rate setting with 2Mbps.

**Upstream Rate**

Assign the transmission rate for this WAN interface. The default value is 102400 kbps (100 Megabit). This setting is very important for VigorTalk ATA-24 outgoing buffer adjustment. If you use a DSL subscriber service with a 256Kbps downstream, please set the downstream rate setting with 256Kbps.

**Type**

Select a connection type for this WAN interface. Currently, there is only one setting offered for you to choose - Fast Ethernet.

**Physical Mode**

Select connection speed mode for this WAN interface. There are **auto negotiation**, **full duplex**, and **half duplex** of either 10/100/1000M speed options for the WAN Interface.

**IP Mode**

Select an IP mode for this WAN interface. There are two available modes for Internet access, **Static** or **DHCP**. On this page you may configure the WAN interface to use **Static** (fixed IP) or **DHCP** (dynamic IP address). Most of the cable users will use the **DHCP** mode to get a globally reachable IP address from the cable host system.



## 2.2.2 Static Mode

You can manually assign a static IP address to the WAN interface and complete the configuration by applying the settings and rebooting your adapter. Choosing **Static** as the IP mode, you will see the following page:

Static/DHCP Configuration			
IP Address :	<input type="text" value="172.16.1.100"/>	Host Name :	<input type="text"/>
Subnet Mask :	<input type="text" value="255.255.255.0"/>	Domain Name :	<input type="text"/>
Default Gateway :	<input type="text" value="172.16.1.1"/>	(Host Name and Domain Name are required for some ISPs.)	
Primary DNS :	<input type="text" value="168.95.1.1"/>		
Secondary DNS :	<input type="text" value="168.95.1.2"/>		
IP Alias List			
1.	<input type="text"/>	2.	<input type="text"/>
3.	<input type="text"/>	4.	<input type="text"/>
5.	<input type="text"/>	6.	<input type="text"/>
7.	<input type="text"/>	8.	<input type="text"/>
<a href="#">Next &gt;&gt;</a>			

All the settings here are set by privately. Your ISP will not provide these settings.

**IP Address** Assign a private IP address to the WAN interface.

**Subnet Mask** Assign a subnet mask value to the WAN interface.

**Default Gateway** Assign a private IP address to the gateway.

**Primary DNS** Assign a private IP address to the primary DNS.

**Secondary DNS** Assign a private IP address to the secondary DNS.

**IP Alias List** Assign other IP addresses to be bound to this interface. This setting is optional.

After setting up the **WAN** interface, the user can click **Next** to setup the LAN interface continuously.

## LAN – LAN IP/DHCP Page

### Quick Setup - LAN

---

#### LAN IP/DHCP

##### IP Configuration

IP Address :

Subnet Mask :

##### DHCP Server

Status :  Enable  Disable

Start IP :

End IP :

Primary DNS :

Secondary DNS :

Lease Time (Min) :

Gateway IP(Optional) :

<b>IP Address</b>	Assign an IP address for the LAN interface.
<b>Subnet Mask</b>	Assign the subnet mask for the LAN interface.
<b>Status</b>	Click <b>Enable</b> to use DHCP server; click <b>Disable</b> to close DHCP server.
<b>Start IP</b>	Assign the start IP address of the IP pool that DHCP server can use for clients in LAN.
<b>End IP</b>	Assign the end IP address of the IP pool that DHCP sever can use for clients in LAN.
<b>Primary DNS</b>	Type the IP address for primary DNS.
<b>Secondary DNS</b>	Type the IP address for secondary DNS.
<b>Lease Time</b>	Type the number for lease time. The default setting is 1440.
<b>Gateway IP</b>	Type the IP address as DHCP client.

When you finished the above required settings, please click **Finish**. A system reboot page will appear. Click **Apply** to activate the static mode configuration.

## 2.2.3 DHCP Mode

DHCP allows a user to obtain an IP address automatically from a DHCP server on the Internet. If you choose **DHCP** mode, the DHCP server of your ISP will assign a dynamic IP address for VigorTalk ATA-24 automatically. It is not necessary for you to assign any setting. (Host Name and Domain Name are required for some ISPs). Simply click **Next** to setup LAN interface.

**Quick Setup - WAN**

MAC Address :  Default MAC  User Defined MAC  
00:50:7f:c5:45:76

Downstream Rate :  (kbps)

Upstream Rate :  (kbps)

Physical Mode :

IP Mode :  Static  DHCP

Static/DHCP Configuration

After setting up the **WAN** interface, the user can click **Next** to setup the LAN interface continuously.

### LAN – LAN IP/DHCP Page

**Quick Setup - LAN**

**LAN IP/DHCP**

**IP Configuration**

IP Address :

Subnet Mask :

**DHCP Server**

Status :  Enable  Disable

Start IP :

End IP :

Primary DNS :

Secondary DNS :

Lease Time (Min) :

Gateway IP(Optional) :

<<Previous Finish

#### IP Address

Assign an IP address for the LAN interface.

#### Subnet Mask

Assign the subnet mask for the LAN interface.

#### Status

Click **Enable** to use DHCP server; click **Disable** to close DHCP server; click **Relay Agent** to activate relay agent function.

#### Start IP

Assign the start IP address of the IP pool that DHCP server can use for clients in LAN.

#### End IP

Assign the end IP address of the IP pool that DHCP sever can use for clients in LAN.

<b>Primary DNS</b>	Type the IP address for primary DNS.
<b>Secondary DNS</b>	Type the IP address for secondary DNS.
<b>Lease Time</b>	Type the number for lease time. The default setting is 1440.
<b>Gateway IP</b>	Type the IP address as DHCP client.

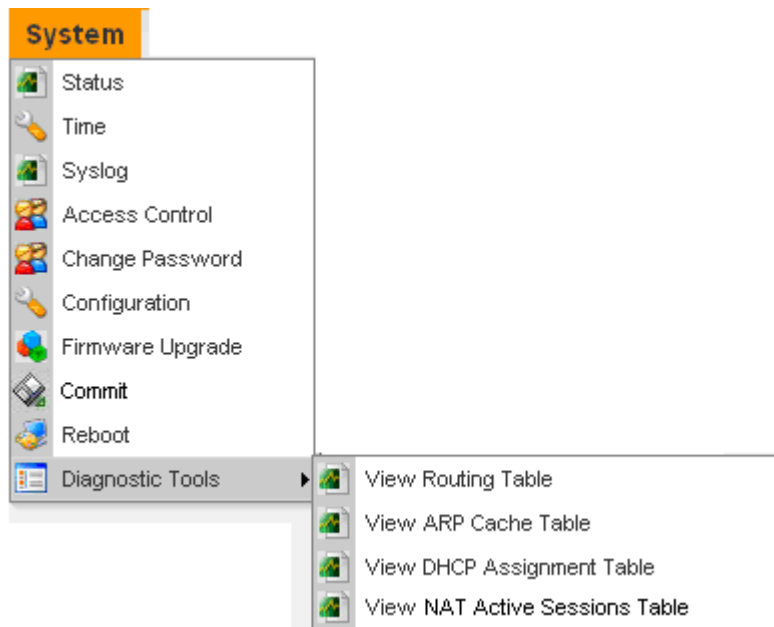
When you finished the above required settings, please click **Finish**. A system reboot page will appear. Click **Apply** to activate the static mode configuration.

# 3 Advanced Configuration

After finished basic configuration of the adapter, you can access Internet with ease. For the user who wants to adjust more setting for suiting his/her request, please refer to this chapter for getting detailed information about the advanced configuration of this adapter.

## 3.1 System setup

For the system setup, there are several items that you have to know the way of configuration: Status, Time Setup, Syslog Setup, Access Control Setup, Reboot and Firmware Upgrade Setup, Diagnostic Tools and Configuration Setup.



### 3.1.1 Status

The online **Status** function provides some useful system information on the current status of the VigorTalk ATA-24. A user can observe the system status on this Web page and determine which setting needed to be changed in corresponding web pages. In the **System** group, click the **Status** option. The online **Status** Web page contains three parts: **Basic Status**, **LAN Status**, and **WAN Status**.

**Refresh Option** You can choose to automatically refresh the Web page information. There are four options given as shown below.

**No Refresh:** Static information page.

**Every 10 Seconds:** Refreshes the page every 10 seconds.

**Every 20 Seconds:** Refreshes the page every 20 seconds.

**Every 30 Seconds:** Refreshes the page every 30 seconds.

## Basic Status

General status of this adapter will be displayed on **Basic Status** page.

The screenshot shows the 'System - Status' page with a 'Refresh Option' dropdown set to 'No Refresh' and a 'Refresh' button. Below this are three tabs: 'Basic Status' (selected), 'LAN Status', and 'WAN Status'. The 'Basic Status' tab displays the following information:

Model :	ATA24 system
Hardware Version :	0
Firmware Version :	V2.0.3.0
Build Date&Time :	Fri Jan 16 13:50:11 CST 2009
System Uptime :	0 days 1 hours 3 minutes 52 seconds
CPU Usage :	0.0000%
Memory Size :	128 MBytes
Memory Usage :	33.1190%
Current System Time :	1970-01-01 01:03:52

- |                            |                                                               |
|----------------------------|---------------------------------------------------------------|
| <b>Model</b>               | Displays the model name of the adapter.                       |
| <b>Hardware Version</b>    | Displays the hardware version of the adapter.                 |
| <b>Firmware Version</b>    | Displays the firmware version of the adapter.                 |
| <b>Build Date&amp;Time</b> | Displays the date and time of the current firmware build.     |
| <b>System Uptime</b>       | Displays the amount of time that the adapter has been online. |
| <b>CPU Usage</b>           | Displays the average percentage of the CPU being used.        |
| <b>Memory Usage</b>        | Displays the percentage of memory being used.                 |
| <b>Current System Time</b> | Displays the current local system time.                       |

## LAN Status

The status of LAN connection is shown in this page. Simply click **LAN Status** tag to get the detailed.

The screenshot shows the 'System - Status' page with the 'Refresh Option' dropdown set to 'No Refresh' and a 'Refresh' button. Below this are three tabs: 'Basic Status', 'LAN Status' (selected), and 'WAN Status'. The 'LAN Status' tab displays the following information:

IP Address :	192.168.1.1
MAC Address :	00:50:7f:f0:44:f8
High Availability Status :	
RX Packets :	39024
TX Packets :	40566

- |                              |                                                                                                                                                                                 |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>IP Address</b>            | Displays the IP address of the LAN interface.                                                                                                                                   |
| <b>MAC Address</b>           | Displays the MAC address of the LAN Interface.                                                                                                                                  |
| <b>High Available Status</b> | The High Available Status is shown when the function is enabled. When there are two VigorTalk ATA-24 devices in the same LAN, one can be set as Master device and the other can |

be set as Slave device.

*Master* - It means that VigorTalk ATA-24 plays the Master role in high availability feature.

*Slave* - It means that VigorTalk ATA-24 plays the Slave role in high availability feature.

If there is only one VigorTalk ATA-24 used in LAN, this line will be blank.

### **RX Packets**

Displays the total number of received packets at the LAN interface.

### **TX Packets**

Displays the total transmitted packets at the LAN interface.

### **WAN Status**

The status of WAN interface (Static or DHCP) is shown in this page. Simply click **WAN Status** tag to get the detailed. There are four sets of WAN status can be shown in this page at one time. The sample below just lists one set of WAN status for only WAN1 interface is used.

The screenshot shows the 'System - Status' page with a 'Refresh Option' dropdown set to 'No Refresh' and a 'Refresh' button. Below this are tabs for 'Basic Status', 'LAN Status', and 'WAN Status'. The 'WAN Status' tab is active, displaying details for 'WAN1' and 'WAN2' interfaces. A 'Disconnect' button is located at the bottom of the WAN1 section.

WAN1 :		WAN2 :	
IP Address :	172.16.3.229	IP Address :	
MAC Address :	00:50:7fc5:45:89	MAC Address :	00:50:7fc5:45:8a
Primary DNS :		Primary DNS :	
Secondary DNS :		Secondary DNS :	
Gateway :	172.16.3.4	Gateway :	
RX Packets :	1214754	RX Packets :	0
TX Packets :	35819	TX Packets :	0
Connection Status :	connected	Connection Status :	
Up Time :	0 days 22 hours 0 minutes 22 seconds	Up Time :	

### **IP Address**

Displays the IP address of the WAN interface.

### **MAC Address**

Displays the MAC address of the WAN Interface.

### **Primary DNS**

Displays the IP address of the primary DNS.

### **Secondary DNS**

Displays the IP address of the secondary DNS.

### **Gateway**

Displays the IP address of the default gateway.

### **RX Packets**

Displays the total received packets for each WAN interface.

### **TX Packets**

Displays the total transmitted packets for each WAN interface.

### **Connection Status**

Displays the connection status of the WAN interface.

### **Up Time**

Displays the total system uptime of the interface.

**Disconnect**

Disconnects current connection.

### 3.1.2 Time

As an NTP (Network Time Protocol) client, the adapter gets standard time from the time server. Some time-based functions, such as **Call Schedule** and **URL Content filtering**, cannot work properly until the system time functions run successfully. Typically, NTP achieves high accuracy and reliability with multiple redundant servers and diverse network paths.

The VigorTalk ATA-24 supports synchronization with a specific NTP server or the remote PC host of the administrator. In the **System** group, click the **Time** option. The Time page is shown below:

**System - Time**

Use Browser Time  
 Use NTP Time

NTP Server :

Time Zone : (GMT+00:00) Greenwich Mean Time : Dublin ▼

Daylight Saving Time :  Not Use  Use

Update Interval : 30 seconds ▼

Apply Cancel

**Use Browser Time**

Click this option to use the browser time from the remote administrator PC host as adapter's system time.

**Use NTP Time**

Click this option to use the time from an NTP server as adapter's system time.

**NTP Server**

Assign a public IP address or domain name of the NTP server.

**Time Zone**

Select the time zone where the VigorTalk ATA-24 is located.

**Daylight Savings Time**

Select **Use** to activate this function. This function is useful for some areas.

**Update Interval**

Select a time interval for updating from the NTP server.

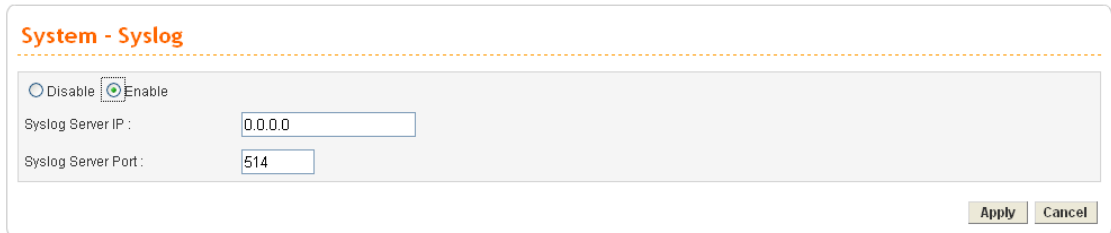
**Apply**

Click **Apply** to save these settings.



### 3.1.3 Syslog

The VigorTalk ATA-24 supports a Syslog function to keep a record of abnormal conditions. The adapter will send Syslog packets to a Syslog server on the remote site. The administrator can observe any abnormal events from VigorTalk ATA-24. In the **System** group, click the **Syslog** option. The Syslog web page is shown below:



**System - Syslog**

Disable  Enable

Syslog Server IP :

Syslog Server Port :

- Status** Click **Enable** to activate this function. The adapter will send system log message for your reference. If you click **Disable**, the adapter will not send out any message about system log.
- Syslog Server IP** The IP address of the Syslog server. If a user assigns an IP address of “0.0.0.0”, the Syslog function will be disabled. Then, VigorTalk ATA-24 will not send Syslog packets to the Syslog server.
- Syslog Server Port** Assign a port for the Syslog protocol.
- Apply** Click **Apply** to save these settings.

### 3.1.4 Access Control

This page allows you to determine which services (HTTP/Telnet/SSH) is used for the user to access VigorTalk ATA-24. In addition, you can also limit some hosts to access VigorTalk ATA-24 with specified IP address.

In the **System** group, click the **Access Control** option. You will get the following page:

**System - Access Control**

**Management Method**  
Allow Management Method:  
 HTTP    Telnet    SSH

**Management Access Control**  
Allow Management from the WAN  
 Disable    Enable All    Enable User Defined WAN IP  
Allowed IP1:  ~   
Allowed IP2:  ~   
Allowed IP3:  ~

**Management Port**  
 Default Ports (HTTP Port:80 Telnet Port:23 SSH Port:22)    User Defined Ports  
HTTP Port:   
Telnet Port:   
SSH Port:

**PING Restriction**  
 Disable PING from the LAN  
 Disable PING from the WAN

Apply   Cancel

#### Management Method

There are three management methods provided here for you to choose for your adapter. Check HTTP/Telnet/SSH for the adapter.

#### Allow Management from the WAN

**Disable** - Disable the management from the WAN interface.

**Enable All** - Enable all management (through HTTP/Telnet/SSH) from the WAN interface.

**Enable User Defined WAN IP** - System can be managed by these three IP addresses via WAN.

**Allowed IP1(to 3)** - Type in ranges for IP addresses (up to three) for managing the system.

#### Management Port

**Default Ports** - Use the default ports for HTTP and Telnet if you choose HTTP and Telnet as management methods.

**User Defined Ports** - Or you can assign new port numbers for HTTP, Telnet and SSH respectively.

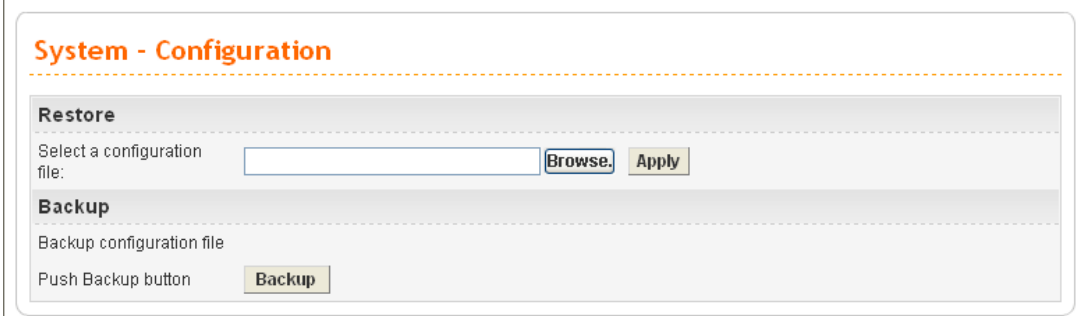
#### PING Restriction

**Disable PING from the LAN** - Choose this function to reject all ICMP packets from LAN side.

**Disable PING from the WAN** - Choose this function to reject all ICMP packets from WAN side.

### 3.1.5 Configuration

Most of the settings can be saved locally as a configuration file, and can be applied to another adapter. The VigorTalk ATA-24 supports the restoring and uploading functions of the **configuration files**. In the **System** group, click the **Configuration Setup** option. And you can see the following page.



The screenshot shows a web interface titled "System - Configuration". It is divided into two main sections: "Restore" and "Backup".

- Restore Section:** Contains the text "Select a configuration file:" followed by an empty text input field. To the right of the input field are two buttons: "Browse..." and "Apply".
- Backup Section:** Contains the text "Backup configuration file" followed by "Push Backup button" and a "Backup" button.

**Select a Configuration File** Please click the **Browse...** button to find out the location of the configuration file to be uploaded to the adapter and click **Apply**.

**Backup Configuration File** Download the configuration file to a local host. The default file name is "ata24.cfg".

**Push Backup Button**

### 3.1.6 Firmware Upgrade

VigorTalk ATA-24 allows users to upgrade firmware through a Web interface. In the **System** group, click the **Firmware Upgrade** option. You can see the following page then. Before you execute the firmware upgrade, please download the **newest firmware** from Draytek's website ([www.draytek.com](http://www.draytek.com)) or FTP site ([ftp.draytek.com](ftp://ftp.draytek.com)) on the computer first.

**System - Firmware Upgrade**

Caution : After an upgrade procedure a reboot is required.

Current Version : ATA24 system V2.0.3.0

Location :  Local  Remote

Firmware :  **Browse...**

TFTP Server IP

Remote File Name

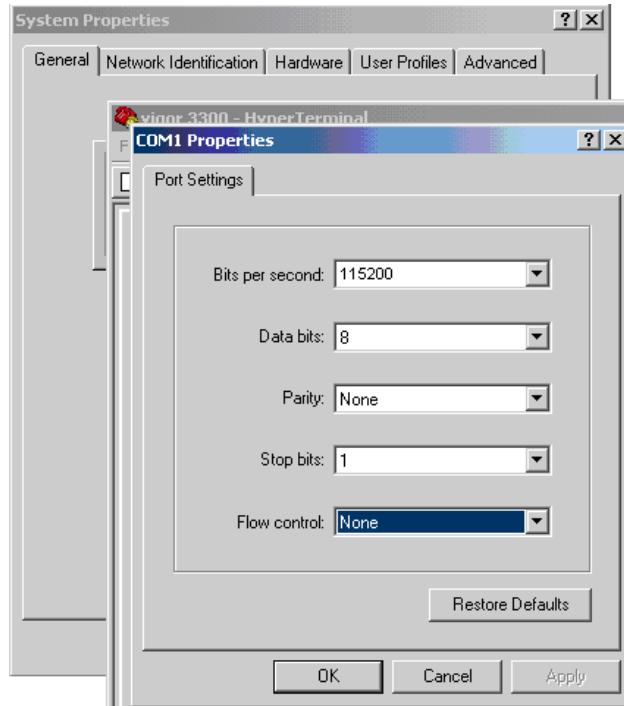
**Apply** **Cancel**

- Caution** Displays a caution for your reference.
- Current Version** Displays current firmware version that you are using.
- Location** *Local* means upgrade firmware from browser.  
*Remote* means upgrade firmware from a remote TFTP server.
- Firmware** Specify the location of the firmware file if you want to upgrade the firmware locally.
- TFTP Server IP** If you want to upgrade the firmware of this adapter from remote side, please type the IP address of the TFTP server.
- Remote File Name** The default filename will be shown here. If you have use another name to save the firmware file, please type the new name in this field.
- Apply** After finished your selection, please click **Apply** to execute the firmware upgrade.

#### Firmware Upgrade from a Console Port

Firmware upgrade can be done from a console port, too. The following example was run on a Windows environment.

1. Download the newest firmware from the DrayTek Website ([www.draytek.com.tw](http://www.draytek.com.tw)) or FTP site ([ftp.draytek.com](ftp://ftp.draytek.com)) on your computer first.
2. Connect the RJ45 connector of console cable to the console port on VigorTalk ATA-24 and the DB9 connector of the console cable to the RS232 port on the PC.



The default setting of the console port is “baud rate 115200, no parity, and 8 bit with 1 stop bit.”

3. Power on VigorTalk ATA-24, then press **ENTER** before the system reboots completely.

```

*****
* ATA-24 Bootloader Version: V1.0.2 (Oct 3 2008 - 15:52:20) *
*****

Press [ENTER] key within 5 sec. to download image... 5

Current LAN IP is 172.17.3.102
New IP:

Current Serv IP is 172.17.3.234
New IP:

Current image is ata24_m825.all
New Name:

```

4. Type LAN IP, TFTP Server IP, Image Name one by one, and press ENTER.
5. The firmware upgrade begins.
6. After firmware upgrade is finished, the device will restart.

### 3.1.7 Commit

Commit can save the current settings. Please click **Apply** to save the VigorTalk ATA-24 system settings.

### 3.1.8 Reboot

The VigorTalk ATA-24 system can be restarted from a Web browser. **Reboot** screen can appear after you finish the changing of WAN and LAN settings. You have to reboot the adapter to invoke the configured settings that you made before. Besides, you can select **Reset to factory default** to reboot the device and retrieve the default settings.

In the **System** group, choose the **Reboot** option. In the web page of **Reboot**, a user must either keep the current configuration settings or use the default configuration after the VigorTalk ATA-24 system has been rebooted.

DrayTek

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VigorTalk ATA24 Series User's Guide

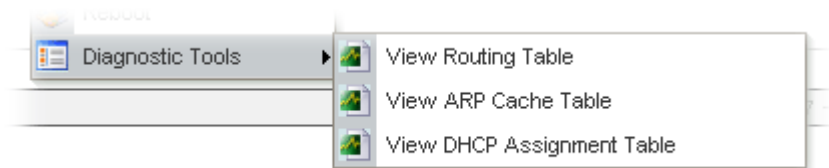
Click **Apply** to reboot the whole system. The rebooting procedure usually takes 70 or more seconds.



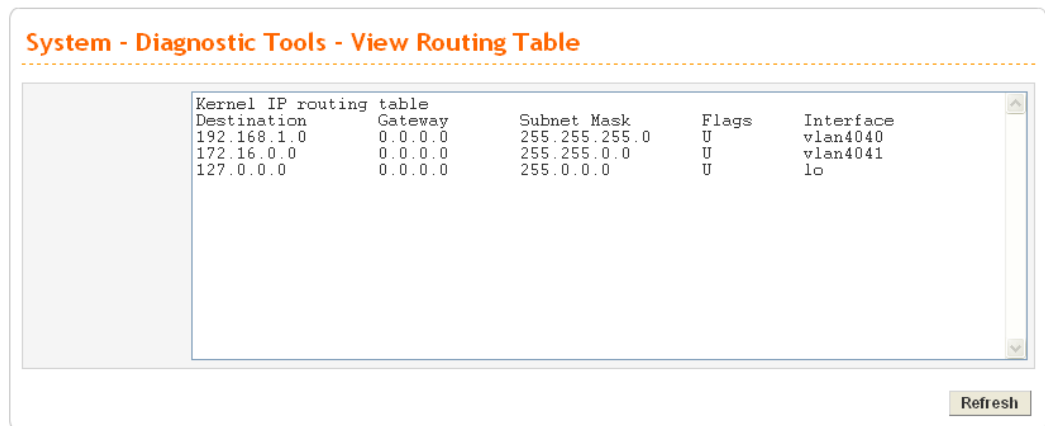
### 3.1.9 Diagnostic Tools

In some cases, a user may need to know some information about the adapter, such as static or dynamic databases, or other routing information. The VigorTalk ATA-24 supports four functions, **Routing Table**, **ARP Cache Table**, and **DHCP Assignment Table** for the user to review such information.

In the **System** group, click the **Diagnostic Tools** option



- Select **View Routing Table** to get the following page:



<b>Destination</b>	Displays the destination IP address for various routings.
<b>Gateway</b>	Displays the default gateway.
<b>Subnet Mask</b>	Displays the subnet mask for various routings.
<b>Flags</b>	Displays the status of the routing entries.
<b>Interface</b>	Denoted by <b>vlan4040</b> if it is a LAN interface and <b>vlan4041</b> if it is a WAN interface.
<b>Refresh</b>	Click <b>Refresh</b> to re-display this web page for getting newest routing information.

- Select **View ARP Cache Table** to get the following page:

**System - Diagnostic Tools - View ARP Cache Table**

Index	IP Address	MAC Address	Interface
1	172.16.3.8	00:1D:09:68:1D:8A	vlan4041
2	172.16.3.18	00:50:FC:2F:3D:17	vlan4041
3	192.168.1.10	00:0E:A6:2A:D5:A1	vlan4040
4	172.16.3.4	00:50:7F:C0:8D:84	vlan4041

**Refresh**

- IP Address** Displays the IP address for different ARP cache.
- MAC Address** Displays the MAC address for different ARP cache.
- Interface** Denoted by **vlan4040** if it is a LAN interface. **vlan4041** means it is a WAN1 interface; **vlan4042** means it is a WAN2 interface; **vlan4043** means it is a WAN3 interface.
- Refresh** Click **Refresh** to re-display this web page for getting newest ARP information.

- Select **View DHCP Assignment Table** to get the following page:

**System - Diagnostic Tools - View DHCP Assignment Table**

Index	Assigned IP	MAC Address	Time Left
1	192.168.1.10	00:0E:A6:2A:D5:A1	23 hours, 52 minutes, 15 seconds

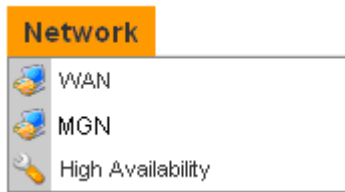
**Refresh**

- Assigned IP** Displays the IP address of the static DHCP server.
- MAC Address** Displays the MAC address of the static DHCP server.
- Time Left** Displays the remaining time for this IP address assigned by DHCP server. When the time expired, such IP address would not be kept for this client and might be assigned to other client.
- Refresh** Click **Refresh** to re-display this web page for getting newest routing information.



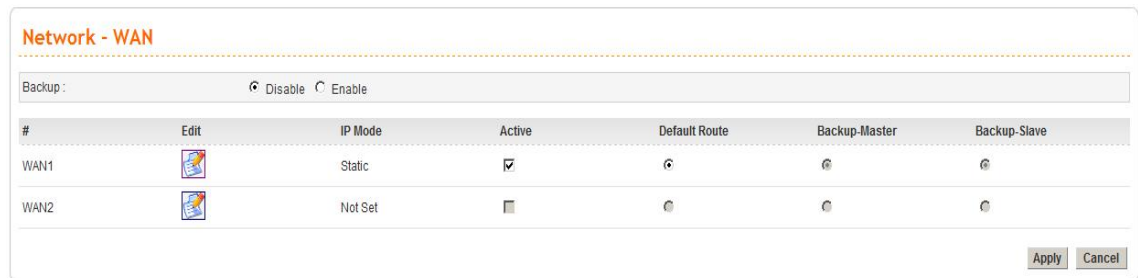
## 3.2 Network Setup

For Internet access, it is necessary for you to set **WAN** and **MGN** interfaces for the adapter.



### 3.2.1 WAN and Internet Access Setup

The VigorTalk ATA-24 supports two WAN interfaces (with two IP Modes – Static or DHCP), which share the same setting page. In the **Network** group, please click the **WAN** option. The following page will be shown.



**Backup** Enables or disables backup function for WAN interfaces. If you enable this function, the backup-master/backup-slave will execute the job of master/slave device when the master/slave device fails to work.

**Edit** Open the configuration page of this WAN interface.

**IP Mode** Displays current mode of this WAN interface. There are two options: Static or DHCP

**Active** Activates/closes this WAN interface.

**Default Route** Sets this WAN interface as default route interface.

**Backup-Master** Sets this WAN interface as a master interface. WAN1 must be assigned as Master interface if Backup function is enabled.

**Backup-Slave** Sets this WAN interface as a slave interface.

**VoIP** Sets this WAN interface as VoIP default interface.

Most users will use their adapters primarily for Internet access. The VigorTalk ATA-24 supports broadband Internet access and provides multiple WAN interfaces. The following sections will give a detailed illustration to broadband access methods.

Click the “**Edit**” icon to bring up the WAN configuration page for the corresponding interface.

**Network - WAN - WAN1 - Fast Ethernet**

---

MAC Address :  Default MAC  User Defined MAC

Downstream Rate :  (kbps)

Upstream Rate :  (kbps)

Physical Mode :  ▼

IP Mode :  Static  DHCP

- Default MAC** Uses the default Mac address.
- User Defined MAC** Uses a MAC address defined by users. If you select this item, you have to type the MAC address in the box below.
- Downstream Rate** Sets downstream rate for this WAN interface. The default value is 102400 kbps (100 Megabit).
- Upstream Rate** Sets transmission rate for this WAN interface. The default value is 102400 kbps (100 Megabit).
- Physical Mode** Sets connection speed mode. There are five options including **Auto negotiation, full duplex, half duplex, 10M, 100M** and **1000M**.
- IP Mode** Sets an IP Mode with **Static (fixed IP)** or **DHCP (dynamic IP address)** and creates the IP group information. Most cable modem users will use DHCP to get a globally reachable IP address from the cable head-end system. Different mode will lead different configuration and will be explained in later section.

Before you connect a broadband access device e.g. a DSL/Cable modem to VigorTalk ATA-24, you need to know what kind of Internet access your ISP provides. The following sections introduce four widely used broadband access services: **Static** for DSL, **DHCP** for Cable modem. In most cases, you will get a DSL or cable modem from the broadband access service provider. VigorTalk ATA-24 is connected behind the broadband device i.e. DSL/cable modem and works as a NAT or IP adapter for broadband connections.

Next, we will introduce each WAN mode in detailed.

### Static IP Configuration

It means that the IP group information for WAN interface is manually assigned by the user.

IP Mode :  Static  DHCP

**Static/DHCP Configuration**

IP Address :  Host Name :

Subnet Mask :  Domain Name :

Default Gateway :  (Host Name and Domain Name are required for some ISPs.)

Primary DNS :

Secondary DNS :

MTU :

**Connection Detection**

Detect Type :

Detect Interval(sec) :

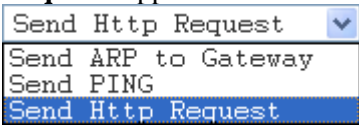
No-Reply Count:

Detect Destination Host : (IP or Domain Name)

**IP Alias List**

1.	<input type="text"/>	2.	<input type="text"/>
3.	<input type="text"/>	4.	<input type="text"/>
5.	<input type="text"/>	6.	<input type="text"/>
7.	<input type="text"/>	8.	<input type="text"/>

[9-32](#)

- IP Address** Sets the private IP address of WAN interface.
- Subnet Mask** Sets the subnet mask value of WAN interface.
- Default Gateway** Sets the private IP address of gateway.
- Primary DNS** Sets the private IP address of primary DNS.
- Secondary DNS** Sets the private IP address of secondary DNS.
- MTU** It means the maximum transmission unit. Default value is 1500. Change it if you want.
- Host Name** Some ISP may ask you to type your host name. Please type in if necessary.
- Domain Name** Some ISP may ask you to type your domain name. Please type in if necessary.
- Detect Type** Select a detecting type for this WAN interface. There are three ways **Send ARP to Gateway**, **Send PING** and **Send HTTP Request** supported in ATA24.
- 
- Detect Interval (sec)** Assign an interval period of time for each detecting. The minimum value is 3 and no limit for maximum value.

<b>No-Reply Count</b>	Assign detecting times to ensure the connection of the WAN. After passing the times you set in this field and no reply received by the adapter, the connection of WAN interface will be regarded as breaking down.
<b>Detect Destination Host (IP or Domain Name)</b>	Assign an IP address or Domain name as a destination to be detected whether the host is active (sending reply to the adapter) or not. If not, the connection of WAN interface will be regarded as breaking down. This function is available when <b>Detect Type</b> is set with <b>Send PING</b> or <b>Send Http Request</b> .
<b>IP Alias List</b>	Sets other IP addresses binding in this interface. You can set up to 32 sets of IP alias settings. If you have typed addresses here, you can see and choose it in later web page settings.
<b>Apply</b>	Click <b>Apply</b> to go back to the WAN Interface Configuration page. To apply all settings, click <b>Apply</b> on the WAN Interface Configuration page and reboot your adapter.
<b>Reset</b>	Click this button to clear all the configurations for this page.

## DHCP Configuration

If the WAN interface is set as a DHCP client, the VigorTalk ATA-24 will ask for IP network settings from the DHCP server or DSL modem automatically. It is not necessary for users to manually configure the adapter.

IP Mode :  Static  DHCP

**Static/DHCP Configuration**

IP Address :  Host Name :

Subnet Mask :  Domain Name :

Default Gateway :  (Host Name and Domain Name are required for some ISPs.)

Primary DNS :

Secondary DNS :

MTU :

**Connection Detection**

Detect Type :

Detect Interval(sec) :

No-Reply Count :

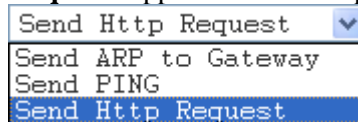
Detect Destination Host : (IP or Domain Name)

**MTU** It means the maximum transmission unit. Default value is 1500. Change it if you want.

**Host Name** Some ISP may ask you to type your host name. Please type in if necessary.

**Domain Name** Some ISP may ask you to type your domain name. Please type in if necessary.

**Detect Type** Select a detecting type for this WAN interface. There are three ways **Send ARP to Gateway**, **Send PING** and **Send HTTP Request** supported in the adapter.



**Detect Interval (sec)** Assign an interval period of time for each detecting. The minimum value is 3 and no limit for maximum value.

**No-Reply Count** Assign detecting times to ensure the connection of the WAN. After passing the times you set in this field and no reply received by the adapter, the connection of WAN interface will be regarded as breaking down.

**Detect Destination Host (IP or Domain Name)** Assign an IP address or Domain name as a destination to be detected whether the host is active (sending reply to the

adapter) or not. If not, the connection of WAN interface will be regarded as breaking down. This function is available when **Detect Type** is set with **Send PING** or **Send Http Request**.

**Apply**

Click **Apply** to go back to the WAN Interface Configuration page. To apply all settings, click **Apply** on the WAN Interface Configuration page and reboot your adapter.

**Reset**

Click this button to clear all the configurations for this page.

### 3.2.2 MGN

In the **Network** group, select **MGN** option. The following page for LAN IP/DHCP will be shown.

The screenshot shows a web interface titled "Network - MGN". Under the "MGN IP/DHCP" tab, there are two main sections: "IP Configuration" and "DHCP Server".

**IP Configuration:**

- IP Address: 192.168.1.1
- Subnet Mask: 255.255.255.0

**DHCP Server:**

- Status:  Enable  Disable
- Start IP: 192.168.1.10
- End IP: 192.168.1.254
- Primary DNS: (empty field)
- Secondary DNS: (empty field)
- Lease Time (Min): 1440
- Gateway IP(Optional): (empty field)

At the bottom right, there are "Apply" and "Cancel" buttons.

**IP Address**

Type the IP address for LAN/DHCP.

**Subnet Mask**

Type the subnet mask for the LAN IP/DHCP.

**Status**

Click **Enable** the DHCP server; click **Disable** to close DHCP server.

**Start IP**

Sets the starting IP address of the IP address pool for DHCP server.

**End IP**

Sets the ending IP address of the IP address pool for DHCP server.

**Primary DNS**

Sets the private IP address of the primary DNS.

- Secondary DNS**                      Sets the private IP address of the secondary DNS.
- Lease Time (Min)**                Sets a lease time for the DHCP server. The time unit is minute.
- Gateway IP (Optional)**        Sets a gateway IP address for the DHCP server.

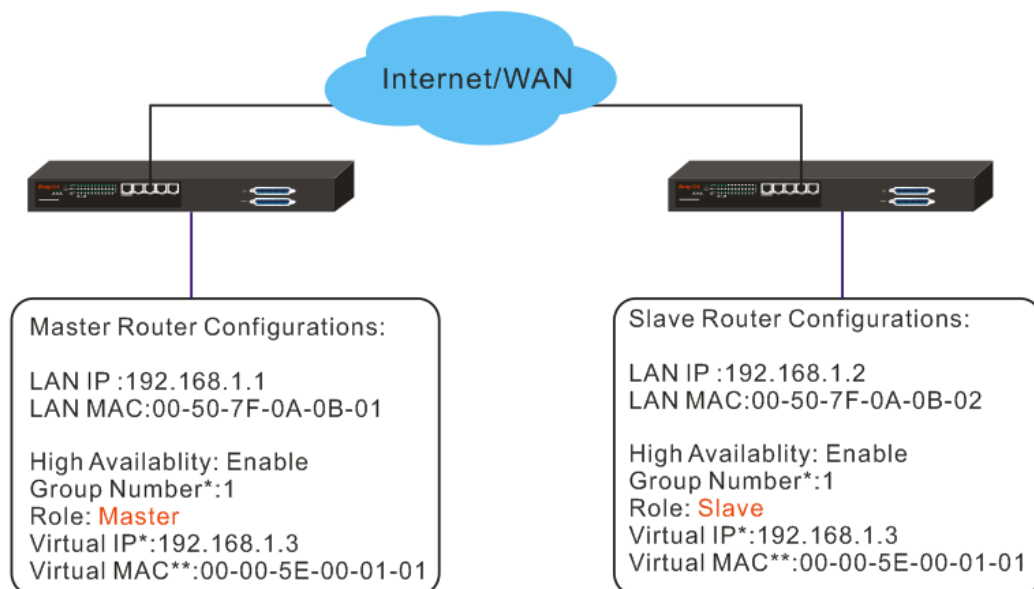
Click **Apply** to reboot the system and apply the settings.

### 3.2.3 High Availability

The High Availability (HA) feature refers to the awareness of component failure and the availability of backup resources. The complexity of HA is determined by the availability needs and the tolerance of system interruptions. Systems, that provide nearly full-time availability, typically have redundant hardware and software that makes the system available despite failures.

The high availability is designed to avoid single points-of-failure. When failures occur, the failover process moves processing performed by the failed component (the “Master”) to the backup component (the “Slave”). This process remains system-wide resources, recovers partial of failed transactions, and restores the system to normal within a matter of microseconds.

Take the following picture as an example. The left device is regarded as Master device, the right device is regarded as Slave device. When Master device is broken down, the Slave device could replace the Master role to take over all jobs as soon as possible. However, once the original Master is working again, the Slave would be changed to original role to stand by.



In the **Network** group, click the **High availability** option.

**Network - LAN - High Availability**

---

High Availability:  Disable  Enable

Group Number:  (Range: 1~255)

Role:

Virtual IP:

**High Availability** Disables or enables this function. When the master device fails down, the slave device will take its work over.

**Group Number** Assign a group number. The range is from 1 to 255. PCs on the same group (in LAN) can support for each other.

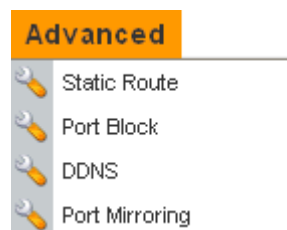
**Role** Select a role for this device as Master or Slave.

**Virtual IP** Assign an IP address as a virtual IP.

Click **Apply** to reboot the system and apply the settings.

## 3.3 Advanced Setup

In the **Advanced** menu, there are several items offered here for you to adjust for the adapter.



### 3.3.1 Static Route Setup

When you have several subnets in your LAN, sometimes a more effective and quicker way for connection is the **Static routes** function rather than other methods. You may simply set rules to forward data from one specified subnet to another specified subnet without the presence of RIP.

This function allows users to assign static routing information. In the **Advanced** group, choose **Static Route**. You will get the following page.



**Advanced - Static Route**

#	Network Interface	Gateway IP	Destination IP	Mask
1	<input checked="" type="radio"/>			
2	<input type="radio"/>			
3	<input type="radio"/>			
4	<input type="radio"/>			
5	<input type="radio"/>			
6	<input type="radio"/>			
7	<input type="radio"/>			
8	<input type="radio"/>			
9	<input type="radio"/>			
10	<input type="radio"/>			

1

**Network Interface** Displays the network interface (LAN, WAN1, 2, 3 or 4).

**Gateway IP** Displays the gateway address of the static route.

**Destination IP** Displays the destination IP of the static route.

**Mask** Displays the subnet mask of this route.

**Edit** Allows users to edit the selected static route settings.

**Delete/Delete All** Removes one or all the selected static route settings.

The system allows users to set up to 10 static routes for the adapter.

### Edit the Static Route

To edit static route for certain item, select the radio button of the item and click **Edit** on the bottom of the page. The following web page will be displayed:

**Advanced - Static Route - Edit**

1

Network Interface :

Gateway IP :

Destination IP :

Subnet Mask :

**Network Interface** Select a network interface as a destination to be sent. It includes **LAN**, and **WAN1~WAN3**.

**Gateway IP** Assign an IP address of the gateway for the interface selected above.

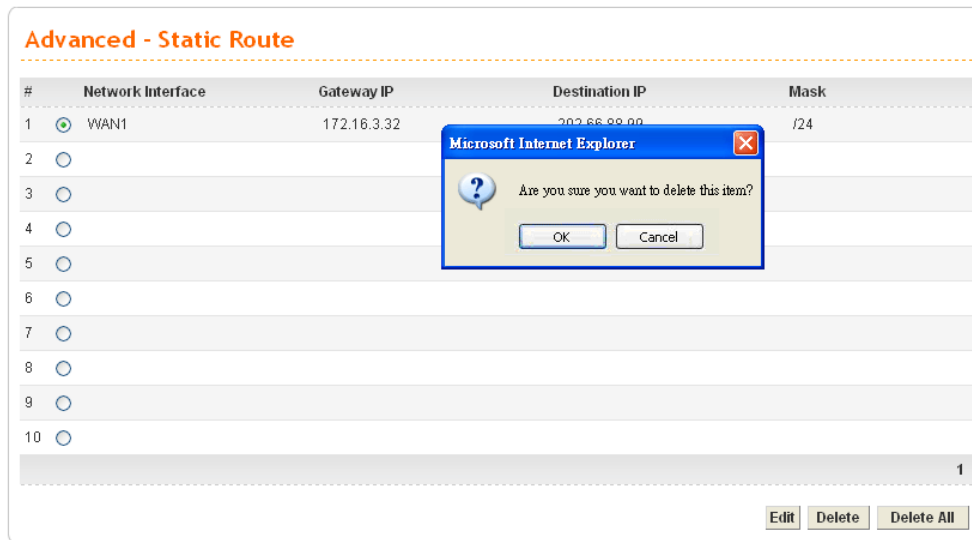
**Destination IP** Assign the IP address of the destination that data will be transferred to. Packets ready to destination will be sent out through the network interface chosen in this page.

**Subnet Mask** Assign a value of subnet mask for destination IP address.

Click **Apply** to reboot the system and apply the settings.

### Delete the Static Route

Select the radio button of the item that you want to delete and click **Delete** on the bottom of the page. The following web page will be displayed:



Click **OK** to delete the entry in static route table.

Users can click **Delete All** to remove all entries in static route table.

### 3.3.2 Port Block

The **Port Block** function provides a user to set lots of proprietary port numbers. Packets will be dropped if destination ports (both TCP and UCP) of packets with these assigned port numbers are on WAN and LAN. The advantage of this feature is to filter some unnecessary packets or attacking packets on Internet environment or LAN network. VigorTalk ATA-24 supports ten port numbers to be blocked.

In the **Advanced** group, click **Port Block** option. You will get the following page.

**Advanced - Port Block**

Index	Status	Port Number
1.	<input checked="" type="radio"/> Disable <input type="radio"/> Enable	<input type="text"/>
2.	<input checked="" type="radio"/> Disable <input type="radio"/> Enable	<input type="text"/>
3.	<input checked="" type="radio"/> Disable <input type="radio"/> Enable	<input type="text"/>
4.	<input checked="" type="radio"/> Disable <input type="radio"/> Enable	<input type="text"/>
5.	<input checked="" type="radio"/> Disable <input type="radio"/> Enable	<input type="text"/>
6.	<input checked="" type="radio"/> Disable <input type="radio"/> Enable	<input type="text"/>
7.	<input checked="" type="radio"/> Disable <input type="radio"/> Enable	<input type="text"/>
8.	<input checked="" type="radio"/> Disable <input type="radio"/> Enable	<input type="text"/>
9.	<input checked="" type="radio"/> Disable <input type="radio"/> Enable	<input type="text"/>
10.	<input checked="" type="radio"/> Disable <input type="radio"/> Enable	<input type="text"/>

**Index**

The number of each entry.

**Status**

User can **Disable** or **Enable** the port block for the specified port.

**Port Number**

Assign a port number to be blocked in system. The default port setting is 135.

Click **Apply** to finish this setting.

### 3.3.3 DDNS

The Dynamic DNS function allows the adapter to update its online WAN IP address, which assigned by ISP or other DHCP server to the specified Dynamic DNS server. Once the adapter is online, you will be able to use the registered domain name to access the adapter or internal virtual servers from the Internet. DDNS is more popular on dynamic IP users, who typically receive dynamic, frequently-changing IP addresses from their service provider.

Before you set up the Dynamic DNS function, you have to subscribe free domain names from the Dynamic DNS service providers. The adapter provides up to ten accounts for the function and supports the following providers: **www.dynsns.org**, **www.no-ip.com**, **www.dtdns.com**, **www.changeip.com**, **www.ddns.cn**. You should visit their websites for registering your own domain name on the adapter.

In the **Advanced** group, click **DDNS** option. You will get the following page.

**Advance - DDNS**

#	Domain Name	Server Provider	Server Type	Active	Status
1		dyndns.org	dynamic	disable	Not Connected
2		dyndns.org	dynamic	disable	Not Connected
3		dyndns.org	dynamic	disable	Not Connected
4		dyndns.org	dynamic	disable	Not Connected
5		dyndns.org	dynamic	disable	Not Connected
6		dyndns.org	dynamic	disable	Not Connected
7		dyndns.org	dynamic	disable	Not Connected
8		dyndns.org	dynamic	disable	Not Connected
9		dyndns.org	dynamic	disable	Not Connected
10		dyndns.org	dynamic	disable	Not Connected

**Refresh**

- Domain Name**                      Display the domain name set for the entry.
- Service Provider**                Display the service provider that supports DDNS.
- Service Type**                      Display the service type for the entry.
- Active**                              Display the activation status (disable or enable) for this entry.
- Status**                              Display the connection status of this entry.

Click **Refresh** to re-display the whole page information.

To modify DDNS setting, click an entry number to get into edit mode.

**Advanced - DDNS Setting**

Status :                       Disable  Enable

Interface :                    WAN1

Server Provider :            dyndns.org (www.dyndns.org)

Server Type :                dynamic

Domain Name :              abc.dyndns.org

Login Name :                draytek

Login Password :            .....

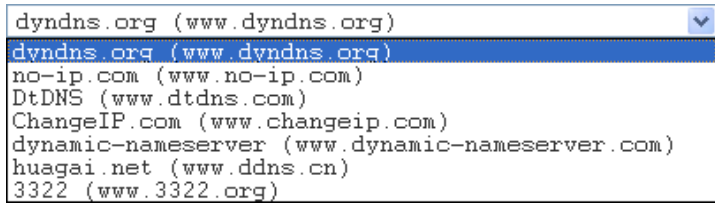
Wild Card :                   Disable  Enable

Backup MX :                  Disable  Enable

Mail Extender :             dray@draytek.com

**Apply** **Cancel**

- Status**                              Click **Disable** to disable this function. Click **Enable** to activate this function.
- Interface**                          Select a specific interface for registering on DDNS server. The Interface should be any WAN port on VigorTalk series.
- Server Provider**                  Assign a provider name to support DDNS server. The VigorTalk ATA-24 supports 7 domain server providers as default.



<b>Server Type</b>	Select <b>Static</b> , <b>Dynamic</b> or <b>Custom</b> type for this entry of DDNS settings.
<b>Domain Name</b>	Assign a private domain name to be accessed.
<b>Login Name</b>	Assign a name to login into DDNS server.
<b>Login Password</b>	Assign a password to login into DDNS server.
<b>Wild Card</b>	If you want anything-here.yourhost.dyndns.org to work (EX. To make things like www.yourhost.dyndns.org work), click “Enable” to active this function.
<b>Backup MX</b>	MX stands for Mail Exchanger. Mail Exchangers are used for directing mail to specific servers other than the one a hostname points at.
<b>Mail Extender</b>	Assign an email address.

Click **Apply** to finish these settings and return to previous page.

---

**Note:**

1. The Wildcard and Backup MX features are not supported for all Dynamic DNS providers. You could get more detailed information from their websites.
2. Backup MX provides a secondary mail server to hold your e-mail if your main email server go offline for any reason. Once you go back online, your email will be delivered to you.

### 3.3.4 Port Mirroring

VigorTalk-ATA Series supports port mirroring function in WAN interfaces. Generally speaking, this function copies traffic from one or more specific ports to a target port. This mechanism helps manager track the network errors or abnormal packets transmission without interrupting the flow of data access the network. By the way, user can apply this function to monitor all traffics which user needs to check.

There are some advantages supported in this feature. Firstly, it is more economical without other detecting equipments to be set up. Secondly, it may be able to view traffic on one or more ports within a VLAN at the same time. Thirdly, it can transfer all data traffics to be mirrored to one analyzer connect to the mirroring port. Last, it is more convenient and easy to configure in user’s interface.

In the **Advanced** group, click the **Port Mirroring** option. You will see the following page.



**Enable/Disable**

Click **Disable** to disable this function. Click **Enable** to activate this function.

**Mirroring Port**

Select a port to view traffic sent from mirrored ports.

**Mirrored Port(s)**

Click which ports are necessary to be mirrored.

After finishing the settings, please click **Apply**.

### 3.4 Firewall Setup

The firewall controls the allowance and denial of packets through the adapter. The **Firewall Setup** in the VigorTalk ATA-24 Series mainly consists of Denial of Service (DoS) only. The firewall filters help to protect your computer against attack from outsiders.

The following sections will explain how to configure the **Firewall**. The **DoS** facility can detect and mitigate the DoS attacks. T



#### 3.4.1 DoS

The DoS function helps to detect and mitigates DoS attacks. These include flooding-type attacks and vulnerability attacks. Flooding-type attacks attempt to use up all your system's resources while vulnerability attacks try to paralyze the system by offending the vulnerabilities of the protocol or operation system.

In the **Firewall** group, click the **DOS** option. You will see the following page. The DoS Defense Engine inspects each incoming packet against the attack signature database. Any packet that may paralyze the host in the security zone is blocked. The DoS Defense Engine also monitors traffic behavior. Any anomalous situation violating the DoS configuration is reported and the attack is mitigated.

**Firewall - DoS**

DoS Defense :  Disable  Enable

<input type="checkbox"/> Enable SYN flood defense :	Threshold: <input type="text" value="300"/> Packets/sec	Timeout: <input type="text" value="10"/> sec
<input type="checkbox"/> Enable UDP flood defense :	Threshold: <input type="text" value="300"/> Packets/sec	Timeout: <input type="text" value="10"/> sec
<input type="checkbox"/> Enable ICMP flood defense:	Threshold: <input type="text" value="300"/> Packets/sec	Timeout: <input type="text" value="10"/> sec
<input type="checkbox"/> Enable Port Scan detection :	Threshold: <input type="text" value="300"/> Packets/sec	
<input type="checkbox"/> Block IP options	<input type="checkbox"/> Block TCP flag scan	
<input type="checkbox"/> Block Land	<input type="checkbox"/> Block Tear Drop	
<input type="checkbox"/> Block Smurf	<input type="checkbox"/> Block Ping of Death	
<input type="checkbox"/> Block trace route	<input type="checkbox"/> Block ICMP fragment	
<input type="checkbox"/> Block SYN fragment	<input type="checkbox"/> Block Unknown Protocol	
<input type="checkbox"/> Block Fraggle Attack		

**DoS Defense** Enables or disables the DoS Defense function. The default value is **Disable**.

**Enable SYN Flood Defense** Activates the SYN flood defense function. If the amount of TCP SYN packets from the Internet exceeds the user-defined threshold value, the adapter will be forced to randomly discard the subsequent TCP SYN packets within the user-defined timeout period. The default setting for threshold and timeout are **300** packets per second and **10** seconds, respectively.

**Enable UDP Flood Defense** Activates the UDP flood defense function. If the amount of UDP packets from the Internet exceeds the user-defined threshold value, the adapter will be forced to randomly discard the subsequent UDP packets within the user-defined timeout period. The default setting for threshold and timeout are **300** packets per second and **10** seconds, respectively.

**Enable ICMP Flood Defense** Activates the ICMP flood defense function. If the amount of ICMP echo requests from the Internet exceeds the user-defined threshold value, the adapter will discard the subsequent echo requests within the user-defined timeout period. The default setting for threshold and timeout are **300** packets per second and **10** seconds, respectively.

**Enable Port Scan Detection** Activates the Port Scan detection function. Port scan sends packets with different port numbers to find available services, which respond. The adapter will identify it and report a warning message if the port scanning rate in packets per second exceeds the user-defined threshold value. The default threshold is **300** pps (packets per second).

<b>Enable Block IP Options</b>	Activates the Block IP options function. The adapter will ignore any IP packets with IP option field appearing in the datagram header.
<b>Enable Block Land</b>	Activates the Block Land function. A Land attack occurs when an attacker sends spoofed SYN packets with identical source address, destination addresses and port number as those of the victim.
<b>Enable Block Smurf</b>	Activates the Block Smurf function. The adapter will reject any ICMP echo request destined for the broadcast address.
<b>Enable Block Trace Route</b>	Activates the Block trace route function. The adapter will not forward any trace route packets.
<b>Enable Block SYN Fragment</b>	Activates the Block SYN fragment function. Any packets having the SYN flag and fragmented bit sets will be dropped.
<b>Enable Block Fraggle Attack</b>	Activates the Block fraggle Attack function. Any broadcast UDP packets received from the Internet are blocked.
<b>Enable TCP Flag Scan</b>	Activates the Block TCP flag scan function. Any TCP packet with an anomalous flag setting is dropped. These scanning activities include <b>no flag scan, FIN without ACK scan, SYN FIN scan, Xmas scan</b> and <b>full Xmas scan</b> .
<b>Enable Tear Drop</b>	Activates the Block Tear Drop function. This attack involves the perpetrator sending overlapping packets to the target hosts so that target host will hang once they re-construct the packets. The adapters will block any packets resembling this attacking activity.
<b>Enable Ping of Death</b>	Activates the Block Ping of Death function. Many machines may crash when receiving an ICMP datagram that exceeds the maximum length. The adapter will block any fragmented ICMP packets with a length greater than 1024 octets.
<b>Enable Block ICMP Fragment</b>	Activates the Block ICMP fragment function. Any ICMP packets with fragmented bit sets are dropped.
<b>Enable Block Unknown Protocol</b>	Activates the Block Unknown Protocol function. The adapter will block any packets with unknown protocol types.

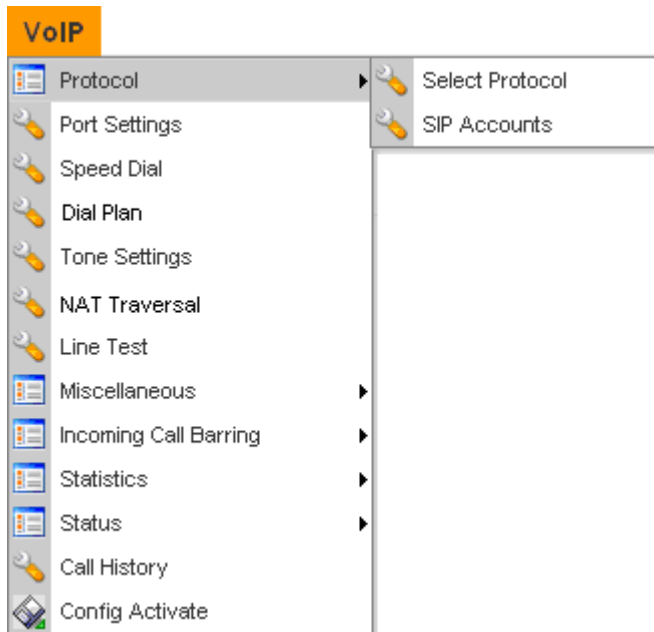
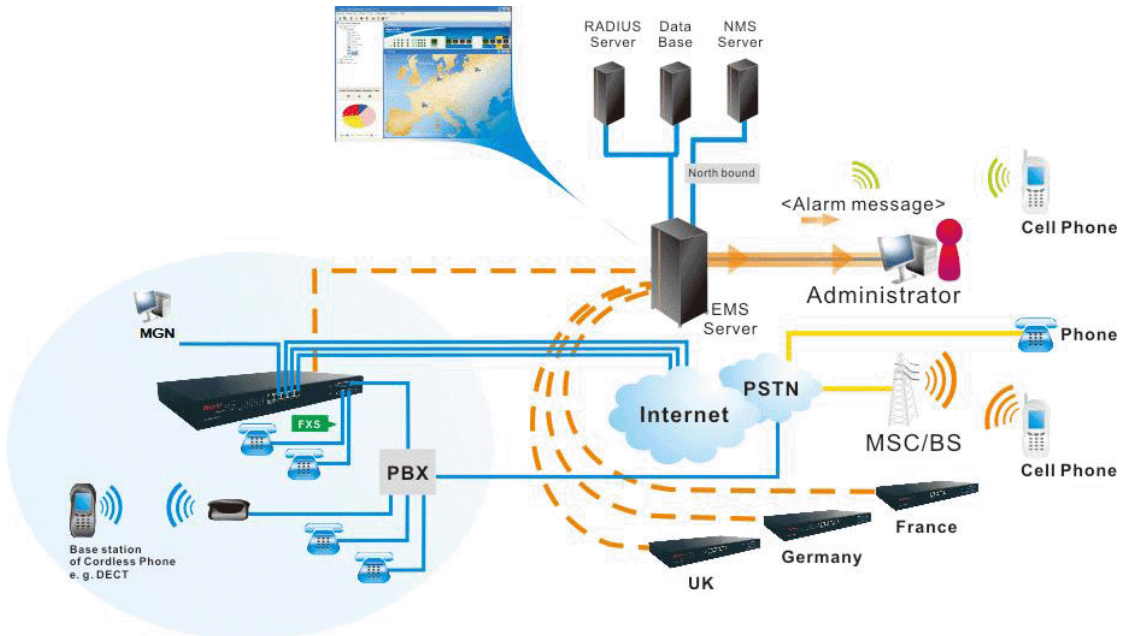
Click **Apply** to apply the settings when you finish the configuration.



### 3.5 VoIP Setup

Voice over Internet Protocol (VoIP) is a technology that allows you to make telephone calls using a broadband Internet connection instead of a regular (or analog) phone line.

The VigorTalk ATA-24 series provides cost effective voice solution for SME customers which can be explained with the following diagram.



## 3.5.1 Protocol

### Select Protocol

There are three protocols can be used for VoIP phones – SIP, MGCP and H248. You should click either one of buttons to set corresponding settings for VoIP phones. Be aware that both sides (local end and remote end) should use same protocol for VoIP phones.

#### VoIP - Protocol

Select Protocol :  SIP  MGCP  H248

**SIP Server Configuration** | MGCP Configuration | H248 Configuration

SIP Local Port :

#	Active	Outbound Proxy	Proxy Name	Proxy Address	Proxy Port	Registrar Addr	Registrar Port	Expires (sec)	Domain
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text" value="0"/>	<input type="text" value="5060"/>	<input type="text" value="0"/>	<input type="text" value="5060"/>	<input type="text" value="3600"/>	<input type="text" value="0"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text" value="0"/>	<input type="text" value="5060"/>	<input type="text" value="0"/>	<input type="text" value="5060"/>	<input type="text" value="3600"/>	<input type="text" value="0"/>
3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text" value="0"/>	<input type="text" value="5060"/>	<input type="text" value="0"/>	<input type="text" value="5060"/>	<input type="text" value="3600"/>	<input type="text" value="0"/>

Example      iptel      iptel.org      iptel.org      iptel.org

Proxy      User-Agent Name

1.	<input type="text" value="DrayTek ATA24-1.1.0"/>
2.	<input type="text" value="DrayTek ATA24-1.1.0"/>
3.	<input type="text" value="DrayTek ATA24-1.1.0"/>

#### ● For SIP Configuration

- SIP Local Port**      Type the port number for SIP protocol. The default value is 5060.
- Active**      Click this box to activate this SIP proxy server setting.
- Outbound Proxy**      Check this box to enable this function for sending SIP protocol packets to an SIP proxy server.
- Proxy Name**      Type the name of the SIP proxy server.
- Proxy Address**      Type the IP address of the SIP proxy server.
- Proxy Port**      Type the port number of the SIP proxy server.
- Registrar Address**      Type the IP address or domain name of the SIP registrar server.
- Registrar Port**      Type the port number of the SIP registrar server.
- Expires**      Type the timeout value for SIP protocols. The default value is 300.
- Domain**      Type the IP address or domain name of the SIP Domain/Realm.
- User-Agent Name**      Type the name for the client's device.

You can set up to 3 sets of SIP configurations in this page.

● **For MGCP Configuration**

**MGCP Call Agent Address** The IP address of the Call Agent server in MGCP.

**MGCP Call Agent Port** The UDP port number for the Call Agent server.

**MGCP Local Port** The UDP port number in MGCP local terminal.

**EndPoint Name Style** Choose a proper name style for the VoIP settings. There are three options for you to choose.

**aaln/#@[ip\_addr]** - ex: aaln/1@[1.1.1.1]

**mac\_addr/#@[ip\_addr]**- ex: 000504030201/1@[1.1.1.1]

**aaln/#@mac\_addr**- ex: aaln/1@000504030201

**aaln/#@** - ex: aaln/1@v3300.draytek.com

**Logic ID Starting Number** The starting number for “#” used in EndPoint Name Style. The range for the number is from 1 to 24. That is, if you type 3 in

**Wild-carded RSIP**

this field, the number 3 to 26 will be available for applying

For VoIP phone call with MGCP configuration, each port will send RSIP to call agent for notifying that port is initiated or restarted.

**Each endpoint sends its own RSIP** – Each port must send one RSIP message (e.g., aaln/1@[172.16.3.5]) to call agent respectively.

**Send only one wild RSIP** – Only one RSIP message (e.g., aaln/\*@[172.16.3.5]) will be sent to call agent to indicate all ports are initiated/restarted.

**Range Wildcard RSIP**

Click **Enable** to send out RSIP message (e.g., aaln/\*@[172.16.3.5]).  
Click **Disable** to close such function.

**HearBeat**

Click **Enable** to check if MGCP server can work normally or not, otherwise click **Disable**.

**HearBeat Period**

Type the interval for the system to check the MGCP server.

**HearBeat Retry**

Type the times for the system to check the MGCP server.

● **For H248 Configuration**

The screenshot shows the 'VoIP - Protocol' configuration page. At the top, there are radio buttons for 'SIP', 'MGCP', and 'H248', with 'H248' selected. Below this, there are three tabs: 'SIP Server Configuration', 'MGCP Configuration', and 'H248 Configuration', with 'H248 Configuration' active. The configuration is divided into three sections: 'Call Agent', 'Message ID', and 'General Setting'.  
- **Call Agent:** H248 Call Agent Address: 218.108.7.70; H248 Call Agent Port: 2944.  
- **Message ID:** H248 MessageID Mode:  [(IPAddress):Port]  [(IPAddress)]; H248 MessageID IP Mode:  WAN IP Address  Manual IP Address; H248 MessageID Address: 210.21.21.11; H248 MessageID Port: 2944.  
- **General Setting:** H248 Local Port: 2944.  
At the bottom right, there are 'Apply' and 'Cancel' buttons.

**H248 Call Agent Address** The IP address of the Call Agent server in H248.

**H248 Call Agent** The port number for the Call Agent server in H248.

**H248 MessageID Mode** Choose one of the modes for MessageID (defined by H248). Settings configured in **Message ID** field are used to be identified by the server supported with H248.

**H248 MessageID IP Mode** If you choose **WAN IP Address**, the system will use WAN IP address configured in Network for such protocol; if you choose Manual IP Address, you have to type IP address manually in the field of **H248 MessageID Address** below.

**H248 MessageID Address** Type WAN IP address used for the server supported with H248 when you choose **Manual IP address** as H248 MessageID Address.

**H248 MessageID Port** The port number for MessageID.

**H248 Local Port** The UDP port number in H248 local terminal.

## SIP Accounts

You have to set up your own SIP settings. When you apply for an account, your SIP service provider will give you relational information for you to type in this page.

VoIP - SIP Accounts						
#	User Name	Proxy Server	VoIP IP Address	Ring Port	Ring Type	Call Forwarding
1	<input checked="" type="radio"/> 1001		WAN	1	All Ports	
2	<input type="radio"/> 1002		WAN	2	All Ports	
3	<input type="radio"/> 1003		WAN	3	All Ports	
4	<input type="radio"/> 1004		WAN	4	All Ports	
5	<input type="radio"/> 1005		WAN	5	All Ports	
6	<input type="radio"/> 1006		WAN	6	All Ports	
7	<input type="radio"/> 1007		WAN	7	All Ports	
8	<input type="radio"/> 1008		WAN	8	All Ports	

1 2 3 4

<b>User Name</b>	1001 ~ 1032 are the default name specified by the system. Please click Edit to modify it if necessary.
<b>Proxy Server</b>	Display the name of Proxy Server specified for such account.
<b>VoIP IP Address</b>	Display the interface for such account. Such interface is used to apply VoIP traffics.
<b>Ring Port</b>	Display the ring port number when the specified SIP account rings.
<b>Ring Type</b>	<p>Display the ring type for all the phone ports.</p> <p><b>All Ports</b> – Phones of all ports in the same group will ring.</p> <p><b>First Available</b> – The unconnected or unused phone of the first port will ring.</p> <p><b>Round Robin</b> – Only one phone will ring at one time and all of the phones will ring in turn.</p>
<b>Call Forwarding</b>	<p>Display results for call forwarding.</p> <p><b>Blank</b> - no call forwarding.</p> <p><b>Always</b> - call forwarding for all of the calls.</p> <p><b>Busy</b> – call forwarding while the phone is busy.</p> <p><b>No Answer</b> - the call forwarding phone rings three times and gets no answer.</p>

To edit an SIP account, please choose one of the radio buttons under Username and click Edit. The following page will be shown automatically.

**VoIP - SIP Accounts - Edit**

---

**1**

Disable  Enable  
 Username:   
 Password:   
 Display Name:   
 Authentication ID:   
 Proxy Server:   
 Call without Registration:  Disable  Enable  
 VoIP IP Address:

**Call Forwarding**

Disable  
 Callforwarding all calls  
 Callforwarding busy  
 Callforwarding no answer after  rings (Range:1~10)  
 SIP URL:  (Example:8001@iptel.org)

**IncommingCall Rings**

Rings all ports in the group  Rings the first available port  Rings by round robin

**Ring Port Setting**

<input checked="" type="checkbox"/> P1	<input type="checkbox"/> P2	<input type="checkbox"/> P3	<input type="checkbox"/> P4	<input type="checkbox"/> P5	<input type="checkbox"/> P6	<input type="checkbox"/> P7	<input type="checkbox"/> P8
<input type="checkbox"/> P9	<input type="checkbox"/> P10	<input type="checkbox"/> P11	<input type="checkbox"/> P12	<input type="checkbox"/> P13	<input type="checkbox"/> P14	<input type="checkbox"/> P15	<input type="checkbox"/> P16
<input type="checkbox"/> P17	<input type="checkbox"/> P18	<input type="checkbox"/> P19	<input type="checkbox"/> P20	<input type="checkbox"/> P21	<input type="checkbox"/> P22	<input type="checkbox"/> P23	<input type="checkbox"/> P24

**Disable/Enable**

Click **Disable** to close this setting. Click **Enable** to activate this setting.

**Username**

Enter your account name of SIP Address, e.g. every text before @.

**Password**

The password provided to you when you registered with a SIP service.

**Display Name**

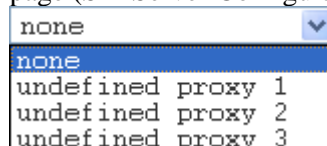
The caller-ID that you want to be displayed on your friend's screen.

**Authentication ID**

Type the name or number used for SIP Authorization with SIP Registrar.

**Proxy Server**

Before you choose, please set SIP proxy server first in previous page (SIP Server Configuration).



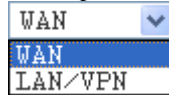
**Call without Registration**

Some SIP server allows user to use VoIP function without registering. For such server, please click **Enable** to invoke **Call without register**.

**VoIP Address**

The interface is used to apply VoIP traffics. There are two options: **WAN** and **LAN/VPN**. If LAN/VPN is selected, VoIP can be applied through a VPN tunnel to create a high security

voice phone.



## Call Forwarding

There are four options for you to choose.

**Disable-** It is to close call forwarding function.

**Callforwarding busy-** It means the incoming calls will be forwarded into SIP URL only when the local system is busy.

**Callforwarding no answer after-** It means if the incoming calls do not receive any response, they will be forwarded to the SIP URL by the time out.

**SIP URL-** Type in the SIP URL (e.g., aaa@draytel.org or abc@iptel.org) as the site for call forwarded.

## IncomingCall Rings

**Rings as all ports in the group-** All the ring ports selected for such account will ring when VigorTalk receives any incoming call.

**Rings the first available port-** The first ring port selected for such account will ring when VigorTalk receives any incoming call.






**Rings by round robin-** All the ring ports selected for such account will ring one by one when VigorTalk receives any incoming call.

## Ring Port Setting

VigorTalk-ATA allows to connect up to 24 ring port. For such account, please specify required ring port(s) by checking the box(es) for applying the configuration.

### 3.5.2 Port Settings

Port Settings page allows users to set phone number and phone groups for different call receivers.

VoIP - Port Settings										
#	Edit	Active	SIP Account	Call Waiting	Hotline	Mic/Spk Gain	FAX	Codec	DTMF	Port Locked
1		V	1 - 1001			0 / 0	T.38 Relay	G.729A	RFC2833	
2		V	2 - 1002			0 / 0	T.38 Relay	G.729A	RFC2833	
3		V	3 - 1003			0 / 0	T.38 Relay	G.729A	RFC2833	
4		V	4 - 1004			0 / 0	T.38 Relay	G.729A	RFC2833	
5		V	5 - 1005			0 / 0	T.38 Relay	G.729A	RFC2833	
6		V	6 - 1006			0 / 0	T.38 Relay	G.729A	RFC2833	
7		V	7 - 1007			0 / 0	T.38 Relay	G.729A	RFC2833	
8		V	8 - 1008			0 / 0	T.38 Relay	G.729A	RFC2833	

- Edit** Click this button to access into the Edit page for each phone number.
- Active** Displays the status (active or not) for the VoIP connection. When this connection is active, a ‘v’ sign will be displayed on the page.
- SIP Account** Displays the account name for that port.
- Call Waiting** When call waiting is enabled, a ‘v’ sign will be displayed on the page.
- Hotline** Displays the hotline number for that port.
- Mic/Spk Gain** Displays the gain value for transmitting/receiving voice.
- FAX** Displays the FAX function mode, T.38 Relay or Transparent.
- Codec** Displays the codec settings for the VoIP connection.
- DTMF** Displays the DTMF mode (InBand, OutBand, SIP Info, etc.)
- Port Locked** When this port is locked, a ‘v’ sign will be displayed on the page. In general, it means the connection for such port is troubled with something.

When you click **Edit**, the following page will appear for you to configure.



**VoIP - Port Settings - Port1 - Edit**

---

**Port 1**

Disable  Enable

Default SIP Accounts:

VoIP IP Address:

**Hotline**

Hotline Number to Internet:

**Codec**

Preferred Codec :

Single Codec :

Codec Rate :  (ms)

Codec VAD:  Disable  Enable

**CAS**

Microphone Gain:  (Range: -14 ~ 6)

Speaker Gain:  (Range: -14 ~ 6)

**FAX**

FAX Mode:

**DTMF**

DTMF Mode:  InBand  OutBand(RFC2833)  SIP INFO

DTMF Volume:  (Range: 0 ~ 31)

**Call Waiting**

Disable  Enable

**Port Unlock**

Manual Unlocked:  (Unlock the port when its call status is "Line Fault")

**Port 1**

Click **Enable** to activate this port or **Disable** to close this port.

**Default SIP Accounts** – Choose one of the SIP account as the default setting.

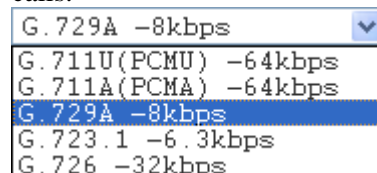
**VoIP IP Address** - The interface is used to apply VoIP traffics. There are two options: **WAN** and **LAN/VPN**. If LAN/VPN is selected, VoIP can be applied through a VPN tunnel to create a high security voice phone.

**Hotline**

**Hotline Number to Internet** - Pre-set a phone number to make the port dialing out to Internet automatically.

**Codec**

**Preferred Codec** - It can be applied on this port. VigorTalk ATA-24 supports five Codecs. The default setting is G.729A. You can choose another one as preferred Codec for outgoing calls.



**Single Codec** - If you checked this box, only preferred codec will be used for outgoing and incoming calls. And if the remote end does not support such Codec, the VoIP communication will be failed.

**Codec Rate** - Type the rate value to be applied on this port.

**Codec VAD- Enable or Disable** VAD (Voice Activity Detection). It can detect whether the voice activity is progressing or not. If not, RTP packets transmission will be stopped for saving more bandwidth.

**CAS** **Microphone Gain**- The gain value while transmitting voice. The default value is 0. The range is from -32 to 31.  
**Speaker Gain**- The gain value while receiving voice. The default value is 0. The range is from -32 to 31.

**FAX** **FAX Mode** -The FAX function mode. There are three options:  
**Transparent**: FAX will be transmitted via voice channel; no fax relay and no Codec change will be involved.  
**T.38 Relay**: Using T.38 Fax Relay. This is the default value.

**DTMF** **DTMF Mode** -  
**InBand**: Choose this one then the Vigor will send the DTMF tone as audio directly when you press the keypad on the phone.  
**OutBand (RFC2833)**: Choose this one then the Vigor will capture the keypad number you pressed and transform it to digital form then send to the other side; the receiver will generate the tone according to the digital form it receive. This function is very useful when the network traffic congestion occurs and it still can remain the accuracy of DTMF tone.  
**SIP INFO**: Choose this one then the Vigor will capture the DTMF tone and transfer it into SIP form. Then it will be sent to the remote end with SIP message.  
**DTMF Volume** – Determine the volume of DTMF voice signal. The more the number is set, the greater the sound is.

**Call Waiting** **Enable** – Activate the call waiting function.  
**Disable** – Close the call waiting function.

**Port Unlocked** This button is available only when current port is locked. Click it to unlock the port.

**Apply** When you finish all the configurations, please click this button to activate them.

### 3.5.3 Speed Dial

This page allows you to set a simple way to dial a specific number. Up to 150 numbers can be stored in VigorTalk ATA-24 Series.

**VoIP - Speed Dial**

#	Speed Dial Phone Number	Speed Dial Destination	Memo
1	1001	1001@iptel.org	dial 1
2			
3			
4			
5			

Example 101                      101@iptel.org

1 2 3 4 5 6 7 8 9 10 >

**Speed Dial Phone Number** Type the phone number to be used as quick dial.

**Speed Dial Destination** Type the destination address of the dial.

**Memo** Type a description for the specified number.

**Apply** Click this button to activate the page settings.

**Clear This Page** Click this button to remove all the settings in this page.

### 3.5.4 Dial Plan

Dial plan allows users to call out with simple buttons instead of dialing long numbers. To set a dial plan with specified settings, please open the following page.

**VoIP - Dial Plan**

#	Match String	Min Length	Max Length	Prefix Strip	Prefix Add	SIP IP Address	Time Out	Memo
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

1

**Match String** Displays the match string of the entry.

**Min Length** Displays the min dial digit length of the entry.

**Max Length** Displays the max dial digit length of the entry.

**Prefix Strip** Displays the prefix string digit of the entry.

**Prefix Add** Displays the prefix add digit of the entry.

**SIP IP Address** Displays the SIP IP Address of the entry.

**Time Out** Displays the digit timeout value of the entry.

**Memo** Displays the brief description stated in memo field of the entry.

**Edit** Click this button to access into the editing page of the speed dial.

**Delete/Delete All** Click this button to delete the selected setting or all settings.

To configure one entry, please click **Edit** to open the following page.

The screenshot shows a web interface titled "VoIP - Dial Plan - Edit". It contains a table with one row for entry ID "1". To the right of the table are several input fields for configuration: "Match String", "Min Length", "Max Length", "Prefix Strip", "Prefix Add", "SIP IP Address", "Inter Digit TimeOut", and "Memo". At the bottom right of the form area, there are "Apply" and "Cancel" buttons.

**Match String** Assign a match String for this entry. For example, suppose the match string is 12345. When dial 1234567, the digit will be matched of this entry.

**Min Length** Min length to match the string.

**Max Length** Max length to match this string

**Prefix Strip** Assign the length of digit to be removed from the original phone number. For example, suppose the original phone number is 03654321 and the strip length is 2. The first two numbers (03) will be removed and the final phone number becomes 654321.

**Prefix Add** Assign the length of digit to be added from the original phone number. For example, suppose the original phone number is 654321 and the prefix add 03. The first two numbers (03) will be added and the final phone number becomes 03654321.

**Prefix Add** Assign a new number to be added before the phone number (after removing length of digit). For example, suppose the original phone number is 03654321. The strip length is 2 and the append number is 886. Then, the final phone number will be 886654321..

**SIP IP Address** Assign an IP address for the destination which the SIP message would be sent to.

**Inter Digit Timeout** Assign a timeout value for the inter digit.

**Memo** A description of this entry.

### 3.5.5 Tone Settings

It is provided for fitting the telecommunication custom for the local area of the adapter installed. Wrong tone settings might cause inconvenience for users. To set the sound pattern of the phone set, simply choose a proper region to let the system find out the preset tone settings and caller ID type automatically. Or you can adjust tone settings manually if you choose **User Defined**. TOn1, TOff1, TOn2 and TOff2 mean the cadence of the tone pattern. TOn1 and TOn2 represent sound-on; TOff1 and TOff2 represent the sound-off.

**VoIP - Tone Settings**

---

Region :  Caller ID Type :

Tone Classification	Low Frequency(Hz)	High Frequency(Hz)	TOn1 (10msec)	TOff1 (10msec)	TOn2 (10msec)	TOff2 (10msec)
Dial tone	<input type="text" value="350"/>	<input type="text" value="440"/>	<input type="text" value="500"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Ringing tone	<input type="text" value="440"/>	<input type="text" value="480"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="200"/>	<input type="text" value="400"/>
Busy tone	<input type="text" value="480"/>	<input type="text" value="620"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="50"/>	<input type="text" value="50"/>
Congestion tone	<input type="text" value="480"/>	<input type="text" value="620"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="25"/>	<input type="text" value="25"/>

---

**Setting CPT Tone Timer**

Dial Tone :	<input type="text" value="16"/>	Busy Tone :	<input type="text" value="30"/>	Howler Tone :	<input type="text" value="60"/>	Ringing Tone :	<input type="text" value="180"/>
Special Dial Tone :	<input type="text" value="16"/>	Call Waiting Tone :	<input type="text" value="30"/>	Congestion Tone :	<input type="text" value="30"/>	Reorder Tone :	<input type="text" value="30"/>

#### Region

Select the proper region which you are located. The common settings of **Caller ID Type**, **Dial tone**, **Ringing tone**, **Busy tone** and **Congestion tone** will be shown automatically on the page. If you cannot find out a suitable one, please choose **User Defined** and fill out the corresponding values for dial tone, ringing tone, busy tone, congestion tone by yourself for VoIP phone.



#### Dial tone

A tone means the phone line is ready to make a call.

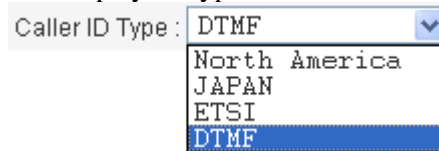
#### Ringing tone

A tone means the call is ringing.

#### Busy tone

A tone means the phone line is busy.

<b>Congestion tone</b>	A tone means the network is busy.
<b>Low Frequency (Hz)</b>	Type the low frequency number in Hertz.
<b>High Frequency (Hz)</b>	Type the high frequency number in Hertz.
<b>TOn1 (10msec)</b>	Type the duration of the first ring.
<b>TOff1 (10msec)</b>	Type the silence duration after the first ring.
<b>TOn2 (10msec)</b>	Type the duration of the next continuous ring.
<b>TOff2 (10msec)</b>	Type the silence duration after the next continuous ring.
<b>Caller ID Type</b>	If <b>User Defined</b> is selected in the <b>Region</b> field, users can select one of the supported values. If a country is selected, this field will display ID type value automatically.



<b>Setting CPT Tone Timer</b>	Set different timer for different tones to restrict the play time of tone. When the time is up, the tone broadcasting will be stopped.
	<b>Dial Tone</b> – A telephony signal which indicates that the status for the telephone is off-hook.
	<b>Busy Tone</b> – A telephony signal which indicates that the calling is failed.
	<b>Howler Tone</b> –A telephony signal to tell the caller the receiver is off-hook.
	<b>Ringling Tone</b> - A telephony signal that the caller hears from the telephone set after dialing.
	<b>Special Dial Tone</b> - A telephony signal which indicates a special feature (e.g., call forwarding) is using for such port.
	<b>Call Waiting Tone</b> - A telephony signal which signifies that there is another incoming call, eg., call forwarding.
	<b>Congestion Tone</b> – A telephony signal which indicates someone dials invalid call or the circuit (or network) is unable to route.
	<b>Recorder Tone</b> – The caller has connected to an automatic answering device and is requested to start speaking.

### 3.5.6 Nat Traversal

If the router you use connects to Internet by other device, you have to set this function. This page is used to enable the Nat Traversal function. User could use it to enable the VoIP service under the NAT environment.

The screenshot shows the 'VoIP - NAT Traversal' configuration interface. It is divided into three main sections: 'NAT Traversal', 'Symmetric Media', and 'NAT Status'.  
1. **NAT Traversal**: Contains three radio buttons: 'Disable' (selected), 'Manually Input NAT IP Address', and 'Auto Discover NAT IP Address'. Below these are fields for 'NAT IP Address' (127.0.0.1), 'STUN Local Port' (3478), 'STUN Server Address' (stun.fwdnet.net), and 'STUN Server Port' (3478). There are also radio buttons for 'Semi-auto, need to config NAT' and 'Full-auto, no need to config NAT (only for SIP)'.  
2. **Symmetric Media**: Contains two radio buttons: 'Disable symmetric RTP and T.38' (selected) and 'Enable symmetric RTP and T.38'.  
3. **NAT Status**: Displays 'NAT Type: N/A, Local IP Address: 172.17.3.4, WAN IP Address: 172.17.3.4'.  
At the bottom right, there are 'Apply' and 'Cancel' buttons.

#### Disable

The default setting is disable. If you want to enable this function, please click the other radio buttons listed below.

#### Manually Input NAT IP Address

To input NAT IP address manually, please click this radio button and type the IP Address in the NAT IP Address field.

#### Auto Discover NAT IP Address

To make the NAT IP address configuring automatically by the system, please click this radio button. There are two options for you to choose:

**Semi-auto, need to config NAT** – If you choose this one, you still have to configure NAT partially by type the required STUN Local Port, server address and server port.

**Full-auto, no need to config NAT (only for SIP)** – If you choose this one, the system will configure NAT settings automatically. All you have to do is click **Apply**.

#### Symmetric Media


If Symmetric Media is enabled, the router will transmit RTP packets/T.38 packets to the remote side via the IP address and Port number coming from the receiving RTP packet. If Symmetric Media is disabled, the router will transmit RTP packets via SDP (Session Description Protocol). The default setting is Disable Symmetric RTP and T.38.

#### NAT Status

Display current NAT status.

### 3.5.7 Line Test

This page is used to diagnose the connection status for device, port and subscriber line.



**VoIP - Line Test**

Port: 1 Line Test Function: Metallinc Loop Test TestItem: AC Voltage

Run Test

**Port**

Choose one of the VoIP port for executing line test.

**Line Test Function**

Choose one of the test functions for executing line test. There are three types provided here, loop, line card and user phone.

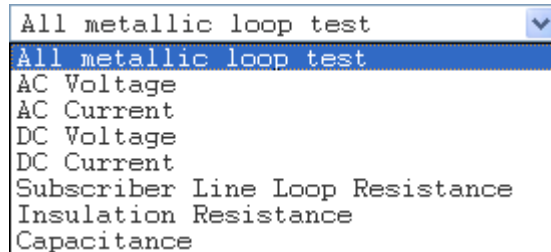
**Metallinc Loop Test** – Such function can diagnose if there is something wrong happened such as line cross, line short to ground and line open.

**Line card Test** – It can check normal battery, loop current and execute self dial tone test, self dial digit test and self ring voltage test.

**User Phone Test** – Such function must match with the subscriber.

**Test Item**

Choose one of the test types.



- All metallic loop test
- AC Voltage
- AC Current
- DC Voltage
- DC Current
- Subscriber Line Loop Resistance
- Insulation Resistance
- Capacitance

**Run Test**

Click this button to start the line test.



## VoIP - Line Test Result

**All Metallic Loop test (Port1)**

**AC Voltage**  
Tip Lead Voltage = 0 Vrms  
Ring Lead Voltage = 0 Vrms  
Tip Ring Voltage = 0 Vrms

**AC Current**  
Tip Lead Current = 0.0 mA  
Ring Lead Current = 0.0 mA

**DC Voltage**  
Tip Lead Voltage = 0 V  
Ring Lead Voltage = -0 V  
Tip Ring Voltage = 0 V

**DC Current**  
Tip Lead Current = 0 mA  
Ring Lead Current = 0 mA

**Subscriber Line Loop Resistance**  
RLOOP = 3809 Ohms

**Resistance Test Results**  
RTG = OPEN  
RRG = OPEN  
RTR = 101040

**Capacity**  
Tip Ground Capacitance = 0.00 uF  
Ring Ground Capacitance = 0.00 uF  
Tip Ring Capacitance = 0.42 uF

**Receiver Off-Hook**  
Off-Hook = No

**Ringer Equivalence Numer**  
REN = 0.465508  
ZLoad = 15037.331055

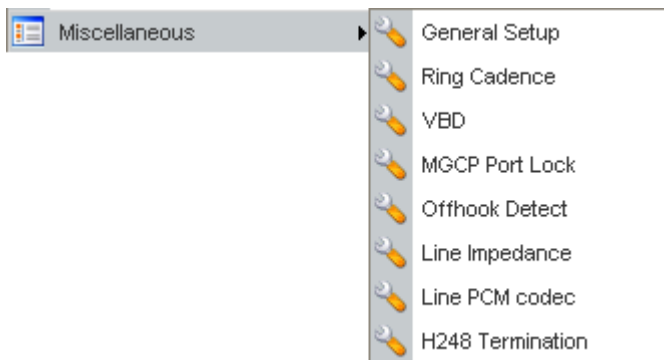
---

**Metallic Testing Result: Test Pass**

[Return to line Test](#)

### 3.5.8 Miscellaneous

Many settings that cannot be classified under VoIP are placed in this page, such as ring cadence, voice band data, MGCP port lock, offhook detect, line impedance and line PCM codec.



#### General Setup

This page includes **RTP** and **T.38 Starting Port**, **T.38 Redundancy Number**, **VoIP FailOver**, etc.

**VoIP - Miscellaneous - General Setup**

---

RTP Starting Port :

T38 Mode :  Disable  Enable

T.38 Starting Port :

T.38 Redundancy number :  (Range: 0~4)

Dialing Completion Timeout :  sec (Range: 1~60)

Line Polarity Reversal :  as Callee Answer  as Callee On-Hook

VoIP FailOver :  Use POTS system

Echo Cancellation :  Disable  Enable

Echo Cancellation Tail Length :  ms (Range: 8 ~ 128, should be multiple of 8)

**Pulse Timing**

---

Minimum pulse break time :  ms

Maximum pulse break time :  ms

Minimum flash break time :  ms

Maximum flash break time :  ms

Minimum pulse make time :  ms

Maximum pulse make time :  ms

Minimum pulse interdigit time :  ms

Required:

1. Minimum pulse break time < Maximum pulse break time < Minimum flash break time < Maximum flash break time

2. Minimum pulse make time < Maximum pulse make time < Minimum pulse interdigit time

**RTP Starting Port**

The starting port number for RTP protocol packet. The default setting is 13456.

**T38 Mode**

Click **Enable** to enable T.38 function. Click **Disable** to close this function.

**T.38 Starting Port**

The starting port number for T.38 protocol packet. The default setting is 49170.

**T.38 Redundancy Number**

The redundancy number (how many payloads attaching to the tail of the packet) for T.38 protocol. The default value is 1.

**Dialing Completion Timeout**

Users might dial with incomplete phone number and wait for several seconds but not finish the complete dialing. The system will force to dial the incomplete number after the time you set in this field to finish that call. For example, the phone number is 03654321 and the dialing completion timeout is set to 4 (secs). The user dials with 036 and stops to dial. After passing through 4 seconds, the adapter will send out that phone call automatically.

**Line Polarity Reversal**

**as Callee Answer** - Check this box to generate line polarity reversal while the remote user picks up the phone call.

**as Callee On-Hook** - Check this box to generate line polarity

reversal while the remote user hangs off the phone call.

**VoIP FailOver**

**Use POTS System** – When VoIP call is unavailable, the system will switch into PSTN phone automatically.

**Echo Cancellation**

Click **Enable** to cancel echo.  
Click **Disable** to invoke echo.

**Echo Cancellation Tail ...**

The length is used to indicate the echo canceller buffer to cancel the echo. The unit is mini-second.

**Minimum/Maximum pulse break time**

Such setting determines the pulse break time for pulse digit phone. Keep the default setting.

**Minimum/Maximum flash break time**

Such setting determines the pulse break time for pulse digit phone. Keep the default setting.

**Minimum/Maximum pulse make time**





Such setting determines the pulse break time for pulse digit phone. Keep the default setting.

**Minimum pulse interdigit time**

Such setting determines the pulse break time for pulse digit phone. Keep the default setting.

**Ring Cadence**

This page is used to set ring cadence for each ring port. There are eight groups of ring cadence offered by the system.

VoIP - Miscellaneous - Ring Cadence									
#	Edit	Ton1	Toff1	Ton2	Toff2	Ton3	Toff3	Ton4	Toff4
1		1000 ms	4000 ms	0 ms	0 ms	0 ms	0 ms	0 ms	0 ms
2		800 ms	2000 ms	800 ms	4000 ms	0 ms	0 ms	0 ms	0 ms
3		800 ms	2000 ms	800 ms	4000 ms	0 ms	0 ms	0 ms	0 ms
4		800 ms	2000 ms	800 ms	4000 ms	0 ms	0 ms	0 ms	0 ms
5		800 ms	2000 ms	800 ms	4000 ms	0 ms	0 ms	0 ms	0 ms
6		800 ms	2000 ms	800 ms	4000 ms	0 ms	0 ms	0 ms	0 ms
7		800 ms	2000 ms	800 ms	4000 ms	0 ms	0 ms	0 ms	0 ms
8		800 ms	2000 ms	800 ms	4000 ms	0 ms	0 ms	0 ms	0 ms

TON1 and TON2 represent sound-on; TOFF1 and TOFF2 represent the sound-off.

To edit an entry, select it by clicking the radio button (from 1 to 8). Then click the **Edit** button on the bottom to bring up the following Web page.



## One by One

When you click such item, you have to specify which ring port will be applied with the configuration set here. If you choose multiple ring ports, they will apply the configuration one by one.

## MGCP Port Lock

Such device has the ability to detect error automatically. When something wrong happened, the system will lock all the MGCP ports. This page is available only when you choose **MGCP** as VoIP protocol.

VoIP - Miscellaneous - MGCP Port Lock							
Port	Lock Status	Manual Control		Port	Lock Status	Manual Control	
1	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>	13	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>
2	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>	14	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>
3	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>	15	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>
4	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>	16	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>
5	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>	17	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>
6	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>	18	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>
7	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>	19	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>
8	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>	20	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>
9	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>	21	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>
10	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>	22	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>
11	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>	23	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>
12	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>	24	Unlocked	<input type="button" value="Unlock"/>	<input type="button" value="Lock"/>

## Unlocked

When line error occurred, the system will lock all the troubled ports. It means all the locked ports will not be used any more. Users can execute line test to make sure if the troubled port is recovered to normal condition. If yes, users can open this web page to unlock those troubled ports.

## Locked

Ports with locked status will not be used normally. In addition, any available MGCP port can be locked at any time due to special reason if necessary.

## Offhook Detect

The value typed here can be used for the device to judge the time for offhook.

**VoIP - Miscellaneous - Offhook Detect Current Value**

All Ports 8 mA  
 One by One

Port 1: 8 mA	Port 7: 8 mA	Port 13: 8 mA	Port 19: 8 mA
Port 2: 8 mA	Port 8: 8 mA	Port 14: 8 mA	Port 20: 8 mA
Port 3: 8 mA	Port 9: 8 mA	Port 15: 8 mA	Port 21: 8 mA
Port 4: 8 mA	Port 10: 8 mA	Port 16: 8 mA	Port 22: 8 mA
Port 5: 8 mA	Port 11: 8 mA	Port 17: 8 mA	Port 23: 8 mA
Port 6: 8 mA	Port 12: 8 mA	Port 18: 8 mA	Port 24: 8 mA

**All Port**

When you click this button and choose any number from the drop down list, all the configurations will be applied to all ring ports.

**8/10/12** – When the phone line current reaches 8mA/10mA/12mA, the system will judge the phone is off-hook.

**One by One**

When you click such item, you have to specify which ring port will be applied with the configuration set here. If you choose multiple ring ports, they will apply the configuration one by one.

**Line Impedance**

It defines the impedance of phone line for different areas (countries). At present, there are three types, 600, 900 and China (specified for areas in China) provided here for choosing.

**VoIP - Miscellaneous - Line Impedance**

All Ports 600 Ω  
 One by One

Port 1: 600 Ω	Port 7: 600 Ω	Port 13: 600 Ω	Port 19: 600 Ω
Port 2: 600 Ω	Port 8: 600 Ω	Port 14: 600 Ω	Port 20: 600 Ω
Port 3: 600 Ω	Port 9: 600 Ω	Port 15: 600 Ω	Port 21: 600 Ω
Port 4: 600 Ω	Port 10: 600 Ω	Port 16: 600 Ω	Port 22: 600 Ω
Port 5: 600 Ω	Port 11: 600 Ω	Port 17: 600 Ω	Port 23: 600 Ω
Port 6: 600 Ω	Port 12: 600 Ω	Port 18: 600 Ω	Port 24: 600 Ω

**All Port**

When you click this button and choose any item from the drop down list, all the configurations will be applied to all ports.

**One by One**

When you click such item, you have to specify which ring port will be applied with the configuration set here. If you choose multiple ports, they will apply the configuration one by one.

**Line PCM codec**

There are two types, **A-LAW** and  $\mu$  **LAW** provided for such setting. Choose the suitable one according to the codec system used by ISP in different area. It will be applied for transferring analog signal into digital signal or transferring digital signal into analog signal while doing PCM codec sampling.

**All Port**

When you click this button and choose any item from the drop down list, all the configurations will be applied to all ports.

**600/900** – Available impedance value provided by the system.

**China** - Such selection is available for the users in China.

**One by One**

When you click such item, you have to specify which ring port will be applied with the configuration set here. If you choose multiple ports, they will apply the configuration one by one.

### 3.5.9 Incoming Call Barring

This feature is used to bar incoming VoIP calls from the Internet. Barring classes can be specified to allow or deny incoming calls. There are five barring classes on the device. The default setting is **Allow all incoming calls**.



**Set**

This page allows you to choose a barring class, match method and set a range for speed dial entries for the incoming call barring.

**VoIP - Incoming Call Barring - Set**

---

**Barring Class**

Deny only calls from deny list

---

**Match Method**

Name:  Disable  Enable  
Remind: \_\_\_\_\_

IP/Domain:  Disable  Enable  
Remind: \_\_\_\_\_

---

**Speed Dial Entries**

From: 1 To: 150

**Barring Class**

There are five options for incoming calls from remote ends.

Choose either one of them to set the barring class.

Deny only calls from deny list

Allow all incoming calls

Allow only calls from allow list

Allow only calls from speed dial entries

Deny only calls from deny list

Deny all incoming calls

**Allow all incoming calls** – All incoming calls from remote ends are accepted by this adapter.

**Allow only calls from allow list** – Only the calls listed in the Allow List page will be accepted by this adapter.

**Allow only calls from speed dial entries** – Only the calls listed in the speed dial entries will be accepted by this adapter.

**Deny only calls from deny list** – The calls listed on Deny List page will not be accepted by this adapter. And others calls are accepted.

**Deny all incoming calls** – All incoming calls from remote ends are not accepted by this adapter.

**Match Method**

**Name - Enable or Disable** this function to take value of **Speed Dial Phone Number** to be checked.

**IP/Domain - Enable or Disable** this function to take the value of **Speed Dial Destination** to be checked.

**Speed Dial Entries**

Type the range to be checked. The default value is from 1 to 150.

**Allow List**

The VigorTalk ATA-24 supports up to **30** entries in the Allow List table. When you choose **Allow only calls from allow list** as the Barring Class, only the people listed in this list can call this adapter.



**VoIP - Incoming Call Barring - Allow List**

#	Name	IP/Domain
1	<input type="text" value="Tom"/>	<input type="text" value="192.168.1.6"/>
2	<input type="text" value="John"/>	<input type="text" value="iptel.org"/>
3	<input type="text"/>	<input type="text"/>
4	<input type="text"/>	<input type="text"/>
5	<input type="text"/>	<input type="text"/>
Example	John	192.168.1.1 or iptel.org

1 2 3 4 5 6

**Name** The name or number in the allow list.

**IP/Domain** The IP address or domain name to be allowed. If the peer is registered in SIP proxy server, use the domain name of the SIP proxy server. Otherwise, use the static IP address or DDNS domain name.

### Deny List

The VigorTalk ATA-24 supports up to **30** entries in the Deny List table. When you choose **Deny only calls from deny list** as the Barring Class, people listed in this list **cannot** call this adapter.

**VoIP - Incoming Call Barring - Deny List**

#	Name	IP/Domain
1	<input type="text" value="James"/>	<input type="text" value="172.16.3.221"/>
2	<input type="text" value="Steven"/>	<input type="text" value="arctel.com"/>
3	<input type="text"/>	<input type="text"/>
4	<input type="text"/>	<input type="text"/>
5	<input type="text"/>	<input type="text"/>
Example	John	192.168.1.1 or iptel.org

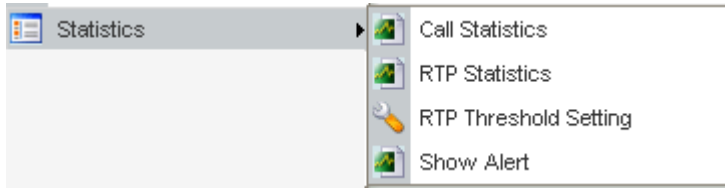
1 2 3 4 5 6

**Name** The name or number in the deny list.

**IP/Domain** The IP address or domain name to be denied. If the peer is registered in SIP proxy server, use the domain name of the SIP proxy server. Otherwise, use the static IP address or DDNS domain name.

### 3.5.10 Statistics

The function provides call statistics, RTP statistics, RTP threshold setting and show alert for users.



## Call Statistics

This page displays statistics for all incoming/outgoing calls (successful and failed) through this adapter.

**VoIP - Call Statistics**

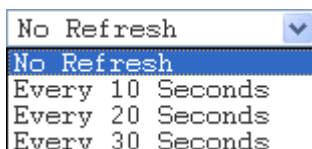
---

Refresh Option: No Refresh Refresh

15 minutes
24 hours

Port	Successful Outgoing Calls	Successful Incoming Calls	Failed Outgoing Calls	Failed Incoming Calls	Total Calls
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

You can click **Refresh** to get the latest status information for these VoIP phones. In addition, you can set the time interval of refreshing. Use the drop down list of **Refresh Option** to choose an automatic refreshing setting. If you choose **No Refresh**, the system will not refresh this page until you click **Refresh** button.



## RTP Statistics

This page displays statistics for RTP.

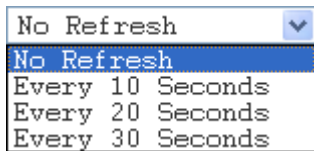
**VoIP - RTP Statistics**

Refresh Option:

**15 minutes** | 24 hours

Port	Sender Packet Count	Sender Octet Count	Receiver Packet Count	Receiver Octec Count	Number of Packet Lost	Interarrival Jitter	Delay
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							

You can click **Refresh** to get the latest status information for these VoIP phones. In addition, you can set the time interval of refreshing. Use the drop down list of **Refresh Option** to choose an automatic refreshing setting. If you choose **No Refresh**, the system will not refresh this page until you click **Refresh** button.



### RTP Threshold Setting

This page is used to set RTP threshold settings for alert message. The alert message will be sent out when the values of the incoming phone calls beyond the settings configured in this page. In addition, the alert message will be displayed on the page of **Show Alert**.

**VoIP - Statistics - RTP threshold**

---

Mode :  Disable  Enable

Round Trip Delay Low Threshold :  (ms)

Round Trip Delay High Threshold :  (ms)

Jitter Low Threshold :  (ms)

Jitter High Threshold :  (ms)

Packet Loss Ratio Low Threshold :  (0~100%)

Packet Loss Ratio High Threshold :  (0~100%)

RTCP Timeout :  (seconds)

- Mode** Click **Enable** to activate RTP Threshold mode.
- Round Trip Delay Low Threshold** Set the lowest value (default setting is 80) as round trip delay low threshold.
- Round Trip Delay High Threshold** Set the highest value (default setting is 150) as round trip delay high threshold.
- Jitter Low Threshold** Set the lowest value (default setting is 3) as jitter low threshold.
- Jitter High Threshold** Set the lowest value (default setting is 10) as jitter high threshold.
- Packet Loss Ratio Low Threshold** Set the lowest value (default setting is 0) as packet loss ratio low threshold.
- Packet Loss Ratio High Threshold** Set the lowest value (default setting is 5) as packet loss ratio high threshold.
- RTCP Timeout** Set the value (default setting is 10) for RTP timeout setting.

**Show Alert**

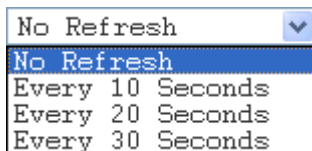
This page display information for alert message.

**VoIP - Statistics - Show Alert**

Refresh Option: No Refresh Refresh

Port	Alert Count	Alert Type	Delay	Jitter	Lost
1		Unknow			
2		Unknow			
3		Unknow			
4		Unknow			
5		Unknow			
6		Unknow			
7		Unknow			
8		Unknow			
9		Unknow			
10		Unknow			
11		Unknow			
12		Unknow			
13		Unknow			
14		Unknow			
15		Unknow			
16		Unknow			
17		Unknow			
18		Unknow			
19		Unknow			
20		Unknow			
21		Unknow			
22		Unknow			
23		Unknow			
24		Unknow			

You can click **Refresh** to get the latest status information for these VoIP phones. In addition, you can set the time interval of refreshing. Use the drop down list of **Refresh Option** to choose an automatic refreshing setting. If you choose **No Refresh**, the system will not refresh this page until you click **Refresh** button.



### 3.5.11 Status

This feature displays Port and SIP status for VoIP phone calls.



#### Port Status

This page displays the connection status for VoIP phone calls.

**VoIP -Port Status**

Refresh Option:

#	Call Status	RTP Statistic
1	Locked	PS=0, OS=0, PR=0, OR=0, PL=0, JI=0, LA=0
2	Idle	
3	Idle	
4	Idle	
5	Idle	
6	Idle	
7	Idle	
8	Idle	
9	Idle	
10	Idle	
11	Idle	
12	Idle	
13	Idle	
14	Idle	
15	Idle	
16	Idle	
17	Idle	
18	Idle	
19	Idle	
20	Idle	
21	Idle	
22	Idle	
23	Idle	
24	Idle	

\* PS: Packets Sent, OS: Octets Sent, PR: Packets Received, OR: Octets Received, PL: Packets Lost, JI: Interarrival Jitter Estimate(ms), LA: Avg TX Delay(ms)

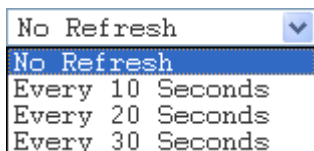
**Call Status**

Display the calling status, idle, far-end alerting, alerting, busy, dialing and connected.

**RTP Statistics**

The statistics for RTP. **PS** means packets sent; **OS** means octets sent; **PR** means packet received; **OR** means octets received; **PL** means packets lost, **LA** means average TX delay (unit is ms) and **JI** means inter arrival jitter estimates (unit is ms).

You can click **Refresh** to get the latest status information for these VoIP phones. In addition, you can set the time interval of refreshing. Use the drop down list of **Refresh Option** to choose an automatic refreshing setting. If you choose **No Refresh**, the system will not refresh this page until you click **Refresh** button.



**SIP Status**

This page displays the registration status for VoIP phone calls.

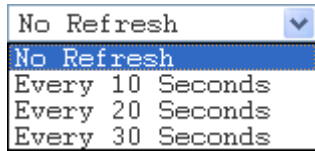
**VoIP -SIP Status**

Refresh Option:

#	Register Status	#	Register Status	#	Register Status	#	Register Status
1		9		17		25	
2		10		18		26	
3		11		19		27	
4		12		20		28	
5		13		21		29	
6		14		22		30	
7		15		23		31	
8		16		24		32	

**Register Status** The status (OK or Failed) of registering in proxy server.

You can click **Refresh** to get the latest status information for these VoIP phones. In addition, you can set the time interval of refreshing. Use the drop down list of **Refresh Option** to choose an automatic refreshing setting. If you choose **No Refresh**, the system will not refresh this page until you click **Refresh** button.



**Fault Status**

This page displays the status for VoIP fault. When something wrong happened to the VoIP line, the problem will be displayed in this page.

**VoIP - Fault Status**

Refresh Option:

Device

No Fault

Port	Fault Status	Port	Fault Status	Port	Fault Status	Port	Fault Status
1	-	7	-	13	-	19	-
2	-	8	-	14	-	20	-
3	-	9	-	15	-	21	-
4	-	10	-	16	-	22	-
5	-	11	-	17	-	23	-
6	-	12	-	18	-	24	-

**Fault Status**

The possible messages for the fault status include:

**Thermal Fault:** When the SLIC is too hot to be born, corresponding message will be displayed in this field.

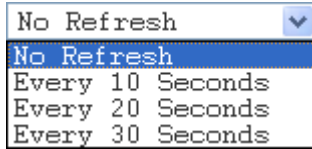
**DC Fault:** DC current is added on the telephone line externally.

**AC Fault:** AC current is added on the telephone line externally.

**Buttery Fault:** there is something wrong happened to the internal battery.

**Clock Fault:** there is something wrong happened to the internal clock.

You can click **Refresh** to get the latest status information for these VoIP phones. In addition, you can set the time interval of refreshing. Use the drop down list of **Refresh Option** to choose an automatic refreshing setting. If you choose **No Refresh**, the system will not refresh this page until you click **Refresh** button.



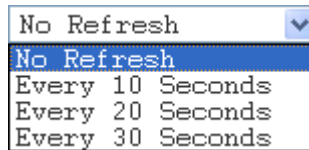
### 3.5.12 Call History

This page lists the call history through VigorTalk ATA-24. You can click **Refresh** to get the latest history information for these VoIP phones. Besides, this page refreshes automatically every 10 seconds.

VoIP - Call History																
Refresh Option: <input type="button" value="No Refresh"/> <input type="button" value="Refresh"/>																
#	Port Number	Call Type	Caller Number	Callee Number	Start Time	End Time	Duration	Release Reason	Remote RTP Address	Remote RTP Port	RTP Statistic	Codec Type	Packet Period	VAD	DTMF Relay	
1	11	Incoming	2435	1011	Fri Jan 2 03:40:54 1970	Fri Jan 2 03:41:23 1970	0 days, 00h:00m:29s	Normal Drop	10.10.10.60	13476	PS=751, OS=15020, PR=606, OR=12120, PL=0, LW=2	0.728A 8kbps	20ms	Off	RFC2833	
2	20	Incoming	2444	1020	Fri Jan 2 03:40:54 1970	Fri Jan 2 03:41:23 1970	0 days, 00h:00m:29s	Normal Drop	10.10.10.60	13494	PS=751, OS=15020, PR=606, OR=12120, PL=0, LW=3	0.728A 8kbps	20ms	Off	RFC2833	
3	2	Incoming	2426	1002	Fri Jan 2 03:40:54 1970	Fri Jan 2 03:41:23 1970	0 days, 00h:00m:29s	Normal Drop	10.10.10.60	13458	PS=751, OS=15020, PR=605, OR=12100, PL=0, LW=2	0.728A 8kbps	20ms	Off	RFC2833	
4	19	Incoming	2443	1019	Fri Jan 2 03:40:49 1970	Fri Jan 2 03:41:18 1970	0 days, 00h:00m:29s	Normal Drop	10.10.10.60	13482	PS=1001, OS=20020, PR=808, OR=17380, PL=0, LW=3	0.728A 8kbps	20ms	Off	RFC2833	

#### Refresh Option

Specify the interval of refresh time to obtain the latest VoIP calling information. The information will update immediately when the Refresh button is clicked.



#### Port Number

The port number of VoIP.

#### Call Type

The dialing direction for this call (Incoming/Outgoing).

#### Caller Number

The phone number of the caller.

#### Callee Number

The phone number of the receiver.

#### Start Time

The starting time of the call.

#### End Time

The ending time of the call.

#### Duration

The duration of the call.



<b>Release Reason</b>	The reason for the call termination.
<b>Remote RTP Address</b>	The IP address of remote voice site.
<b>Remote RTP Port</b>	The used port number of remote voice site.
<b>RTP Statistic</b>	The statistic of RTP with abbreviation will be shown in this field (e.g., PS: Packets Sent; OS: Octets Sent; PR: Packets Received; OR: Octets Received; PL: Packets Lost; JI: Interarrival Jitter Estimate (ms); LA: Average TX Delay(ms)).
<b>Codec Type</b>	The Codec mode used for this phone calling.
<b>Packet Period</b>	The period of time for sampling on voice signal.
<b>VAD</b>	The status of VAD.
<b>DTMF Relay</b>	The status of DTMF.

### 3.5.13 Configure Activate

This page will activate the new configured settings. Click **Apply** to execute the new settings.

**VoIP - Configure Activate**

---

**Warning !**  
 The action may cause **all of the VoIP calls disconnected !**  
 Please confirm you really want to execute Configure Activate right now !

When the VoIP settings are configured, it must be activated after clicking **Apply** in this page.

This page is left blank.

# 4

## Trouble Shooting

This section will guide you to solve abnormal situations if you cannot access into the Internet after installing the adapter and finishing the web configuration. Please follow below sections to check your basic installation stage by stage.

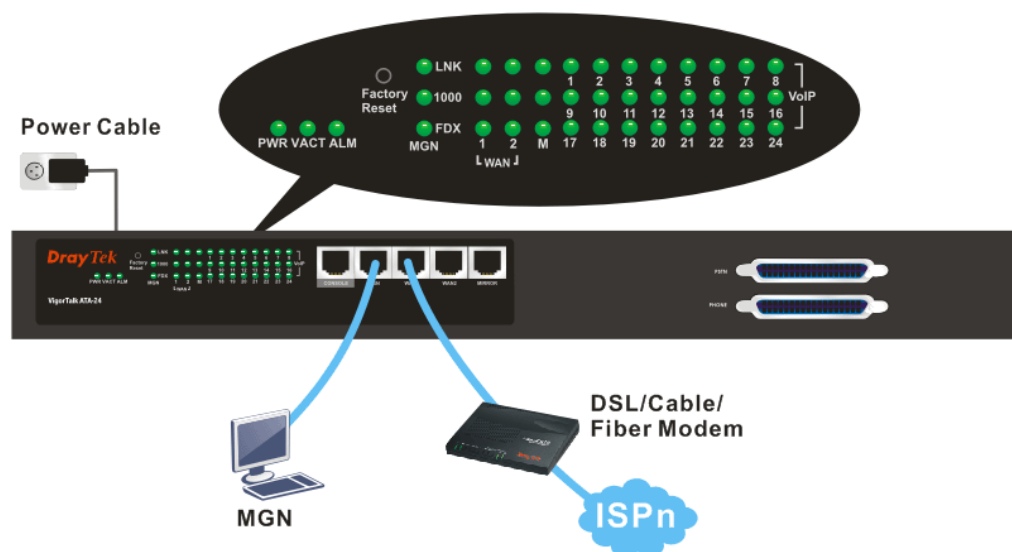
- Checking if the hardware status is OK or not.
- Checking if the Network Connection Settings on your computer is OK or not.
- Pinging the Adapter from your computer.
- Checking if the ISP Settings are OK or not.
- Backing to factory default setting if necessary.

If all above stages are done and the adapter still cannot run normally, it is the time for you to contact with your dealer for advanced help.

### 4.1 Checking If the Hardware Status Is OK or Not

Follow the steps below to verify the hardware status.

1. Check if the power line and WLAN/MGN cable connections is OK. If not, refer to “**2.1 Hardware Installation**” for reconnection.
2. Turn on the adapter. Make sure the **ACT LED** blinks once per second and the correspondent **WAN/MGN LED** is bright.



3. If not, there must be something wrong with the hardware connection. Simply back to “**1.2 Hardware Installation**” to execute the hardware installation. And then, try again.

## 4.2 Checking If the Network Connection Settings on Your Computer Is OK or Not

Sometimes the link failure occurs due to the wrong network connection settings. After trying the above section, if the link is still failed, please do the steps listed below to make sure the network connection settings is OK.

### For Windows



---

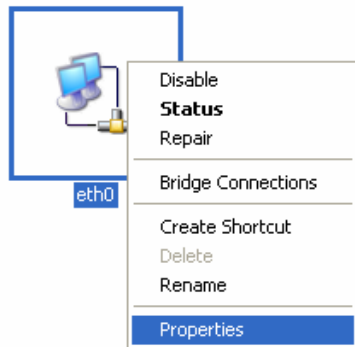
The example is based on Windows XP. As to the examples for other operation systems, please refer to the similar steps or find support notes in [www.draytek.com](http://www.draytek.com).

---

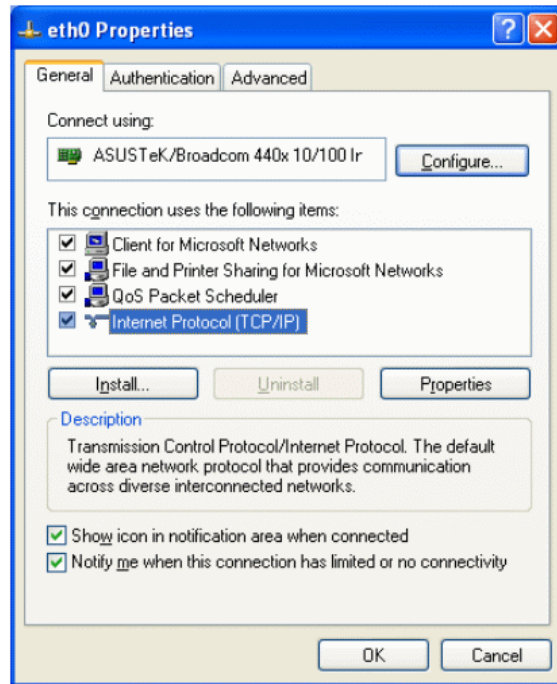
1. Go to Control Panel and then double-click on Network Connections.



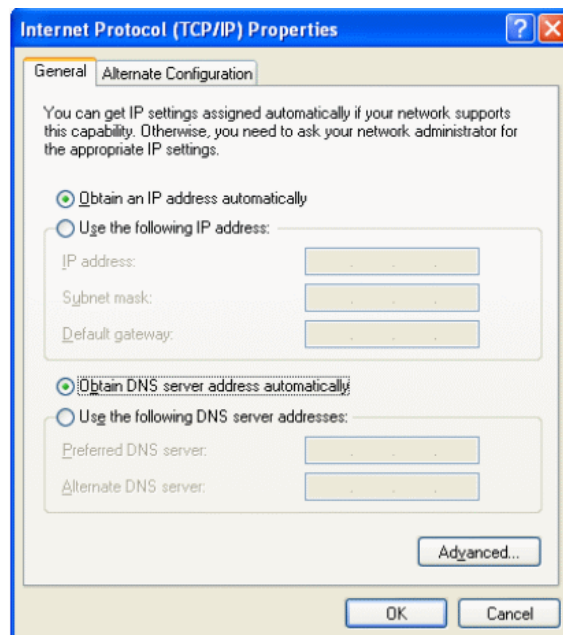
2. Right-click on Local Area Connection and click on Properties.



3. Select **Internet Protocol (TCP/IP)** and then click **Properties**.

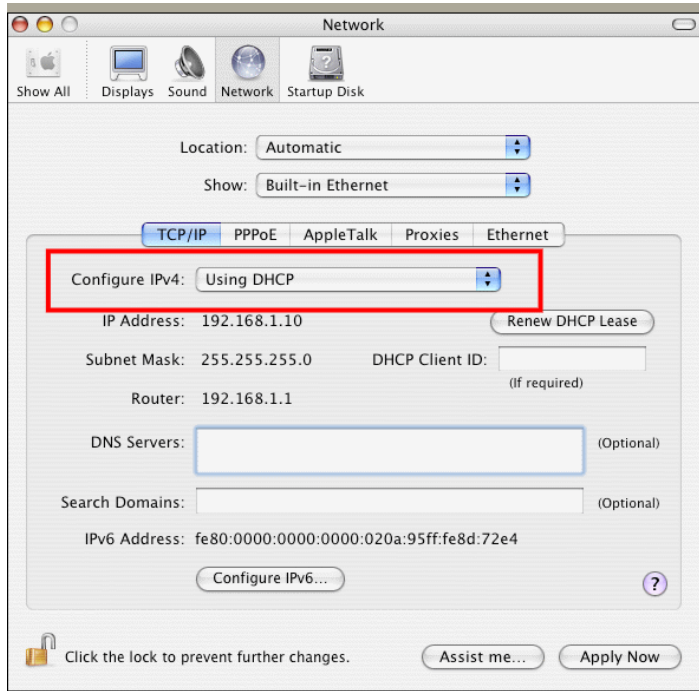


4. Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**.



## For MacOs

1. Double click on the current used MacOs on the desktop.
2. Open the **Application** folder and get into **Network**.
3. On the **Network** screen, select **Using DHCP** from the drop down list of Configure IPv4.



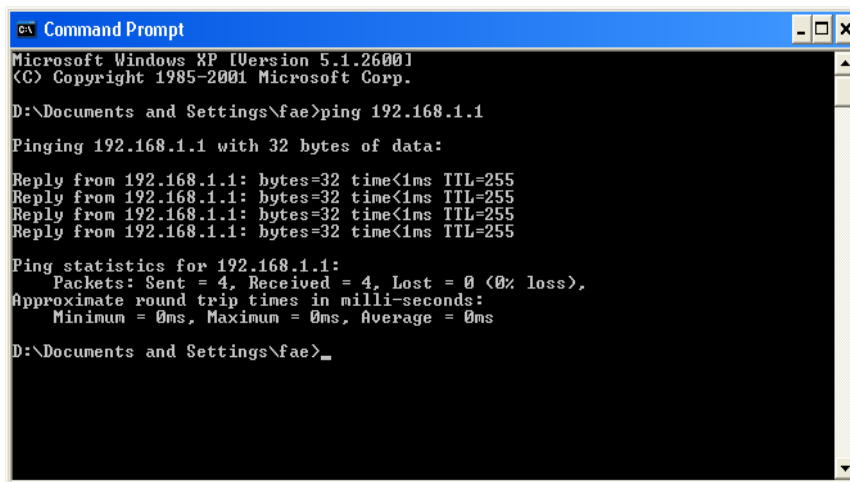
## 4.3 Pinging the Adapter from Your Computer

The default gateway IP address of the adapter is 192.168.1.1. For some reason, you might need to use “ping” command to check the link status of the adapter. **The most important thing for this command is that the computer will receive a reply from 192.168.1.1 for correct link.** If not, please check the IP address of your computer. We suggest you setting the network connection as **get IP automatically**. (Please refer to the section 3.2)

Please follow the steps below to ping the adapter correctly.

### For Windows

1. Open the **Command Prompt** window (from **Start menu**>> **Run**).
2. Type **command** (for Windows 95/98/ME) or **cmd** (for Windows NT/ 2000/XP). The DOS command dialog will appear.



```
ca Command Prompt
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

D:\Documents and Settings\fae>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

D:\Documents and Settings\fae>_
```

3. Type **ping 192.168.1.1** and press [Enter]. If the link is OK, the line of **Reply from 192.168.1.1:bytes=32 time<1ms TTL=255** will appear.
4. If the line does not appear, please check the IP address setting of your computer.

### For MacOs (Terminal)

1. Double click on the current used MacOs on the desktop.
2. Open the **Application** folder and get into **Utilities**.
3. Double click **Terminal**. The Terminal window will appear.
4. Type **ping 192.168.1.1** and press [Enter]. If the link is OK, the line of **64 bytes from 192.168.1.1: icmp\_seq=0 ttl=255 time=xxxx ms** will appear.

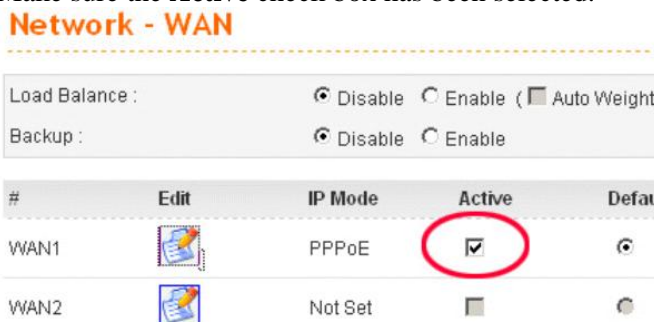
```

Terminal — bash — 80x24
Last login: Sat Jan 3 02:24:18 on ttty1
Welcome to Darwin!
Vigor10:~ draytek$ ping 192.168.1.1
PING 192.168.1.1 (192.168.1.1): 56 data bytes
64 bytes from 192.168.1.1: icmp_seq=0 ttl=255 time=0.755 ms
64 bytes from 192.168.1.1: icmp_seq=1 ttl=255 time=0.697 ms
64 bytes from 192.168.1.1: icmp_seq=2 ttl=255 time=0.716 ms
64 bytes from 192.168.1.1: icmp_seq=3 ttl=255 time=0.731 ms
64 bytes from 192.168.1.1: icmp_seq=4 ttl=255 time=0.72 ms
^C
--- 192.168.1.1 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max = 0.697/0.723/0.755 ms
Vigor10:~ draytek$ █

```

## 4.4 Checking If the ISP Settings Are OK or Not

1. Go to the web configuration GUI (<http://192.168.1.1>), click **Network >> WAN** to check your ISP settings for IP modes.
2. Make sure the **Active** check box has been selected.



### For Static Mode

1. Check if the values of **IP Address**, **Subnet Mask**, **Gateway IP Address** and **Primary DNS** that you got from ISP are set properly or not. If you forget, please contact with ISP for getting new ones.

The screenshot shows the 'Static/DHCP Configuration' page. On the left, there are five input fields: 'IP Address' (172.16.3.229), 'Subnet Mask' (255.255.255.0), 'Default Gateway' (172.16.3.1), 'Primary DNS' (168.95.1.1), and 'Secondary DNS' (168.95.192.1). These five fields are enclosed in a red rectangular box. On the right, there are two input fields: 'Host Name' and 'Domain Name'. Below them is a note: '(Host Name and Domain Name are required for some ISPs.)'

2. If anything wrong, please retype correct values and try the network connection again.
3. After finishing the settings, go to **System - Status** page and click **WAN Status**. You will get a correct web page of WAN settings.



Basic Status	LAN Status	WAN Status
<b>WAN1 :</b>		
IP Address :	220.130.52.221	
MAC Address :	00:50:7f:28:80:e4	
Primary DNS :	168.95.1.1	
Secondary DNS :		
Gateway :	220.130.52.209	
RX Packets :	708	
TX Packets :	384	
Connection Status :	connected	
Up Time :	0 days 0 hours 5 minutes 7 seconds	

### For DHCP Mode

1. Check if **Host Name** (optional) and **Domain Name** (optional) are correct or not. Both them are required for some ISPs.

Static/DHCP Configuration			
IP Address :	<input type="text" value="172.16.3.229"/>	Host Name :	<input type="text"/>
Subnet Mask :	<input type="text" value="255.255.255.0"/>	Domain Name :	<input type="text"/>
Default Gateway :	<input type="text" value="172.16.3.1"/>	(Host Name and Domain Name are required for some ISPs.)	
Primary DNS :	<input type="text"/>		
Secondary DNS :	<input type="text"/>		

2. If anything wrong, please check and retype correct values. Then try the network connection again.
3. After finishing the settings, go to **System - Status** page and click **WAN Status**. You will get a correct web page of WAN settings.

Basic Status	LAN Status	WAN Status
<b>WAN1 :</b>		
IP Address :	172.16.100.10	
MAC Address :	00:50:7f:28:80:e5	
Primary DNS :	172.16.100.1	
Secondary DNS :		
Gateway :	172.16.100.1	
RX Packets :	96	
TX Packets :	100	
Connection Status :	connected	
Up Time :	0 days 0 hours 4 minutes 51 seconds	

## 4.5 Backing to Factory Default Setting If Necessary

Sometimes, a wrong connection can be improved by returning to the default settings. Try to reset the adapter by software or hardware.



**Warning:** After pressing **factory default setting**, you will lose all settings you did before. Make sure you have recorded all useful settings before you pressing. The password of the factory default is null.

### Software Reset

You can reset adapter to factory default via Web page.

Go to **System >> Reboot** on the web page. The following screen will appear. Choose **Reset to factory default** and click **Apply**. After few seconds, the adapter will return all the settings to the factory settings.

### System - Reboot

---

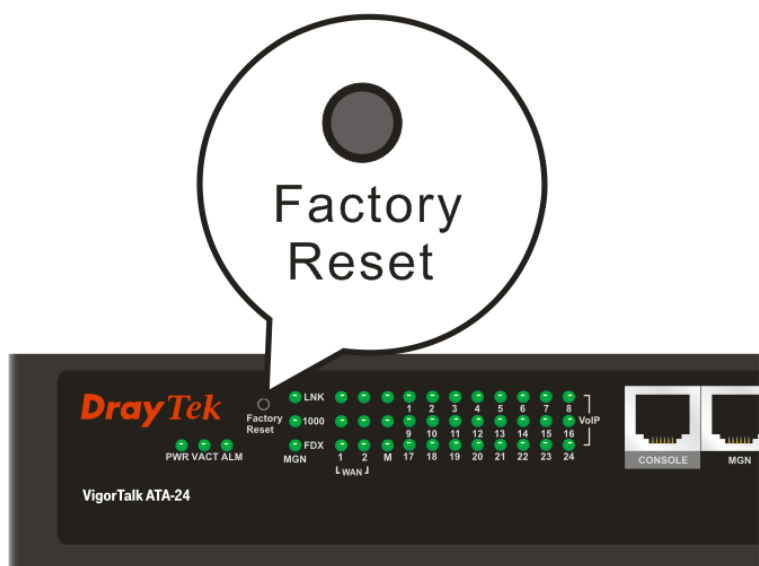
System rebooting will take 20 seconds

Reset to factory default

**Apply**

### Hardware Reset

While the adapter is running (ACT LED blinking), press the **RST** button and hold for more than 5 seconds. When you see the ACT LED blinks rapidly, please release the button. Then, the adapter will restart with the default configuration.



After restore the factory default setting, you can configure the settings for the adapter again to fit your personal request.

## 4.6 Contacting Your Dealer

If the adapter settings are correct at all, and the adapter still does not connect to internet, please contact your ISP technical support representative to help you for configuration.

Also, if the adapter still cannot work correctly, please contact your dealer for help. For any further questions, please send e-mail to [\*\*support@draytek.com\*\*](mailto:support@draytek.com).

# Appendix A: Telnet Commands

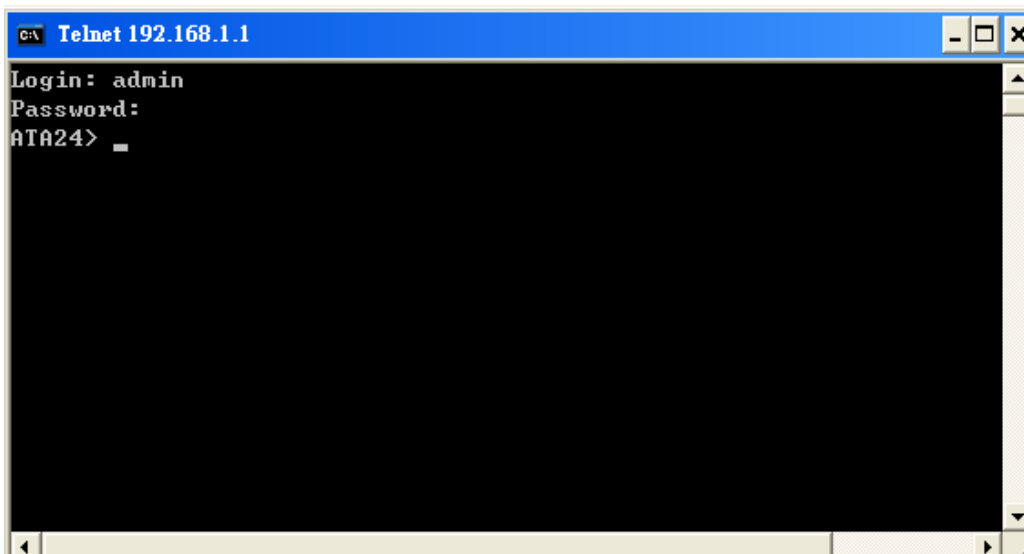
## A.1 Introduction

In addition to the SNMP management, users can use commands to configure the ATA-24 VoIP Board. Users can do telnet on the ATA-24 VoIP Board and use the following two ways. One is console interface; another is telnet by management port.

The ATA-24 console interface will connect to PC console port. Users can use terminal emulation software configured by the following parameters.

- VT100 terminal emulation
- 115200 bps
- No parity, 8 data bits, 1 stop bit
- No hardware flow control

Users can type '?' for help. Another tools for command interface is telnet via management port. The PC should be the same subnet as ATA-24 VoIP Board. The default IP address is **192.168.1.1**. The default login name is "**admin**", password is "**1234**".



## A.2 Root Commands

### A.2.1 Enter Function Commands

- Enter advanced configuration function  
**ATA24> advance**
- Enter system diagnostics function  
**ATA24> diag**
- Enter firewall configuration function  
**ATA24> firewall**

- Enter network configuration function  
**ATA24> network**
- Enter system configuration function  
**ATA24> system**
- Enter voip configuration function  
**ATA24> voip**

### A.2.2 Other Commands

- Help  
**ATA24> ?**
- Logout the CLI or the Telnet connection  
**ATA24> exit**  
or  
**ATA24> logout**  
or  
**ATA24> quit**

## A.3 Advance Commands

### A.3.1 General Commands

- Enter advance configuration function  
**ATA24> advance**
- Help in advance configuration function  
**ATA24/ advance > ?**
- Back to the root commands  
**ATA24/ advance > ..**

### A.3.2 Port Block Commands

- Display the status for port block setting  
**ATA24/advance> block -s**
- Enable port block setting  
**ATA24/advance> <Index> <Enable> <Port number>**
- Disable port block setting  
**ATA24/advance> <Index> <Disable>**

<b>&lt;Index&gt;</b>	Item number(1~10)
<b>&lt;Disable/Enable&gt;</b>	0: Disable 1: Enable
<b>&lt;Port Number&gt;</b>	Available number 1 ~ 65535

### A.3.3 Portmirror Commands

- Help  
**ATA24/advance> portmirror ?**
- Display port mirror settings  
**ATA24/advance> portmirror -s**
- Edit port mirror settings  
**ATA24/advance> <Enable> <Moirroring> <Mirror CPU> <Mirror LAN><Mirror WAN1> <Mirror WAN2> <Mirror WAN3>**

<Enable>	0: Disable 1: Enable
<Moirroring>	Moirroring Port 1: WAN1 2: WAN2
<Mirror CPU> <Mirror LAN> <Mirror WAN1> <Mirror WAN2> <Mirror WAN3>	0: Do not mirror, 1: Mirror

### A.3.4 Staticroute Commands

- Help  
ATA24/advance> staticroute ?
- Display static route settings  
ATA24/advance> staticroute -s <Index>
- Edit static route settings  
ATA24/advance> <Index> <Network Interface> <Destination IP>  
<Gateway IP> <Subnet Mask>
- Delete static route settings  
staticroute -d <Index>

<Index>	Item number(1~10)
<Network Interface>	0 : LAN 1 : WAN1 2 : WAN2 3 : WAN3
<Destination IP>	IP address of the destination
<Gateway IP>	IP address of the gateway
<Subnet Mask>	Available settings include: /24 ; /25 ; /26 ; /27 ; /28 ; /29 ; /30 ; /31 ; /32 ; /8 ; /9 ; /10 ; /11 ; /12 ; /13 ; /14 ; /15 ; /16 ; /17 ; /18 ; /19 ; /20 ; /21 ; /22 ; /23 ; /0

## A.4 Diagnostics Commands

### A.4.1 General Commands

- Enter system diagnostics function  
ATA24> diag
- Help in the system diagnostics function  
ATA24/diag> ?
- Back to the root commands  
ATA24/diag> ..

### A.4.2 Learning\_table Commands

- Help  
ATA24/diag> learning\_table ?
- Learning\_table commands usage

ATA24/diag> Learning\_table

### A.4.3 Netstat Commands

- Help  
ATA24/diag> netstat ?
- Netstat commands usage  
ATA24/diag> netstat -h
- Netstat diagnostics utility  
ATA24/diag> netstat <cmd>

### A.4.4 Nslookup Commands

- Help  
ATA24/diag> nslookup ?
- Nslookup diagnostics utility  
ATA24/diag> nslookup <IPorDomainName>

### A.4.5 Ping Commands

- Help  
ATA24/diag> ping ?
- Ping commands usage  
ATA24/diag> ping
- Ping diagnostics utility  
ATA24/diag> ping <Source Interface> <Destination Address>

<Source Interface>	0 : LAN 1 : WAN1 2 : WAN2 3 : WAN3
<Destination Address>	Domain name or IP Address of destination

### A.4.6 Traceroute Commands

- Help  
ATA24/diag> traceroute ?
- Display usage message  
ATA24/diag> traceroute
- Traceroute diagnostics utility  
ATA24/diag> traceroute <cmd>

<cmd>	Octet string
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## A.5 Firewall Commands

### A.5.1 General Commands

- Enter firewall configuration function  
ATA24>firewall
- Help in the firewall function  
ATA24/ firewall > ?

- Back to the root commands  
ATA24/ firewall > ..

## A.5.2 DoS Commands

- Help  
ATA24/ firewall >dos ?
- Set the icmpflood detection function  
ATA24/ firewall >dos /icmpflood
- Set the packet block detection function  
ATA24/ firewall >dos/packetblock
- Set the port scan detection function  
ATA24/ firewall >dos/ portscan
- Set the synflood detection function  
ATA24/ firewall >dos/ synflood
- Set the udpflood detection function  
ATA24/ firewall >dos/ udpflood
- Enable Dos Command  
ATA24/ firewall >dos/enable

### A.5.2.1 Icmpflood Command

- Help  
ATA24/ firewall >dos >icmpflood ?
- Icmpflood commands usage  
ATA24/firewall/dos/icmpflood> enable <Option>  
ATA24/firewall/dos/icmpflood>threshold<Value> <Timeout>

<Option>	0: disable ICMPFlood detection function 1: enable ICMPFlood detection function
<Value>	0-65535, default=300 packets/sec
<Timeout>	The value of time out

### A.5.2.2 Packetblock Command

- Help  
ATA24/network>dos >packetblock ?
- Packetblock commands usage  
ATA24/firewall/dos/packetblock > option <Value>

<Value>	1: Enable block ip option 2: Enable block TCP option 4: Enable block land 8: Enable tear drop 16:Enable block smurf 32:Enable block ping of death 64:Enable block trace route 128:Enable block icmp fragement 256:Enable SYN fragement 512:Enable Unknow protocol 1024:Enable Fraggel attack
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### A.5.2.3 Portscan Command

- Help

**ATA24/network>dos >portscan ?**

- Portscan commands usage

**ATA24/firewall/dos/portscan >enable <Option>**

**ATA24/firewall/dos/portscan >threshold <Value>**

<b>&lt;Option&gt;</b>	0: disable port scan detection function 1: enable port scan detection function
<b>&lt;Value&gt;</b>	0-65535, default=300 packets/sec

### A.5.2.4 Synflood Command

- Help

**ATA24/network>dos >synflood ?**

- Portscan commands usage

**ATA24/firewall/dos/synflood >enable <Option>**

**ATA24/firewall/dos/synflood >threshold <Value>**

<b>&lt;Option&gt;</b>	0: disable SynFlood detection function 1: enable SynFlood detection function
<b>&lt;Value&gt;</b>	0-65535, default=300 packets/sec
<b>&lt;Timeout&gt;</b>	The value of time out

### A.5.2.5 Udpflood Command

- Help

**ATA24/network>dos >udpflood ?**

- Portscan commands usage

**ATA24/firewall/dos/udpflood >enable <Option>**

**ATA24/firewall/dos/udpflood >threshold <Value>**

<b>&lt;Option&gt;</b>	0: disable UDPFlood detection function 1: enable UDPFlood detection function
<b>&lt;Value&gt;</b>	0-65535, default=300 packets/sec
<b>&lt;Timeout&gt;</b>	The value of time out

### A.5.2.6 Enable Command

- Help

**ATA24/network>dos >enable ?**

- Portscan commands usage

**ATA24/firewall/dos >enable <Option>**

<b>&lt;Option&gt;</b>	0: disable DoS Function 1: enable DoS Function
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## A.6 Network Commands

## A.5.1 General Commands

- Enter network configuration function  
**ATA24> network**
- Help in the network diagnostics function  
**ATA24/network> ?**
- Back to the root commands  
**ATA24/network> ..**

## A.5.2 MGN Commands

- Help  
**ATA24/network>mgn ?**
- Set the dhcp mode  
**ATA24/network/ mgn > dhcp**
- Set the IP address  
**ATA24/network/ mgn > ip**
- Set the Mac Address Manually  
**ATA24/network/ mgn > mac**

### A.5.2.1 DHCP Command

- Help  
**ATA24/network/ mgn >dhcp ?**
- Display DHCP setting  
**ATA24/network/ mgn >dhcp -s**
- Enable/disable LAN setting  
**dhcp -mode <Index> <Mode>**
- Specify range for LAN IP address  
**dhcp -range <Index> <Start IP> <End IP>**
- Specify DNS server  
**dhcp -dns <Index> <Primary DNS> <Secondary DNS>**  
**dhcp -dns <Index> <Primary DNS>**
- Specify gateway  
**dhcp -gateway <Index> <Gateway IP>**
- Specify lease time  
**dhcp -lease <Index> <Lease Time>**
- Specify DHCP server  
**dhcp -relay <WAN IF> <DHCP Server IP>**

<b>&lt;Mode&gt;</b>	0: Disable 1: Enable 2: Relay Agent
<b>&lt;Start IP&gt;</b>	IP address as starting point.
<b>&lt;End IP&gt;</b>	IP address as ending point.
<b>&lt;Primary DNS&gt;</b>	IP address as primary DNS.
<b>&lt;Secondary DNS&gt;</b>	IP address as secondary DNS.
<b>&lt;Gateway IP&gt;</b>	IP address as gateway.
<b>&lt;Lease Time&gt;</b>	Unit is minute.

### A.5.2.2 IP Command

- Help  
ATA24/network/ mgn >ip ?
- Display nat setting  
ATA24/network/ mgn >ip -s
- Edit IP\_NAT setting  
ATA24/network/ mgn >ip -w <IP> <Netmask>

<IP>	IP address.
<Netmask>	Subnet mask for NAT.

### A.5.2.3 MAC Command

- Help  
ATA24/network/mgn>mac ?
- Display IP route setting  
ATA24/network/mgn>mac 1 <Mac Address>

< Mac Address >	xx:xx:xx:xx:xx:xx
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### A.5.3 WAN Commands

- Help  
ATA24/network/wan ?

#### A.5.3.1 Backup Configuration Command

- Help  
ATA24/network/wan>advance> backup?
- Display the setting  
ATA24/network/wan>advance> backup -s
- Edit the setting  
ATA24/network/wan>advance> backup <status>

<status>	0: Disable 1: Enable
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#### A.5.3.2 Set WAN to Active Command

- Help  
ATA24/network/wan>active ?
- Edit WAN setting  
ATA24/network/wan>active <index> <status> <default route>  
ATA24/network/wan>active <index> <status> <default route>  
<loadbalance><backupmaster> <backupslave>

<index>	1: WAN1 2: WAN2
<status>	0: not active 1: active
<default route>	0: not default 1: default

<b>&lt;loadbalance&gt;</b>	0: not join loadbalance 1: join loadbalance
<b>&lt;backupmaster&gt;</b>	0: not backupmaster 1: backupmaster
<b>&lt;backupslave&gt;</b>	0: not backupslave 1: backupslave

### A.5.3.3 Set WAN to DHCP Mode Command

- Help

**ATA24/network/wan>dhcp ?**

- Display current setting

**ATA24/network/wan>dhcp -s <index>**

- Edit WAN setting

**ATA24/network/wan>dhcp <index>**

**ATA24/network/wan>dhcp <index> <hostname> <domainname>**

<b>&lt;index&gt;</b>	1: WAN1 2: WAN2
<b>&lt; hostname &gt;</b>	Name of the host.
<b>&lt; domainname &gt;</b>	Name of the domain

### A.5.3.4 Configure MAC Address Command

- Help

**ATA24/network/wan>mac ?**

- Display current setting

**ATA24/network/wan>mac -s <index>**

- Edit WAN setting

**ATA24/network/wan>mac <index> <Use Default>**

**ATA24/network/wan>mac <index> <User Define> <Mac Address>**

<b>&lt;index&gt;</b>	1: WAN1 2: WAN2
<b>&lt;Use Default&gt;</b>	0: use default setting
<b>&lt;User Define&gt;</b>	1: user defined setting
<b>&lt;Mac Address&gt;</b>	MAC address for user defined configuration

### A.5.3.8 Configure UP/Downstream Rate Command

- Help

**ATA24/network/wan>rate ?**

- Display current setting

**ATA24/network/wan> rate -s <index>**

- Edit WAN setting

**ATA24/network/wan> rate <index> <Downstream> <Upstream>**

<b>&lt;index&gt;</b>	1: WAN1 2: WAN2
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<b>&lt;Downstream&gt;</b>	0: using default setting (102400) Type any number to set downstream rate.
<b>&lt;Upstream&gt;</b>	0: using default setting(102400) Type any number to set upstream rate.

### A.5.3.9 Show WAN Configuration Command

- Help  
ATA24/network/wan>show ?
- Display all WAN interfaces settings  
ATA24/network/wan> show
- Display specified WAN interface settings  
ATA24/network/wan>show <index>

<b>&lt;index&gt;</b>	1: WAN1 2: WAN2
<b>&lt;index&gt;</b>	1: WAN1 2: WAN2

### A.5.3.10 Configure WAN Speed Command

- Help  
ATA24/network/wan>speed ?
- Display current setting  
ATA24/network/wan> speed -s <index>
- Edit WAN setting  
ATA24/network/wan>speed <index> <Speed & Duplex>

<b>&lt;index&gt;</b>	1: WAN1 2: WAN2
<b>&lt;Speed &amp; Duplex&gt;</b>	1:Auto Negotiation 2:100M / Full Duplex 3:100M / Half Duplex 4:10M / Full Duplex 5:10M / Half Duplex

### A.5.3.11 Set WAN to Static Mode Command

- Help  
ATA24/network/wan>static ?
- Display current setting  
ATA24/network/wan> static -s <index>
- Edit WAN setting  
ATA24/network/wan> static <index> <IP> <Netmask> <Gateway>  
<Primary DNS> <Secondary DNS>

<b>&lt;index&gt;</b>	1: WAN1 2: WAN2
<b>&lt;IP&gt;</b>	Private IP address for WAN.
<b>&lt;Netmask&gt;</b>	Subnet mask for WAN.
<b>&lt;Gateway&gt;</b>	Private IP address for gateway.
<b>&lt;Primary DNS&gt;</b>	Private IP address as primary DNS.

<b>&lt;Secondary DNS&gt;</b>	Private IP address as secondary DNS.
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### A.5.3.12 Static Connection Detection Command

- Help  
ATA24/network/wan>static\_detect ?
- Display current setting  
ATA24/network/wan> static\_detect -s <index>
- Set condition for detection, sending ARP to Gateway  
ATA24/network/wan> static\_detect <index> 0 <detect interval>  
<No-Reply Count>
- Set condition for detection, sending PING  
ATA24/network/wan> static\_detect <index> 1 <detect interval>  
<No-Reply Count> <detect destination>
- Set condition for detection, sending HTTP  
ATA24/network/wan> static\_detect <index> 2 <detect interval>  
<No-Reply Count> <detect destination>

<b>&lt;index&gt;</b>	1: WAN1 2: WAN2
<b>&lt;detect interval&gt;</b>	Assign a number as interval time for detecting.
<b>&lt;No-Reply Count&gt;</b>	Assign a number (times) to ensure the connection of the WAN is on. After passing the times you set in this field and no reply received by the adapter, the connection of WAN interface will be regarded as breaking down.
<b>&lt;detect destination&gt;</b>	Private IP address or domain name

## A.6 System Commands

### A.6.1 General Commands

- Enter system configuration function  
ATA24> system
- Help in the system configuration function  
ATA24/system> ?
- Back to the root commands  
ATA24/system> ..

### A.6.2 View ARP Cache Table Command

- Help  
ATA24/system/DiagnosticTools>arpcachetable ?
- Display the setting  
ATA24/system/DiagnosticTools> arp cache table

### A.6.3 View DHCP Assignment Command

- Help  
ATA24/system/DiagnosticTools> dhcpassignmenttable ?
- Display the setting

ATA24/system/DiagnosticTools> dhcp assignment table

## A.6.4 View Routing Table Command

- Help  
ATA24/system/DiagnosticTools> routingtable ?
- Display the setting  
ATA24/system/DiagnosticTools> routing table

## A.6.5 Administrator Control Commands

- Help  
ATA24/system> administrator ?
- Edit password for administrator  
ATA24/system> administrator <old password> <new password>  
<verify password>

<old password>	Type old password.
<new password>	Type new password.
<verify password>	Retype the password for verification.

## A.6.6 Auto Logout Commands

- Help  
ATA24/system > auto\_logout ?
- Display the setting  
ATA24/system > auto\_logout -s
- Edit the max-cli-session number  
ATA24/system > auto\_logout -n <MaxSess>
- Kill the #'s log-session  
ATA24/system > auto\_logout -d <SessNum>
- Edit the maximum idle time of auto logout  
ATA24/system > auto\_logout -m <MaxIdleTime>
- Enable/Disable the auto logout  
ATA24/system > auto\_logout <Active>

<MaxSess>	Integer(1 to15)
<SessNum>	Integer(1 to MaxSess)
<MaxIdleTime>	Seconds, Integer(10 to 86400)
<Active>	0: Disable 1: Enable

## A.6.7 Config Commands

- Help  
ATA24/system> config ?
- Display the setting  
ATA24/system> config -s
- Execute the backup action  
ATA24/system> config backup <fname> <servIP>
- Execute the restore action

ATA24/system> config restore <fname> <servIP>

<fname>	Octets string maximum length is 64.
<servIP>	IP address for the IVD

## A.6.8 Manage Port Commands

- Help  
ATA24/system> manage\_port ?
- Display the setting  
ATA24/system> manage\_port -s
- Manage port from WAN interface  
ATA24/system> manage\_port -m <Use Default Port or Not><Manage from WAN>
- Reboot the system to apply the changes  
ATA24/system> manage\_port -r
- Enable HTTP/Telnet function  
ATA24/system> manage\_port -e <HTTP Enable> <TELNET Enable>
- Change port number for HTTP/Telnet function  
ATA24/system> manage\_port -p <Http> <Telnet>
- Set IP address for the connection through WAN interface  
ATA24/system> manage\_port -i <index> <IP Start> <IP End>

<Use Default Port or Not>	0 : Default 1 : User Define
<Http>	default: 80
<Telnet>	default: 23
<Manage from WAN>	0 : Disable all from Wan; 1 : Enable all from Wan; 2 : Enable only defined Wan IP;
<IP Start>	Starting point
<IP End>	Ending point.

## A.6.9 Reboot Commands

- Help  
ATA24/system> reboot ?
- Reboot the system  
ATA24/system> reboot
- Reboot the system with keeping some important configuration  
ATA24/system> reboot keep
- Reboot the system with factory default configuration  
ATA24/system> reboot default
- Reboot the IVD VoIP board only  
ATA24/system> reboot voip  
ATA24/system> reboot dsl

## A.6.10 Show Status Command

- Help



**ATA24/system> status ?**

- Display the system status

**ATA24/system> status**

### A.6.11 Syslogd Commands

- Help

**ATA24/system> syslogd ?**

- Display the syslog setting

**ATA24/system> syslogd -s**

- Set IP address and port number for Syslog server

**ATA24/system>syslogd <Active> <RIP> <RPort> <Facility> <Severity>**

<b>&lt;Active&gt;</b>	0: Disable 1: Enable
<b>&lt;RIP&gt;</b>	Type IP address for LAN
<b>&lt;RPort&gt;</b>	Integer(1 to 65535)
<b>&lt;Facility&gt;</b>	0: local use 0 (local0)(default) 1: local use 1 (local1) 2: local use 2 (local2) 3: local use 3 (local3) 4: local use 4 (local4) 5: local use 5 (local5) 6: local use 6 (local6) 7: local use 7 (local7)
<b>&lt;Severity&gt;</b>	0: Emergency(default setting) 1: Alert 2: Critical 3: Error 4: Warning 5: Notice (including SIP) 6: Informational 7: Debug

### A.6.13 Upgrade Commands

- Help

**ATA24/system> upgrade ?**

- Display the setting

**ATA24/system> upgrade -s**

- Execute the firmware upgrade

**ATA24/system> upgrade <File Name> <Server IP>**

<b>&lt;File Name&gt;</b>	Octets string maximum length is 64.
<b>&lt;Server IP&gt;</b>	Type IP address for the IVD.

## A.7 Voip Commands

### A.7.1 General Commands

- Enter voip configuration function  
**ATA24> voip**
- Help in the voip diagnostics function  
**ATA24/voip> ?**
- Back to the root commands  
**ATA24/voip> ..**

### A.7.2 H248 Commands

- Help  
**ATA24/voip>h248 ?**
- Display H248 call agent setting  
**ATA24/voip/h248 > callagent -s**
- Edit the H248 call agent setting  
**ATA24/voip/h248>callagent <IPAddress> <Port>**
- Display digit map default short/long timer setting  
**ATA24/voip/h248 >dmTimer -s**
- Edit the digit map timer setting  
**ATA24/voip/h248>dmTimer <Termination> <Timer> <Sec>**
- Display local listening port number for H248  
**ATA24/voip/h248 >localport -s**
- Edit the local listening port setting  
**ATA24/voip/h248>localport <Port>**
- Display message ID  
**ATA24/voip/h248 >mid -s**
- Edit message ID  
**ATA24/voip/h248>mid -m <Mode>**  
**ATA24/voip/h248>mid -i <IP Mode>**  
**ATA24/voip/h248>mid <IPAddress>**  
**ATA24/voip/h248>mid <IPAddress> <Port>**
- Display termination ID  
**ATA24/voip/h248 >termid -s**
- Edit termination ID  
**ATA24/voip/h248>termId -a <Prefix> <StartNum>**  
**ATA24/voip/h248>termId <Termination> <ID>**

<b>&lt;IPAddress&gt;</b>	Domain name or IP Address
<b>&lt;Port&gt;</b>	1 to 65535
<b>&lt;Termination&gt;</b>	1 to 24
<b>&lt;Timer&gt;</b>	0: short timer 1: long timer
<b>&lt;Sec&gt;</b>	1 to 99 (sec)
<b>&lt;Mode&gt;</b>	0: [IPAddress]:Port 1: [IPAddress]

<IP Mode>	0: WAN IPAddress 1: Manual IPAddress
<Prefix>	ID Name prefix
<StartNum>	Beginning of ID Name Number
<Termination>	1 to 24
<ID>	Identification name

### A.7.3 Linetest Commands

- Help  
**ATA24/voip>linetest ?**
- Execute voip line card test  
**ATA24/voip/linetest > line\_card\_test <Line> <TestItem>**
- Execute voip metallic loop test  
**ATA24/voip/linetest > metallic\_loop\_test <Line>**
- Execute voip user phone test  
**ATA24/voip/linetest >user\_phone\_test <Line> <TestItem>**

<Line>	Available number: 1 to 24
<TestItem> (for voip line card test)	A: Normal Battery B: Loop Current C: Dial Tone Test D: Dial Digit Test E: Ring Voltage Test
<TestItem> (for voip user phone test)	A: DTMF Tone Testing B: Dial Pulse Testing C: Howler Tone D: Ringing

### A.7.4 MGCP Commands

- Help  
**ATA24/voip/mgcp> callagent ?**
- Display the call agent setting  
**ATA24/voip/mgcp> callagent -s**  
**ATA24/voip/mgcp> callagent2 -s**
- Edit the IP address and port number for call agent  
**ATA24/voip/mgcp> callagent <IPAddress> <Port>**  
**ATA24/voip/mgcp> callagent2 <IPAddress> <Port>**
- Display the setting of End Point Name ID Style  
**ATA24/voip/mgcp> epidstyle -s**
- Edit the style mode for end point  
**ATA24/voip/mgcp> epidstyle -m<Mode>**
- Edit the logic ID for end point  
**ATA24/voip/mgcp> epidstyle -l <LogicID>**
- Edit the domain name for end point  
**ATA24/voip/mgcp> epidstyle -d <DomainName>**

- Display the MGCP heartbeat setting  
ATA24/voip/mgcp> heartbeat -s
- Edit the dual\_homing action  
ATA24/voip/mgcp> heartbeat <Active>
- Edit the period of heartbeat for dual\_homing  
ATA24/voip/mgcp> heartbeat -t <Sec>
- Edit the retry times of dual\_homing  
ATA24/voip/mgcp> heartbeat -r <Times>
- Display local port setting  
ATA24/voip/mgcp> localport -s
- Edit the local port number for MGCP protocol  
ATA24/voip/mgcp> localport <Port>
- Display the port lock setting  
ATA24/voip/mgcp> portlock -s  
ATA24/voip/mgcp> portlock -s <Port>
- Edit the port lock/unlock  
ATA24/voip/mgcp> portlock <Port> <lock>
- Display the setting  
ATA24/voip/mgcp> rsip -s
- Set the RSIP action  
ATA24/voip/mgcp> rsip <Active>
- Display the setting pf sending RSIP with wildcarded endpoint ID  
ATA24/voip/mgcp> rsip -s
- Edit the RSIP action  
ATA24/voip/mgcp> wildrsip <wildcard> <range>

<IPAddress>	Assign an IP address of Call Agent server in MGCP (Default is 192.168.100.100)
<Port>	Assign a UDP port number to Call Agent server. 1 to 65535 (Default is 2727)
<Mode>	There are four options for users to select. (Default is 0) 0. aaln/#@[ip_addr] ex: aaln/1@[1.1.1.1] 1. mac_addr/#@[ip_addr] ex: 000504030201/1@[1.1.1.1] 2. aaln/#@mac_addr ex: aaln/1@000504030201 3. aaln/#@domain_name ex: aaln/1@callagent.com
<LogicID>	Starting number for logic ID.
<DomainName>	Name of the domain
<Active>	0: Disable 1: Enable (default=0) There are two options for users to select. <b>Each endpoint sends its own RSIP</b> <b>Send only one wild-carded RSIP</b> "Enable" to activate this function. "Disable" to close this function. (Default is

	Disable)
<Sec>	Integer(1 to 65535 default=60)
<Times>	Integer(1 to 300 default=1)
<Port> (for port lock/unlock)	1 to 24
<lock>	0: unlocked (default) 1: locked
<wildcard>	1: Enable wildcard(*) RSIP(Default) 0: Disable wildcard(*) RSIP
<range>	1: Enable range([1-24]) wildcards(Default) 0: Disable range([1-24]) wildcards

## A.7.5 Miscellaneous Commands

- Help in the misc diagnostics function  
**ATA24/voip>misc ?**
- Display the dialing completion timeout  
**ATA24/voip/misc> dialing\_timeout -s**
- Set the dialing completion timeout  
**ATA24/voip/misc> dialing\_timeout <value>**
- Display echo cancellation configuration  
**ATA24/voip/misc> echo\_cancellation -s**
- Enable echo cancellation configuration  
**ATA24/voip/misc> echo\_cancellation <enable>**  
**ATA24/voip/misc> echo\_cancellation <enable> <tailLength>**
- Display VoIP failover configuration  
**ATA24/voip/misc> failover -s**
- Enable/disable VoIP failover configuration when it failed from network to gateway  
**ATA24/voip/misc> failover -n <Mode>**
- Enable/disable VoIP failover configuration to use POTS system forcefully  
**ATA24/voip/misc> failover -f <Mode>**
- Display gain control setting  
**ATA24/voip/misc>gain -s**
- Set gain control setting  
**ATA24/voip/misc>gain <Device port> <Speaker Gain> <Microphone Gain>**
- Display line impedance parameter  
**ATA24/voip/misc> lineimpedance -s**
- Set same value for each line  
**ATA24/voip/misc> lineimpedance <Country>**  
**ATA24/voip/misc>lineImpedance <line> <Country>**
- Display line PCM codec  
**ATA24/voip/misc> linepcmcodec -s**
- Set same value for each line  
**ATA24/voip/misc> linepcmcodec <codec>**

- ATA24/voip/misc> linepcmcodec <line> c**
- Display metering parameter  
**ATA24/voip/misc> metering -s**
- Set metering parameter  
**ATA24/voip/misc> metering**  
**ATA24/voip/misc> metering -r <Reversal as Callee off-hook> <Reversal as Callee on-hook>**
- Display NAT traversal setting  
**ATA24/voip/misc> nat -s**
- Set NAT traversal setting  
**ATA24/voip/misc>nat <Disable Mode>**  
**ATA24/voip/misc>nat <Manual Mode> <NatIpAddr>**  
**ATA24/voip/misc>nat <Auto Mode> <Type> <LocalPort> <ServerIP> <ServerPort>**  
**ATA24/voip/misc>nat -sym <sym\_rtp\_t38>**
- Display Line offhook detect current value  
**ATA24/voip/misc>offhookdetect -s**
- Set Line offhook detection  
**ATA24/voip/misc> offhookdetect <Current>**  
**ATA24/voip/misc> offhookdetect <line> <Current>**
- Display pulse timing configuration  
**ATA24/voip/misc> pulsetime -s**
- Set pulse timing  
**ATA24/voip/misc> pulsetime <breakMin> <breakMax> <flashMin> <flashMax> <makeMin> <makeMax> <interdigitmin>**
- Display ring cadence and frequency setting  
**ATA24/voip/misc> ring -s**
- Set ring cadence and frequency (same value for each line)  
**ATA24/voip/misc> ring -f <Frequency>**
- Set ring frequency  
**ATA24/voip/misc>ring -f <line> <Frequency>**
- Set ring cadence  
**ATA24/voip/misc>ring -c <Index> <Ton1> <Toff1> <Ton2> <Toff2> <Ton3> <Toff3> <Ton4> <Toff4>**
- Display the port number for sending/receiving RTP packets  
**ATA24/voip/misc> rtp\_port -s**
- Set the port number for sending/receiving RTP packets  
**ATA24/voip/misc> rtp\_port <Port number>**
- Display T.38 Fax Relay Configuration  
**ATA24/voip/misc> t38 -s**
- Set T.38 Fax Relay  
**ATA24/voip/misc> t38 <Mode>**  
**ATA24/voip/misc t38 <Mode> <Port> <Redundancy>**

- Display Voice Band Data (VBD) Configuration  
ATA24/voip/misc> vbd -s
- Set Voice Band Data (VBD) (same value for each line)  
ATA24/voip/misc> vbd <VBD>
- Set Voice Band Data (VBD)  
ATA24/voip/misc> vbd <port><VBD>

<value>	Range: 1~60 (second)
<enable>	0: disable 1: enable
<tailLength>	Network Echo Canceller Tail Length (ms) Range: 8 ~ 128, should be multiple of 8
<Mode>	0: disable 1: enable
<Device port>	Device port number
<Speaker Gain>	Assign the gain value while receiving voice, default value is 0. The range is from -14 to 6.
<Microphone Gain>	Assign the gain value while transmitting voice, default value is 0. The range is from -14 to 6. (Default is 0)
<line>	Device line number (from 1 to 24)
<Country>	0: 600 Ohm (default) 1: 900 Ohm 2: China
<Codec>	0: Mu-LAW (default) 1: A-LAW
<Reversal as Callee off-hook>	0: Disable (default) 1: Enable
<Reversal as Callee on-hook>	0: Disable (default) 1: Enable
<Disable Mode>	0 : Disable NAT traversal (DEFAULT)
<Manual Mode>	1 : Manually input NAT IP address
<Auto Mode>	2 : Auto discover NAT IP address
<NatIpAddr>	Type IP address for manual mode.
<Type>	0 : Semi-auto, need to configure NAT 1 : Full-auto, no need to configure NAT
<LocalPort>	Local listening port number for STUN client
<ServerIP>	The IP address of STUN server
<ServerPort>	The port number of STUN server
<sym_rtp_t38>	0 : Disable symmetric RTP and T.38 1 : Enable symmetric RTP and T.38
<Current>	8: 8 mA (default) 10: 10 mA 12: 12 mA 15: 15 mA
<breakMin>	Minimum pulse break time (ms)
<breakMax>	Maximum pulse break time (ms)
<flashMin>	Minimum flash break time (ms)
<flashMax>	Maximum flash break time (ms)
<makeMin>	Minimum pulse make time (ms)
<makeMax>	Maximum pulse make time (ms)

<interDigitMin>	Minimum pulse inter digit time (ms)
<Frequency>	Ring frequency 20: 20 HZ (default) 25: 25 HZ
<Index>	Pattern Index, Index Value: 1-8
<Ton1>	Ton1 of cadence, unit: (ms)
<Toff1>	Toff1 of cadence, unit: (ms)
<Ton2>	Ton2 of cadence, unit: (ms)
<Toff2>	Toff2 of cadence, unit: (ms)
<Ton3>	Ton3 of cadence, unit: (ms)
<Toff3>	Toff3 of cadence, unit: (ms)
<Ton4>	Ton4 of cadence, unit: (ms)
<Toff4>	Toff4 of cadence, unit: (ms)
<Port number>	1 to 65535
<Mode>	0: Disable 1: Enable
<Port>	T.38 Starting Port, 1 to 65535 (default:13456)
<Redundancy>	T.38 Redundancy Number, 0 to 4 (default:1)
<port>	device port number
<VBD>	0: Auto Detection 1: Modem 2: Fax

**Note:** “Auto Discovery NAT IP Address” option is used when IVD is behind a NAT adapter, NAT uses dynamic WAN IP address like as DHCP client. There must be having a STUN server in Internet. IVD needs to negotiate with STUN server for this function.

**Note:** The “STUN”(Simple Traversal of UDP through NATs) server is an implementation of the STUN protocol that enables STUN functionality in SIP-based systems. STUN is an application-layer protocol that can determine the public IP and nature of a NAT device that sits between the STUN client and STUN server.

## A.7.6 SIP Commands

- Help in the sip configuration function  
**ATA24/voip/sip> ?**
- Enter incallbarring configuration function  
**ATA24/voip/sip> incallbarring**
- Display allow list of incoming calls (for SIP)  
**ATA24/voip/misc> allow -s**  
**ATA24/voip/misc>allow -s <Index>**
- Edit allow list of incoming calls (for SIP)  
**ATA24/voip/sip> allow -e <Index> <Name> <IP/Domain>**
- Delete allow list of incoming calls (for SIP)  
**ATA24/voip/sip> allow -d <Index>**  
**ATA24/voip/sip> allow -d**
- Display deny list of incoming calls (for SIP)



- ATA24/voip/misc> deny -s**
  - ATA24/voip/misc> deny -s <Index>**
- Edit deny list of incoming calls (for SIP)
  - ATA24/voip/sip> deny -e <Index> <Name> <IP/Domain>**
- Delete deny list of incoming calls (for SIP)
  - ATA24/voip/sip> deny -d <Index>**
  - ATA24/voip/sip> deny -d**
- Display current settings for incoming call barring (for SIP)
  - ATA24/voip/misc> set -s**
- Edit deny list of incoming calls (for SIP)
  - ATA24/voip/sip> set <Class> <MatchName> <MatchIP>**
  - <SpeeddialFrom> <SpeeddialTo>**
- Display call waiting setting
  - ATA24/voip/misc> callwait -s**
- Edit call waiting setting
  - ATA24/voip/sip>callwait <Port> <Mode>**
- Display the codec setting
  - ATA24/voip/sip> codec -s**
- Edit prefect codec, codec rate and VAD for the port#
  - ATA24/voip/sip> codec <Port> <PreferCodec> <CodecRate> <VAD>**
- Edit single codec for the port#
  - ATA24/voip/sip> codec -single <Port> <Active>**
- Display VoIP setting
  - ATA24/voip/sip>default\_account -s**
- Edit default SIP account
  - ATA24/voip/sip>default\_account <Port> <SIP Account>**
- Display dialplan setting
  - ATA24/voip/sip>dialplan -s**
- Display dialplan setting with detail description
  - ATA24/voip/sip>dialplan -h**
- Edit dialplan setting (adding new entry)
  - ATA24/voip/sip>dialplan -a <MatchString> <MinLength> <MaxLength>**
  - <PrefixStrip> <PrefixAdd> <SipIpAddr>**
  - <InterDigitTimeOut> <Memo>**
- Edit dialplan setting (modifying an entry)
  - ATA24/voip/sip>dialplan -e <EntryIdx> <MatchString> <MinLength>**
  - <MaxLength><PrefixStrip> <PrefixAdd> <SipIpAddr>**
  - <InterDigitTimeOut> <Memo>**
- Delete dialplan setting
  - ATA24/voip/sip>dialplan -d <EntryIdx>**
  - ATA24/voip/sip>dialplan -D**
- Display DTMF Relay setting
  - ATA24/voip/sip>dtmf\_relay -s**
- Edit DTMF relay mode for the port#
  - ATA24/voip/sip>dtmf\_relay <Port> <Mode>**

- Edit DTMF relay mode and SIP INFO mode for the port#  
**ATA24/voip/sip>dtmf\_relay <Port> <Mode> <SipInfoMode>**  
**ATA24/voip/sip>dtmf\_relay -gain <port> <Gain Value>**
- Display fax transporting setting  
**ATA24/voip/sip> fax -s**
- Edit fax mode for the port#  
**ATA24/voip/sip> fax <Port> <Mode>**
- Display hotline setting  
**ATA24/voip/sip> hotline -s**
- Enable/Disable the hotline function  
**ATA24/voip/sip> hotline <Port> <Active>**
- Edit the hotline number  
**ATA24/voip/sip> hotline <Port> <Active> <<Digits>**
- Display local listening port number for SIP  
**ATA24/voip/sip> localport -s**
- Edit SIP local port number  
**ATA24/voip/sip> localport <Port>**
- Display port activation setting  
**ATA24/voip/sip> port\_active -s**
- Choose proxy for the port  
**ATA24/voip/sip> port\_active <Port> <Active>**
- Display proxy server setting  
**ATA24/voip/sip> server -s**
- Enable/Disable the proxy server  
**ATA24/voip/sip> server <Proxy#> <Active>**
- Enable/Disable the proxy server and outbound proxy  
**ATA24/voip/sip> server <Proxy#> <Active> <Outbound>**
- Edit the proxy server parameters  
**ATA24/voip/sip> server <Proxy#> <Active> <Outbound> <ProxyName>**  
**<ProxyIP> <ProxyPort> <RegistrarIP> <RegistrarPort> <Expires>**  
**<Domain>**
- Display SIP message (for SIP)  
**ATA24/voip/sip> siplog <Mode>**  
**ATA24/voip/sip> siplog <Mode><Line>**
- Display SIP user agent setting  
**ATA24/voip/sip> sipua -s <Index>**
- Display ring port setting  
**ATA24/voip/sip> sipua -r**
- Edit SIP user agent setting  
**ATA24/voip/sip> sipua -e <Index> <Active> <UserName> <Password>**  
**<DisplayName> <AuthId><CallForwardMode> <CallForwardUrl>**  
**<CallForwardRing><Proxy> <CallNoRegister> <RingType> <IpBind>**
- Edit ring port setting  
**ATA24/voip/sip> sipua -r <Index> <RingPort> <Mode>**
- Delete SIP user agent setting

ATA24/voip/sip> sipua -e  
ATA24/voip/sip>dialplan -D

- Display speed dial setting  
ATA24/voip/sip> speeddial -s  
ATA24/voip/sip> speeddial -s <start> <end>
- Add speed dial number and destination for the entry  
ATA24/voip/sip> speeddial -a <Number> <Destination> <Memo>
- Edit speed dial number, destination and memo for the entry  
ATA24/voip/sip> speeddial -e <Index> <Number> <Destination>  
<Memo>
- Delete the entry of speed dial  
ATA24/voip/sip> speeddial -d <Index>
- Delete all entries of speed dial  
ATA24/voip/sip> speeddial -D
- Display ports that unlocked  
ATA24/voip/sip> unlock -s  
ATA24/voip/sip> unlock -s <Port>
- Execute port unlock  
ATA24/voip/sip> unlock <Port>

<Index>	1 to 30 1 to 32 for SIP user agent
<Name>	Name of the incoming calls
<IP/Domain>	IP address or domain name
<Class>	0 : Allow all incoming calls 1 : Allow only calls from allow list 2 : Allow only calls from speed dial entries 3 : Deny only calls from deny list 4 : Deny all incoming calls
<MatchName>	0 : Disable ; 1 : Enable
<MatchIP>	0 : Disable ; 1 : Enable
<SpeeddialFrom>	1 to 150
<SpeeddialTo>	1 to 150
<Port> <	Port number of the device. From 1 to 24
<Mode> for ring port setting/RTP threshold setting	0 : Disable ; 1 : Enable
<PreferCodec>	Select one Codec to be applied on this port. IVD supports five Codecs. 0: G.711U(PCMU) -64kbps 1: G.711A(PCMA) -64kbps 2: G.729A -8kbps (Default is 2) 3: G.723.1 -6.3kbps 4: G.726-32kbps
<CodecRate>	Select one rate value to be applied on this port. 20/40 - for PCMU or PCMA (Default is 20) 20/40/60/80 - for G.729A (Default is 20) 30/60 - for G.723.1 (Default is 30) 20/40 - for G.726 (Default is 20)
<VAD>	“Enable” to activate VAD(Voice Activity

	Detection, also known as Silence Suppression) function. “Disable” to stop using VAD. (Default is Disable)
<Active>	“Enable” to activate this port. “Disable” to close this port. (Default is Disable)
<SIP Account>	1 to 32
<EntryIdx>	1 to 60
<MatchString>	Matched string, ex: 9011x.T, maximum 63 characters.
<MinLength>	Min. length of digits, range: 0~63, default: 0 (only use for x.T (unfixed length) )
<MaxLength>	Max. length of digits, range: 0~63, default:32
<PrefixStrip>	Number of prefix digits to strip, range: 0~63
<PrefixAdd>	Prefix string to be add, -1: none maximum 63 char.
<SipIpAddr>	SIP IP address or domain name, ex: iptel.org 0 for no specific address
<InterDigitTimeOut>	Override the inter-digits timeout, range: 1~60(sec) default: 4 (sec)
<Memo>	User-specified name for comment, maximum 63 characters. Users can add some descriptions for each number. (Default is none)
<Mode>	0: Disable 1: RFC2833 (Default is 1) 2: SIP INFO
<SipInfoMode>	Click one option to be applied in DTMF function. There are three options to be supported as below – Disable(Inband) RFC2833 SIP INFO 0: CISCO 1: NORTEL (If Mode is 1, default is none) (If Mode is 2, default is 0)
<Gain Value>	0 to 31
< Mode >	Select a mode to be applied on FAX function. There are two options to be supported as below – Transparent: FAX will be transmitted via voice channel, no fax relay nor Codec change will be involved. T.38 Relay: Using T.38 Fax Relay. It is the default value. 0: Transparent 1: T.38 Relay (Default is 1)
<Active >	0: Disable, 1: Enable Or 0: off, 1: on
<Digits >	Default is none
< Proxy#>	Proxy # is from 1 to 3.
< Outbound >	0: Disable (Default is 0)

	1: Enable (It means that each SIP protocol packet will be sent to SIP proxy server always.)
< ProxyName >	Assign a name of SIP proxy server. (Default is none)
< ProxyIP >	Assign an IP address of SIP proxy server. (Default is 0)
< ProxyPort >	Assign a port number of SIP proxy server. 1...65535 (Default is 5060)
< RegistrarIP >	Assign an IP address or domain name of SIP register server. (Default is 0)
< RegistrarPort >	Assign a port number of SIP register server. 1...65535 (Default is 5060)
< Expires >	Assign a timeout value for SIP protocol, the default value is 300. (minimum 60 seconds)
<Domain>	Assign an IP address or domain name of SIP Domain/Realm. (Default is 0)
<Mode> for SIP Message	0: Output last 50 lines 1: Output last N lines
<Line> for SIP Message	Print last N lines for mode 1
<UserName>	SIP username
<Password>	SIP password
<DisplayName>	SIP display name
<AuthId>	SIP authentication ID
<CallForwardMode>	0: Disable 1: Call forwarding all calls 2: Call forwarding busy 3: Call forwarding no answer
<CallForwardUrl>	SIP url format, ex: 101@iptel.org
<CallForwardRing>	1~10 (rings)
<Proxy>	0: Don't use proxy server 1: use Proxy 1 2: use Proxy 2 3: use Proxy 3
<CallNoRegister>	0: Call with Registration 1: Call without Registration
<RingType>	0: Rings all ports in the group 1: Rings the first available port 2: Rings by round robin
<IpBind>	0: WAN 1: VPN/LAN1 2: VPN/LAN2 3: VPN/LAN3 4: VPN/LAN4
<RingPort>	1~24 port
<Index> for speed dial setting	1~150
<Number>	Assign a dialing phone number.Ex: 101
<Destination>	Assign an address of dialing destination. Ex: 101@iptel.org

## A.7.7 Statistics Commands

- Help in the Statistics function  
**ATA24/voip/Statistics > ?**
- Display call statistics setting  
**ATA24/voip/statistics> callstat**
- Display the setting by port  
**ATA24/voip/statistics> callstat <Port>**
- Edit the range for callstat port  
**ATA24/voip/statistics> callstat <Port> <Range>**
- Display RTP statistics setting  
**ATA24/voip/statistics> rtpstat**
- Display the setting by port  
**ATA24/voip/statistics> rtpstat <Port>**
- Edit the range for rtpstat port  
**ATA24/voip/statistics> rtpstat <Port> <Range>**
- Display RTP threshold setting  
**ATA24/voip/statistics> rtpthreshold -s**
- Edit the value for rtpthreshold  
**ATA24/voip/statistics> rtpthreshold <mode> <delayLow> <delayHigh>  
<jitterLow> <jitterHigh> <lostLow> <lostHigh> <timeout>**
- Display VoIP RTP alert setting  
**ATA24/voip/statistics> showalert**
- Display the setting by port  
**ATA24/voip/statistics> showalert <Port>**

<b>&lt;Port&gt;</b>	Port number of the device. From 1 to 24
<b>&lt;Range&gt;</b> for VoIP call statistics	0: 15 minutes 1: 24 hour
<b>&lt;delayLow&gt;</b>	Round Trip Delay Low Threshold (ms)
<b>&lt;delayHigh&gt;</b>	Round Trip Delay High Threshold (ms)
<b>&lt;jitterLow&gt;</b>	Jitter Low Threshold (ms)
<b>&lt;jitterHigh&gt;</b>	Jitter High Threshold (ms)
<b>&lt;lostLow&gt;</b>	Packet Loss Ratio Low Threshold (0..100%)
<b>&lt;lostHigh&gt;</b>	Packet Loss Ratio High Threshold (0..100%)
<b>&lt;timeout&gt;</b>	RTCP timeout (in seconds)
<b>&lt;Lowfreq&gt;</b>	Assign a low frequency number in Hertz unit. (unit is HZ) (Default is 350)
<b>&lt;Highfreq&gt;</b>	Assign a high frequency number in Hertz unit. (unit is HZ) (Default is 440)
<b>&lt;Ton1&gt;</b>	The duration of the first ringing. (10msec per unit) (Default is 0)
<b>&lt;Toff1&gt;</b>	The silence duration after the first ringing. (10msec per unit) (Default is 0)
<b>&lt;Ton2&gt;</b>	The duration of the next continuous ringing. (10msec per unit) (Default is 0)
<b>&lt;Toff2&gt;</b>	The silence duration after the next continuous ringing.

	(10msec per unit) (Default is 0)
<Type> for call ID setting	0: North America 1: JAPAN 2: ETSI (Default is 2) 3: DTMF

## A.7.8 VoIP Status Commands

- Help in the Statistics function  
**ATA24/voip/status> ?**
- Display VoIP faults  
**ATA24/voip/status>faultstatus**
- Display VoIP FXS port hook state (onhook or offhook)  
**ATA24/voip/status>hookstate**  
**ATA24/voip/status>hookstate<Port>**
- Display VoIP connection Status  
**ATA24/voip/status>portstatus**  
**ATA24/voip/status>portstatus <Port>**
- Display VoIP SIP User Agent Registration Status  
**ATA24/voip/status>sipuastatus**  
**ATA24/voip/status>sipuastatus <Port>**
- Display VoIP Status  
**ATA24/voip/status>voipstatus**  
**ATA24/voip/status>voipstatus <Mode>**

<Port>	Port number of the device. From 1 to 24
<Mode>	0: disable 1: enable

## A.7.9 Tone User Defined Commands

- Help in the Statistics function  
**ATA24/voip/tone/user\_defined> ?**
- Display user defined tone setting  
**ATA24/voip/tone/user\_defined> busy -s**
- Edit frequency and cadence for busy tone  
**ATA24/voip/tone/user\_defined> busy <Lowfreq> <Highfreq> <Ton1>**  
**<Toff1> <Ton2> <Toff2>**
- Display caller ID setting  
**ATA24/voip/tone/user\_defined> callerid -s**
- Edit caller id type  
**ATA24/voip/tone/user\_defined> callerid <Type>**
- Display the setting  
**ATA24/voip/tone/user\_defined> congestion -s**
- Edit frequency and cadence for congestion tone  
**ATA24/voip/tone/user\_defined> congestion <Lowfreq> <Highfreq>**  
**<Ton1> <Toff1> <Ton2> <Toff2>**
- Display user defined dial tone setting

- ATA24/voip/tone/user\_defined> dial -s**
- Edit frequency and cadence for dial tone  
**ATA24/voip/tone/user\_defined> dial <Lowfreq> <Highfreq> <Ton1> <Toff1> <Ton2> <Toff2>**
  - Display user defined ringing tone setting  
**ATA24/voip/tone/user\_defined> ringing -s**
  - Edit frequency and cadence for ringing tone  
**ATA24/voip/tone/user\_defined> ringing <Lowfreq> <Highfreq> <Ton1> <Toff1> <Ton2> <Toff2>**
  - Display the country of the tone setting  
**ATA24/voip/tone> region -s**
  - Choose the region for CPT setting  
**ATA24/voip/tone> region <Region Number>**
  - Display CPT tone timer setting  
**ATA24/voip/tone/ timer -s**
  - Edit CPT tone timer  
**ATA24/voip/tone/timer <Tone> <Timer>**

<b>&lt;Lowfreq&gt;</b>	(unit is HZ) (Default is 440)
<b>&lt;Highfreq&gt;</b>	(units is HZ) (Default is 480)
<b>&lt;Ton1&gt;</b>	(10msec per unit) (Default is 0)
<b>&lt;Toff1&gt;</b>	(10msec per unit) (Default is 0)
<b>&lt;Ton2&gt;</b>	(10msec per unit) (Default is 200)
<b>&lt;Toff2&gt;</b>	(10msec per unit) (Default is 400)
for user defined ring tone	
<b>&lt;Region Number&gt;</b>	Select one country area for using VoIP feature. There is one option User Defined for proprietary setting. 0 : User Defined 1 : Australia 2 : British (Default is 2) 3 : Canada 4 : China 5 : Denmark 6 : Finland 7 : France 8 : Germany 9 : Hong Kong 10 : India 11 : Japan 12 : Netherlands 13 : Norway 14 : Singapore 15 : Taiwan 16 : USA
<b>&lt;Tone&gt;</b> for CPT tone timer setting	1: Dial Tone 2: Busy Tone 3: Howler Tone 4: Ringing Tone



	5: Special Dial Tone 6: Call waiting Tone 7: Congestion Tone 8: Reorder Tone
<Timer>	Range: 0~300 <sec>

### A.7.10 Config Commands

- Help  
ATA24/voip>protocol ?
- Execute/activate VoIP setting  
ATA24/voip>config

### A.7.11 List Commands

- Help  
ATA24/voip>listcmds ?
- Display all VoIP CLI commands  
ATA24/voip>listcmds

### A.7.12 Protocol Commands

- Help  
ATA24/voip>protocol ?
- Display the setting  
ATA24/voip>protocol -s
- Set the voip protocol  
ATA24/voip>protocol <Protocol>

<Protocol>	0: MGCP, 1: SIP, 2:H.248
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