



# AT&T Business in a Box™

User Guide

*Version 1.0*

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# AT&T Business in a Box™

## Important Information - Please Read

### Contact and Support Information

Review the email you should have received from AT&T to determine the type of installation and service you have purchased.

For all AT&T Business in a Box<sup>SM</sup> service installation questions and technical issues, call 1-877-ATT-VDNA.

For more documentation support, go to the following URLs:

- <http://www.att.com/dna/support> (for information about FlexReach)
- <http://www.corp.att.com/bvoip/vdna/implementation/> (for information about VDNA)

Use the following login information:

- **Login:** att
- **Password:** attvoip



#### Caution

The Erase Button on the back or front of any of the managed devices contained in the Business in a Box should never be pressed.

Pressing the Erase button will reset the hardware, which will require either a replacement or/and onsite technician to reconfigure the hardware. Service will be disconnected until service can be restored. If the Erase button is pressed, please call AT&T for further support.

### Install & Administration

Business in a Box features the following two types of install programs:

- For **Onsite Installation**, an AT&T representative will arrive onsite at the specified date and time and complete the hardware installation. Please keep this document for your records.
- For **Telephone Installation (Tele-Install)**, please review the remainder of this document so you will be familiar with the equipment and connections when AT&T schedules the installation and turn-up of the equipment with you.

# Overview

The AT&T Business in a Box™ Converged Networking Router is an intelligent, all-in-one networking solution and provides the following important functions for converged networks:

- A Single Device or Set of Devices and Network Connections that provides combined Voice and Data Service for your business
- Business VoIP (using analog phones, PBX and VoIP Phones)
- Provides Quality of Service (QoS) for voice and data over the same network
- A Built-in Firewall That Provides Robust Security
- Wireless Access Supporting 802.11b/g clients

# Tele-Install Option Only

This section of the user guide should be used during the Telephone Installation (Tele-Install). The section provides support for checking package contents, mounting the AT&T Business in a Box™ equipment and connecting up power, computer Ethernet cables and phone lines/faxes. AT&T will contact you once your AT&T Business in a Box™ shipment has arrived to schedule the turn-up date and time for service activation.

## **Check the package contents:**

1. The AT&T Managed Internet Service (MIS) + circuit should already be installed and ready for the turn-up process.
2. Locate the new AT&T MIS+ T1 circuit installed location. The AT&T Business in a Box™ should be mounted near this location. The T1 cable will need to be connected between the CPE and the MIS+ demarcation (install point).
3. Check the package contents to ensure you have everything listed on the contents page of this section.
4. Procure a Phillips head screwdriver for mounting the CPE device.
5. Make sure you have the AT&T phone number for support if you experience problems after the install process is completed. The number is listed in "Contact and Support Information".

## **Complete these steps:**

1. Schedule the install date and time. AT&T will contact you for scheduling after the AT&T Business in a Box™ shipment has arrived.
2. Acquire a power strip for the components of the package.
3. Mount appliances.
4. Plug-in phones, cables, and phones.
5. Verify service is working as expected after all the install steps are completed with the Tele-Install representative.

# Contents of the Box

Please check to ensure all contents are present for the AT&T Business in a Box<sup>SM</sup> service. Direct any questions about the contents to your technical contact during the Tele-Install.

The contents of the box include:

- 1 base unit router (12 -or 24-port PoE)
  - Power adapter
  - Power cable
  - Screws for rack mount brackets
  - Rack mount brackets
  - WiFi antenna
  - 14' brown RJ-11 cable for v.90
  - Gray RJ-45 14' T1 straight-through cable

In addition, the contents can include these add-ons:

Up to three 8-port PoE switches\*, each of which includes the following components:

- Power supply, including power pack and power cord
- Rack mount brackets
- Screws for rack mount brackets
- Orange 14' RJ-45 straight-through Ethernet cable

Up to three 8-port analog expansion modules\*, each of which includes the following components:

- Power adapter
- Power cable
- Screws for rack mount brackets
- Rack mount brackets
- Orange RJ-45 14' straight-through Ethernet cable
- 4500 analog expansion module stencils
- Screws
- Cable tie
- Self adhesive cable tie base

Up to three 24-port PoE switches\*, each of which includes the following components

- Black null modem serial cable
- Power cord
- Rack mount brackets
- Screws for rack mount brackets
- Black plastic square feet for desktop installation
- Orange 14' RJ-45 straight-through Ethernet cable

\*Note: The color of the box may vary.

# Connecting the Power, Cables, and Devices

This section depicts the typical setup steps for mounting and plugging in the power, phone Internet T1 (MIS+ circuit), and local Ethernet (computer/switch data) cables.



## Warning

To reduce the risk of damage, always connect the AC power cord to an AC outlet suitable for the power supply that came with the unit.

- Connect one end of the AC power cord to the power adapter and the other end to the AC outlet (**Note:** the 24-port expansion module does not include a power adapter).
- Connect plug from the power adapter to the Power Connector on the AT&T Business in a Box™. Sometimes a little force is necessary to get the plug properly positioned.



## Caution

Secure the power adapter using a fastener or tie wrap to a nearby shelf so that it does not hang from the power connector.

To connect the power and the cables to the AT&T Business in a Box™, complete the following tasks:

Step 1. Connect the power and cables to the Base Unit Router (12-port PoE or 24-port PoE)

Optionally, you can complete one or both of the following steps:

- Optional step: Connect the power and cables to the 8-port or 24-port PoE switch
- Optional Step. Connect the power and cables to the analog expansion module(s)

Step 2. Connect devices (phones, computers, or fax)



## Step 1. Connect the power and cables to the Base Unit Router (12-port PoE or 24-port PoE)

### 24-Port PoE Base Unit Router

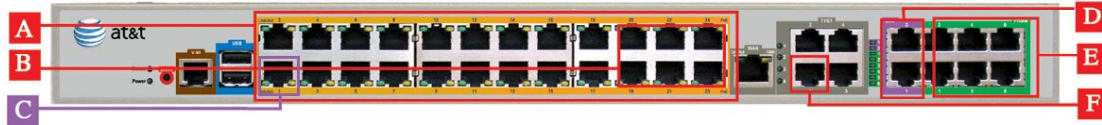


Figure 1: 24-port PoE Base Unit Router front panel

	Name	Description
A	Local Area Network (LAN)	24 x ports for the LAN on the public segment. Use Local Area Network (LAN) ports to connect to IP phones or add on devices for the Business in a Box solution. As a PoE port, these ports can also transfer electrical power to remote devices.  <b>Note: No peripheral devices should be plugged into Port 1</b> , which is reserved for access to the custadmin web administration GUI. For details on accessing the custadmin GUI, please refer to the “Configuration” section.
B	LAN ports	Recommended LAN ports for connecting the 8-port or 24-port PoE switches and 8-port analog expansion modules.  <b>Note:</b> Connect to these switches from the LAN port in descending order of LAN ports (beginning at LAN port 24).
C	Customer Administration LAN port	Reserved for access to the custadmin web administration GUI.  No peripheral devices should be plugged into Port 1. For details on accessing the custadmin GUI, please refer to the “Configuration” section.
D	FXO ports	2 x ports that retain functionality even in the case of a power outage.
E	FXS ports	6 x ports for connecting to voice devices.

	Name	Description
<b>F</b>	T1 WAN port	Port that connects to a T1 demarcation endpoint.

1. Connect one end of the gray RJ-45 14' T1 straight-through cable (labeled "T1") to the region denoted as "F" in Figure 1: 24-port PoE Base Unit Router front panel. Connect the other end to a T1 demarcation point.



**Figure 2: 24-port PoE Base Unit Router back panel**

	Name	Description
<b>A</b>	Wireless Antenna	Antenna for the wireless LAN.
<b>B</b>	Power	Accepts the plug from the supplied power cord to connect the unit to a power source.

2. If the wireless LAN will be enabled, connect the wireless antenna to the front of the Base Unit Router as shown in region "A" of Figure 2: 24-port PoE Base Unit Router back panel.
3. Following the guidelines at the beginning of this section, connect the appliance from region "B" of Figure 2: 24-port PoE Base Unit Router back panel to an AC outlet.

## 12-Port PoE Base Unit Router



**Figure 3: 12-port PoE Base Unit Router front panel**

	Name	Description
<b>A</b>	Local Area Network (LAN)	<p>12 x ports for the LAN on the public segment. Use Local Area Network (LAN) ports to connect to IP phones or add on devices for the Business in a Box solution. As a PoE port, these ports can also transfer electrical power to remote devices.</p> <p><b>Note: No peripheral devices should be plugged into Port 1</b>, which is reserved for access to the custadmin web administration GUI. For details on accessing the custadmin GUI, please refer to the “Configuration” section.</p>
<b>B</b>	LAN ports	<p>Recommended LAN ports for connecting the 8-port or 24-port PoE switches and 8-port analog expansion modules.</p> <p><b>Note:</b> Connect to these switches from the LAN port in descending order of LAN ports (beginning at LAN port 12).</p>
<b>C</b>	Customer Administration LAN port	<p>Reserved for access to the custadmin web administration GUI.</p> <p>No peripheral devices should be plugged into Port 1. For details on accessing the custadmin GUI, please refer to the “Configuration” section.</p>
<b>D</b>	FXO ports	<p>2 x ports that retain functionality even in the case of a power outage.</p>
<b>E</b>	FXS ports	<p>6 x ports for connecting to voice devices.</p>

	Name	Description
<b>F</b>	T1/E1 WAN port	Port that connects to the T1 demarcation endpoint.

1. Connect one end of the gray RJ-45 14' T1 straight-through cable (labeled "T1") to the region denoted as "F" in Figure 3: 12-port PoE Base Unit Router front panel. Connect the other end to a T1 demarcation point.



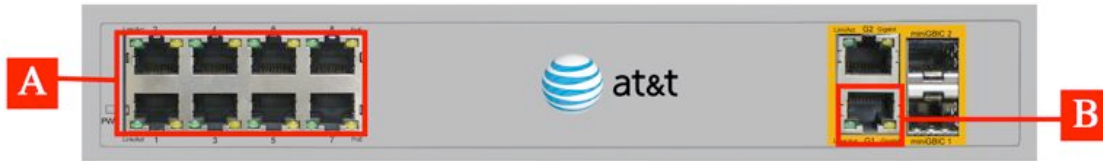
**Figure 4: 12-port PoE Base Unit Router back panel**

	Name	Description
<b>A</b>	Wireless Antenna	Antenna for the wireless LAN.
<b>B</b>	Power	Accepts the plug from the supplied power cord to connect the unit to a power source.

2. If you will be using the wireless LAN, connect the wireless antenna to the front of the Base Unit Router as shown in region "A" of Figure 4: 12-port PoE Base Unit Router back panel.
3. Following the guidelines at the beginning of this section, connect the appliance from region "B" of Figure 4: 12-port PoE Base Unit Router back panel to an AC outlet.

## Optional step: Connect the power and cables to the 8-port or 24-port PoE switch

### 8-Port PoE switch



**Figure 5: 8-port PoE switch front panel**

	Name	Description
<b>A</b>	Local Area Network PoE ports (LAN)	8 x ports (10/100 mbps only) for the LAN on the private segment. Use Local Area Network (LAN) ports to connect to IP phones or an Ethernet switch. As a PoE port, these ports can also transfer electrical power to remote devices.
<b>B</b>	10/100/1000 Gigabit Ethernet uplink port	Ethernet port that connects to the base unit router.  <b>Note:</b> Do not plug in peripheral devices to this port.

1. Connect one end of the orange RJ-45 cable (labeled “Ethernet”) that is provided with each PoE switch to the highest numbered available port on the base unit router, as shown in region “B” of Figure 1: 24-port PoE Base Unit Router front panel and Figure 3: 12-port PoE Base Unit Router front panel. Connect the other end of the cable to region “B” of the PoE switch, as shown in Figure 5: 8-port PoE switch front panel.

**Note:** You may add up to three PoE switches.



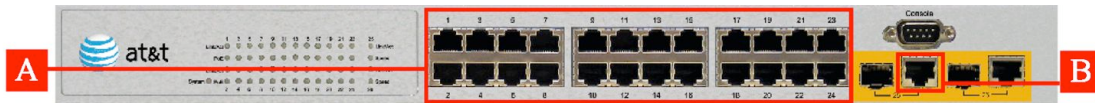
**Figure 6: 8-port PoE switch back panel**

	Name	Description
<b>A</b>	Power	Accepts the plug from the supplied power cord to connect the unit to a power source.

**Following the guidelines at the beginning of this section, connect the appliance from region “A” of**

2. Figure 6: 8-port PoE switch back panel to an AC outlet.

### 24-Port PoE switch



**Figure 7: 24-port PoE switch front panel**

	Name	Description
<b>A</b>	Local Area Network PoE ports (LAN)	24 x ports (10/100 mbps only) for the LAN on the private segment. Use Local Area Network (LAN) ports to connect to IP phones or an Ethernet switch. As a PoE port, these ports can also transfer electrical power to remote devices.
<b>B</b>	10/100/1000 Gigabit Ethernet uplink port	Ethernet port that connects to the base unit router. <b>Note:</b> Do not plug in peripheral devices to this port.

1. Connect one end of the orange RJ-45 cable (labeled “Ethernet”) that is provided with each PoE switch to the highest numbered available port on the base unit router, as shown in region “B” of Figure 1: 24-port PoE Base Unit Router front panel and Figure 3:

12-port PoE Base Unit Router front panel. Connect the other end of the cable to region "B" of region "B" of the PoE switch, as shown in Figure 7: 24-port PoE switch front panel.

**Note:** You can add up to three PoE switches.



**Figure 8: 24-port PoE switch back panel**

	Name	Description
A	Power	Accepts the plug from the supplied power cord to connect the unit to a power source.

- Following the guidelines at the beginning of this section, connect the appliance from region "A" of Figure 8: 24-port PoE switch back panel to an AC outlet.

**Optional Step. Connect the power and cables to the analog expansion module(s)**



**Figure 9: 8-port analog expansion module**

	Name	Description
A	Ethernet WAN port	Connects the analog expansion module to the base unit router.

	Name	Description
B	Power	Accepts the plug from the supplied power cord to connect the unit to a power source.
C	FXS Ports	8 x ports for connecting to voice devices.

1. Connect one end of the orange RJ-45 cable (labeled "Ethernet") that is provided with the analog expansion module to the highest numbered port (located in region "B" of Figure 1: 24-port PoE Base Unit Router front panel and Figure 3: 12-port PoE Base Unit Router front panel) of the base unit router. Connect the other end to the Ethernet port (labeled as region "A" in Figure 9: 8-port analog expansion module) on the analog expansion module.
2. If more than one analog expansion module will be used, connect another orange RJ-45 cable (labeled "Ethernet") to the next highest numbered port (located in region "B" of Figure 1: 24-port PoE Base Unit Router front panel and Figure 3: 12-port PoE Base Unit Router front panel) of the base unit router. Connect the other end to the Ethernet port (labeled as region "A" in Figure 9: 8-port analog expansion module) on the analog expansion module.
3. Connect up to three 8-port analog expansion modules, repeating steps 1 and 2, as needed.
4. Connect region "B" of each appliance as noted in Figure 9: 8-port analog expansion module to an AC outlet.

## Step 2. Connect devices (phones, computers, or fax)

1. Connect devices to the public LAN segment of the network in region "A" of Figure 1: 24-port PoE Base Unit Router front panel or Figure 3: 12-port PoE Base Unit Router front panel.
2. Connect devices to the private LAN segment of the network in region "A" of Figure 5: 8-port PoE switch front panel or Figure 7: 24-port PoE switch front panel.
3. Connect devices to the FXS/FXO ports of the base unit router, located in regions "D" and "E" of Figure 1: 24-port PoE Base Unit Router front panel or Figure 3: 12-port PoE Base Unit Router front panel.
4. Connect devices to the FXS ports of the analog expansion modules, located in region "C" of Figure 9: 8-port analog expansion module.



# Configuration

The following topics in this section will provide you with more information about how to complete configuration of your devices to the network:

- Configuring the Base Unit Router and analog expansion modules
- VDNA Configuration
- FlexReach Configuration

## Configuring the Base Unit Router and analog expansion modules

Before completing either a FlexReach or VDNA configuration, you must connect directly to the web configuration GUI of the Base Unit Router and any connected analog expansion modules.

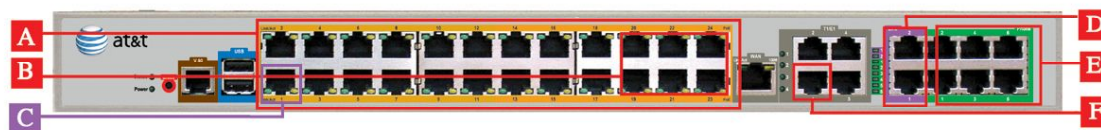
The following topics provide more information about how to connect and configure each managed device:

- Configure the Base Unit Router
- Configure the wireless settings of the Base Unit Router
- Connect to the wireless network of the Base Unit Router with a PC
- Configure the analog expansion module

### Configure the Base Unit Router

1. Connect the orange 14' RJ-45 straight-through cable (labeled "Ethernet") to LAN port 1, located on the front panel of the base unit router or analog expansion module.

LAN port 1 is located in region "C", as shown below:



**Figure 10: 24-port PoE Base Unit Router front panel**

2. Launch a web browser on the PC and enter the following URL:  
<http://1.1.1.1>

**Note:** If you have not received an IP address for your connected

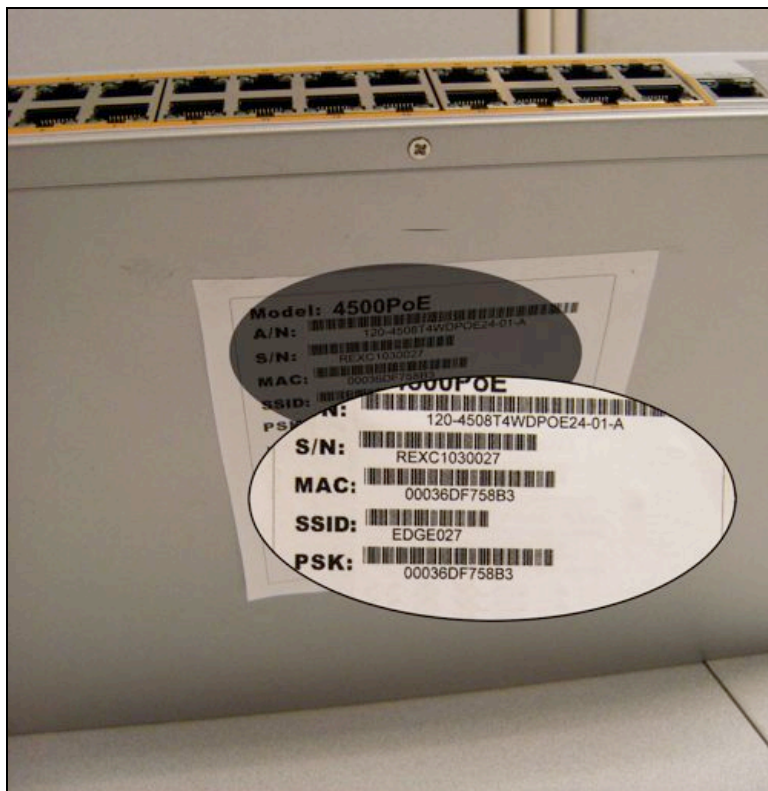
device via DHCP, you must statically assign your IP address to 1.1.1.2

3. A login window similar to the following should appear:



4. Enter "custadmin" in the **User name** field and the last six characters of the MAC address in the **Password** field.

5. You can locate the MAC address on the bottom side of the base unit router, as shown in the following figure:



**Figure 11: Location of the MAC address**

**Example Password:** FFD421

**IMPORTANT:** When entering the MAC address, always use uppercase characters.

6. The “System” page of the web configuration GUI appears.

## Configure the wireless settings of the Base Unit Router

**Prerequisite task:** Log on to the base unit router as described in Configure the Base Unit Router.

1. Choose **System > Wireless**.
2. The following screen appears:

3. Select the checkbox at the top of the screen to enable wireless capabilities.

To change the pre-populated default settings, refer to the following table:

Field	Description
<b>Network SSID</b>	Follows the format of “EDGE” and the last three characters of the serial number, which is always in uppercase characters. Located on the bottom of the base unit router.
<b>Wireless mode</b>	<b>Available modes:</b> 802.11a, 802.11b, 802.11g, and 802.11b/g

Field	Description
<b>Channel</b>	<b>Channels for 802.11a:</b> 36-64 (at intervals of 4) <b>Channels for 802.11 b &amp; g:</b> 1-11. <b>Default:</b> 6
<b>Power Level</b>	<b>Default:</b> 4
<b>Pre-Shared Key (PSK)</b>	Used by endpoints to log into the wireless network. The PSK is the full MAC address and always consists of uppercase characters or numbers.  Located on the bottom of the Base Unit Router.
<b>Key Renewal Interval</b>	Number of seconds between attempts to automatically synchronize the pre-shared keys.  <b>Default number of seconds:</b> 3600.

4. Click **Submit**.

## Connect to the wireless network of the Base Unit Router with a PC

### Prerequisite task:

Configure the wireless settings of the Base Unit Router

1. Open the PC's wireless utility and connect to the wireless network of the Base Unit Router. The name of the wireless network is the **Network SSID**.

**Note:** The Network SSID is specified in the System panel of the web configuration GUI of the device.

2. In the password field, enter the Pre-Shared Key (PSK). You can locate the PSK on the bottom of the device as specified in the following figure.

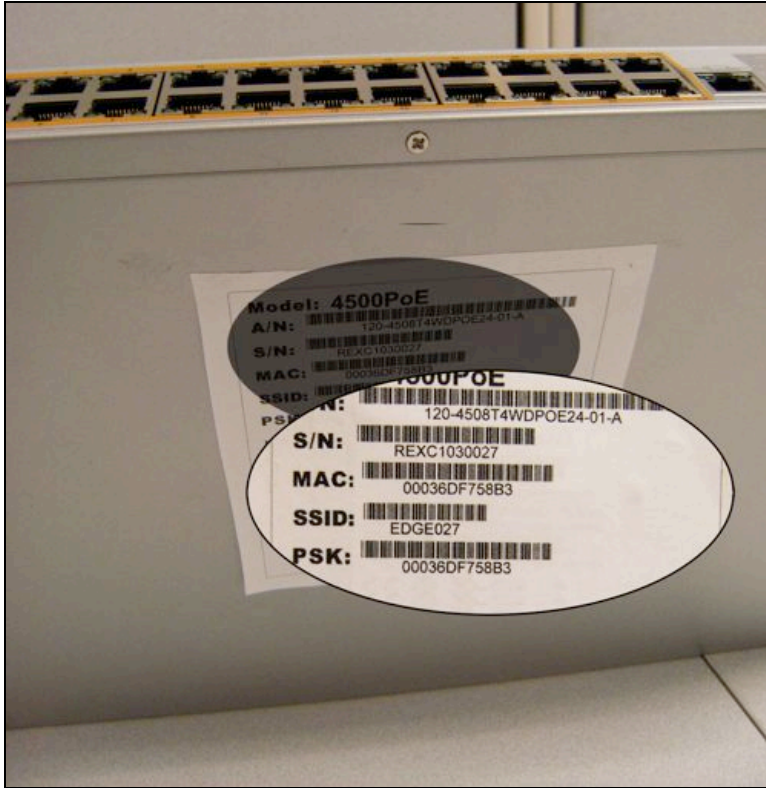


Figure 12: Location of the PSK

3. Connect to the wireless network.

### Configure the analog expansion module

1. Connect the orange 14' RJ-45 straight-through cable (labeled "Ethernet") to LAN port 4, located on the front panel of the Base Unit Router or analog expansion module.

LAN port 4 is located in region "D", as shown below:



Figure 13: 8-port analog expansion module back panel

2. Launch a web browser on the PC and enter the following URL:  
<http://1.1.1.1>

**Note:** If you have not received an IP address for your connected

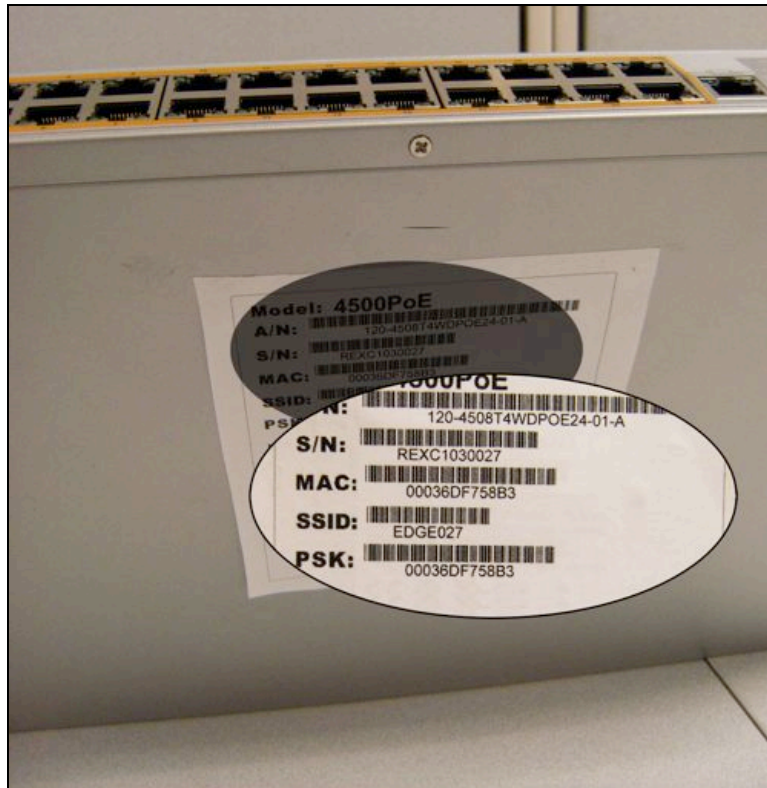
device via DHCP, you must statically assign your IP address to 1.1.1.2

The following login window appears:



3. Enter "custadmin" in the **User Name** field and the last six characters of the MAC address in the **Password** field.

You can locate the MAC address on the bottom side of the appliance, as shown in the following figure:



**Figure 14: Location of the MAC address**

**Example Password: F758B3**

**IMPORTANT:** When entering the Network SSID, always use uppercase characters.

4. The “System” page of the web configuration GUI appears

## VDNA Configuration

VDNA configuration is completed at the AT&T Business Direct Portal at <http://www.businessdirect.att.com>. You will receive an email that contains instructions detailing how log on to the AT&T Business Direct Portal.

**Note:** All voice devices connected to AT&T Business in a Box™ with VDNA must be configured to tag their incoming and outgoing IP packets with VLAN ID=100.

## FlexReach Configuration

### FlexReach Configuration

To complete your FlexReach configuration, connect directly to the base unit router and analog expansion modules and log on to the custadmin web configuration GUI. You can connect to the base unit router using an Ethernet cable or a wireless connection. A connection with an analog expansion module can only be established using an Ethernet cable.

After a connection has been established, in the custadmin GUI, assign SIP usernames that are registered on your soft switch to each port to which your devices are connected. You can also create hunt groups to which each port and connected device on the base unit router and analog expansion modules can be assigned.

The following topics in this section provide more information about connecting and completing configuration for your FlexReach installation.

- Assigning SIP usernames to connected devices
- Creating a Hunt Group
- Creating SIP Trunking rules
- Creating an Extended Hunt Group

### Assigning SIP usernames to connected devices

#### Prerequisite task(s):

“Configure the Base Unit Router”,



“Configure the wireless settings of the Base Unit Router” and  
“Connect to the wireless network of the Base Unit Router with a PC”,  
or “Configure the analog expansion module”.

1. Choose **SIP UA** from the web configuration menu.

The screen appears as below:

**FXS/Phone Port Settings - Basic** [Help](#)

SIP UA allows voice call from Analog port to IP or PSTN  
**UA is currently bound to 192.168.1.252:1025**

---

**Global configuration:**

Enable SIPUA:

Use SIP Username for SIP authentication:

Codec Preference:

Use Preferred codec only:

Use REFER for transfer:

Register with proxy:

---

**Port 1 Configuration:**

Hook state: **On-hook**

SIP Display name:

SIP Username:

SIP Authentication name:

Password:

2. Select the checkbox **Enable SIPUA**.

**Note:** Leave all fields not explicitly mentioned here at their default values. These are correct for the AT&T FlexReach service.

3. For each corresponding FXS port connected to the device (either the base unit router or an analog expansion module), enter a SIP username.

**Note:** The SIP username must be associated with a DID that is stored on the SIP server. It must be the full 10-digit DID (not just the extension).

4. Click **Submit**.

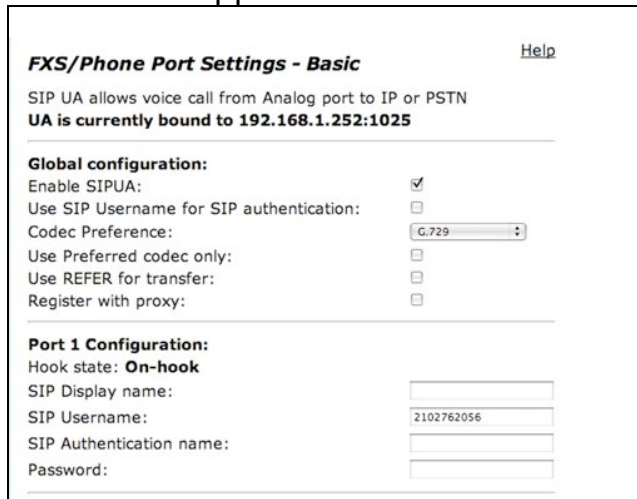
## Creating a Hunt Group

### Prerequisite task(s):

- “Configure the Base Unit Router”,  
“Configure the wireless settings of the Base Unit Router” and  
“Connect to the wireless network of the Base Unit Router with a PC”,  
or “Configure the analog expansion module”.
- “Assigning SIP usernames to connected devices”

1. Choose **SIP UA** from the web configuration menu.

The screen appears as below:



The screenshot shows a web configuration page titled "FXS/Phone Port Settings - Basic" with a "Help" link. Below the title, it states "SIP UA allows voice call from Analog port to IP or PSTN" and "UA is currently bound to 192.168.1.252:1025". The page is divided into two sections: "Global configuration" and "Port 1 Configuration".

**Global configuration:**

- Enable SIPUA:
- Use SIP Username for SIP authentication:
- Codec Preference:
- Use Preferred codec only:
- Use REFER for transfer:
- Register with proxy:

**Port 1 Configuration:**

- Hook state: **On-hook**
- SIP Display name:
- SIP Username:
- SIP Authentication name:
- Password:

2. Assign the primary Hunt DID as the SIP username to one FXS port. The primary Hunt DID is the external phone number by which the Hunt group and members of the Hunt group can be reached.
3. For each additional FXS port that will be a member of the hunt group, enter a four digit fake DID.

**Recommendation:** Use BBPP format for fake DIDs, where BB stands for the device number and PP stands for the port number.

4. Click **Submit**.
5. Choose **SIP UA > Advanced** from the web configuration menu.

The screen appears as below:

[Help](#)

### FXS/Phone Port Settings - Advanced

This Page allows advance configuration of FXS/Phone ports..

[Reset to Defaults](#)

---

**Global configuration:**

Enable SIPUA:	<input checked="" type="checkbox"/>
Bind to LAN:	<input checked="" type="checkbox"/>
SIPUA IP Address:	<input type="text"/>
SIPUA bind Port:	<input type="text"/>
Conference URI:	<input type="text"/>
Domain:	<input type="text"/>
RTP Min Port:	<input type="text" value="20000"/>
RTP Max Port:	<input type="text" value="20050"/>
Outbound Proxy Server IP:	<input type="text"/>
Outbound Proxy Server Port:	<input type="text"/>
Termination Impedance:	<input type="text" value="600r ohms"/>
Dialed in prefix(Incoming from IP network):	<input type="text"/>
CPC(Call Party Control) timer (in milliseconds):	<input type="text" value="510"/>
Inter Digit Delay timer(In seconds):	<input type="text" value="4"/>
Enable Call Waiting:	<input checked="" type="checkbox"/>
Internal Call Ring:	<input type="text" value="Ring-0"/>
External Call Ring:	<input type="text" value="Ring-0"/>
Hunt Group DID:	<input type="text" value="2102763057"/>
VAD Enable:	<input type="text" value="On"/>

---

**Port 1 Configuration:**

Codec Preference:	<input type="text" value="Global Setting"/>
Use Preferred codec only:	<input type="checkbox"/>
Domain:	<input type="text"/>
Outbound Proxy Server IP:	<input type="text"/>
Outbound Proxy Server Port:	<input type="text"/>
Analog Receive gain:	<input type="text" value="0dB"/>
Analog Transmit gain:	<input type="text" value="0dB"/>
Member of HUNT group:	<input type="checkbox"/>
Enable Call Waiting:	<input checked="" type="checkbox"/>
VAD Enable:	<input type="text" value="Global Setting"/>
Hotline number:	<input type="text"/>

---

**Port 2 Configuration:**

Codec Preference:	<input type="text" value="Global Setting"/>
Use Preferred codec only:	<input type="checkbox"/>
Domain:	<input type="text"/>
Outbound Proxy Server IP:	<input type="text"/>
Outbound Proxy Server Port:	<input type="text"/>
Analog Receive gain:	<input type="text" value="0dB"/>
Analog Transmit gain:	<input type="text" value="0dB"/>
Member of HUNT group:	<input checked="" type="checkbox"/>
Enable Call Waiting:	<input type="checkbox"/>
VAD Enable:	<input type="text" value="Global Setting"/>
Hotline number:	<input type="text"/>

6. Select the HUNT Group DID from the pull down menu.
7. For each FXS port that will be a member of the HUNT Group DID, Select the **Member of HUNT Group** checkbox.
8. De-select the **Enable Call Waiting** checkbox.
9. Click **Submit**.

## Creating SIP Trunking Rules

### Prerequisite task(s):

- “Configure the Base Unit Router”,
- “Configure the wireless settings of the Base Unit Router” and
- “Connect to the wireless network of the Base Unit Router with a PC”,
- or “Configure the analog expansion module”.
- “Assigning SIP usernames to connected devices”

To create a SIP trunking rule, complete the following additional steps:

1. Choose **VoIP ALG > SIP > Trunking Rules**.
2. A screen similar to the following page appears:

**SIP Trunking**
[Help](#)

Configuration of SIP trunking devices.

---

**SIP Trunking devices**

A SIP trunking device can be a PSTN gateway, or similar device, that does not issue REGISTER messages. Calls will be forwarded to the device based on the dial-plan rules below.

If VLANs are enabled, the SIP trunking device needs to be in the same VLAN as defined in the VoIP ALG page.

SIP Trunking Devices			
	Address	Port	Name
<input type="checkbox"/>	192.178.10.252	1025	ua
<input type="checkbox"/>	192.178.10.4	5060	hunttwo

**Add a trunking device**

Action: Add new trunking device

Name:

Address:

Port:

Extended hunt group:

Commit Reset

**Header Transformation**

These header transformation rules are applied to all SIP trunking devices. They define how specified SIP headers should be transformed when forwarding to the SIP Server.

**From Header**

Select the domain to use in From header when sending requests to the SIP Server:

SIP Server Address (default)

System WAN IP

Commit Reset

3. In the **Add a trunking device** section, if necessary, provide the address and port for the SIP Trunking device.

**Note:** Enter the IP address and port number for each analog

expansion module which will host devices that are part of the Hunt Group.

4. In the **From Header** section, confirm that the **System WAN IP** checkbox is selected.
5. In the **Rules** section, add the new sip trunking rule. See “Example SIP Trunking rule” for an example.

**Note:** When specifying a pattern match, enter a subset of digits from the primary HUNT Group DID. This subset of digits is how the SIP server identifies the HUNT Group DID. The subset often consists of the last two or three digits of the DID. Consult with AT&T Support to confirm how the SIP Server identifies your primary HUNT Group DID.

6. Click **Submit**.

## Creating an Extended Hunt Group

### Prerequisite tasks:

- “Configure the Base Unit Router”,  
“Configure the wireless settings of the Base Unit Router” and  
“Connect to the wireless network of the Base Unit Router with a PC”,  
or “Configure the analog expansion module”.
- “Assigning SIP usernames to connected devices”
- “Creating a Hunt Group”

The Business in a Box allows you to create an extended Hunt Group comprised of devices hosted both on the base unit router and analog expansion modules.

To create an extended hunt group, complete the following steps:

1. Complete the steps as described in the task “Creating a Hunt Group” for each device that will be part of the Extended Hunt Group.
2. Connect to the base unit router using the steps described in “Configure the Base Unit Router using an Ethernet cable” or “Configure the Base Unit Router using a wireless connection”.
3. Choose **SIPUA > Advanced** from the web configuration menu.

Scroll to the bottom of the page.

A screen appears similar to the following figure:

The screenshot shows a configuration page with two main sections. The first section, titled "Port 6 Configuration:", includes fields for "Codec Preference" (with a "Global Setting" dropdown), "Use Preferred codec only" (checkbox), "Domain" (text input), "Outbound Proxy Server IP" (text input), "Outbound Proxy Server Port" (text input), "Analog Receive gain" (ODB dropdown), "Analog Transmit gain" (ODB dropdown), "Member of HUNT group" (checkbox), "Enable Call Waiting" (checkbox, checked), "VAD Enable" (Global Setting dropdown), and "Hotline number" (text input). The second section, titled "Extended Hunt Group Members", has "Name" and "Address" text inputs, an "Add to list" button, and a list box containing two SIP addresses: "sip:2102762056@192.178.10.4" and "sip:8888@192.178.10.4". To the right of the list box are "Move Up", "Delete", and "Move Down" buttons. At the bottom of the form are "Submit" and "Reset" buttons.

4. In the **Extended Hunt Group Members** section, add the full SIP username and IP address of the analog expansion module that contains the other hunt group members.

5. Click **Add**.

**Note:** SIP usernames that are higher in the list will be dialed first.

### Example SIP Trunking rule

If internal users (on the LAN) should only be able to dial using 7 digit dialing, add the following trunk rule by completing the following steps:

1. Choose **VoIP ALG > SIP > Trunking Rules**.

A screen similar to the following page appears:

**SIP Trunking** [Help](#)

Configuration of SIP trunking devices.

---

**SIP Trunking devices**

A SIP trunking device can be a PSTN gateway, or similar device, that does not issue REGISTER messages. Calls will be forwarded to the device based on the dial-plan rules below.

If VLANs are enabled, the SIP trunking device needs to be in the same VLAN as defined in the VoIP ALG page.

SIP Trunking Devices		
Select:	Address	Port
<input type="checkbox"/>	192.178.10.252	1025
<input type="checkbox"/>	192.178.10.4	5060

**Add a trunking device**

Action: Add new trunking device

Name:

Address:

Port:

Extended hunt group

**Header Transformation**

These header transformation rules are applied to all SIP trunking devices. They define how specified SIP headers should be transformed when forwarding to the SIP Server.

**From Header**

Select the domain to use in From header when sending requests to the SIP Server:

SIP Server Address (default)

System WAN IP

3. In the **Add a trunking device** section, if necessary, provide the address and port for the SIP Trunking device.

**Note:** Enter the IP address and port number for each analog expansion module which will host devices that are part of the Hunt Group.

4. In the **From Header** section, confirm that the **System WAN IP** checkbox is selected.
5. In the **Rules** section, add the following new rule:
  - a. For the **Type** field, select **Outbound** from the drop down menu.
  - b. In the **Pattern-match** field, enter "XXXXXX".
  - c. In the **Add string** field, enter the first three digits of the SIP username as it is stored on the SIP server.

- d. Select the trunking device that hosts the primary HUNT group DID from the Trunking device drop down menu.
6. Click **Submit**.



# Appendix A: Images



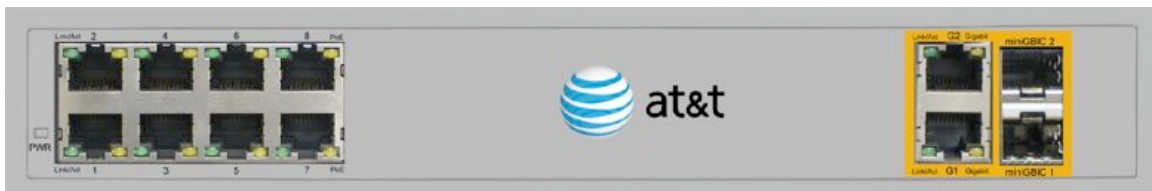
**Figure 15: 24-Port PoE Base Unit Router Front Panel (no port descriptions)**



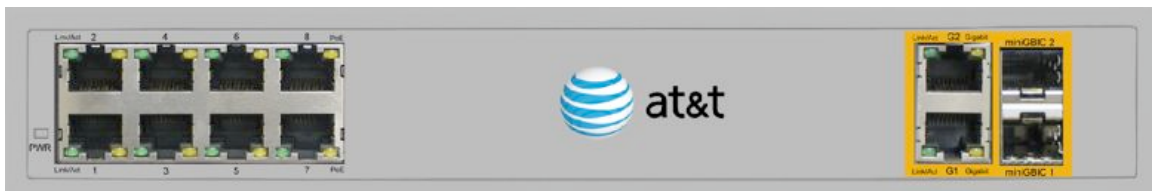
**Figure 16: 12-Port PoE Base Unit Router Front Panel (no port descriptions)**



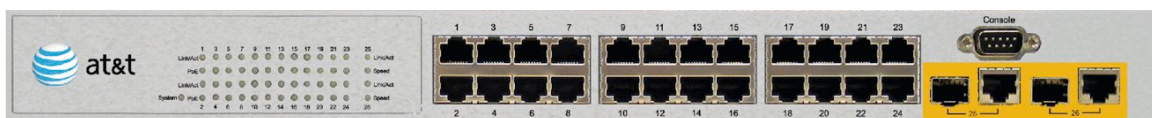
**Figure 17: 12-Port or 24-Port PoE Base Unit Router Back Panel (no port descriptions)**



**Figure 18: 8-Port PoE switch front panel (no port descriptions)**



**Figure 19: 8-Port PoE switch front panel (no port descriptions)**



**Figure 20: 24-Port PoE switch front panel (no port descriptions)**



**Figure 21: 24-Port PoE Base Unit Router Back Panel (no port descriptions)**



**Figure 22: 8-port analog Expansion Module Back Panel (no port descriptions)**

# Appendix B: Legal Notice

This AT&T Business in a Box User Guide ("Guide") is offered as a convenience to AT&T's customers. The specifications and information regarding the product in this Guide are subject to change without notice. All statements, information, and recommendations in this Guide are believed to be accurate but are presented without warranty of any kind, express or implied, and are provided "AS IS". Users must take full responsibility for the application of the specifications and information in this Guide.

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