

User manual  
**CDMA EV-DO Rev. B**  
**Mobilt Bredband**  
**Wi-Fi Router R90**



## Important Notice

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Due to the nature of wireless communications, transmission and reception of data can never be guaranteed. Data may be delayed, corrupted (i.e., have errors) or be totally lost. Although significant delays or losses of data are rare when wireless devices such as the router are used in a normal manner with a well-constructed network, the router should not be used in situations where failure to transmit or receive data could result in damage of any kind to the user or any other party, including but not limited to personal injury, death or loss of property. Axesstel accepts no responsibility for damages of any kind resulting from delays or errors in data transmitted or received using the Axesstel router or for failure of the Axesstel router to transmit or receive such data.

## Safety Precautions

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Do not operate the router:

- In areas where blasting is in progress
- Where explosive atmospheres may be present
- Near medical equipment
- Near life support equipment or any equipment that may be susceptible to any form of radio interference. In such areas, the router **MUST BE POWERED OFF**. The Axesstel router can transmit signals that could interfere with this equipment.

Do not operate the router in any aircraft, whether the aircraft is on the ground or in flight. In aircraft, the router **MUST BE POWERED OFF**. When operating, the router can transmit signals that could interfere with various onboard systems.

Note: Some airlines may permit the use of cellular phones while the aircraft is on the ground and the door is open. The router may be used at this time.

The driver or operator of any vehicle should not operate the router while in control of a vehicle. Doing so will detract from the driver or operator's control and operation of that vehicle. In some states and provinces, operating such communications devices while in control of a vehicle is an offense.

## Limitation of Liability

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## 1 Introduction

Thank you for purchasing the Ice.net R90 EV-DO router. This user manual will help you setup, configure and outline best practices for maximizing your wireless home network performance with the router.

## 2 Product Overview

In minutes, you will be able to connect your computers to the Internet, share your Internet connection and network your computers. The following is a list of features that make your new Ice.net EV-DO router an ideal solution for your home or small office network. Implementation of these features depends on the particular service provider and account features you have chosen.

Some features described in this manual may not be supported by your service provider or may not be available with your network account. For details of the services and accounts available, contact your service provider.

### **Plug-and-Play**

- Your router was factory-set for compatibility with a particular service provider. Thus, your router operates on radio channels and enables services specific to your network service provider. Once your router has been activated on your service provider's network, you can connect to the Internet. After your router is activated, connect it to your computer using the Ethernet (RJ-45) cable or via WiFi. You are now ready to use the Internet.

### **Web-Based Advanced User Interface**

You can easily setup the router's advanced functions through your web browser and without having to install additional software onto your computer. There are no drivers to install and, you can easily make changes and perform setup functions from any computer which is connected to your R90

- NAT IP Address Sharing
- Support for VPN Pass Through
- Built in Dynamic Host Configuration Protocol (DHCP)
- Integrated 802.11b/g/n Wireless Access Point
- MAC Address Filtering

### **Integrated 10/100 4-Port Switch**

The R90 has a built-in, 4-port network switch to allow your wired computers to share printers, data and MP3 files, digital photos, and much more. The switch features automatic detection so it will adjust to the speed of connected devices. The switch will transfer data between computers and the Internet simultaneously without interrupting or consuming resources.

### **Integrated 802.11 b/g/n Wireless Access Point**

The R90 supports Wi-Fi modes b/g and n. Your router as default is set to Wi-Fi mode g. To use mode n you can change this by logging into the web interface (instructions are in section 3.10). Although, please ensure that your Wi-Fi card supports n mode.

## 2.1 Placement of your R90

Place your R90, the central connection point of your network, as close as possible to windows or in rooms at the outer side of your house. If you also use the Wi-Fi feature of the R90, it should be placed near the center of your wireless network devices.

To achieve the best wireless network coverage:

- ◆ Ensure that your R90's networking antennas are parallel to each other, and are positioned vertically (toward the ceiling). If your R90 itself is positioned vertically, point the antennas as much as possible in an upward direction. In multistory homes, place the R90 on an upper floor.
- ◆ Avoid placing your R90 near devices that may emit radio "noise," such as microwave ovens. Dense objects can interfere with wireless communication
- ◆ If your wireless signal seems weak in some areas, try to move the R90 to another location while observing the signal strength indicator

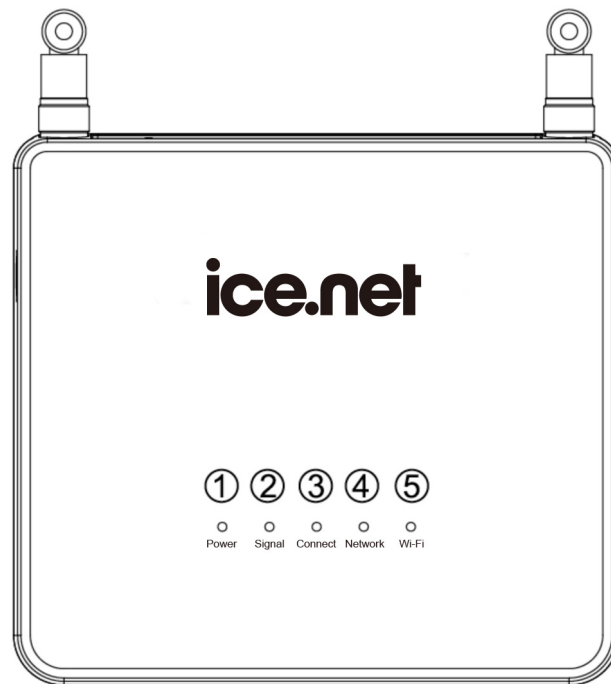
### 3 Using your Router

#### 3.1 Package Contents

- R90 EV-DO Rev B router
- Antennas
- RJ-45 Ethernet Networking Cable
- Power Supply (230V)
- Car Charger (12V)
- Quick Installation Guide
- CD with Complete User Manual

#### 3.2 Router Interfaces

The R90 is designed to be placed on a desktop or wall mounted. All the ports at the back of the router are for better organization and utility. The LED indicators are easily visible on the top of the router to provide you with information about network activity and status.



#### 3.3 Power LED

| LED Color         | AC Mode           | Battery Mode      |
|-------------------|-------------------|-------------------|
| OFF               | No Power          | No Power          |
| Blue Solid        | Adaptor Connected | Fully Charged     |
| Blue Blinking(3s) | In Charging       | -                 |
| Blue Blinking(1s) | -                 | Low Level Charged |

### 3.4 Signal Strength LED

This LED indicates the signal strength of the CDMA network serving the router.

| LED Color         | Status          |
|-------------------|-----------------|
| OFF               | No CDMA signal  |
| Blue              | Strongest Level |
| Blue Blinking(3s) | Medium Level    |
| Blue Blinking(1s) | Low Level       |

### 3.5 Connect LED

This LED informs you that the router is connected to a wireless network and that your user ID and password have been validated.

| LED Color | Status                   |
|-----------|--------------------------|
| OFF       | No connection            |
| Blue      | - In Data use: Connected |

### 3.6 Network LED

This LED informs you that the router is tuned to the wireless network. Your router is programmed to search and use an EV-DO network.

| LED Color | Status     |
|-----------|------------|
| OFF       | No Network |
| Blue      | EV-DO      |

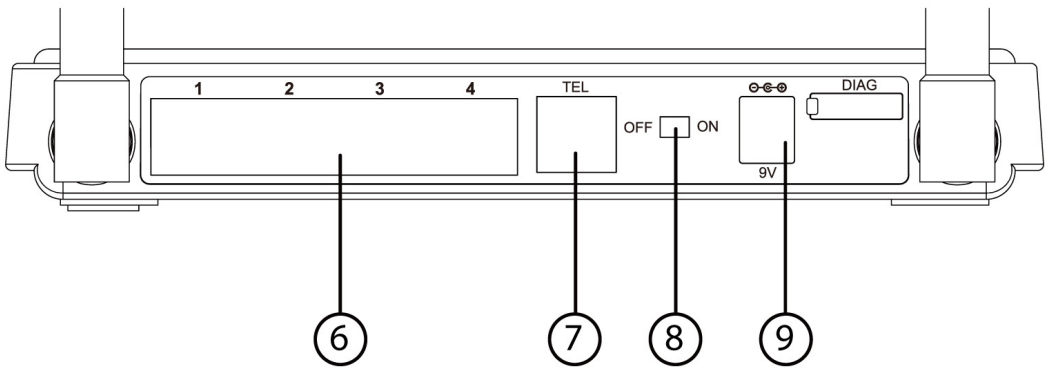
### 3.7 Wi-Fi LED

This LED indicates the status of your WiFi connection.

| LED Color     | Status                             |
|---------------|------------------------------------|
| OFF           | No Wi-Fi                           |
| Blue Solid    | Wi-Fi network within R90 activated |
| Blue Blinking | Data passing through Wi-Fi         |

### 3.8 Other Features

- (6) Network connections to Computers (RJ-45/Ethernet)
- (7) Phone line (RJ-11)
- (8) Power On/Off Switch
- (9) Power Jack



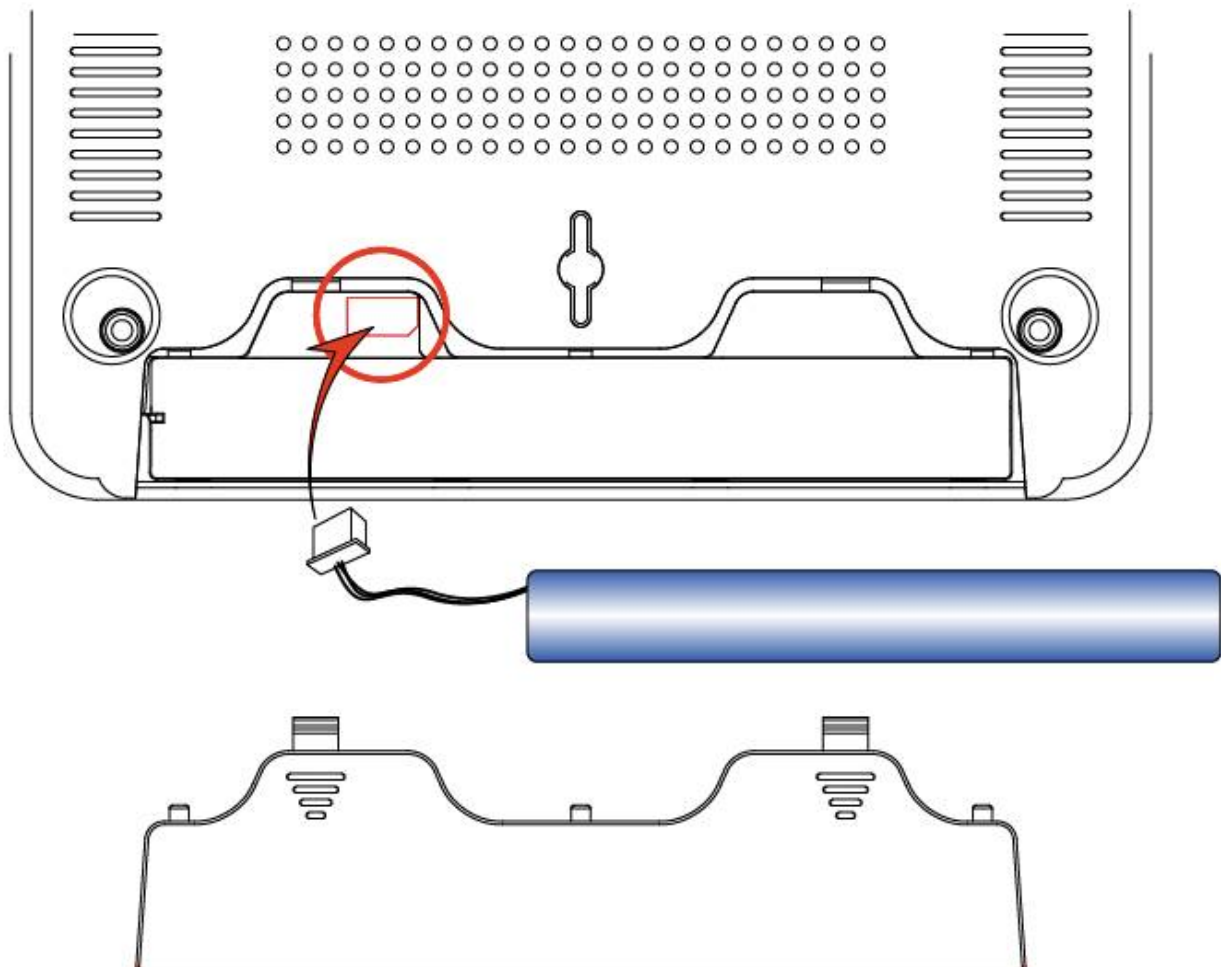
### 3.9 Rechargeable Battery

The R90 comes with the rechargeable battery already pre-installed. It is natural that over time the battery performance will degrade. If you need to remove and replace your battery please follow the instructions below

Before removing or inserting the battery, please ensure that you disconnect the power supply, and move the power switch on the R90 to the OFF position.

#### **Removing / Replacing the Battery**

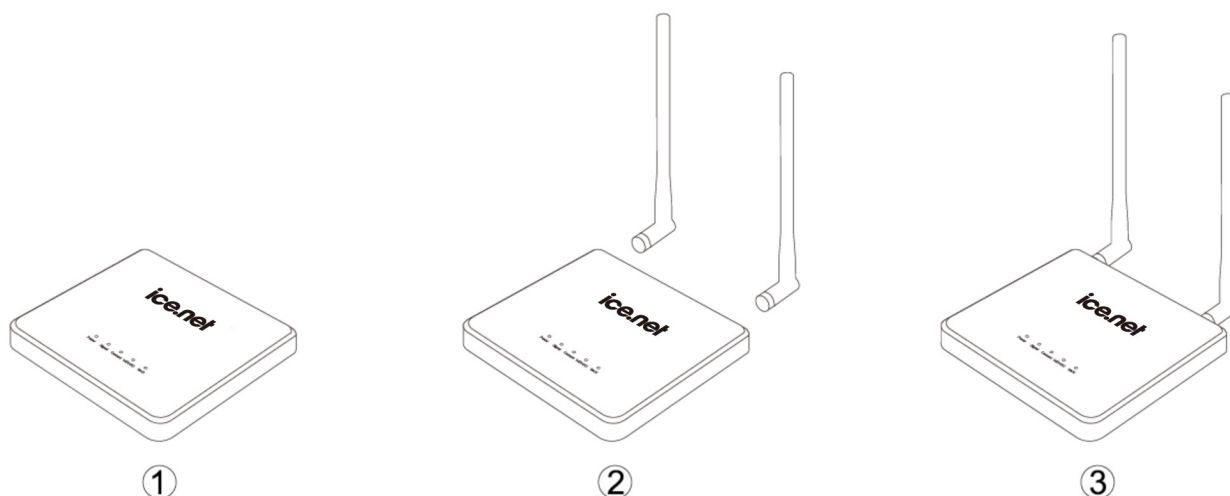
- ① Open the battery cover on the bottom by sliding the cover down towards you.
- ② Disconnect / Connect the DC power cable to the unit marked below.
- ③ Close the battery cover





### 3.10 Setting up your Hardware

- 1 Make sure your router is not connected to any power source and that all the LEDs are OFF.
- 2 How to setup the antennas for maximized performance



- ① Antennas are located on both sides of the router.
- ② Attach the antennas to the back of the router
- ③ Hand tighten the antennas so that they are securely attached to the router

- 3 Locate the power supply that is included with your router. Plug the power supply's small connector into the power port on the router (6). Plug the power supply into an empty power outlet.
- 4 Switch on the router (8). Look at the Power LED on top of the router and make sure the lights are ON.
- 5 Wait for a few seconds while the router searches for network service. When the router finds a suitable network, the Signal LED turns blue and will flash dependent upon the strength of the acquired signal. Refer to the Signal Strength LED description for more details.
- 6 Locate the Ethernet cable that is included with your router. Plug one end of this cable into ANY Ethernet port on your router. Plug the other end of the cable into the networking port on your computer. Alternatively connect to the router through WiFi (see below).

### 3.11 Connecting and Configuring your Router

Each router is factory built for use with a particular service provider. Thus, each router is set to use particular radio channels and to enable services specific to a provider.

Once your router has been activated with the network, connect your computer to the router using the provided Ethernet (RJ-45) cable or WiFi. You are now ready to use the Internet.

When connecting through WiFi you must enter the unique password for your router. This can be found on the sticker on the bottom of your router.

## 4 Web Manager Options

The Web Manager User Interface is a web-based tool that you can use to setup the router. You can also use it to manage advanced functions of your router. From the User Interface, you can perform these tasks:

- View the router's current settings and status
- Change WiFi name, encryption and password
- Change current network settings such as the internal IP address, IP address pool, DHCP settings and more
- Set the router's firewall to work with specific applications (port forwarding)
- Setup security features such as client restrictions, MAC address filtering, WEP and WPA
- Enable the DMZ feature for a single computer on your network
- Change the router's internal password
- Reboot the router
- Back up your configuration settings
- Reset the router's default settings
- Update the router's firmware

To log into the Web Manager, please follow the steps below:



1. Open your web browser and enter `http:// 192.168.0.1` in the address bar.

2. A Log-in page will appear. When prompted for User name and password, enter the following name and password.

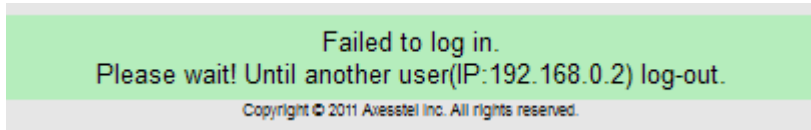
User Name: **admin**  
Password: **admin**

\* If you have changed the user name and the password, enter the new user name and password.

If you enter an incorrect user name or password three times then you will be greeted with this error message

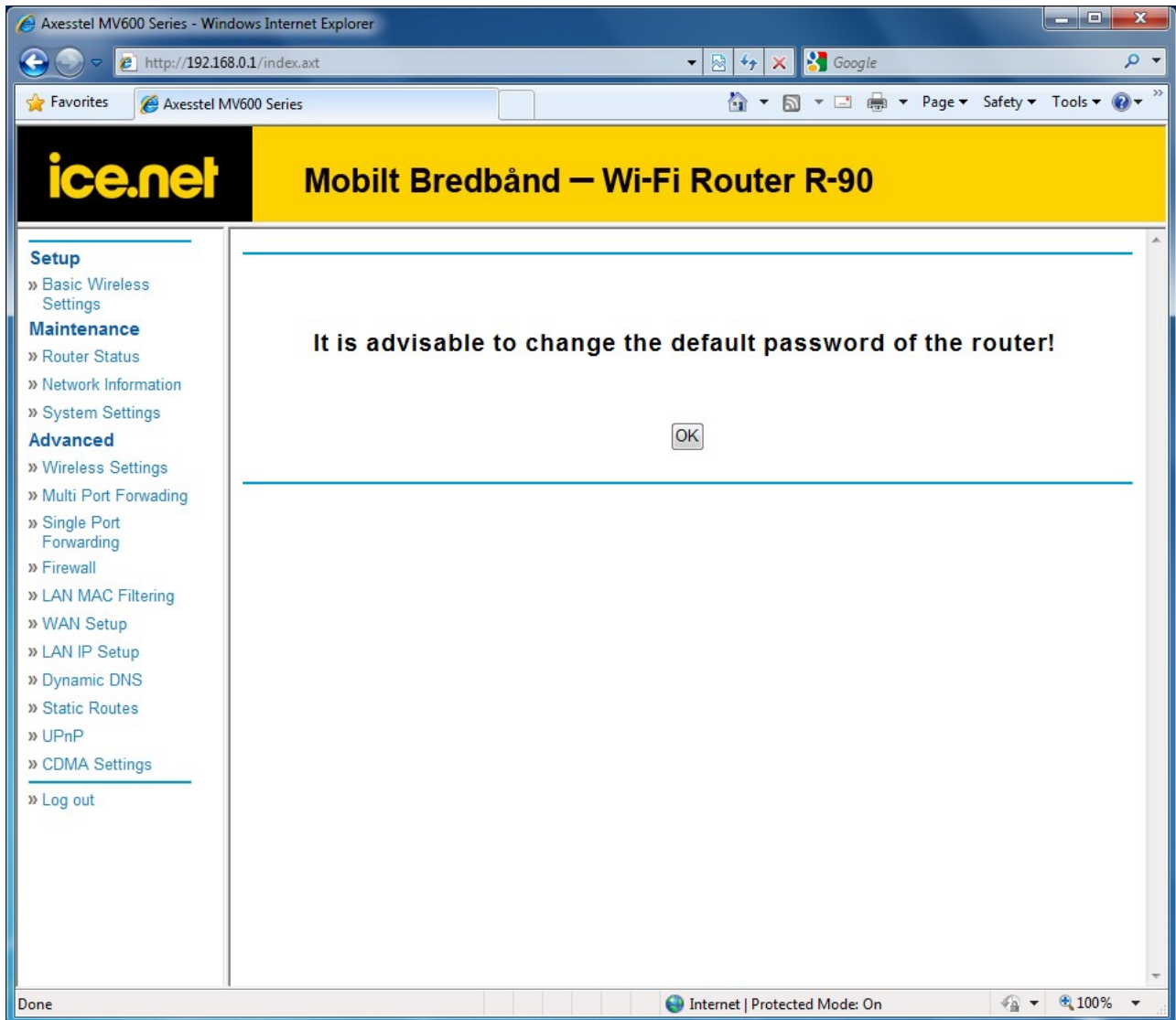
If you have forgotten your username and password, please press the reset button at the bottom of the modem and use defaults shown above.

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If another user is already logged into the web interface then you will receive this error message. Please wait until the other person has logged out.

3. After entering the correct user name and password you will be asked if you want to change the user name and password of the web page. It is advisable that you change your user name and password for enhanced security



4. Once you click OK the following screen will appear and you can then enter your new User Name and Password. Once you have done this please press the apply button. Your router will reboot and you will need to login using your new login credentials

The screenshot displays the web interface of an Axisstel MV600 Series router, accessed via a Windows Internet Explorer browser. The browser's address bar shows the URL `http://192.168.0.1/index.axt`. The page header features the **ice.net** logo and the title **Mobilt Bredbånd – Wi-Fi Router R-90**.

The interface is divided into a left-hand navigation menu and a main content area. The navigation menu includes sections for **Setup**, **Maintenance**, and **Advanced**, with various sub-options like **Basic Wireless Settings**, **Router Status**, **Network Information**, **System Settings**, **Wireless Settings**, **Multi Port Forwarding**, **Single Port Forwarding**, **Firewall**, **LAN MAC Filtering**, **WAN Setup**, **LAN IP Setup**, **Dynamic DNS**, **Static Routes**, **UPnP**, **CDMA Settings**, and **Log out**.

The main content area is titled **System Settings** and contains three distinct sections:

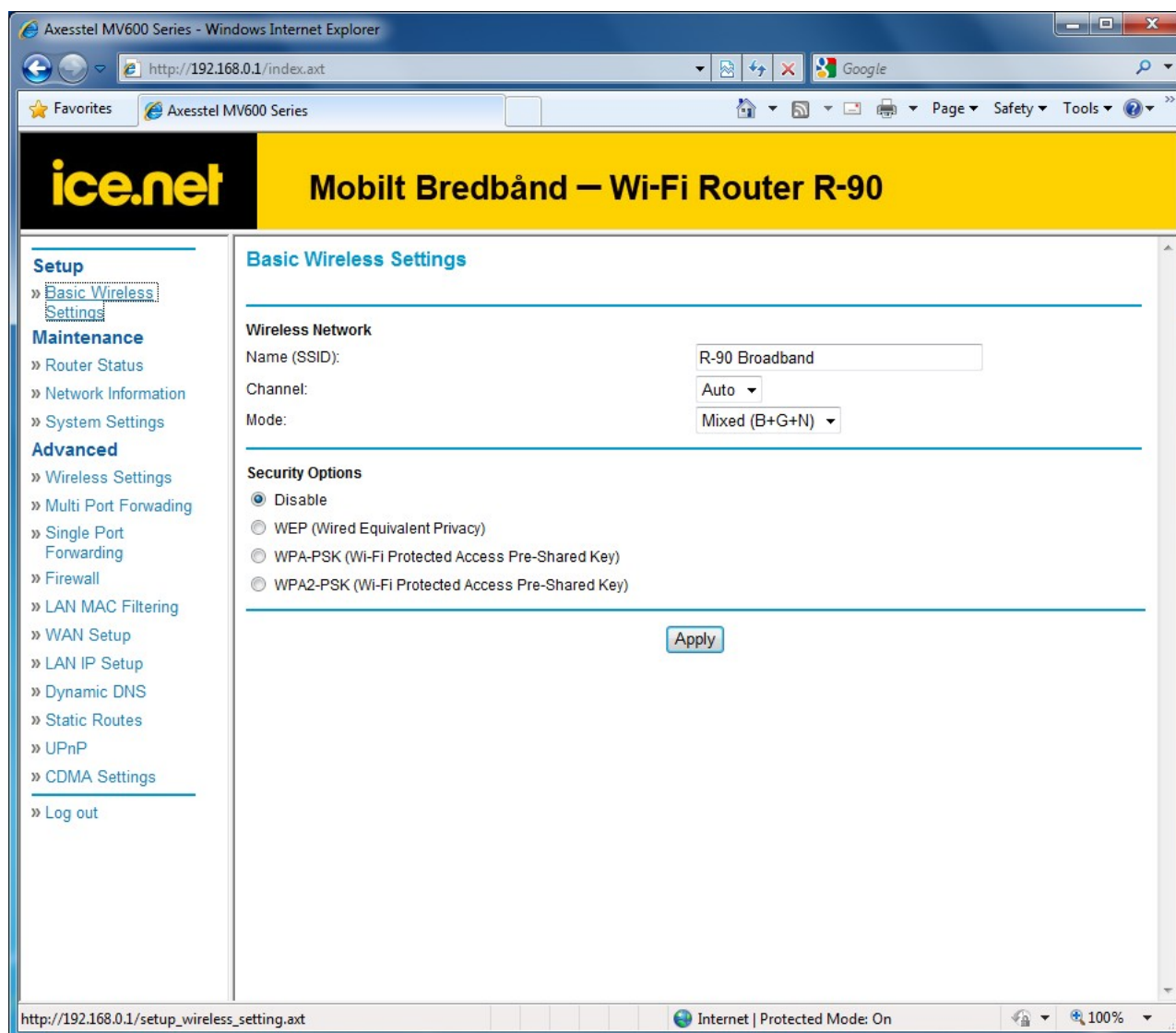
- Set Password:** This section includes three input fields for **Old Password**, **New Password**, and **Confirm New Password**, followed by an **Apply** button.
- Set Username:** This section includes one input field for **New Username**, which contains the text `admin`, followed by an **Apply** button.
- Management Interface Protocol:** This section offers two radio button options: **Use HTTP** (which is selected) and **Use HTTPS** (with a note: "When activated, please add HTTPS in the address field of your browser. Ex.: https://192.168.0.1"). An **Apply** button is located below these options.

At the bottom of the main content area, there is a **Restore Settings** section with a **Restore to factory settings** button.

The browser's status bar at the bottom indicates "Done" on the left and "Internet | Protected Mode: On" on the right, along with a zoom level of 100%.

## 4.1 Basic Wireless Settings

Clicking on the header of the “Basic Wireless Settings” tab will take you to the “Basic Wireless Settings” page. There are options that allow you to make changes to the Wi-Fi wireless network settings.



### 4.1.1 Changing the Wireless Network Name (SSID)

To identify your wireless network, SSID (Service Set Identifier) is used. You can change the SSID to anything you want, or you can leave it unchanged. If there are other wireless networks operating in your area, you will want to make sure that your SSID is unique to avoid interference. To change the SSID, type in the SSID name that you want to use in the “SSID” field and click “Apply”. The change is immediate. If you make a change to the SSID, your wireless-equipped computers may also need to be reconfigured to be able to connect to your new network name. Refer to the documentation of your wireless network adapter for information on making this change.

### 4.1.2 Selecting the Wireless Channel

Your router as default is pre-configured to choose the best wireless channel. It does this by looking at the channels that are being used by Wi-Fi networks and choosing the best channel accordingly. If needed this channel can be changed.

### 4.1.3 Wi-Fi Mode

Your R90 can support three different types of Wi-Fi network, types b, g and n. As default the R90 is set to support mixed mode (b/g/n). This setting ensures that nearly all Wi-Fi devices will be able to connect to your R90 without any issues

### 4.1.4 Securing your Wi-Fi Network

There are a few different ways you can maximize the security of your wireless network and protect your data from prying eyes and ears.. Three encryption methods are available.

- WEP (Wired Equivalent Privacy)
- WPA (Wi-Fi Protected Access) – PSK
- WPA 2 (Wi-Fi Protected Access 2) – PSK

## 4.2 Router Status

Clicking on the header of the “router Status” tab will take you to the “router Status” header page. From this page you can find all the relevant information pertaining to your router such as firmware version and IP address. Detailed descriptions are found below

The screenshot shows the 'Router Status' page for an Axisstel MV600 Series router. The page is displayed in Internet Explorer with the address bar showing 'http://192.168.0.1/index.axt'. The page title is 'ice.net Mobilt Bredbånd – Wi-Fi Router R-90'. The left sidebar contains navigation links for Setup, Maintenance (with Router Status selected), Network Information, System Settings, and Advanced. The main content area shows Router Status details for System, WAN Port, LAN Port, and Wireless Port.

| Router Status         |  |
|-----------------------|--|
| System Name           | MV600 Series                               |
| Firmware Version      | MV600_ETH_NMTNW_v1.4.0 2011-11-23 15:11:07 |
| Hardware Version      | 0.92                                       |
| <b>WAN Port</b>       |  |
| IP Address            | 0.0.0.0                                    |
| Primary DNS           | 0.0.0.0                                    |
| Secondary DNS         | 0.0.0.0                                    |
| <b>LAN Port</b>       |  |
| MAC Address           | 00:90:4C:C0:14:EE                          |
| IP Address            | 192.168.0.1                                |
| IP Subnet Mask        | 255.255.255.0                              |
| DHCP Server           | ON   |
| <b>Wireless Port</b>  |  |
| MAC Address           | 00:90:4C:C0:14:EB                          |
| Name (SSID)           | R-90 Broadband                             |
| Channel               | Auto                                       |
| Mode                  | Mixed (B+G+N)                              |
| Wireless Access Point | ON   |
| Broadcast SSID        | ON   |

### 4.2.1 WAN Port

From here you will be able to find the details of the primary and secondary DNS servers together with the IP address that you have been allocated by the mobile network

### 4.2.2 LAN Port

From here you will be able to see the details of the IP address that is being used to access the web interface, together with its MAC address.

### 4.2.3 Wireless Port

From here you will be able to see all the details relating to your Wi-Fi connection



### 4.3 Network Information

The network information page will provide all the information and detail with regards to the mobile network. The information on this page can be very useful when you are in contact with Customer Services.

The screenshot shows a web browser window displaying the configuration page for an Axisstel MV600 Series Wi-Fi Router. The page title is "ice.net Mobilt Bredband – Wi-Fi Router R-90". The left sidebar contains a navigation menu with sections for Setup, Maintenance, and Advanced. The main content area is titled "Network Information" and displays the following data:

| Module Information            |            |
|-------------------------------|------------|
| Module Version                | V6H207COMM |
| Module Status                 | OK         |
| Module ESN                    | 0x5F691A51 |
| Network Status                |            |
| Connection Information        |            |
| N/A                           |            |
| Network RSSI : -0 dBm         |            |
| Ec/Io : 0 dBm                 |            |
| Carrier 1                     |            |
| Channel No. : 210             |            |
| PN : 0                        |            |
| Mobile Transmit Power : 0 dBm |            |
| Carrier 2                     |            |
| Network RSSI : 0 dBm          |            |
| Ec/Io : 0 dBm                 |            |
| Channel No. : 0               |            |
| PN : 0                        |            |
| Mobile Transmit Power : 0 dBm |            |
| Carrier 3                     |            |
| Network RSSI : 0 dBm          |            |
| Ec/Io : 0 dBm                 |            |
| Channel No. : 0               |            |
| PN : 0                        |            |
| Mobile Transmit Power : 0 dBm |            |

At the bottom of the main content area, there is a "Refresh" button. The browser's address bar shows the URL "http://192.168.0.1/module\_status.axt".



## 4.4 System Settings

From the system settings page you can perform a variety of administration tasks.

**Set Password** – From here you can change the password which is used to access the web GUI

**Set Username** – This option allows you to modify the user name which is used to access the web GUI

**Management Interface Protocol** – This option allows you to toggle between using a HTTP or HTTPS connection when using the web GUI. If you do change to using a HTTPS connection please ensure that you add in HTTPS in the address field of your browser

**Restore Settings** – This option will restore the unit to factory settings. Any modifications that you may have mad to SSID, WPA password, Port Forwarding etc will be lost. The login will revert back to the default settings.

**Router Upgrade** – Occasionally your operator may release a new firmware for your R90, and this new firmware can be applied using this option

**Reboot Settings** – Occasionally you may need to reboot your device and this can be done by using this option.

The screenshot displays the web interface for the Axisstel MV600 Series Wi-Fi Router R-90. The browser window title is "Axisstel MV600 Series - Windows Internet Explorer" and the address bar shows "http://192.168.0.1/index.axt". The page header includes the "ice.net" logo and the title "Mobilt Bredbånd – Wi-Fi Router R-90".

The left sidebar contains a navigation menu with the following categories and links:

- Setup**
  - » Basic Wireless Settings
- Maintenance**
  - » Router Status
  - » Network Information
  - » **System Settings**
- Advanced**
  - » Wireless Settings
  - » Multi Port Forwarding
  - » Single Port Forwarding
  - » Firewall
  - » LAN MAC Filtering
  - » WAN Setup
  - » LAN IP Setup
  - » Dynamic DNS
  - » Static Routes
  - » UPnP
  - » CDMA Settings
  - » Log out

The main content area is titled "System Settings" and contains the following sections:

- Set Password**: Includes input fields for "Old Password", "New Password", and "Confirm New Password", followed by an "Apply" button.
- Set Username**: Includes an input field for "New Username" (pre-filled with "admin"), followed by an "Apply" button.
- Management Interface Protocol**: Includes radio buttons for "Use HTTP" (selected) and "Use HTTPS (When activated, please add HTTPS in the address field of your browser. Ex.: https://192.168.0.1)", followed by an "Apply" button.
- Restore Settings**: Includes a "Restore to factory settings" button.

The browser status bar at the bottom shows "Internet | Protected Mode: On" and a zoom level of 100%.

## 4.5 Advanced Wireless Settings

From this page you can enable / disable your WiFi, as well as decide whether to broadcast your SSID. If you would like to disable access to the web interface via WiFi you can un-check the 'Enable Access to Router Management via Wi-Fi' checkbox.

From this page you can also configure which devices are allowed to connect to your R90. If at anytime you would like to see which devices are connected to your R90 then you can simply press the WiFi Clients table button and this will display a complete list

The screenshot shows the web interface for the Axisstel MV600 Series, specifically the 'Advanced Wireless Settings' page. The browser address bar shows 'http://192.168.0.1/index.axt'. The page title is 'ice.net Mobilt Bredband – Wi-Fi Router R-90'. The sidebar on the left contains a navigation menu with categories: Setup (Basic Wireless Settings), Maintenance (Router Status, Network Information, System Settings), and Advanced (Wireless Settings, Multi Port Forwarding, Single Port Forwarding, Firewall, LAN MAC Filtering, WAN Setup, LAN IP Setup, Dynamic DNS, Static Routes, UPnP, CDMA Settings, Log out). The main content area is titled 'Advanced Wireless Settings' and contains the following settings:

- Wireless On
- SSID Broadcast On
- Enable Access to Router Management via Wi-Fi (Warning: By enabling this check box you will be able to access the router management via Wi-Fi)
- Maximum Wi-Fi Connections:
- Enable Wi-Fi MAC Filtering (MAC Address format 00:00:00:00:00:00)

Below the settings is a table for MAC filtering:

| No | Mac                  | No | Mac                  |
|----|----------------------|----|----------------------|
| 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  | <input type="text"/> | 10 | <input type="text"/> |
| 11 | <input type="text"/> | 12 | <input type="text"/> |
| 13 | <input type="text"/> | 14 | <input type="text"/> |
| 15 | <input type="text"/> | 16 | <input type="text"/> |

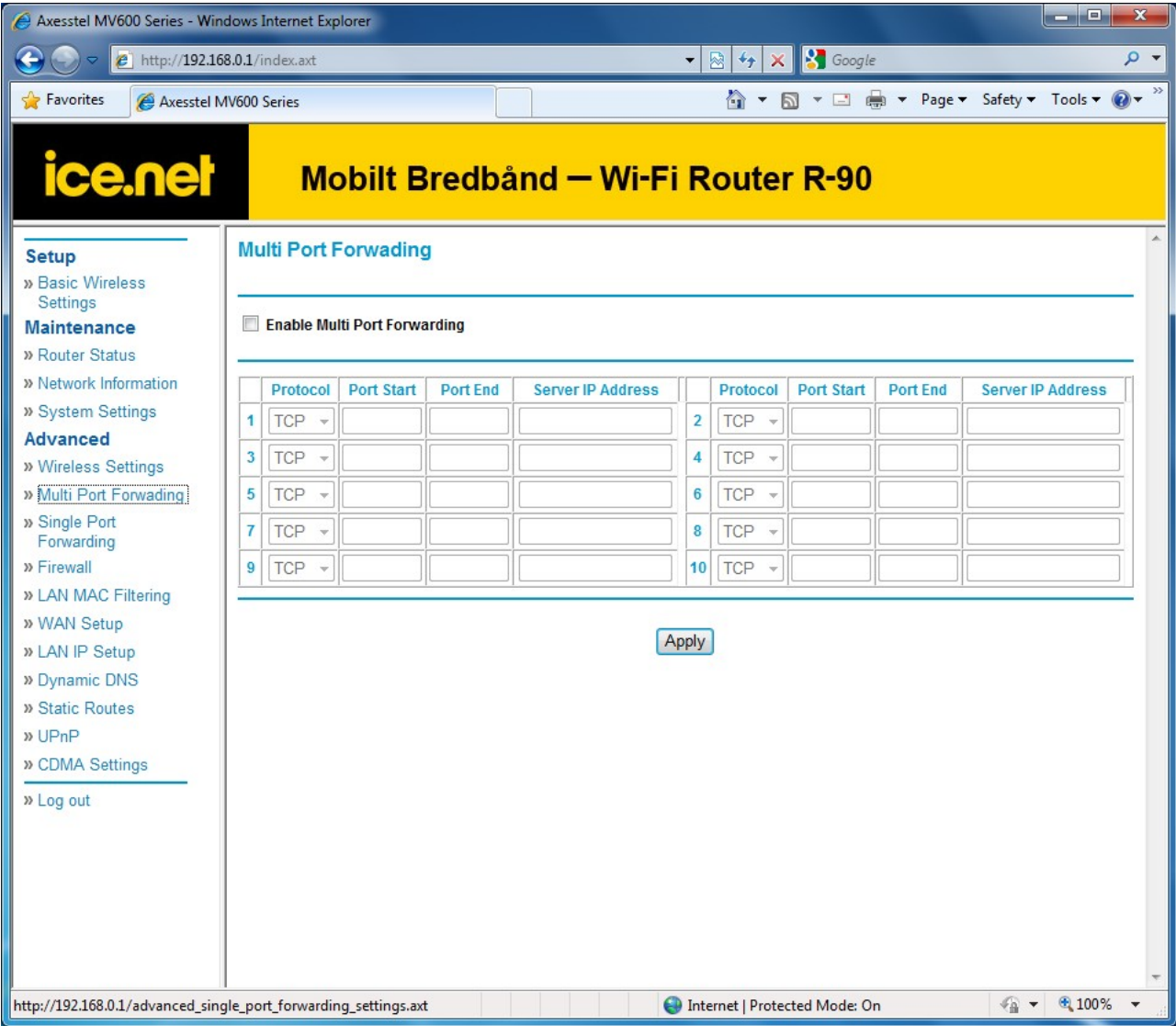
At the bottom of the table is a button labeled 'Wi-Fi Clients Table'. Below the table is an 'Apply' button. The browser status bar at the bottom shows 'Internet | Protected Mode: On' and a zoom level of 100%.

### 4.6 Multi Port Forwarding

Clicking on the “Multi Port Forwarding” sub-heading in the “Advanced” list will take you to the relevant page. Multi Port Forwarding allows you to route a range of ports to the devices that are connected to your router. Your internal computers are protected by a firewall, so computers that are outside your network cannot “see” or reach your computers.

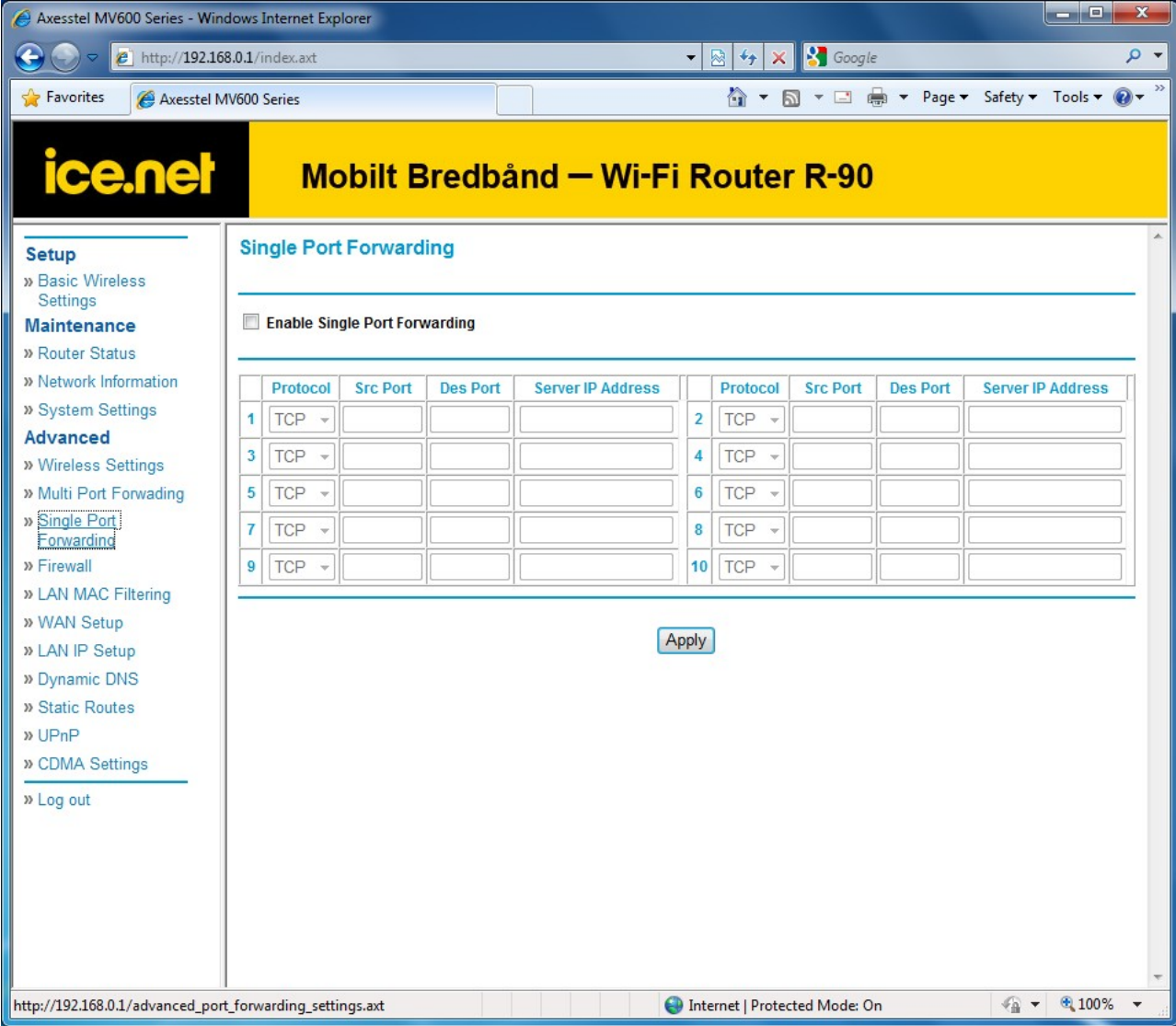
#### 4.6.1 Multi Port Forwarding

To enter settings into Port Forwarding, first select the appropriate service from the “Protocol” drop-down box. Select an application, enter the IP address and port number for your internal server into the provided spaces, and click “Apply”. Note: Opening ports in your firewall can pose a security risk. You can enable and disable settings very quickly. It is recommended that you disable these settings when you are not using a specific application.



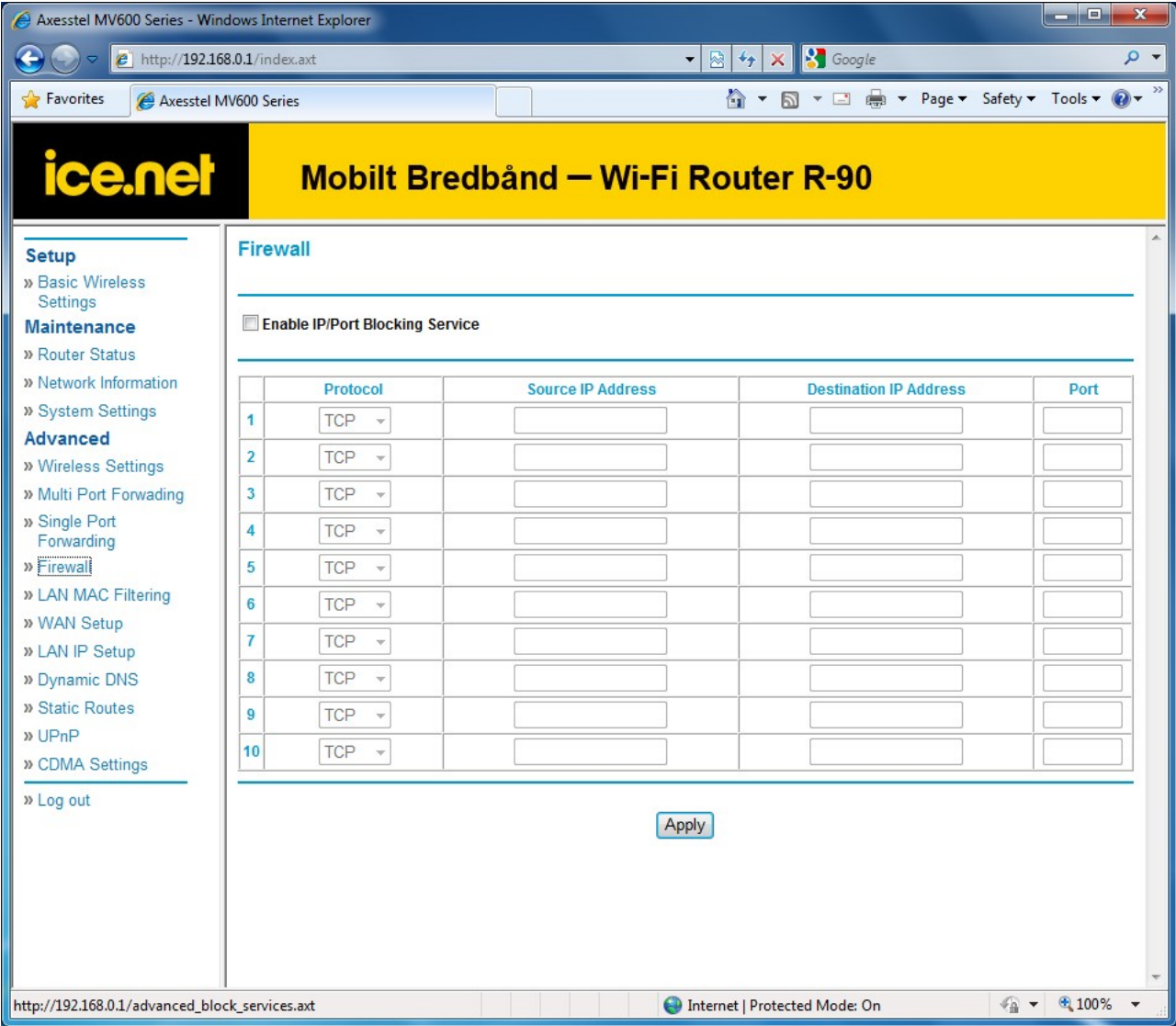
### 4.7 Single Port Forwarding

This feature helps forward IP packets from a specific port to a specific host in your LAN by changing the port number.



### 4.8 Firewall

This page will allow you to enable / disable your firewall





## 4.9 LAN MAC Filtering

Your router can be configured to restrict access to the Internet, email or other network services. Restrictions can be set for a single computer, a range of computers or multiple computers.

### 4.9.1 MAC Filtering

The MAC address filter is a powerful security feature that allows you to specify which computers are allowed on your network. Any computer attempting to access your network must be specified in the filter list or it will be denied access. When you enable this feature, you must enter the MAC address of each client (computer) on your network in order to allow network access to each.

MAC Services Blocking can be set in three modes.

- **Disable.** In this mode, there are no restrictions on any devices connected to the router, whether through Wi-Fi or Ethernet ports
- **Deny.** In this mode, the service table shows the client MAC address being blocked by the router.
- **Allow.** In this mode, the service table shows the client MAC address allowed by the router.

To modify the service table (add, change address or remove clients), enter the correct value and click "Apply".

Note: You will not be able to delete the MAC address of the computer you are using to access the router's administrative functions.

Axisstel MV600 Series - Windows Internet Explorer  
 http://192.168.0.1/index.axt

**ice.net** Mobilt Bredband – Wi-Fi Router R-90

**LAN MAC Filtering**

Disable  
 Deny  
 Allow

( MAC Address format 00:00:00:00:00:00 )

| Number | MAC Address          | Number | MAC Address          |
|--------|----------------------|--------|----------------------|
| 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      | <input type="text"/> | 10     | <input type="text"/> |

Apply

http://192.168.0.1/advanced\_mac\_block\_services.axt

## 4.10 WAN Setup

Clicking on the “WAN Setup” sub-heading in the “Advanced” list will take you to the “WAN Setup” page. This is where you can enable or disable the router’s DMZ, Internet Ping, and HTTP-related items.

### 4.10.1 Demilitarized Zone (DMZ)

The DMZ feature allows you to specify one computer on your internal network to be placed outside the firewall. This may be necessary if the firewall is causing problems with a game, video conferencing, or other application. Use this feature on a temporary basis. The computer in the DMZ is NOT protected from hacker attacks.

### 4.10.2 WAN Ping Blocking

Computer hackers use what is known as “pinging” to find potential victims on the Internet. By pinging a specific IP address and receiving a response, a hacker can determine that something of interest might be at that IP address. You can set your router so it will not respond to a hacker’s ICMP ping, increasing the level of security provided by your router.

If it is necessary to turn on the ping response, select “Allow Ping Response on WAN port” and click “Apply”..

### 4.10.3 Disable NAT

This feature disables all NAT router functionality.

### 4.10.4 Enable Access to Router Managemnet via Internet

This feature allows users with access to the Wi-Fi network to login to the router interface. Be aware that the default settings “username and password” = “admin” a good security measure against intruders to your network. If you wish to restrict the access to the router interface to be accessible only via ethernet cable, please uncheck this box.

The screenshot shows a web browser window displaying the configuration page for an Axisstel MV600 Series Wi-Fi Router. The browser's address bar shows the URL `http://192.168.0.1/index.axt`. The page header features the **ice.net** logo and the title **Mobilt Bredband – Wi-Fi Router R-90**. A left-hand navigation menu is organized into three sections: **Setup** (with a link to Basic Wireless Settings), **Maintenance** (with links to Router Status, Network Information, and System Settings), and **Advanced** (with links to Wireless Settings, Multi Port Forwarding, Single Port Forwarding, Firewall, LAN MAC Filtering, **WAN Setup**, LAN IP Setup, Dynamic DNS, Static Routes, UPnP, CDMA Settings, and Log out). The main content area is titled **WAN Setup** and contains the following configuration options: 

- DMZ Settings:** Three radio buttons are present: **Disable DMZ** (selected), **Default DMZ**, and **Super DMZ**. To the right are input fields for **Host IP Address:** and **Host MAC Address:**.
- DHCP Lease Time:** A numeric input field is set to `86400` with the unit `sec`. Below this is a note: *( After changing the DMZ settings, please renew your IP Address )*.
- Allow Ping Response on WAN port:** A checkbox that is currently unchecked.
- Enable Access to Router Management via Internet:** A checkbox that is currently unchecked.
- Disable NAT:** A checkbox that is currently unchecked.
- Enable Auto Ping:** A checkbox that is currently unchecked.
- Auto PING Interval:** A numeric input field is set to `0` with the unit `min(s)`.
- IP Address or URL:** An empty text input field.

At the bottom of the configuration area is an **Apply** button. The browser's status bar at the bottom shows the current page as `http://192.168.0.1/advanced_wan_setup.axt` and indicates that the Internet is in Protected Mode.



## 4.11 LAN IP Setup

Clicking on the header of the “LAN IP Setup” tab will take you to its header page.

### 4.11.1 LAN TCP/IP Setup

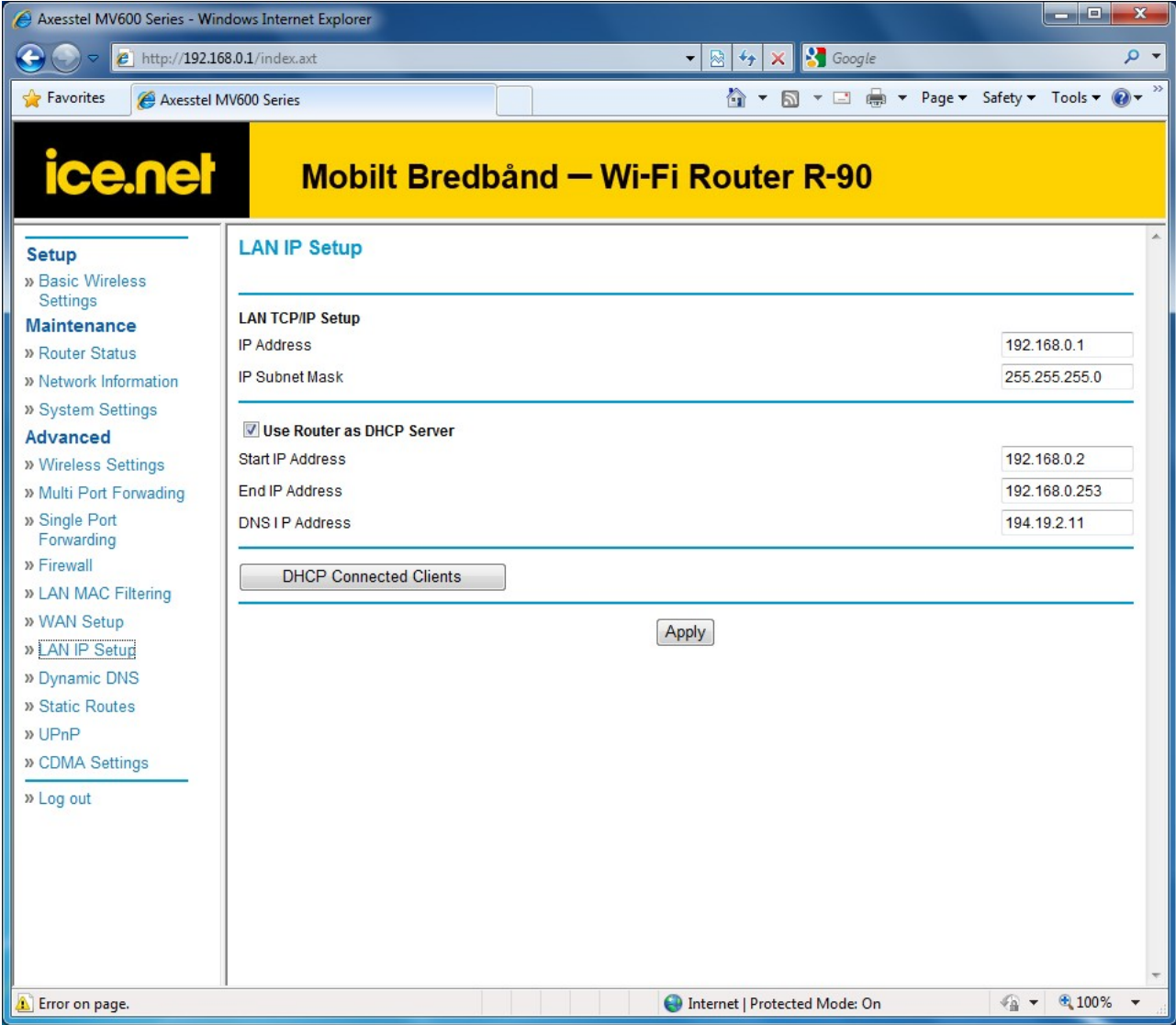
The IP address in this instance is referring to the IP address that you use to log into your router (default 192.168.0.1). If you change this, then in future you will need to log in using the new IP address that you chosen.

There is no need to change the subnet mask. This is a unique, advanced feature of your router. It is possible to change the subnet mask, if necessary. Do NOT make changes to the subnet mask unless you have a specific reason to do so. The default setting is “255.255.255.0”.

### 4.11.2 Use the Router as a DHCP Server

The DHCP server function makes setting up a network very easy by assigning IP addresses to each computer on the network automatically. The DHCP server can be turned OFF, if necessary. To do so, you must manually set a static IP address for each computer on your network. To turn off the DHCP server, de-select “Use router As DHCP Server” and click “Apply”.

If at anytime you would like to see which devices are connected to your R90, please press the DHCP clients table button



The screenshot shows a web browser window titled "Axisstel MV600 Series - Windows Internet Explorer". The address bar shows "http://192.168.0.1/index.axt". The page header features the "ice.net" logo and the title "Mobilt Bredbånd – Wi-Fi Router R-90".

The left sidebar contains a navigation menu with the following items:

- Setup
  - » Basic Wireless Settings
- Maintenance
  - » Router Status
  - » Network Information
  - » System Settings
- Advanced
  - » Wireless Settings
  - » Multi Port Forwarding
  - » Single Port Forwarding
  - » Firewall
  - » LAN MAC Filtering
  - » WAN Setup
  - » LAN IP Setup
  - » Dynamic DNS
  - » Static Routes
  - » UPnP
  - » CDMA Settings
- » Log out

The main content area is titled "DHCP client list" and contains a table with the following data:

| No | IP Address  | MAC Address       | Host  |
|----|-------------|-------------------|-------|
| 1  | 192.168.0.2 | 00:21:9B:E8:F0:9D | E5400 |

Below the table are two buttons: "Refresh" and "Close".

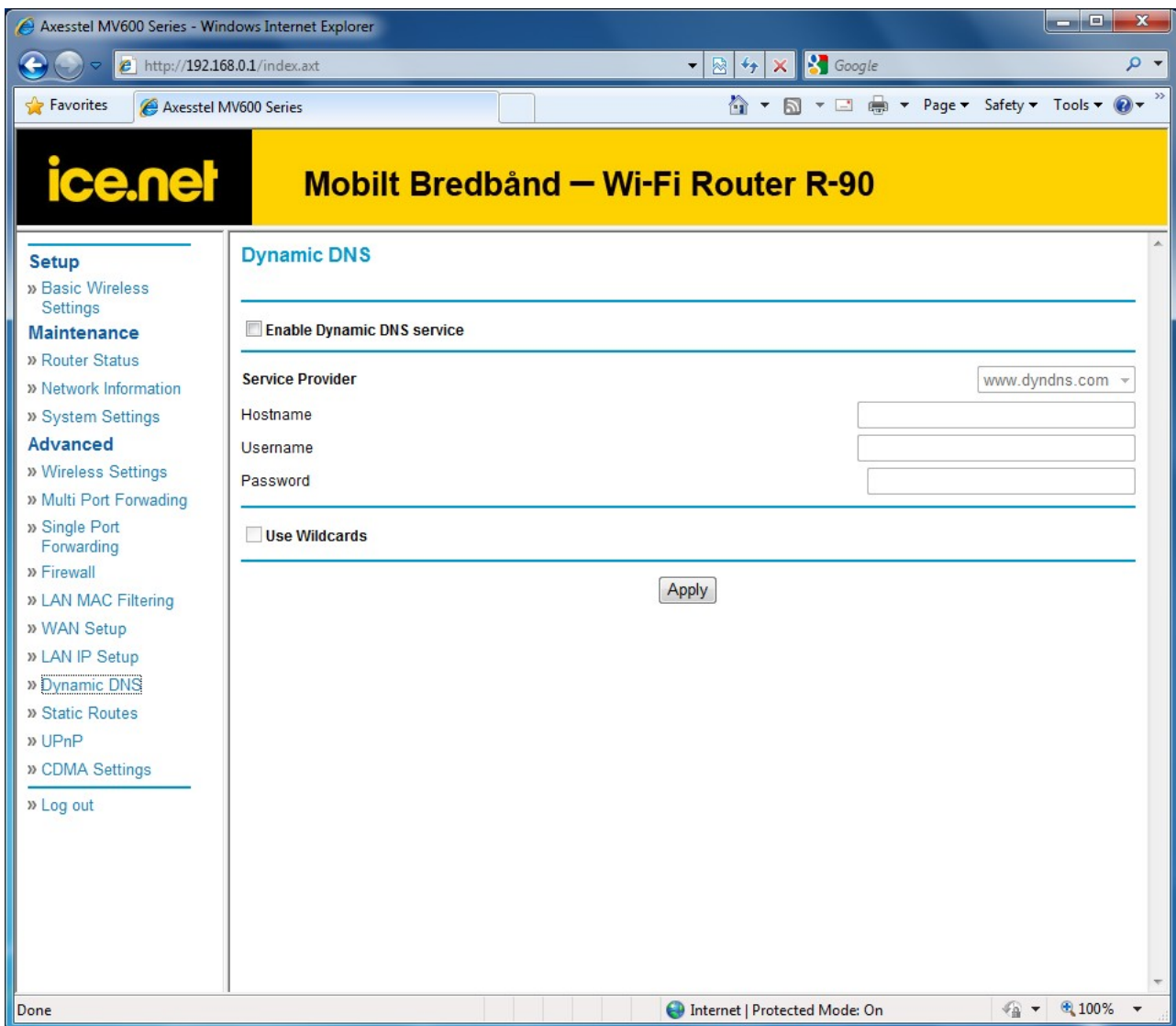
The browser status bar at the bottom shows "Done", "Internet | Protected Mode: On", and a zoom level of "100%".

## 4.12 Dynamic DNS

Dynamic DNS (Domain Name Service) is a method for Dynamic IP users to notify a domain name server to change, in real time (ad-hoc) the active DNS configuration of its configured hostnames, addresses, or other information stored in DNS. Your router supports Dynamic DNS. To use Dynamic DNS, check the “Enable Dynamic DNS Service” box and complete the following items.

**Service Provider:** Select the appropriate Service Provider from the drop down menu and input the Host Name, User Name, and your Password. This information should be the same information that you registered with your Dynamic DNS service provider.

**Use Wildcards:** Click “Use Wildcards” to enable wildcards for this host or keep the box unchecked to disable wildcards for this host. The wildcard alias \*.yourhost.ourdomain.ext is the same address as yourhost.ourdomain.ext.



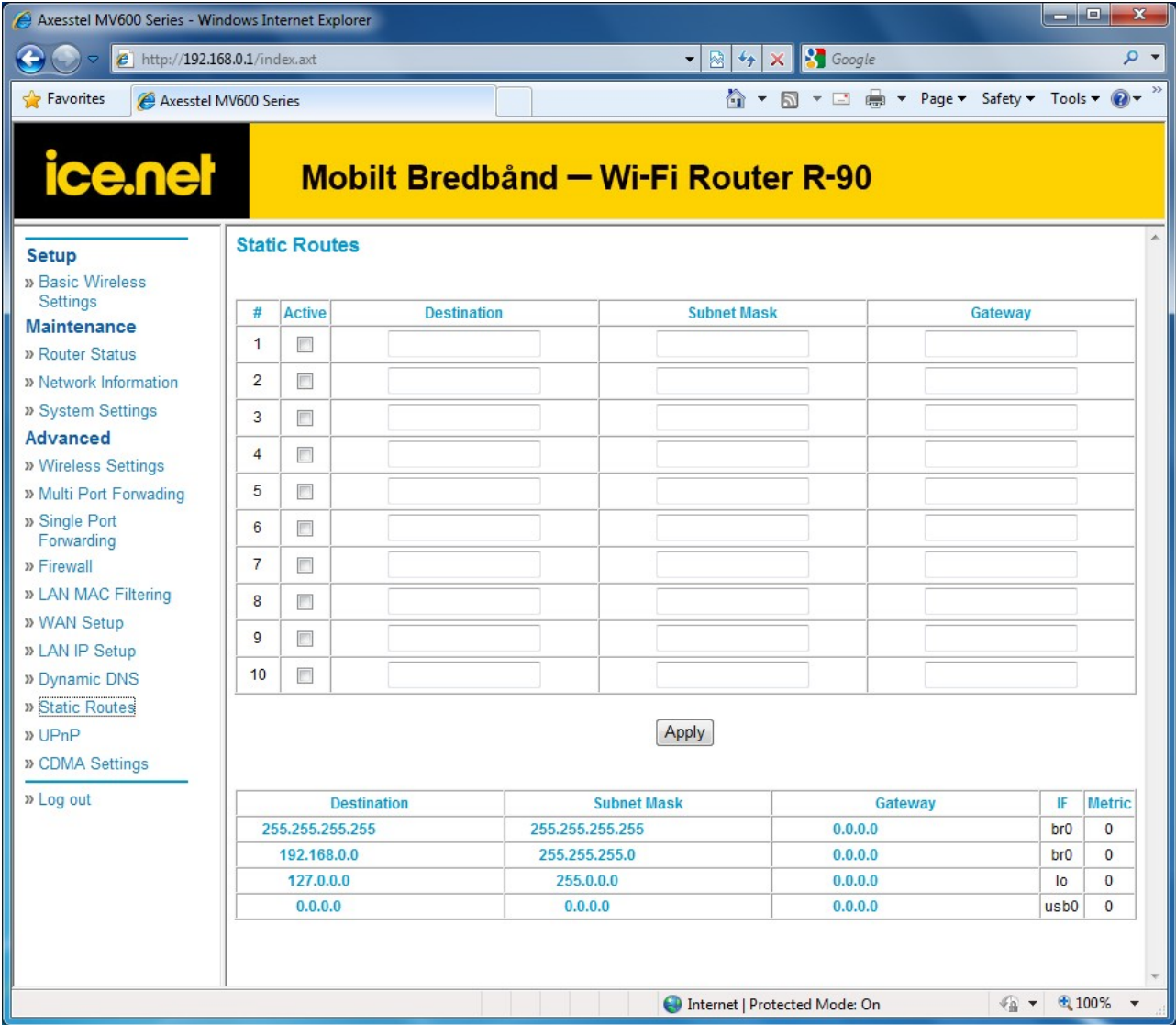
### 4.13 Static Routes

A static IP address connection type is less common than other connection types. If your ISP uses static IP addressing, you will need your IP address, subnet mask and ISP gateway address. This information is available from your ISP or on the paperwork that your ISP gave you. Type in your information and click “Apply”.

**IP Address:** Provided by your ISP. Enter your IP address here.

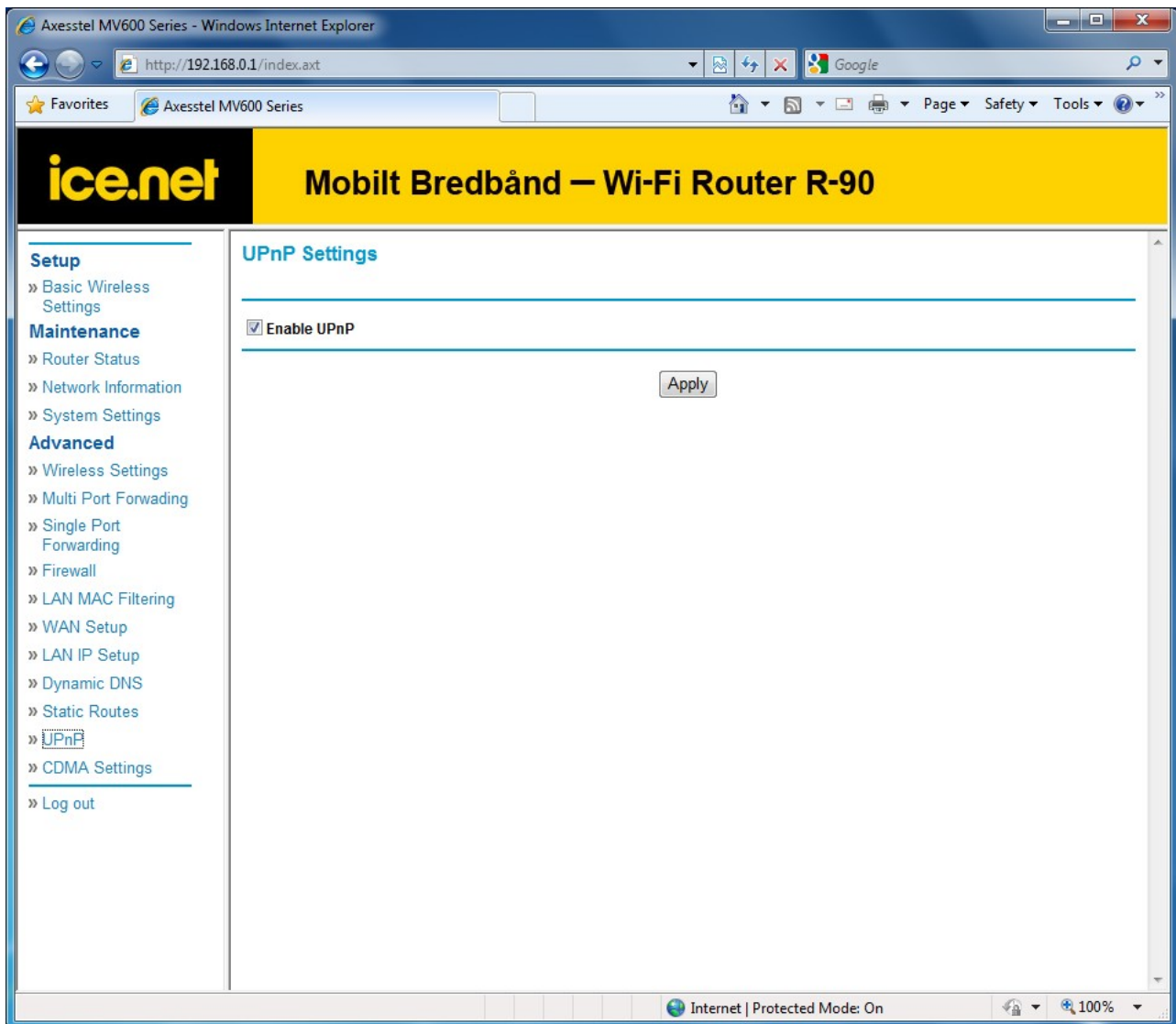
**Subnet Mask:** Provided by your ISP. Enter your subnet mask here.

**ISP Gateway Address:** Provided by your ISP. Enter the ISP gateway address here.



## 4.14 UPnP Settings

From this page you can enable / disable UPnP, Universal Plug and Play.



The screenshot displays the web interface for the Axisstel MV600 Series, accessed via Windows Internet Explorer. The browser address bar shows the URL `http://192.168.0.1/index.axt`. The page header features the **ice.net** logo and the title **Mobilt Bredbånd – Wi-Fi Router R-90**. A left-hand navigation menu lists various settings categories: **Setup** (Basic Wireless Settings), **Maintenance** (Router Status, Network Information, System Settings), and **Advanced** (Wireless Settings, Multi Port Forwarding, Single Port Forwarding, Firewall, LAN MAC Filtering, WAN Setup, LAN IP Setup, Dynamic DNS, Static Routes, UPnP, CDMA Settings, and Log out). The main content area is titled **UPnP Settings** and contains a single checkbox labeled **Enable UPnP**, which is currently checked. Below the checkbox is an **Apply** button. The browser's status bar at the bottom indicates "Internet | Protected Mode: On" and a zoom level of 100%.

## 4.15 CDMA Settings

Clicking on the header of the “CDMA Settings” tab will take you to its header page. From this page, the router’s basic settings can be modified. These settings include:

- PPP Login ID and password (if applicable)
- Authentication Method. A drop-down menu allows users to change the authentication method. The default value is CHAP.
- Dial No.

The screenshot displays the web interface for an Axisstel MV600 Series router, accessed via Internet Explorer. The browser address bar shows `http://192.168.0.1/index.axt`. The page header features the **ice.net** logo and the title **Mobilt Bredbånd – Wi-Fi Router R-90**. A left-hand navigation menu lists various settings categories: **Setup** (Basic Wireless Settings), **Maintenance** (Router Status, Network Information, System Settings), **Advanced** (Wireless Settings, Multi Port Forwarding, Single Port Forwarding, Firewall, LAN MAC Filtering, WAN Setup, LAN IP Setup, Dynamic DNS, Static Routes, UPnP, CDMA Settings), and **Log out**. The main content area is titled **CDMA Settings** and contains the following fields: **Login** (text input with value "cdma"), **Password** (password input with masked characters), **Authentication** (dropdown menu with "CHAP" selected), and **Dial No** (text input with value "#777"). An **Apply** button is positioned below these fields. The status bar at the bottom indicates the current page is `http://192.168.0.1/setup_upnp.axt` and shows "Internet | Protected Mode: On" with a 100% zoom level.

## 5 Troubleshooting

| Problem  | Solution  |
|--|---|
| I am unable to connect to the Internet. The R90's "Signal" light is on and the "Connect" light is off                  | Please ensure that you are connected to your R90. If you are using Wi-Fi please try to connect via an Ethernet cable to the R90 to see if that resolves the issue. If you are using a third party firewall, please disable this firewall as this could be interfering with the connection. Another solution maybe to reboot your router. Alternatively please contact customer services if neither of the above resolve your problem  |
| I can't connect to the Internet wirelessly from my computer but it works if I use the Ethernet cable.                  | Please check to see if the WiFi LED is on. If it is off please log into the web interface (see section 4) and enable Wi-Fi. If the LED is on then please check that your computer is in range of the R90, and that you are connected to the correct Wi-Fi device  |
| My wireless network performance is inconsistent, data transfer is sometimes slow and my Wi-Fi signal strength is poor. | Wireless technology is radio-based, which means connectivity and the throughput performance between devices decreases when the distance between devices increases. Other external factors can cause signal degradation such as walls and metal appliances. Your connection speed may decrease as you move farther away from the R90 or access point. In order to determine if wireless issues are related to range, we suggest temporarily moving the computer, if possible, only a few meters away from the R90 to see if the data rate improves |
| My internet speed is slow and my Signal LED is flashing every 1 second.  | If your signal LED is flashing blue this means that the device is not receiving good signal from the mobile network. Please try to move the R90 to near a window to see if this improves the data rate You have good signal when the signal led starts to flash at a slower speed or the signal led remains fixed.  |



## 6 Technical Specification

|                       |  |
|-----------------------|--|
| Size                  | 180 x 160 x 26 mm                        |
| Weight                | 500g                                     |
| Battery Type          | Li-ion (2 cell), 7.4V(Max 8.4V)/1000mA/h |
| Operating Temperature | -20o C ~ +60o C                          |
| Storage Temperature   | -30o C ~ +70o C                          |
| Humidity              | 5 ~ 95%                                  |
| Stand by Time         | 2 ~ 3 hours                              |
| Usage Time            | 60 ~ 90 minutes                          |
| Adaptor Input         | 100/240V                                 |
| Adaptor Output        | 9V/2A                                    |

## 7 Certification

# Declaration of Conformity

AXESSTEL INC.  
6815 Flanders Drive Ste.210  
San Diego, CA 92121, U.S.A.

**Model Name: MV610, MV610R, MV610V, MV610VR**

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### Conformity Assessment Principles

Complies with the essential requirements of Article 3 of the R&TTE Directive 1999/5/EC, if used for its intended use and that the following standards has been applied:

#### 1. Health (Article 3.1.a of the R&TTE Directive)

Applied standard(s) : EN 62209-1: 2006 for Head SAR

#### 2. Safety (Article 3.1.a of the R&TTE Directive)

Applied standard(s) : EN 60950-1 : 2006 + A11 : 2009

#### 3. Electromagnetic compatibility (Article 3.1b. of the R&TTE Directive)

Applied standard(s) : EN 301 489-1 V 1.8.1 (2008-04) / EN 301 489-17 V 2.1.1 (2009-05)  
EN 301 489-25 V 2.3.2 (2005-07)

#### 4. Efficient use of the radio frequency spectrum (Article 3.2 of the R&TTE Directive)

Applied standard(s) : EN 301 526V1.1.1 (2006-07) / EN 300 328 V1.7.1 (2006-10)

We hereby declare that (all essential radio test suites have been carried out and that) the above named product is in conformity to all the essential requirements of Directive 1999/5/EC.

The conformity assessment procedure referred to in Article 10 and detailed in Annex (III) or (IV) of Directive 1999/5/EC has been followed with the involvement of the following Notified Body (ies): PHOENIX, Koenigswinkel 10 32825 Blomberg Germany

Identification mark: **CE 0700** (Phoenix Notified Body number)


A Technical Construction File and all other relevant technical documentation is filed at the development house:

AXESSTEL INC.

TEL: 858- 625-2100  
FAX: 858- 625- 2110

E-mail : kjeon@axesstel.com

Attention: Kevin Jeon / Director of Engineering

Signature of authorized person: 

Date: November 24, 2011