EpiValley 8089

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PRODUCT FEATURES

- Sleek Slim and Stylish design with an internal antenna.
- Operating System
    - Supports Windows
        - 2000, XP, Vista32/64, Win7
    - Supports Mac OS version (Presently supports only drivers) –
        - 10.5, 10.6 except Snow Leopard
    - Supports selected version of LINUX OS (Only drivers support , No dialer support)
        - Ubuntu-7 & above
        - Fedora Core 5.6 & above(Not Supported with Fedora11)
        - SUSE 9,10 & above
        - Debian Linux 5,6 & above
        - Redhat Enterprise Linux 3 & above
- Support Memory storage drive - SD card up to 8GB
- Complete PNP functionality support on Windows OS.
- Support the PC-Voice functionality and Ear-Jack*. (Presently the voice functionality is limited to the *228 activation process)
- Supports SHDR functionality for improved throughputs
- Supports Hybrid mode of operation between CDMA 1x and EVDO
- Supports Standard USB 2.0 interface

DEVICE OVERVIEW

TECHNICAL SPECIFICATIONS

Functions	Specifications	
Main Operation Chip	QSC-6085	
CDMA Standard	IS-856-A, TIA/EIA/IS-2000, IS-98E Backwards compatibility with IS-95 A/B	
Frequency Band	Cellular 800 Single Band Support	
	Band Class 0	
	TX: 824 ~ 849 MHz	
	RX: 869 ~ 894 MHz	
Transmit Power	**200mW**	
Power supply	USB Power	
LEDs	1 Multi-Color LED RSSI Level: Normal (Green) / Week (Orange) / No service (Red)	
PRL/OTA support	IS-683C Roaming (PRL Support) and Over the Air Service Provisioning (OTASP)	
Antenna	Intenna / Rx Diversity	
Interface Type	USB Connector / USB 1.1 (&2. 0 Compatible / Full Speed)	
T-Flash	Supported	
Voice Jack	Supported (Only for activation procedure)	
Dimension	W:25.4 D:77 H:10 (mm)	
Weight	Net (19g), Gift box (75g)	
Case Material	PC Plastic	
Operating environment	Operating temperature range	-20C to +60C
	Storage temperature range	-30C to +65C
	Humidity	5% to 95%(non-condensing)

SYSTEM REQUIREMENTS

The Photon+ Modem supports an complete Plug and Play feature for the automatic installation of USB drivers and PC-Client tool (Access Manager) on

- **Windows**
    - Windows 2000, XP, Vista and select Linux versions
    - Supports standard USB 1.1 & 2.0
    - 100Mb free hard disk space or above
    - 128Mb RAM or above

- **MAC**
  - Mac OS X Leopard version
  - Supports standard USB 1.1 (USB 2.0 Compatible)
  - 10Mb free hard disk space or above

- **Linux**
  - The following the version of Linux is supported.
    - Redhat Enterprise Linux 3 & above
    - Fedora Core 5,6 & above
    - SUSE Desktop Linux 9,10 & above
    - Debian Linux 5,6 & above
    - Ubuntu Linux 5,6 & above
  - Supports standard USB 1.1 (USB 2.0 Compatible)
  - 10Mb free hard disk space or above

INSTALLATION PROCEDURE

Windows

Introduction for installation

The Wireless Modem supports an automatic installation function of USB driver and PC-Client tool (Access Manager) for Windows® 2000, Windows® XP, Windows® Vista 32 / 64.

After plugging the Wireless Modem on your computer, it will mount a CD Driver. It has an execute file as Autorun.exe which will check whether your computer needs to install it or not.

If your computer needs to install it, the Autorun.exe will execute the Setup Wizard program for installation.

Starting Setup

Insert the Wireless Modem into a USB port on your computer. To run the auto-installation, please wait about 1 minute for loading the installation file through the Wireless Modem.

- Autorun.exe application could be disabled on some computers due to local IT policies. Contact your system administrator in this case.

- If the AutoRun feature on Windows is disabled on your computer, you can install it manually. Follow the steps below for the first time installation.

> 1) Open Windows Explorer or My Computer, and the CD Driver 'Photon+' appears.
> 2) Click CD Driver 'Photon+'.
> 3) Execute 'Autorun.exe' program for starting the installation.

Starting Installation

After the 'Initializing…' display in the Starting Setup, 'Welcome to the Photon+ Access Manager 1.0 Setup Wizard' will appear.

1) Click '**Next**' button in order to proceed.
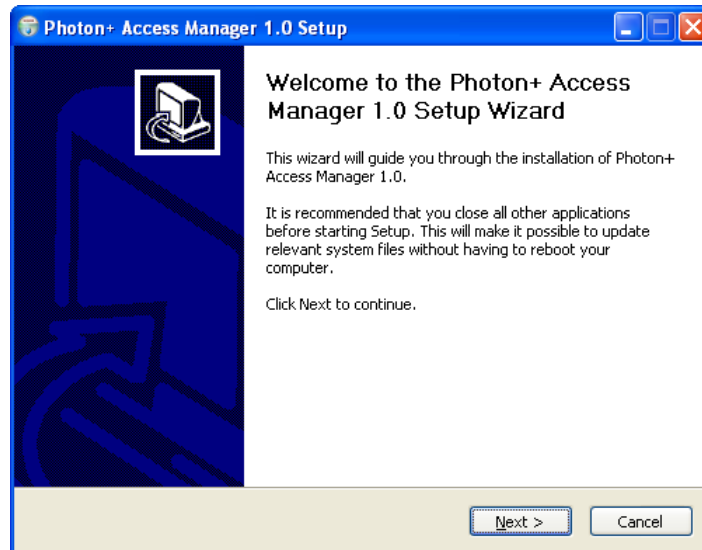
2) Default Installation directory is 'C:\Program Files\TATA\Photon+\'. You can change it to the desired directory location by Pressing the 'Browse…' button.
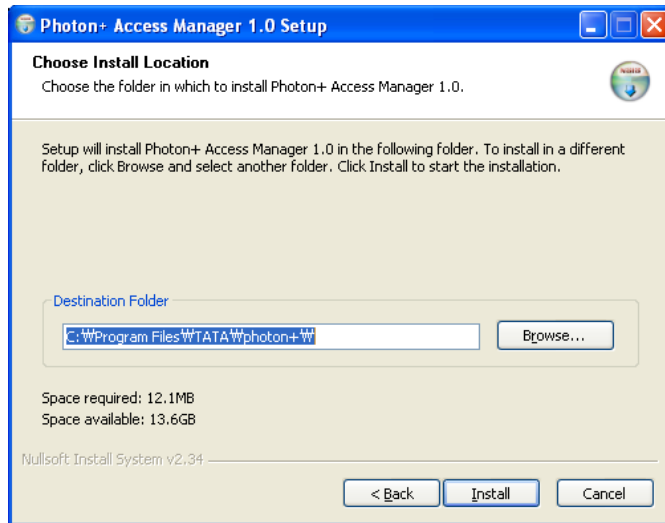
Click 'Install' button to continue the installation.

3) When the installation is completed, click 'Finish'.
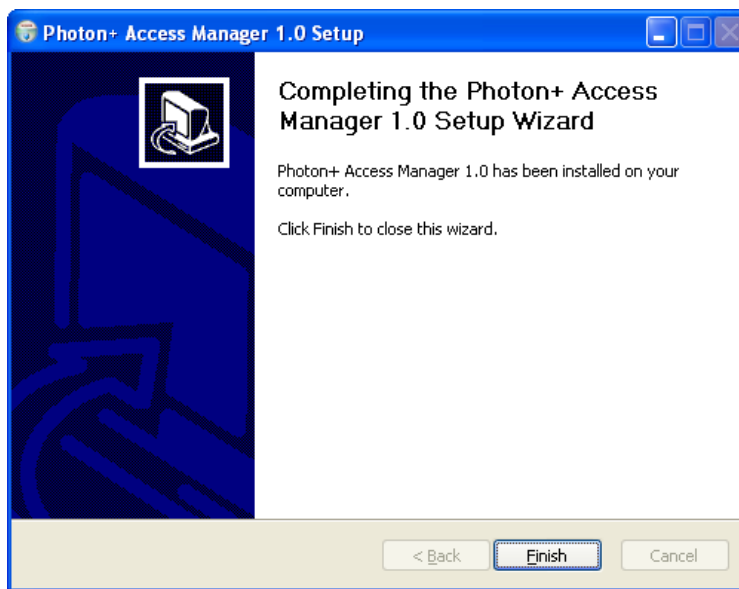
USB Driver Installation

After 'Starting Installation' stage, the Wireless Modem automatically change to the Modem instead of the CD Driver.

Then you will notice that the device drivers are being automatically installed at this stage (Notice the System tray at the bottom right of the screen) and once the installation process is completed "Your New hardware is installed and ready to Use" will be displayed.

> **IMPORTANT NOTE**
>
> •**DO NOT** unplug the Wireless Modem during the USB driver installation.
> •**DO NOT** move the Access Manager launched automatically during the USB driver installation
> •**DO NOT** restart the computer during the USB driver installation.
>
> ※ If the USB driver is not properly installed, Re-run the installation process after
> completing the steps mentioned in the Uninstalling Guide.

Un-installation Procedure

Please note that in the Access Manager you will not be able to **Completely** Uninstall the Access Manager if the
Access Manager is running either on desktop or in the system tray.

IMPORTANT NOTE
• Please **UNPLUG** your Wireless Modem before uninstalling.
• Before uninstalling the Access Manager, please **CLOSE** the Access Manager on the desktop and
also from the system tray.
(You will see a 'Photon+ Access Manager' icon at the bottom right of your desktop screen.)

Uninstalling Procedure I

Exit the Access Manager from the system tray as shown below:
Select '**Exit**' on Tray Menu _ Click '**OK**' button.
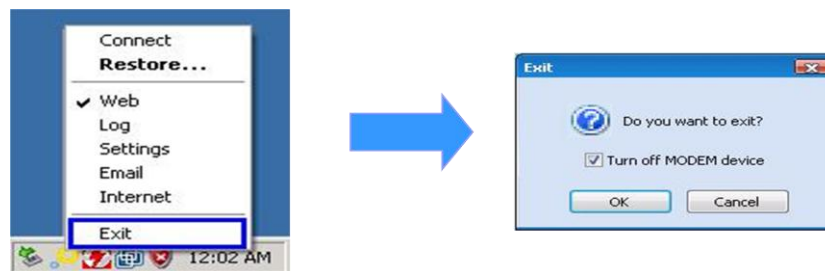
> **IMPORTANT NOTE**
> • Please UNPLUG your Wireless Modem before uninstalling.
> • Before uninstalling the Access Manager, please CLOSE the Access Manager from the desktop
>   and also from the system tray.
>   (You will see a 'Photon+ Access Manager' icon at the bottom right of your desktop screen.)

Uninstalling Procedure II
Program could be uninstalled by either accessing the Uninstall menu.
Open START menu _Programs _ TATA _ Photon+ _ Click Uninstall
Or
Open START menu _ Control Panel _ Add Remove Programs _ Change or Remove Programs _ Click Photon+ Access Manager 1.0.
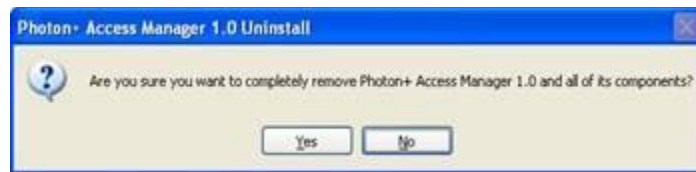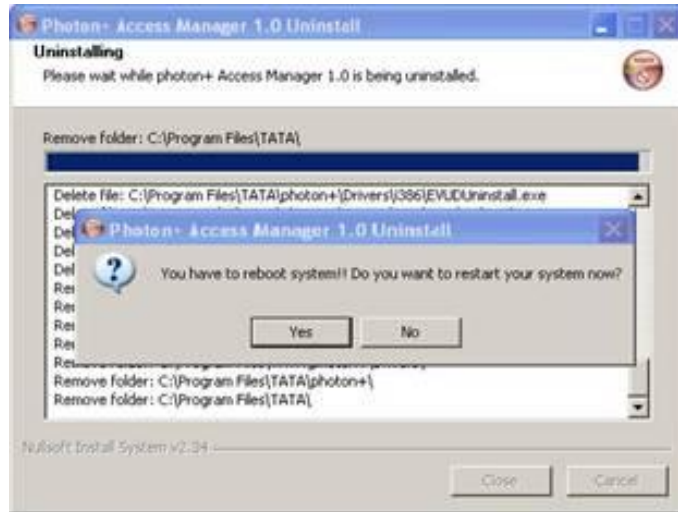

Click '**Yes**' button to continue..

Click YES if you want to remove the entire Access manager along with the USB Modem Drivers.
Click NO to just remove the Access Manager application.

Click **YES** to complete, and your computer will restart.

But if you didn't unplug the Wireless Modem, the below window will pop-up. In this case, click **OK** to complete and manually **restart** your computer.

<u>**Launching Access Manager**</u>

Running Access Manager

Plug the Wireless Modem in a USB port, and Access Manager will run automatically on
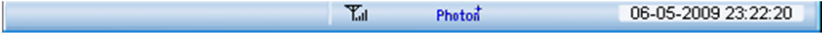
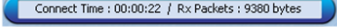Windows OS. Otherwise double click '**Photon+**'( ) icon in your desktop or select 'Start _ All Program _ TATA _ Photon+'.

After initialization, the main window of application will be displayed on the screen as shown below. The main window has five Menus with specific functions.
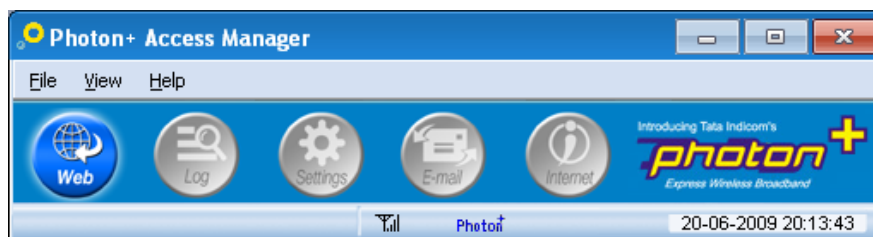
Menu Item	Description
	Display for the internet connection manager.
	Display for the log statistics.
	Set General, Lock, Network, Information, Activate Wizard.
	Open the e-mail client.
	Open the Internet explorer browser.

The below table lists the status information on the Access Manager

Status Item	Description
Status bar	The status bar display for date/time, network signal and packet information.
Network signal Information	Photon+ network information : Indicates the network signal strength. : Indicates the Photon+ network identification.
Internet Connection	When connected, you can check connection time and received packet size, also the packet speed is shown on the status bar. : Rx/Tx packet speed on the status bar. : Current time and total Rx packet.
Tray ICON	When presse the Minimize button, the Access Manager will disappear, later you can see the Tray icon as following. : Normal Status / : Disconnected Status

Activating the Photon Plus Device

If you see the following message on the Access Manager, you should activate the Wireless Modem following the audio instructions received from the Server by PC-Voice.
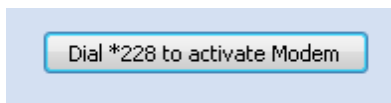
1) Click "Dial *228 to activate Modem" button, the Access Manager will try to call for activation.
2) If the activate call is connected successfully, 'PIN Code Dialog' will pop-up. Input the correct PIN Code following the instructions received from the Server.

Click your PIN Code

1	2	3
4	5	6
7	8	9
*	0	#

3) If the activating procedure is successful, "Programming Successful.." message will be displayed.

Using Photon Plus Access Manager

Setting Up the Internet Connection

 Click '**Web'** icon.

Editing Profile
When installing the Wireless Modem the Internet connection profile is created. To edit the profile information follow the
steps below.
1) Click 'Web' icon to display the Internet connection profile details.
2) Select the Internet connection profile displayed.
3) Click '**Edit**'.
4) Enter the Internet connection number '**#777**'.
5) Enter the user name as '**internet**' and password as '**internet**'.
6) Click '**OK**' button in order to save.

Internet Connection on 'Web'

Click the Connect button ( ) flashing on the Web screen to establish the connection. There is a default profile to connect to the TATA Indicom web page. Click the below logo at the bottom right of the Access Manager.

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Display the Statistic Information

 Click **'Log'** Icon.

The 'Internet Log' feature provides information on the Internet usages such as Date, Duration, Rx, Tx total bytes.

Settings and Information

General Settings
Select 'Settings' Icon -> Click 'General' tab
Items Description

Items	Description
Auto termination when Windows go to power saving mode	The Access Manager will exit automatically when your computer is switched to power saving mode.
Auto execution when Windows startup	The Access Manager will start automatically when the Windows is booted.
Execute the Access Manager on Background	The Access Manager is minimized on the Tray bar and runs on the background when you click "Close".

Lock Settings
Select 'Settings' Icon -> Click 'Lock' tab

The default lock value is four zero "0000". For changing the lock value, follow the stpes mentioned under 'Change
Lock Code' setup.

Items Description

Items	Description
General Lock	When set, you need to enter the lock code every time you run the Access Manager.
Internet Lock	When set, you need to enter the lock code every time you access the 'Web' for the Internet connection.
Change Lock Code	You can change the lock code value. 1) Enter the current lock value. 2) Enter the new lock value. 3) Retype the new lock value in 'Confirm New Lock Code'. 4) Click 'OK' button.

Network Settings
Select 'Settings' Icon ->Click 'Network' tab.
You can change the mode of preference as 'Hybrid Mode', '1xOnly' and 'Photon+ Only'.

Preference Mode	Description
Hybrid mode	The Wireless Modem will operate in dual mode with Photon+ and 1x periodically.
1xOnly	The Wireless Modem will operate only in CDMA1x mode without Photon+.
Photon+ Only	The Wireless Modem will operate only in Photon+ mode without CDMA1x.

Information
Select 'Settings' Icon -> Click 'Information' tab
The information tab displays the following items:
1) Application Information Version.
2) PRL ID information
3) Wireless Modem information as Model name, S/W version, H/W version, MEID and pESN.

Activation Wizard
You can reactivate the Wireless USB Modem in the Setting Menu.
Select 'Settings' Icon -> Click 'Activate Wizard' tab -> Input Lock Code "0000".
The default Lock Code is four zero "0000" and it is different from the General Lock Code.

Follow Activating the Photon Plus Device

Mac OS

The Wireless Modem does not support the automatic installation function on Mac operating system. You need to install it manually following the recommended steps.

Installation Procedure

Insert the Wireless Modem into a USB port on your Mac computer. You may see the Photon+ CD Driver on the Desktop.

Start the Setup

1) Double click the Photon+ CD Driver on the Desktop.

2) You may see the following Installation packages.

NOTE:

First of all, you have to install the '**USB Modem Driver**' installer package, and then need to install the '**Installer_Photon+**' package.
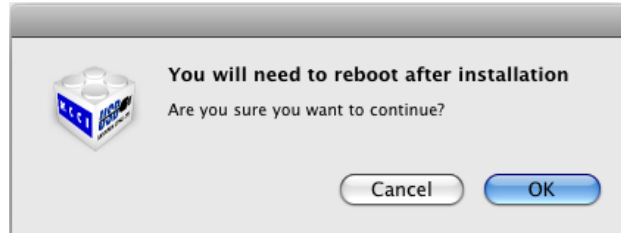
USB Driver Installation
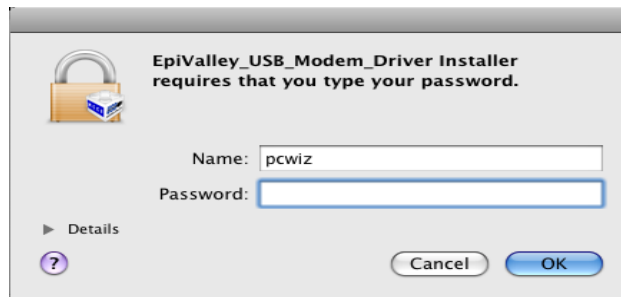
Double click the 'USB Modem Driver' installer package.

1) Click the 'Install' button in order to proceed.

2) Click the 'OK' button.

> **You will need to reboot after installation**
> Are you sure you want to continue?
>
> Cancel   OK

3) Input your 'Password' when prompted, and click the 'OK' button.

> **EpiValley_USB_Modem_Driver Installer requires that you type your password.**
>
> Name: pcwiz
> Password:
>
> ▶ Details
> ?   Cancel   OK

4) Click the 'Restart' button in order to add the system file.

> **Installation completed!**
> You must restart or shutdown. You may then plug in the EpiValley USB Modem
>
> Shutdown   Restart

Un-installing Procedure

Double click the 'USB Modem Driver'   uninstaller package.

1) Click the 'Uninstall' button in order to proceed.

> Uninstaller
>
> Click the Uninstall button to remove the drivers for the EpiValley USB Modem from your computer. You will be prompted for your password in order for this program to remove the system files.
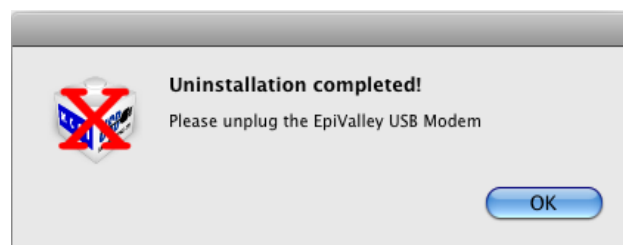>
> Uninstall   Quit

2) Click the 'OK' button.

3) Input your 'Password' when prompted, and click the 'OK' button.
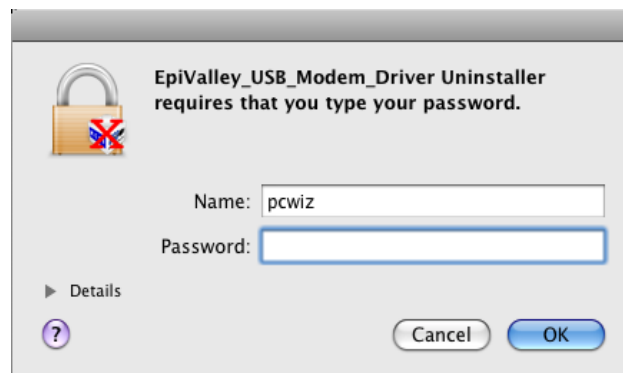
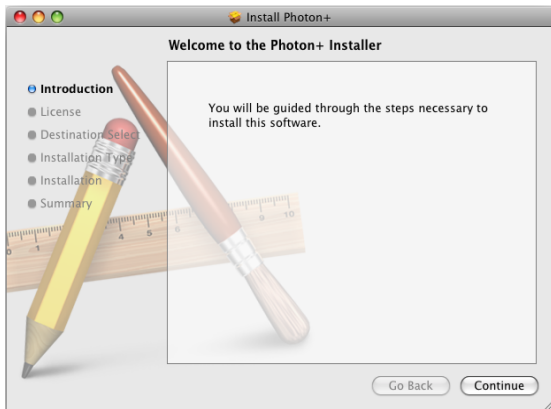4) Click the 'OK' button in order to complete the uninstallation proceeds.

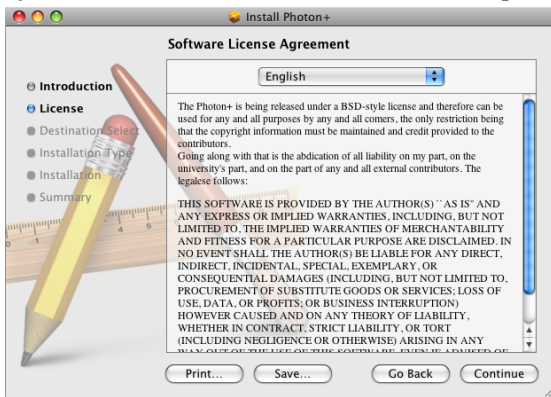**Access Manager Installing Guide**
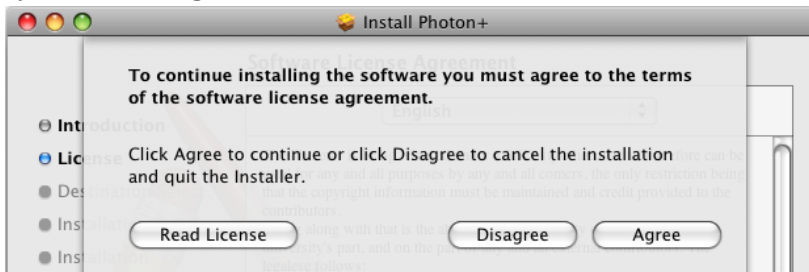1) Double click the 'Photon+ Access Manager' installer package.
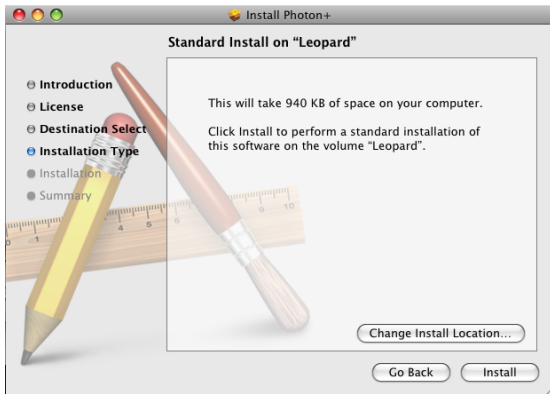
2) Click the 'Continue' button in order to proceed.

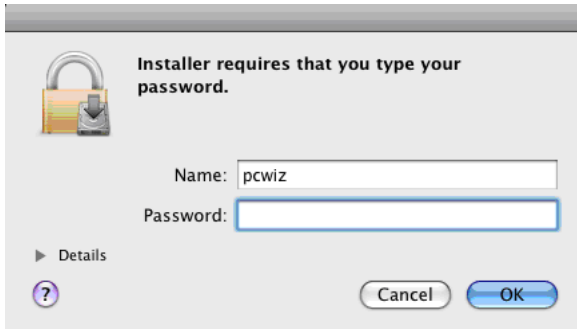3) Click the 'Continue' button to accept the Software License Agreement.

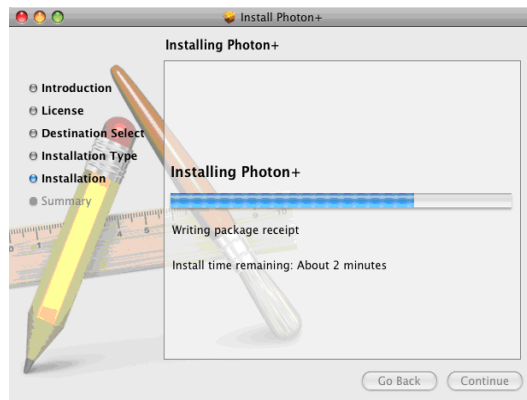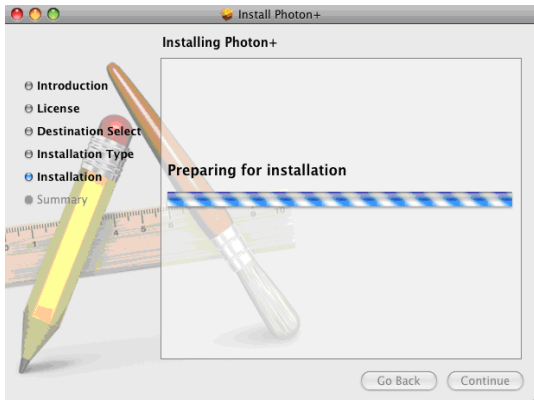4) Click the 'Agree' button.

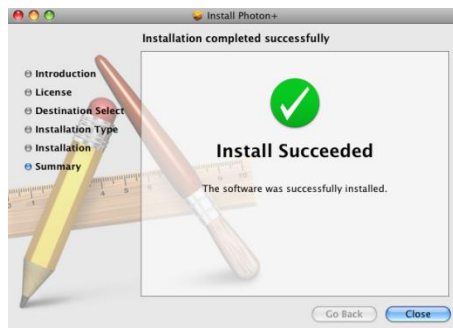5) Click the 'Install' button to start installation.

6) Input your 'Password' when prompted, and click the 'OK' button.

7) Click the 'Continue' button to start the installation process.
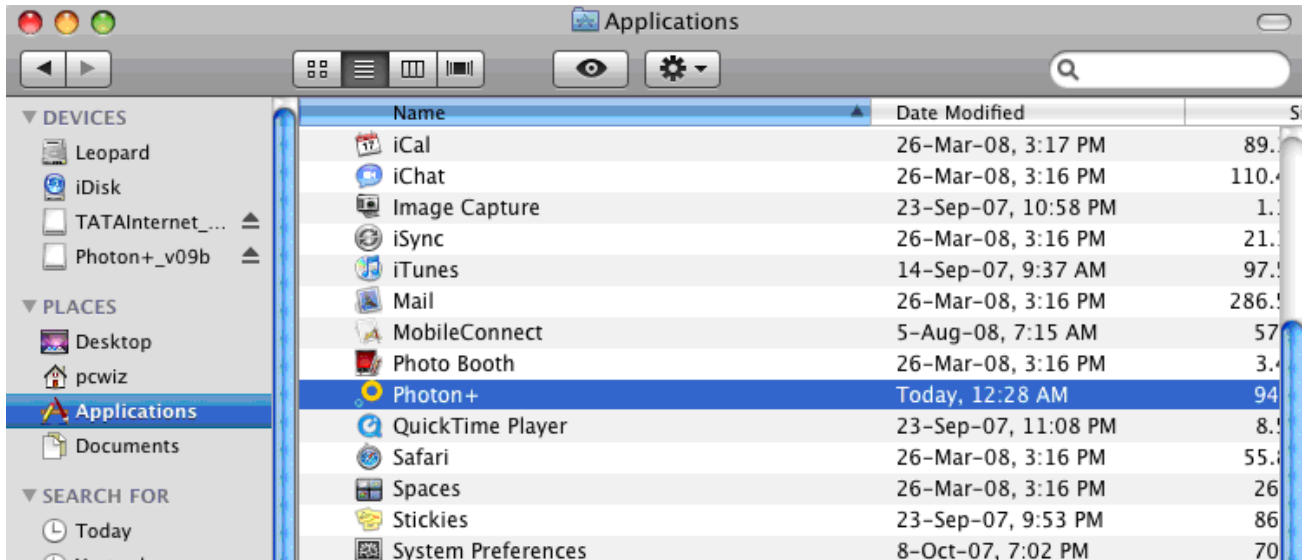

8) Click the 'OK' button to complete the installation process.

Plug the Wireless Modem in a USB port, and click the 'Photon+ Access Manager' in the Applications places.
Click the 'Finder' → Select the 'Applications' in Places → Click the 'Photon+' Access Manager item.

After initialization, the main window of the application will be displayed on the screen as shown below.

The Access Manager will try to search for the Wireless Modem device, and then the Access Manager will be displayed on the screen as shown below.

Internet Connection

Click the Connect button ( ) for connecting to the Internet service. After the connection is established, the Total packets and Current Rate will be displayed as shown below.
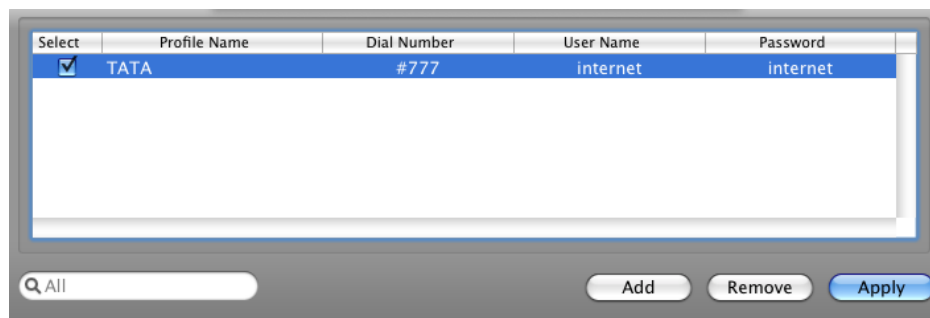

To disconnect, click the disconnect button ( ).

Add Profile
On the menu bar of the management program main interface, click the 'Network' menu →
Click the 'Setting Profile' item.

There is the default profile to TATA, but if you need to add another profile, you can add as following steps.

1) Click 'Add' button.
2) Enter the Profile Name as 'TATA'.
3) Enter the Dial Number as '#777'.
4) Enter the user name as 'internet' and password as 'internet'.
5) Click 'Apply' button in order to save.

Setting Network
On the menu bar of the management program main interface, click the 'Network' menu →
Click the 'Setting Network' item.
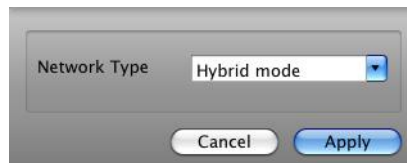
You can change the mode of preference as 'Hybrid mode', '1xOnly' and 'Photon+ Only'.

Preference Mode	Description
Hybrid mode	The Wireless Modem will operate in dual mode with Photon+ and 1x periodically.
1xOnly	The Wireless Modem will operate only in CDMA1x mode without Photon+. You may use the 1xOnly mode in an area without Photon+ coverage.
Photon+ Only	The Wireless Modem will operate only in Photon+ mode without CDMA1x. If you do not need to use the CDMA1x data service, you can disable it.

Modem Information
On the menu bar of the management program main interface, click the 'Network' menu →
Click the 'Modem Information' item.

The information tab displays the following items:

1) PRL ID information.

2) Wireless Modem information as Model name, S/W version, H/W version, MEID and pESN.
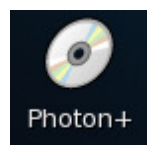
3) Application Information Version.

Linux

Installation Procedure

Insert the Wireless Modem into a USB port on your Mac computer. You may see the Photon+ CD Driver on the Desktop.
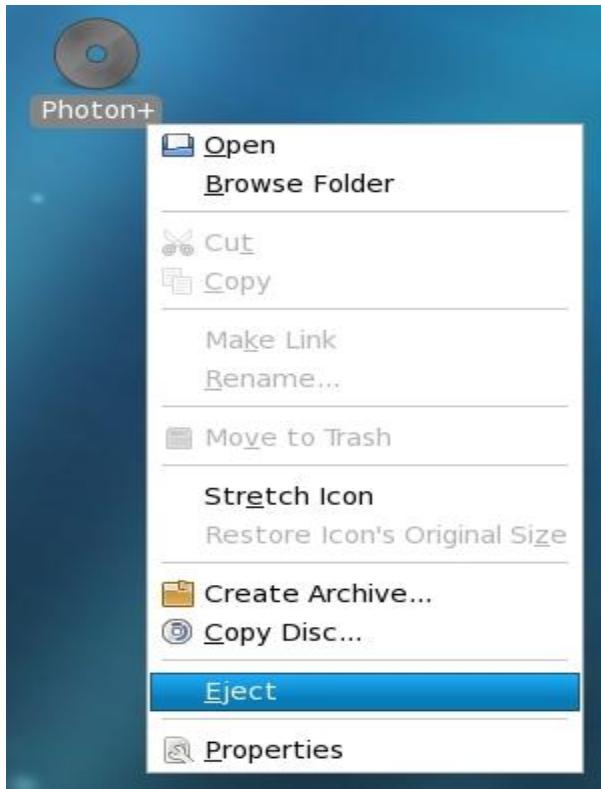
Start the Setup

Insert the Wireless Modem into a USB port in your computer. The Photon+ CD Driver will

appear on the Desktop.

1. Click the right button of the mouse to displaying the menu.
2. Click the 'Eject' item in the Menu, later the modem port of Wireless Modem will loading in "/dev/tty" directory.

IMPORTANT NOTE: To use the Internet connection, it should be executed before.

Configuration Of The Internet Connection on Text Interface

1) Log in the Graphical Interface and open the '**Terminal'** from 'Applications'.
   Terminal can be found at;
         * Click 'Applications' → Click 'Accessories' → Click '**Terminal**'.
          Or
         * Click 'Applications' → Click 'System Tools' →Click '**Terminal**'.

2) In Terminal, type the command '**wvdialconf /etc/wvdial.conf'** to detect and install the
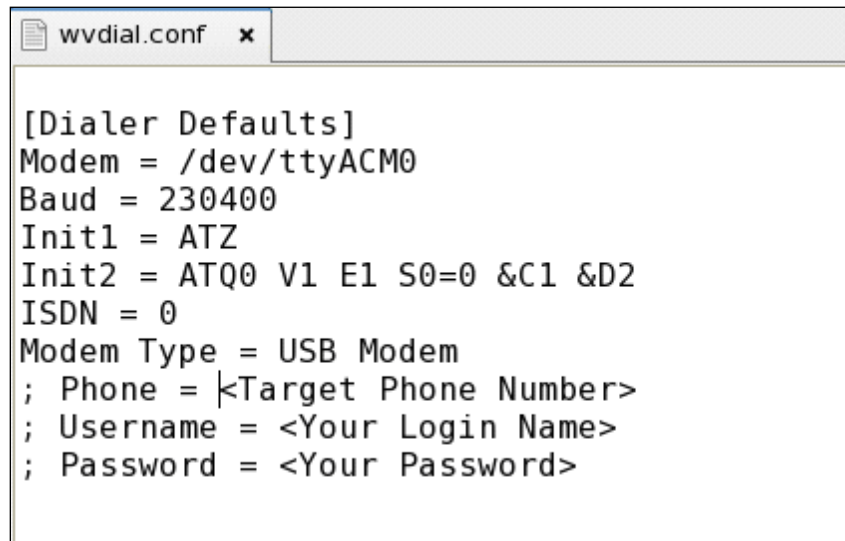   modem for Internet connection.

```
File  Edit  View  Terminal  Tabs  Help
[root@localhost ~]# wvdialconf /etc/wvdial.conf
Scanning your serial ports for a modem.

WvModem<*1>: Cannot get information for serial port.
ttyACM0<*1>: ATQ0 V1 E1 -- OK
ttyACM0<*1>: ATQ0 V1 E1 Z -- OK
ttyACM0<*1>: ATQ0 V1 E1 S0=0 -- OK
ttyACM0<*1>: ATQ0 V1 E1 S0=0 &C1 -- OK
ttyACM0<*1>: ATQ0 V1 E1 S0=0 &C1 &D2 -- OK
ttyACM0<*1>: ATQ0 V1 E1 S0=0 &C1 &D2 +FCLASS=0 -- ERROR
ttyACM0<*1>: Modem Identifier: ATI -- ERROR
ttyACM0<*1>: Speed 4800: AT -- OK
ttyACM0<*1>: Speed 9600: AT -- OK
ttyACM0<*1>: Speed 19200: AT -- OK
ttyACM0<*1>: Speed 38400: AT -- OK
ttyACM0<*1>: Speed 57600: AT -- OK
ttyACM0<*1>: Speed 115200: AT -- OK
ttyACM0<*1>: Speed 230400: AT -- OK
ttyACM0<*1>: Speed 460800: AT -- ÔÔ
ttyACM0<*1>: Speed 460800: AT -- ÔÔ
ttyACM0<*1>: Speed 460800: AT -- ÔÔ
ttyACM0<*1>: Max speed is 230400; that should be safe.
ttyACM0<*1>: ATQ0 V1 E1 S0=0 &C1 &D2 -- OK

Found an USB modem on /dev/ttyACM0.
Modem configuration written to /etc/wvdial.conf.
ttyACM0<Info>: Speed 230400; init "ATQ0 V1 E1 S0=0 &C1 &D2"
[root@localhost ~]# █
```

* **IMPORTANT NOTE**: The modem device name is '**/dev/ttyACM0**'.

3) In the Terminal window, input the command **'gedit/etc/wvdial.conf'** to open the
   configuration file as shown below.

```
wvdial.conf  ✕

[Dialer Defaults]
Modem = /dev/ttyACM0
Baud = 230400
Init1 = ATZ
Init2 = ATQ0 V1 E1 S0=0 &C1 &D2
ISDN = 0
Modem Type = USB Modem
; Phone = <Target Phone Number>
; Username = <Your Login Name>
; Password = <Your Password>
```

4) Make the following changes in the configuration file.
   1. Delete the semi colon(;) before the last three lines phone, username, password.
   2. Enter Phone no '**#777**', Username **'internet'** and password '**internet**'.
   3. In the end, add 2 extra lines in the configuration file.

         Init3 = AT+CRM=1
         Stupid Mode = 1

5) After making these changes, save the configuration file and exit from the gedit
application.

```
wvdial.conf   ×

[Dialer Defaults]
Modem = /dev/ttyACM0
Baud = 230400
Init1 = ATZ
Init2 = ATQ0 V1 E1 S0=0 &C1 &D2
Init3 = AT+CRM=1
Stupid Mode = 1
ISDN = 0
Modem Type = USB Modem
Phone = #777
Username = internet
Password = internet
```

6) Run the command **'wvdial'** from Terminal to connect to Internet.


```
File  Edit  View  Terminal  Tabs  Help
[root@localhost ~]# wvdial
--> WvDial: Internet dialer version 1.54.0
--> Cannot open /dev/ttyACM0: Input/output error
--> Cannot get information for serial port.
--> Initializing modem.
--> Sending: ATZ
ATZ
OK
--> Sending: ATQ0 V1 E1 S0=0 &C1 &D2
ATQ0 V1 E1 S0=0 &C1 &D2
OK
--> Sending: AT+CRM=1
AT+CRM=1
OK
--> Modem initialized.
--> Sending: ATDT#777
--> Waiting for carrier.
ATDT#777
CONNECT
~[7f]}#@!}!}!} }5}"}&} } } } }#}%B#}%}%}&O[1e]Y0'z~
--> Carrier detected.  Starting PPP immediately.
--> Starting pppd at Mon Mar 12 17:22:31 2007
--> pid of pppd: 3498
--> Using interface ppp0
--> local  IP address 59.161.1.248
--> remote IP address 172.23.118.80
--> primary   DNS address 202.54.29.5
--> secondary DNS address 202.54.10.2
```

7) Open browser and start browsing.

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8) If not able to browse, run below command in the Terminal once and the system will be ready for browsing.

   '**cp /etc/ppp/resolv.conf /etc/** ' It will ask for confirmation to overwrite, type Y to overwrite.

```
 File   Edit   View   Terminal   Tabs   Help
[root@localhost ~]# cp -f /etc/ppp/resolv.conf /etc/
cp: overwrite `/etc/resolv.conf'? y
[root@localhost ~]# █
```

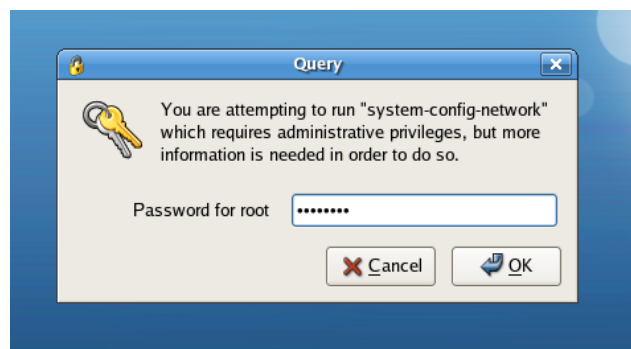9) To end the data call close the terminal or press '**Ctrl + C**'.

```
Caught signal #2!   Attempting to exit gracefully...
--> Terminating on signal 15
--> Connect time 0.3 minutes.
--> Disconnecting at Mon Mar 12 17:22:52 2007
[root@localhost ~]# █
```

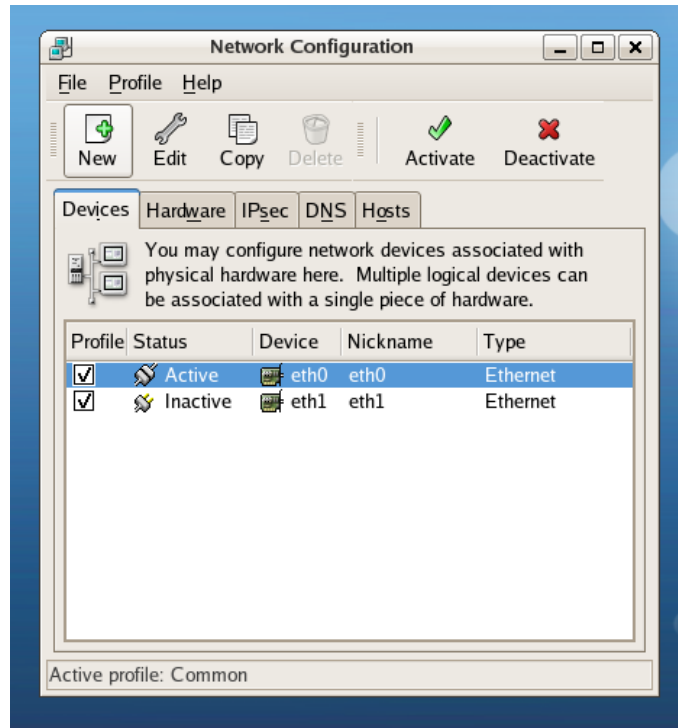**Configuration of the Internet Connection On Graphic Interface**

1) Click System menu → Click Administration → Click '**Network**'.

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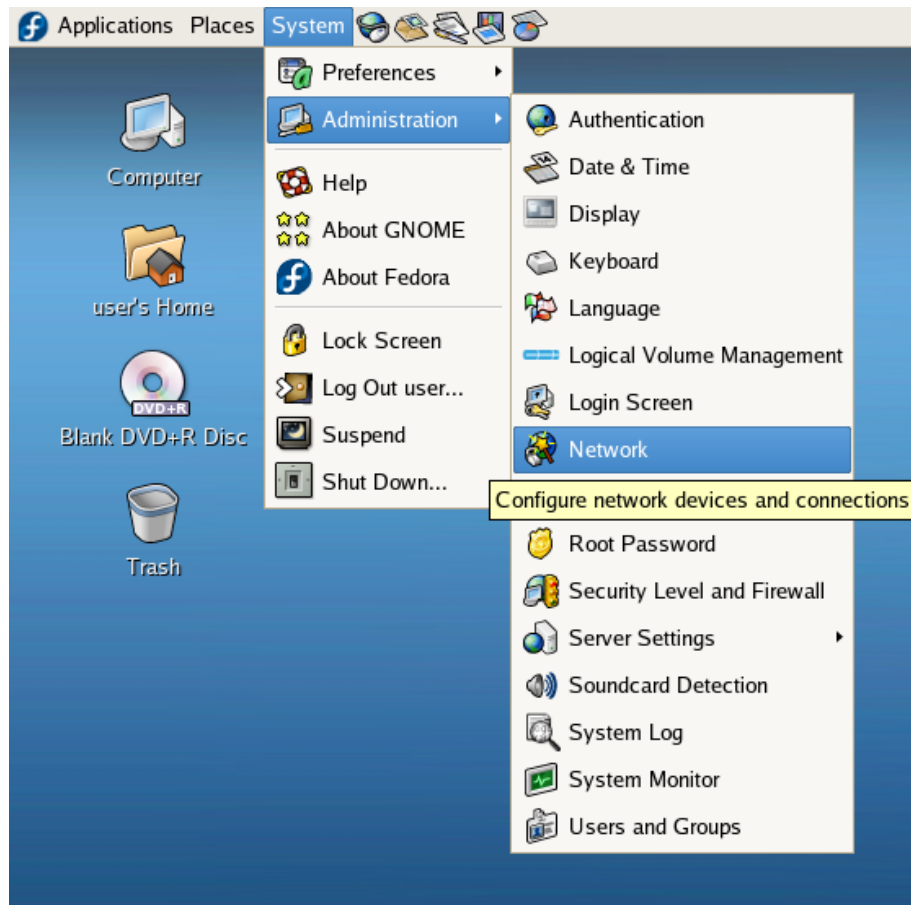
2) Enter the superuser '**Password**'.

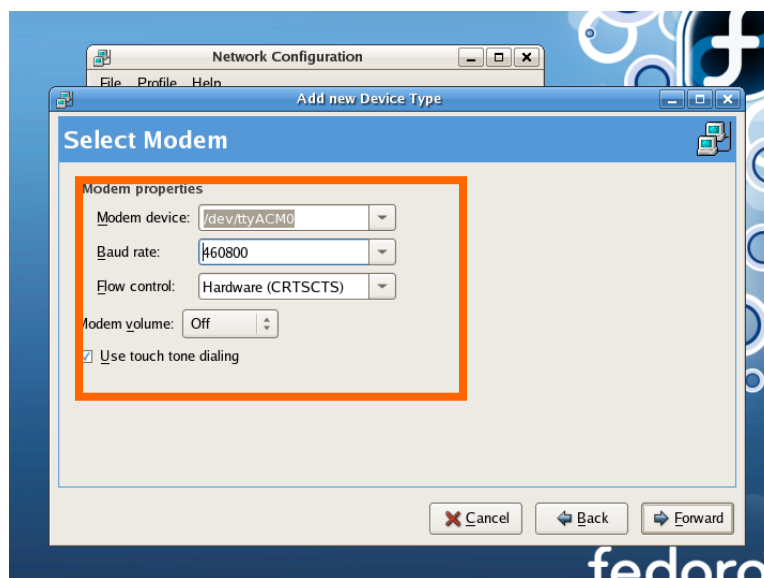3) Click '**New**' on Menu as shown below.

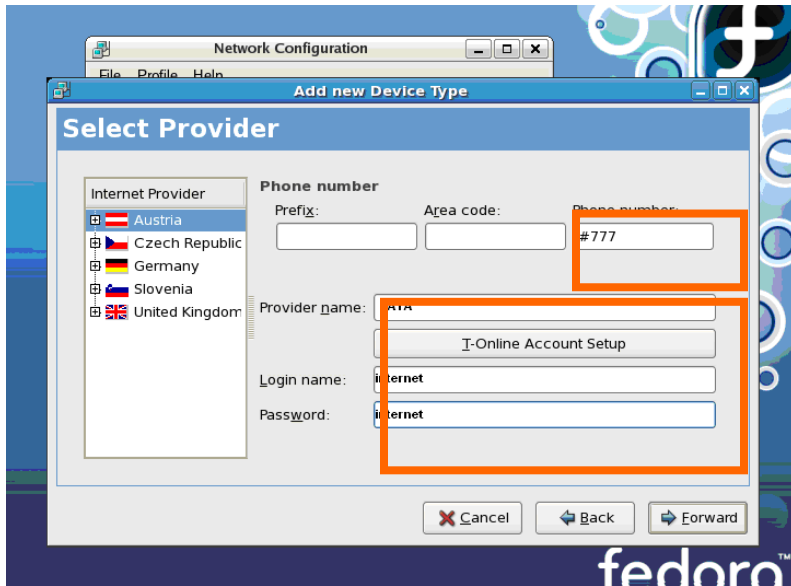4) Choose '**Modem connection'** and proceed to the next step.

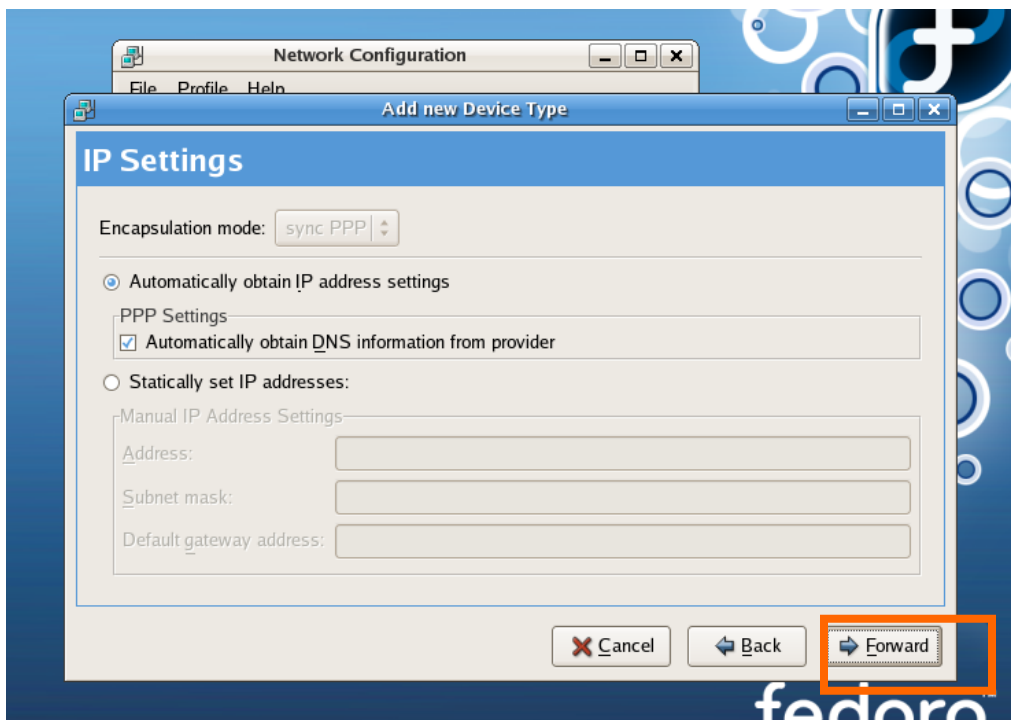5) You will get an Warning message. Click '**OK'** button to continue.

6) For Modem device input **'/dev/ttyACM0'**, for Baud rate **input '460800 bps',** the maximum rate, and click the **'forward'** button.
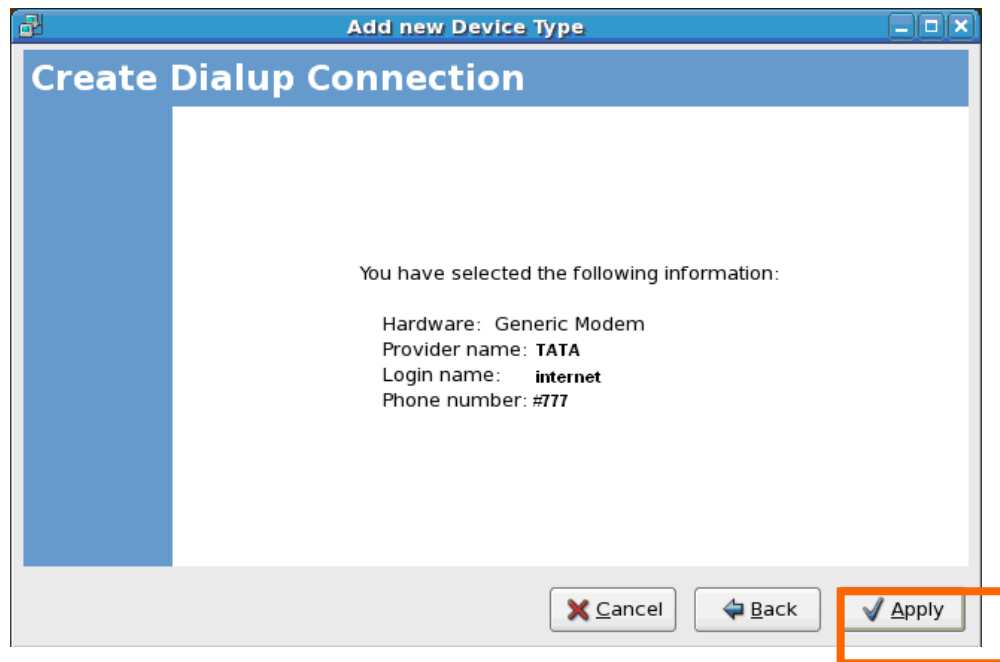

7) Enter Phone no '**#777**' Username **'internet'** and Password '**internet**'.
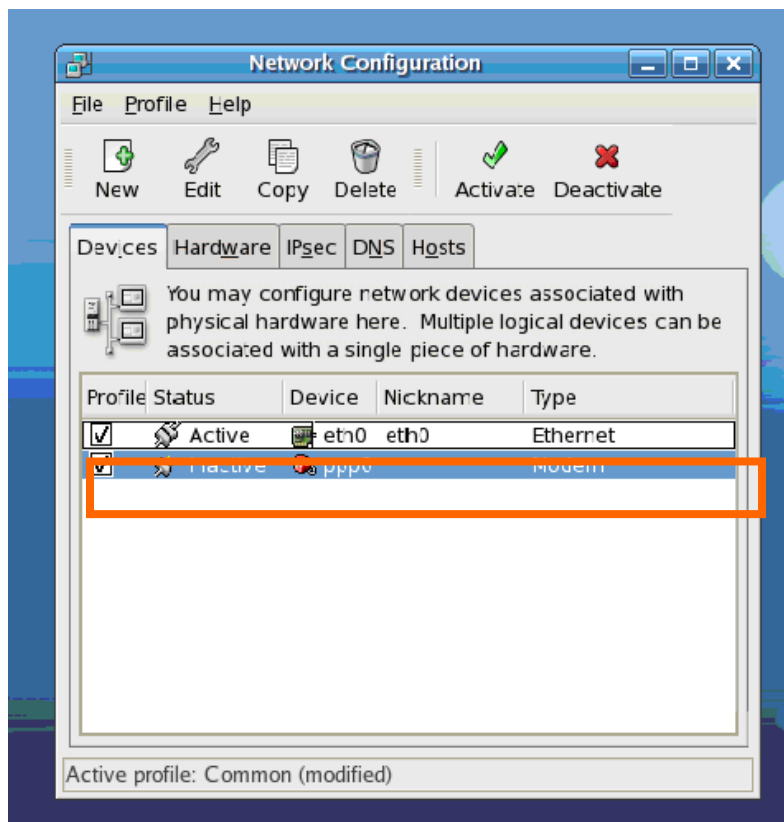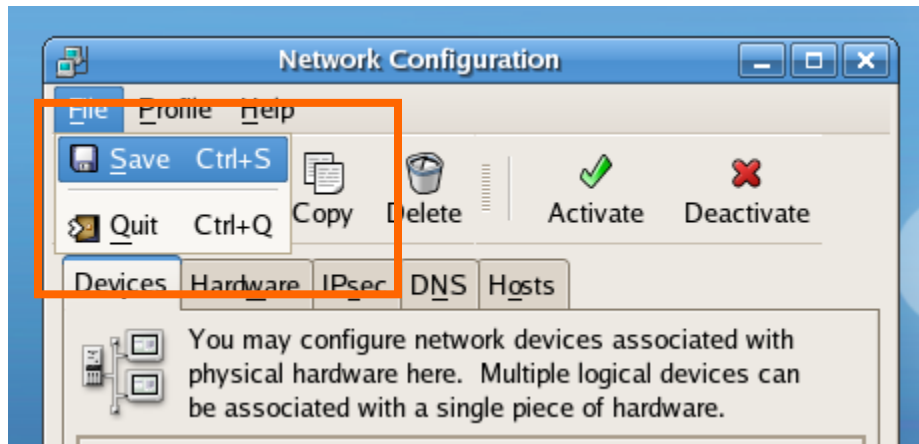
8) Click '**Forward**' button.
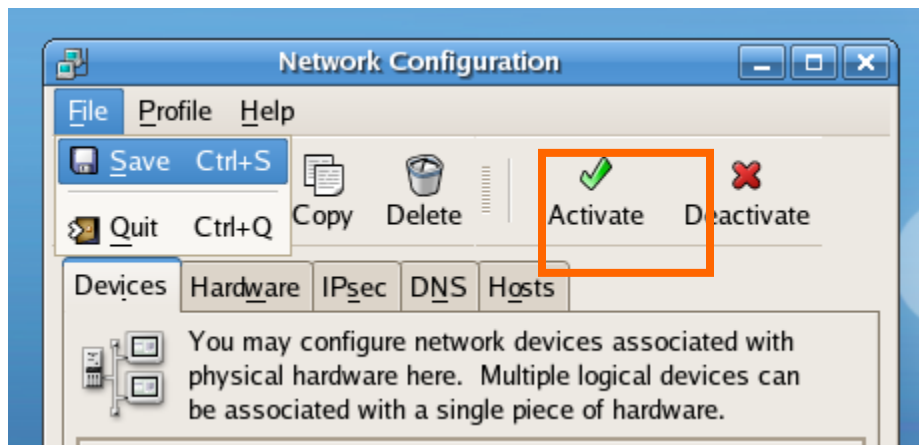
9) Click '**Apply**' button.

10) You can see the configuration registered in the Network Configuration tool.
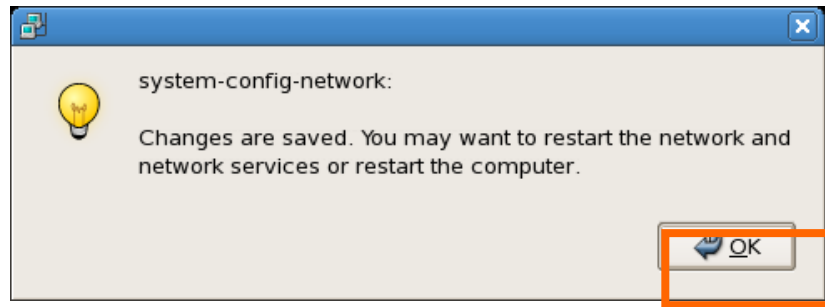
11) Click 'Save' in the 'File' menu.

12) Click '**Activate**' button for the Internet connection.
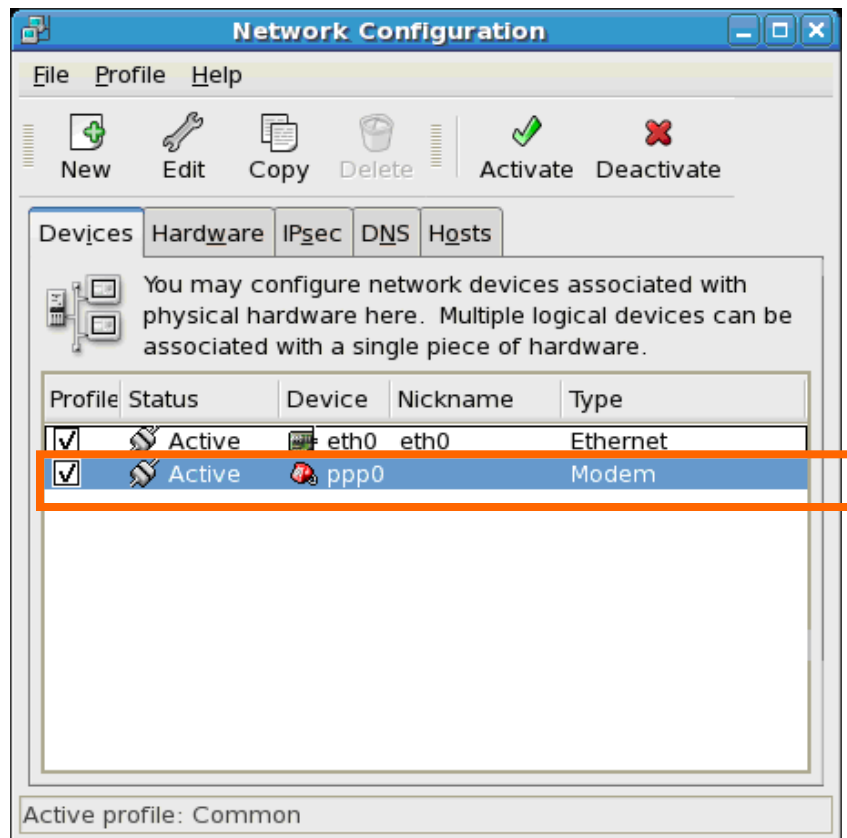

13) Click '**Yes**' button.

14) Click '**OK**' button.

15) Now the Wireless modem is activated.

FAQ

Q 1. What does each LED color stand for?

You can check the signal strength status from LED colors.
Normally it changes from Red→ Orange→ Green gradually when you plug in the modem.
- Green: Strong signal area
- Orange: Weak signal area
- Red: No service

**Q2. What shall I do if I cannot access the Internet?**
1. Check the network signal strength.
2. Check whether you have activated the wireless online service. You can ask the local network operator
on how to activate it.
3. If the Wireless Modem is activated but still you cannot access the internet happen it, please check the
User name / Password in the internet profile on Web.

Q3. In spite of "Green" LED, the Access Manager is still not connected!
Firstly, Unplug the Wireless Modem.
Secondly, follow the step "3. Uninstalling Guide" on page 7, and restart your computer.
Lastly, plug the Wireless Modem again, and follow step "2. Installing Guide"

Q4. The software is not running automatically and it shows below screen.
Please follow the steps mentioned the Q3 step again. If the same message appears contact the Service Provider.
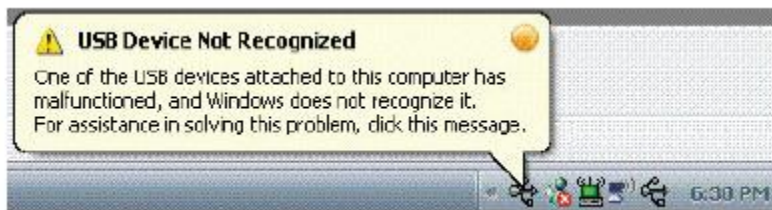
Q5. LED color is still "RED"! There's no LED light!
Your Wireless Modem could defect. Please contact the Service Provider.

Q6. If you need to re-install the Access Manager with the USB Modem driver!
Please follow the steps mentioned in the answers to the Q3.

Q7. The Photon+ auto-installation program does not appear automatically.
The AutoRun feature of Windows might be disabled under the local IT policies on Windows,
In this case, you need to install the PC-Dialer manually, following the steps mentioned at "Starting Setup"

Q8. Cannot connect the Activation call
Please contact the Service Provider, because your device information might have been improperly registered in the network system.

Q9.The Activation call is connected, but the Activation proceed is unsuccessful.
Please contact the Service Provider, because your device information might have been improperly registered in the network system.

Q10. There are no signal bars on the RSSI indicator of Access Manager and "No service" message is displayed, or the LED of the Wireless Modem is orange or red color.
The local network signal might be too weak, Contact the Service Provider for assistance.