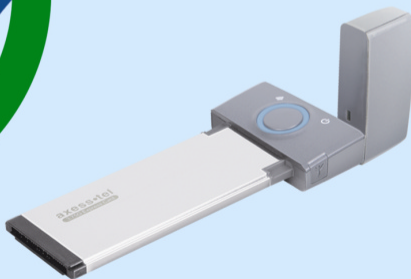# User Manual

3G Wireless Modem

EU230
HSUPA ExpressCard / 34

INTRODUCTION

Thank you for purchasing the Axesstel EU230 ExpressCard® 34 (the Card). This user manual will help you setup, configure and outline best practices for maximizing your wireless home network performance with the Card.

The EU230 ExpressCard® 34 leverages WCDMA 3G networks to allow mobile professionals to maintain productivity with secure, high speed access to email, the Internet, data intensive files and multi-media streaming. SMS messaging enable users to stay connected to colleagues, customers and family.

EU230 allows for quick and easy connectivity to a laptop PC equipped with ExpressCard® 34 interface or USB interface, providing broadband data access from the home, office or while working remotely. Backward compatibility ensures services in GSM/GPRS and EDGE coverage areas, while internal receive diversity antennas maximize coverage range and data throughput. The slim and compact EU230 ExpressCard® 34 provide busy professionals with the versatility to stay productive and connected virtually anywhere, anytime from the home, office or while traveling.

FEATURES

1. PC-Based AxessManager Software
2. Color LED with Status Indicators
3. Receive Diversity for Maximum Range and Throughput
4. Text Messaging through GSM
5. Short Message Service
6. USB 2.0 adaptor

SAFETY PRECAUTIONS

1. Avoid placing the Card in a dusty location, or near a source of gas or fire.
2. Don't Shake, hit or drop the Card.
3. To clean the outside of the Card, use only a soft, dry cloth. The chemicals in alcohol, benzene or acetone can damage the surface of the Card.
4. Do not twist or pull the Mini-B USB Cable.
5. Do not disassemble the Card.
6. Do not place the Card near water, for example, near a bathtub, sink, wet basement, or swimming pool.

CHECKING THE PARTS

Once you have unpacked your product package, make sure that you have all the parts shown below. If any piece is missing or broken, please call your customer service.

    1. Main Unit
    2. USB adapter jacket
    3. USB Data Cable
    4. User Manual
    5. CD Package for Win98/ME/NT
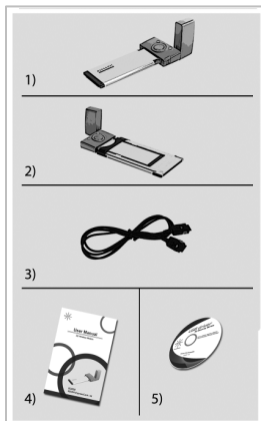
GETTING STARTED

Before you can begin using the Card, you must:
- ➤ Install the Card enabling software and driver.
- ➤ Have an activated and valid SIM card

CONNECTING YOUR CARD TO THE PC

This Card operates by receiving DC power from your PC.

Card installation ExpressCard®34 interface
1. Remove the Card jacket
2. Insert the Card to the ExpressCard®34 slot of your PC. Make sure that the LED button faces upward.

Card installation USB interface
1. Insert the Card into USB jacket
2. Connect the small end of provided USB cable to the jacket
3. Connect the USB cable to your PC.
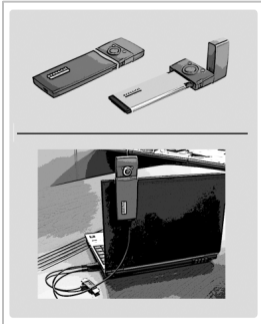
INSTALLING THE MODEM SOFTWARE

System Requirements
The system requirements for using this software are summarized below:

(1) Recommended Specifications

CPU: Pentium III 550MHz or higher, IBM PC-Compatible
RAM: 256MB or more
VGA: Video card with1024 I 768 resolution and 65536 or more colors
HDD: 200MB or more hard disk space
Others: CD-ROM Drive or DVD Drive
OS: Microsoft Windows 2000 or higher(**Compatible with Vista version**)

(2) Minimum Specifications

CPU: Pentium II 300MHz or higher, IBM PC-Compatible
RAM: 128MB or more
VGA: Video card with1024 I 768 resolution and 65536 or more colors
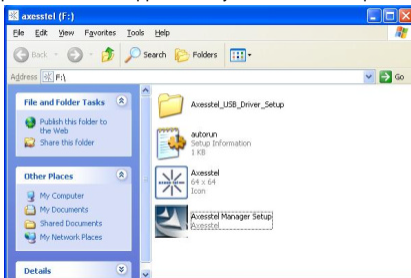HDD: 100MB or more hard disk space
Others: CD-ROM Drive or DVD Drive
OS: Microsoft Windows 2000 or higher

(3) CD Package for Win 98/ME/NT
If O/S version of your PC is Windows 98/ME/NT, you should use CD Package for installation of USB Driver and AxessManager.

Installing the USB Driver and AxessManager

The entire process will take approximately 5 minutes to complete.

Step 1: After inserting the Card to the PC port the above window will appear. Click "Axesstel Manager Setup.exe" to install AxessManager.

Note: If Windows OS auto-play feature is not available and you don't see the pop-up window in step 1, click on "Start" then "My Computer" to see the virtual drive associated with the Card. Double-click on that drive to see the pop-up window shown in step 1
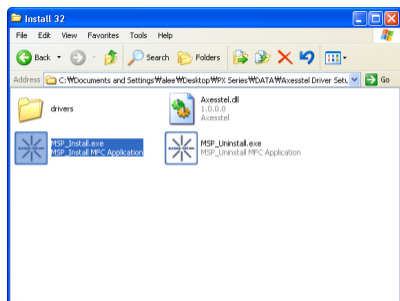
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Step 2: Click "Next" to continue

Step 3: Click "Next" to continue

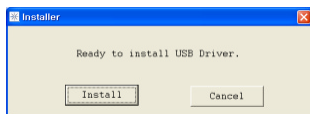**Step 4:** Click **Finish** to complete installation of AxessManager

Step 5: Click **Axesstel Driver Setup** folder and select "Install 32" folder
  *If you use 64bit OS, please run "MSP_Install64.exe" under "Install 64" folder.

Step 6: Click **MSP_Install.exe** to install USB Driver

The following screen will appear

Step 7: Click **Install** and make sure the driver was installed successfully.

Step 8: After finishing driver file copy, the Card will change to Modem mode from CD ROM Mode. **Axesstel USB Mode** will be detected on your PC. Select **Next** to install USB Driver
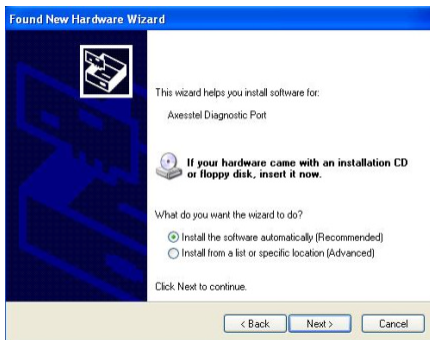

Step 9: Select **Continue Anyway**

Step 10: .Click **Finish** to complete the process

Step 11: Axesstel Diagnostic Port will be detected on your PC. Select **Next** to install USB Driver

Step 12: Select **Continue Anyway**.

Step 13: Click **Finish** to complete the process. After this step you can begin to use **AxessManager**

Once finished the installation, AxessManager SW utility will appear as a short cut icon in Window.

GETTING TO KNOW YOUR MODEM

AxessManager GUI

AxessManager is a SW utility that allows the administration of your Card. You use AxessManager to:

- Initiate data sessions
- Receive and send SMS messages
- Customize features and options

1. Setting Button: Change options of your Card such as SMS setting, APN setting, etc…

2. Connection Button: Initiate or stop a data session to connect to Internet via your operator's network

3. SMS Managers: Configure and manage your Inbox, templates etc..

AxessManager Operation Guide

1. Getting Started

When the PC and the Card are connected, AxessManager allows you to browse Internet, modify modem configurations and text messaging. In addition, you can perform management tasks for device numbers such as adding, modifying and deleting them, and you can write messages in your PC and send them to your modem.

AxessManager provides the following 3 action-buttons that lead to corresponding menus:

- Internet Connection: Connection button allows you to connect to the internet through your service provider.

- SMS Manager: You can download the Inbox, Outbox, and Draft Box messages in your Card to your PC and edit them, or upload newly created messages to your modem and send them to others.

- Settings: You can manage modem settings

1.1. Basic User Interface

1. Connect/Disconnect Button: Used to Connect/Disconnect PC and Device.
2. SMS Manager: when you click SMS Manager icon, the Sub Menu is displayed in the tree structure

Name	Image Button
SMS Manager	
Connection	
Settings	

1.2. Connecting/Disconnecting Your Card to/From the PC

Connecting

1. Connect your PC with the Card by inserting it to your PC ExpressCard34 interface or using the supplied cable. Insert the Card or the cable firmly to the modem until it clicks into place.

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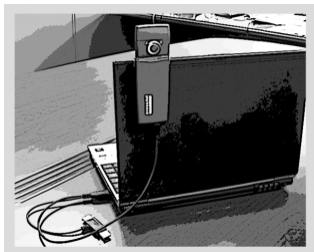
1. Click the icon on your desktop to run the AxessManager Program.

Axesstel Manager

2. Click the Connect/Disconnect button. Note that a connection profile needs to be defined and selected before using the Connect/Disconnect button. Please refer to the section "Add Connect Item" below for more information. When the connection is successful, you can use the AxessManager program.

Disconnecting

1. Click the Connect/Disconnect button after finishing your job. The connection is discontinued and the active Connect/Disconnect button is changed to the disabled status.
2. To exit the program after finishing the job, click the "**X**" button at top right of the program window.
3. Remove the Card from your PC or disconnect the cable from PC and Card.

2. Device Setting

Click the Setting button on the main screen of the program to open the following dialog, where you can specify values for many items needed to set up your modem. The following screen will appear.
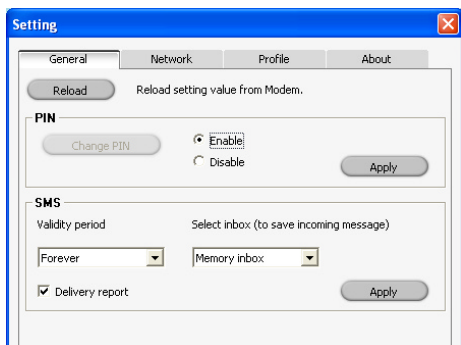
2.1. General

Reload button allows you to reset the Card setting to default factory setting.

PIN setting sub-menu allows you to enable or disable the feature. Check with your service provider before you attempt to change the PIN value or enable this feature. Click the **Apply** button to confirm your new selection.

SMS setting sub-menu: use this function to (i) set the timer for the message to remain in your Card and (ii) select the location where incoming messages will be stored. If you select the location as "SIM inbox", all incoming messages to your number are stored in the memory of your SIM card. If you move your SIM card to another device, the messages will follow. If you select "Memory Inbox" the messages are stored in the Card.

Drop-down window in each setting allows you to choose the right option. Click the **Apply** button to confirm your new selection.

2.2. Network
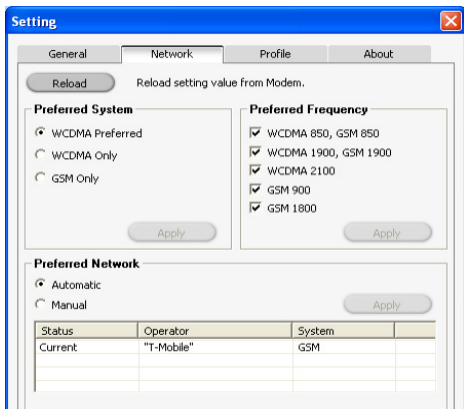
You can change the preferred network setting by using the network setting sub-menu. Note that changing these parameters will affect the functionality and performance of the Card and your Internet connection. Consult your service provider before making any changes in this sub-menu.

2.2. Profile

A short, functional description for each button on the Setting is provided below.

Button	Description
Save	Allows you to save changes made to an existing entry in your Connection Profile
Modify	Allows you to modify existing 'Profile' settings.
Delete	Allows you to delete an existing entry in your Connection Profile
Select	Allows you to view and select from a list of modems currently available for connection.

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Add New Connection Profile

To add new profile, simply enter the information into each connection parameter then click **Save** button.

(1) Profile Name: Enter the name to be displayed on the 'Connect Item' list.
(2) Number: Specify the device number to which modem will connect.
(3) User Name: If required, enter the user ID for the network provider.
(4) Password: Enter the password for the user name.

Delete Profile

Select the 'Profile Item' you want to erase from the list and click Delete.

Modify Profile

Select the 'Profile Item' you want to modify from the list. The parameters associated with this profile will be filled in. Make the necessary changes and click Modify. See 'Add New Connection Profile" for detailed descriptions about the settings.

Once you are satisfied with all changes in **Setting** click the '**X**' button to return to the main window.

3. SMS Manager

SMS Manager is composed of Inbox for keeping received messages, Outbox for saving messages that have been sent out, Draft Box for saving messages that have not yet been sent and Saved Box for keeping important messages in the Inbox. You can directly send out messages from your PC to your device, or download it from device to PC for more convenient management.

3.1. Inbox/SIM Inbox Manager

Both Inbox and SIM Inbox Manager offer same features. The difference is only the location where the messages were stored. Refer to section 2.1 for more details about storing incoming messages.

With Inbox Manager, you can reply to, forward, or delete selected messages.
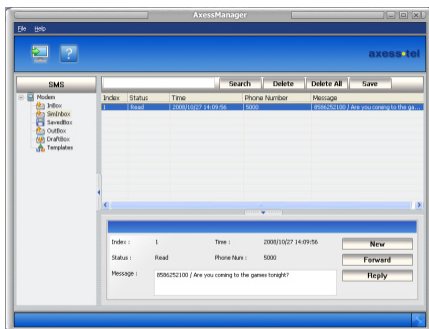
1. Inbox List View

(1) By default, Inbox List View shows all Inbox messages saved in the device.
(2) The details of the Inbox message selected from Inbox List View is displayed in the Preview window at bottom.
(3) You can delete the messages displayed in Inbox List View. (You cannot add.)
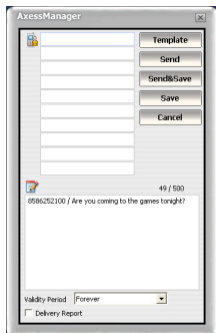
2. Preview Window & Reply/Forward (Send)

(1) The content of the Inbox message selected from Inbox List is displayed in the Preview window at bottom.
(2) When you click the Reply button in the Preview window, a new window pops up for you to edit the message and send it to the sender. The device number is populated in the Reply function.
(3) When you click the Forward button in the Preview window, a new window pops up for you to edit the message and send it to the another person. The message content is included in the Forward function
(4) You can send a message to multiple persons. Just type in each device number in a separate line
(5) You can also compose and send a new message from the Preview Window.

3. Delete Inbox Data

Select the data to delete and press the Delete key.

To delete multiple data simultaneously, select them with your mouse while pressing down the Shift or Ctrl key and then press the Delete key. The selected Inbox data is deleted at once from the device.
The deleted Inbox data cannot be restored.

4. To PC

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3.2. Saved box Manager

To use Saved Box Manager, click the Saved Box text at the left of SMS Manager. With Saved Box Manager, you can reply to, forward, or delete selected messages.

1. Saved Box List View

(1) By default, Saved Box List View shows all Saved Box messages saved in the modem.
(2) The details of the Saved Box message selected from Saved Box List View is displayed in the Preview window at bottom.
(3) You can delete the messages displayed in Saved Box List View. (You cannot add.)

2. Preview Window & Reply/Forward (Send)

(1) The details of the Saved Box message selected from Saved Box List View is displayed in the Preview window at bottom.
(2) When you click the Reply button in the Preview window, a new window pops up for you to edit the message and send it to the sender.
(3) When you click the Forward button in the Preview window, a new window pops up for you to edit the message and send it to the another person.
(4) You can send a message to multiple persons.

3. Delete Saved Box Data

Select the data to delete and press the Delete key on the keyboard. To delete multiple data simultaneously, select them with your mouse while pressing down the Shift or Ctrl key and then press the Delete key. The selected Saved Box data is deleted at once from the modem.
The deleted Saved Box data cannot be restored.

4. To PC

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3.3. Outbox Manager

To use Outbox Manager, click the Outbox icon With Outbox Manager, you can forward, modify, or delete selected messages in Outbox.

1. Outbox List View

(1) By default, Outbox List View shows all Outbox messages saved in the modem.
(2) The details of the Outbox message selected from Outbox List View is displayed in the Preview window at bottom.
(3) You can delete the data displayed in Outbox List View

2. Preview Window & Forward (Send)

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(1) The detail of the Outbox message selected from Outbox List View is displayed in the Preview window at bottom.

(2) To write a new message, click the Send button in the Preview window. A new window pops up in which you can write a new message and send it to others.

(3) When you click the Forward button in the Preview window, a new window pops up for you to edit the message and send it to the another person.

(4) You can send a message to multiple persons.

(5) Type in the device number and click the search button to add to the recipients' list.

3. Delete Outbox Data

Select the data to delete and press the Delete key on the keyboard. To delete multiple data simultaneously, select them with your mouse while pressing down the Shift or Ctrl key and then press the Delete key. The selected Outbox data is deleted at once from the modem

The deleted Outbox data cannot be restored

4. To PC

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3.4. Draft Box Manager

To use Draft Box Manager, click the Draft Box icon.

With Draft Box Manager, you can forward, or delete selected messages in Draft Box.

1. Draft Box List View

(1) By default, Draft Box List View shows all Draft Box messages saved in the modem.

(2) The details of the Draft Box message selected from Draft Box List View is displayed in the Preview window at bottom.

(3) You can delete the data displayed in Draft Box List View.

2. Preview Window & Forward (Send)

(1) The details of the Draft Box message selected from Draft Box List View is displayed in the Preview window at bottom.

(2) To write a new message, click the "New" button in the Preview window, or double click an empty field in the Draft Box List. A new window pops up in which you can write a new message and send it to others.

(3) When you click the Forward button in the Preview window, a new window pops up for you to edit the message and send it to the another person.

(4) You can send a message to multiple persons.

(5) Type in the device number and click the search button to add to the recipients' list.

3. Delete Draft Box Data

Select the data to delete and press the Delete key on the keyboard. To delete multiple data simultaneously, select them with your mouse while pressing down the Shift or Ctrl key and then press the Delete key. The selected Draft Box data is deleted at once from the modem.

The deleted Draft Box data cannot be restored.

4. To PC

The Draft Box List View is updated with the Draft Box messages currently saved in the modem.

3.5. Send

To send a new message, press New button the Preview window.
A new window will pop up. There are 4 buttons in the Send window.
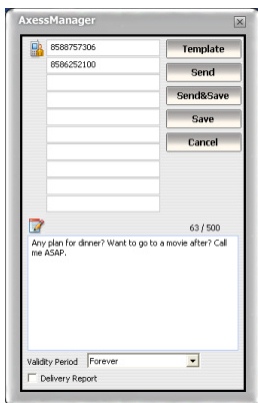
1. Send
Send the message directly to the recipients through the modem.

2. Send & Save
Send the message directly to the recipients through the modem. The message is also saved in the Outbox in the modem

3. Save
This button does not send the message. Message is saved in the Draftbox for later use.

4. Cancel
This button cancels the current operation and returns to the SMS manager menu.

Miscellaneous

SPECIFICATIONS

Frequency Range	Tri-band UMTS: 2100/ 1900/ 850 MHz (Band I/ II/V)
	Quad-band GSM / GPRS / EDGE: 850 / 900 / 1800 / 1900 MHz
Channel Bandwidth	WCDMA 5 MHz
External appearance (mm)	Express Card: 125.2 x 46 x 13 Express Card + USB Adaptor: 144.1 x 46 x 13
Weight	Express Card: 45g, total 70g.
Sending output	3gpp UE Power Class 3 (+24 dBm) GSM Power Class 4 (2W) (850/900 MHz) GSM Power Class 1 (1W) (1800/1900 MHz) EDGE Power Class E2 (+27dBm in 850/900 bands, +26dBm in 1800/1900 bands)
Temperature of operation	-10 ~ +55 degrees Celsius
Relative humidity	5% ~ 90%

AXT_v4.1

SAR INFORMATION
THIS MODEL DEVICE MEETS THE GOVERNMENT'S REQUIREMENTS FOR EXPOSURE TO RADIO WAVES

Your wireless device is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radiofrequency(RF) energy set by the Federal Communications Commission of the US Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population.
The guidelines are based on standards that were developed by independent scientific Organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health. The exposure standard for wireless mobile devices employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg. *
Tests for SAR are conducted with the device transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. This is because the device is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output. Before device is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government adopted

requirement for safe exposure. The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required by the FCC for each model. The highest FCC SAR value for this device when tested for use at the when worn on the body, as described in this user guide, is **0.92 W/Kg** . (Body-worn measurements differ among device models, depending upon available accessories and FCC requirements). While there may be differences between the SAR levels of various devices and at various positions, they all meet the government requirement for safe exposure.

The FCC has granted an Equipment Authorization for this device with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model device is on file with the FCC and can be found under the Display Grant section of ttp://www.fcc.gov/oet/fccid after searching on **FCC ID: PH7EU230**.

Additional information on Specific Absorption Rates (SAR) can be found on the Cellular Telecommunications Industry Association (CTIA) web-site at http://www.wow-com.com. * In the United States and Canada, the SAR limit for device used by the public is 1.6 watts/kg (W/kg) averaged over one gram of tissue. The standard incorporates a substantial margin of safety to give additional protection for the public and to account for any variations in measurements.

SAFETY INFORMATION FOR RF EXPOSURE

Body worm operation
This device was tested for typical body-worn operations with the back of the device kept 5 mm. from the body. To maintain compliance with FCC RF exposure requirements. The use of accessories that do not satisfy these requirements may not comply with FCC RF exposure requirements, and should be avoided.

Safety Information

1. SAFETY INFORMATION FOR FIXED WIRELESS TERMINALS POTENTIALLY EXPLOSIVE ATMOSPHERES
Turn your device OFF when in any area with a potentially explosive atmosphere and obey all signs and instructions. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death.

2. INTERFERENCE TO MEDICAL DIVICES
Certain electronic equipment may be shielded against RF signal from you wireless device. (pacemakers, Hearing Aids, and so on) Turn your device OFF in health c are facilities when any regulations posted in these areas instruct you to do so. RF signals may affect improperly installed or inadequately shielded electronic system in motor vehicles.

3. EXPOSURE TO RF ENERGY
Use only the supplied or an approved replacement antenna. Do not touch the antenna unnecessarily when the device is in use. Do not move the antenna close to, or couching any exposed part of the body .

FCC Compliance Information

This device complies with Part 15 of FCC Rules.
Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received including interference that may cause undesired operation.

U.S.A.
U.S.FEDERAL COMMUNICATIONS COMMISSION
RADIO FREQUENCY INTERFERENCE STATEMENT
INFORMATION TO THE USER

NOTE : This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful Interference in a residential installation This equipment generates, uses, and can radiate radio frequency energy and, if Not installed and used in accordance with the instructions, may cause harmful Interference to radio communications.

However, there is no guarantee that interference will not occur in a particular Installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

*- Reorient or relocate the receiving antenna.Increase the separation between the equipment and receiver.

*- Connect the equipment into an outlet of a circuit different from that to which the receiver is connected.

*- Consult the dealer or an experienced radio/TV technician for assistance.

Changes or modification not expressly approved by the party responsible for Compliance could void the user's authority to operate the equipment. Connecting of peripherals requires the use of grounded shielded signal cables

Europe
CE0682

SAR Limits For Safe Exposure To Radio Waves
Your HSUPA express card is a radio transceiver (transmits and receives). It does not exceed the safe limits of radio wave exposure established by international guidelines. These safety guidelines are well within safety margins designed to assure the protection of all persons, regardless of age or health.

- The exposure guidelines for mobile devices utilize a unit of measurement known as the Specific Absorption Rate or SAR.In Europe, the SAR limit guideline stated by the scientific organization ICNIRP is 2.0 watts/kilogram (W/kg) averaged over ten grams of tissue. The U.S. Federal Communications Commission and Industry Canada and the IEEE (Institute of Electrical and Electronics Engineers) requirements set an SAR limit of 1.6 W/kg averaged over one gram of tissue.

- SAR tests are performed in body positions with the device transmitting at its highest certified power level in all test frequency bands. Actual device

SAR operating levels may be below the maximum value because the device is designed to use only that power necessary to reach a network. That amount varies depending on base station proximity and other factors.

· There may be different SAR values depending on the mode, all modes are designed to meet radio wave requirements. **The highest CE body SAR value under the ICNIRP guidelines for use of this device by the head is 1.86 W/kg.**

Note that different SAR values may result from use of device accessories and enhancements. SAR values may vary depending on regional measuring and testing standards and the network band.