**O P T I O N**
WIRELESS TECHNOLOGY

# The intelligent HSUPA USB modem
## Fast, future-proof and truly worldwide

**O P T I O N**
WIRELESS TECHNOLOGY

## NOTICE

The information in this User Guide is subject to change without notice. The contents herein are provided "as is". Except as required by applicable law, no warranties of any kind, either express or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose, are made in relation to the accuracy, reliability or contents of this document.

## COPYRIGHT

Reproduction, transfer, distribution or storage of part or all of the contents in this User Guide in any form is prohibited without the prior written permission of Option® nv.
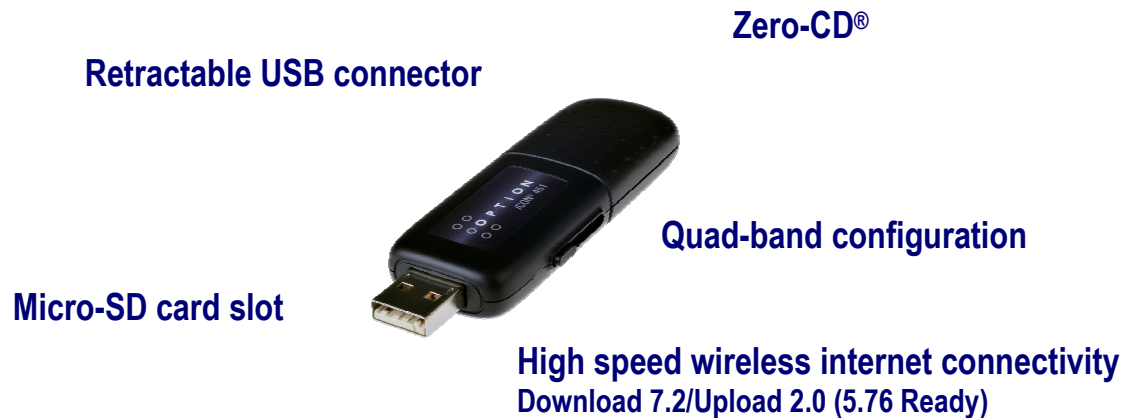
## TRADEMARK

Copyright 2009 ©. Option nv. All rights reserved. Option, GlobeTrotter, Zero-CD and the Option logo are registered trademarks of Option. All third-party trademarks are the property of their respective owners.

# CONTENTS

**O P T I O N**
WIRELESS TECHNOLOGY

# 1 WELCOME

**Zero-CD®**

**Retractable USB connector**

**Quad-band configuration**

**Micro-SD card slot**

**High speed wireless internet connectivity**
**Download 7.2/Upload 2.0 (5.76 Ready)**

The new *iCON® 452* from Option® offers the latest available technology in the world market.

Perfect for tech-savvy consumers and mobile professionals alike, this little device offers high upload (5.76Mbps) and download (7.2Mbps) speeds.

With its compact size, the *iCON® 452* delivers a complete solution in an innovative, intelligent and stylish USB design, and equipped with a quad-band configuration (850/1900/2100/AWS), it is convenient for true global usage with 3G/GPRS/EDGE support. It can therefore be used as a convenient high speed data roaming solution for travelers, enabling access to e-mail and internet virtually everywhere in the world.

The *iCON® 452*'s attractive style with retractable USB connector is compact enough to fit easily into your palm, and its very light weight of 22g ensures maximum portability and convenience in fixed (PC) or mobile (laptop) environments.

Also featuring a Micro-SD slot, the device converts from data modem to true USB storage solution (e.g. enabling portable applications), for up to 32GB.

The technology used in the *iCON® 452* provides the latest features, but takes up less space. This enables devices to be built that are feature-packed, but remain highly compact. The result is the *iCON® 452*.

Particular attention has been placed on the *iCON® 452*'s look and feel. With its special textures and rounded edges, the *iCON® 452* is particularly comfortable to touch and projects a confident and refined image serving as your reliable mobile access companion for years to come.

The *iCON® 452* considerably enhances your working speed. This results in faster e-mail access, instant messaging and swift browsing, streaming and downloading. Also on-line gaming is now possible in the blink of an eye.

Installing and operating the *iCON® 452* is child's play. After inserting a SIM card and plugging the *iCON® 452* USB stick into a free USB port, the easy to use connection software is auto installed, bringing internet access within a mouse-click's reach.

**OPTION**
WIRELESS TECHNOLOGY

## 2    FEATURES



- Stylish ergonomic design with pleasingly rounded contours
- Ultra-compact format just 76mm x 27mm x 13mm and 22g
- Retractable USB connector with simple slide connector mechanism
- 850/1900/2100/AWS Quad band 2G and 3G
- Easy to see LED status display
- Zero-CD® Plug n Play Technology simply insert, install software and go online
- Lanyard holder (lanyard not included)
- Micro-SD Card Slot provides multiple GB of portable USB storage
- Tactile finish in high gloss black
- High Speed wireless Internet connecivity upload up to 5.75Mbps and download up to 7.2Mbps

- Easy connection to any PC and the internet: insert the device, install the Zero-CD® software and go on-line
- Quad-band high-speed 3G and quad-band 2G support for worldwide operation
- Up to 5.76Mbps upload  and 7.2Mbps download speed in 3G
- Zero-CD® Plug 'n' Play technology supported by 64MB internal memory
- Retractable USB connector
- Micro-SD card reader (up to 32GB), making the *iCON® 452* ready for Option®'s uCAN® platform
- Transparent support for IPSec and VPN technology
- Very compact, dimensions of 76 x 27 x 13mm in device, and weighing 22g
- Included lanyard connector (lanyard not included)
- Comprehensively tested on infrastructures and networks worldwide
- Future proof through upgradeable firmware

## 3    SYSTEM REQUIREMENTS

- Windows Vista®, Windows® XP, Windows® XP Pro, Windows® XP Home Edition, Windows® 2000 SP4 or Mac OS® 10.4, 10.5
- Free USB port
- 10Mb of free hard disk space
- SIM-card from your local operator

## 4    *iCON® 452 PACKAGE CONTENT*

- *iCON® 452 HSUPA USB Stick*
- Quick Start Guide

In some cases the package may contain a SIM card or Micro-SD card supplied by your Mobile Operator.

# 5 INSTALLING AND SETTING UP YOUR *i*CON® 452

Step 1 – Remove the SIM-slot cover and insert the SIM card into the *i*CON® 452. If you want to use the *i*CON® 452 as a memory stick, you need to insert a micro-SD card (not included). The micro-SD card slot is also located under the SIM-slot cover. Slide in your micro-SD card and close the cover again.

IMPORTANT! Only insert/remove the SIM or micro-SD card while the *i*CON® 452 is not powered up.

Step 2 – Start up your computer. Slide out the USB connector while holding the slide button down until it clicks into the locking position.

IMPORTANT! To slide the USB connector back inside the modem, use the slider mechanism. Pushing hard on the USB connector without unlocking the slider might damage your *i*CON® 452.

Step 3 – Then insert the *i*CON® 452 into a USB slot on your computer.

NOTE! Your *i*CON® 452 includes the unique Zero-CD® feature from Option®. By inserting the device into your PC, the software and driver installation will start automatically.

Step 4 - An installer window will open. Simply click "Next" and follow the installation instructions.



Step 5 - When the "Installation Completed" screen appears, click "Exit" and you are ready to connect to the internet.

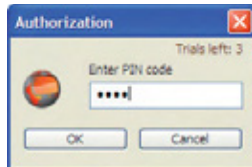**O P T I O N**
WIRELESS TECHNOLOGY

# 6   USING YOUR *i*CON® 452

Step 1 – Start up your computer. Insert the USB connector of the *i*CON® 452 into a free USB slot (or use an extension cable for desktop use).
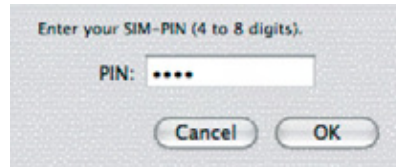
Step 2 – Enter your SIM PIN code (not necessary if you have disabled the PIN code on your SIM card).

Windows® OS                                    Mac OS®

Step 3 – Connecting

Windows® OS                                    Mac OS®

You are now ready to connect to the internet by using the GlobeTrotter® Connect application in the system tool tray. Simply double-click on it to open the application fully, and then click "Connect".

Open the "Application" folder and run "GlobeTrotter Connect". In this tool, click the "Connect" button.

For further GlobeTrotter® Connect 3 software settings, see section 9.

.
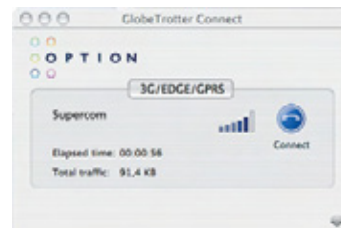
Disconnecting can be done in the same way.

Windows® OS

Right click on the GlobeTrotter® Connect application icon in the system tool tray and click "Disconnect". Alternatively click on the "Disconnect" button in the GlobeTrotter® Connect window.



Mac OS®

Open the "Application" folder and run "GlobeTrotter Connect". In this tool, click the "Disconnect" button.

O P T I O N
WIRELESS TECHNOLOGY
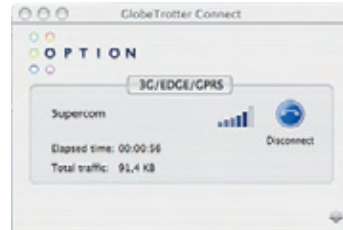
# 7  LED STATUS INDICATOR

The *i*CON® 452 is equipped with a multicolor LED. The different operating statuses are indicated by the frequency and color of blinking. The colors indicate different network generations (data speed capabilities). The blinking scheme indicates the state of connection to the network.

| Color | Light Frequency | Meaning |
| --- | --- | --- |
| Off | Off | Not powered |
| Red | Permanent | Initializing |
| Green | Blinking | Ready to connect to 2G networks |
| Blue | Blinking | Ready to connect to 3G networks |
| Green | Permanently Lit | Connected to 2G network |
| Blue | Permanently Lit | Connected to 3G network |
| Blue-Red | Flickering | A problem occurred |

# 8  SAFE REMOVAL

Before ejecting the *i*CON® 452, always tell Windows® that you want to remove the card first. Use the "Safely Remove Hardware" icon in the system tray. If you do not do this, you may cause the system to crash.

# 9 GLOBETROTTER® CONNECT 3 SOFTWARE

## 9.1 Product Features

- Easy installation
- Simple intuitive user interface
- Compatible with most modern desktop and laptop PCs equipped with Microsoft Windows® 2000, Windows® XP or Windows Vista®

## 9.2 Short Description And Intended Use

The GlobeTrotter® Connect 3 application is a small, easy to use tool to manage your connection to the internet over 2G and 3G mobile networks. It is designed for use with all of Option®'s data products.

### 9.2.1 Basic Use

The focus is on simplicity and most users will use it only in basic mode, where it displays a window with network information and a "Connect" button. The main purpose is therefore simply to Connect/Disconnect to and from the internet.
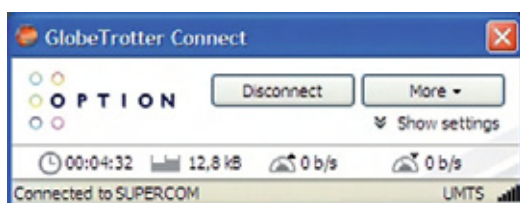

Figure 1: GlobeTrotter® Connect 3 Basic View

While GlobeTrotter® Connect 3 is connected, the "Connection Time", "Volume" and "Current Data Speed" are displayed in the area just above the status bar. An arrow pointing up is followed by the upload speed in Kbit/s and an arrow pointing down is followed by the download speed.

## 9.3 Installing And Setting Up Globetrotter® Connect 3

### 9.3.1 Installation

Your iCON® 452 is equipped with Zero-CD® technology, and the GlobeTrotter® Connect 3 application is installed as soon as you connect the product for the first time.

## 9.3.2   Installation Process

The installation process is straightforward. You will see various screens appear, indicating the installation progress of your *i*CON® 452.
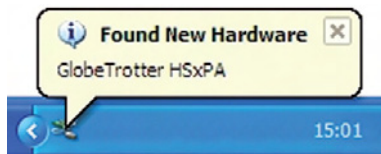


Figure 2: Found New Hardware Balloon



Figure 3: GlobeTrotter® Connect 3 Installation Wizard

Click "Next" to continue the installation.

After GlobeTrotter® Connect 3 is installed, the following screen will be shown. Click "Finish" to close the installation wizard.



Figure 4: Successfully installed GlobeTrotter® Connect 3

## 9.3.3   Running GlobeTrotter® Connect 3

As soon as you plug in the *i*CON® 452, GlobeTrotter® Connect 3 shows up in the Systray.



Figure 5: GlobeTrotter® Connect 3 icon

GlobeTrotter® Connect 3 is now ready to make a connection. Don't forget that apart from the software, the *i*CON® 452 also needs to be ready, e.g. you can't use the *i*CON® 452 if it isn't registered to the network or if the PIN code hasn't been entered yet.

### 9.3.4 Entering your PIN code

If you have enabled the PIN code on your SIM card, you will automatically be asked to type it in. If enabled, you won't be able to use your *iCON®* 452 until you have typed in the PIN code. This will happen every time you power up the device.


Figure 6: Pin Code Dialog

### 9.3.5 Checking Status

Once the PIN code is entered (or immediately if you have disabled the PIN code), the *iCON®* 452 will look for the network. You can check the status by moving your mouse pointer over the GlobeTrotter® Connect 3 icon to get a quick status report showing the network name, technology being used and the signal quality.
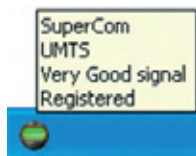

Figure 7: Network Information Balloon

If GlobeTrotter® Connect 3 is opened, you can see the signal strength immediately in the lower right corner. If you need to know the signal strength more accurately (e.g. in fringe areas you may want to determine the location where you have the best reception) double-click on the signal strength indicator to see an enlarged view of the signal strength indicator.
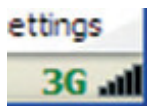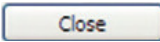

Figure 8: Signal Strength Indicator

The indicator next to the signal strength shows 3G if you have 3G coverage. Once you have a connection, the indicator shows HS if a HSUPA (HS) connection was established.


Figure 9: Enlarged Signal Strength Indicator

### 9.3.6   Exit GlobeTrotter® Connect 3

When you click [ Close ] or ✕, this doesn't kill the application. It just retreats to the Systray (see Figure 5: GlobeTrotter® Connect 3 icon). This behavior is equivalent to other Windows® applications such as MSN messenger. To terminate the application you must "Right Click" on the Title Bar and choose "Exit".
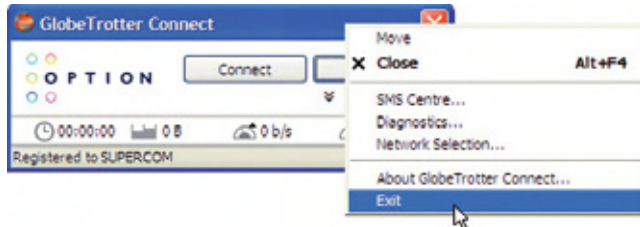


**Figure 10: Exit GlobeTrotter® Connect 3**

## *9.4   Setting Up A Connection To The Internet*

When you want to connect to the internet, you need to specify how you want to connect. You can do this in the settings screen (see the "Changing the program options" section of this manual, section 9.4.3).

As your mobile operator often preconfigures GlobeTrotter® Connect 3 for you, the settings may already be in there.

### 9.4.1   Connecting to the Internet

To connect to the internet simply click on the "GlobeTrotter Connect" icon in the Systray (see screenshot) to display its menu. Click "Connect" to start the internet connection.
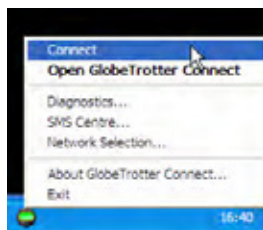


**Figure 11: Connect**

If the software has not been configured, connecting to the internet will fail. In this case refer to the "Changing the program options" section of this manual, section 9.4.3.

## 9.4.2   Disconnecting

To disconnect, click on the Systray icon to show the menu and select the "Disconnect" option.
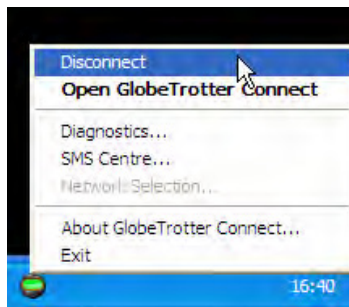


**Figure 12: Disconnect**

## 9.4.3   Changing the program options

Although GlobeTrotter® Connect 3 is simple and straightforward, it has a number of items that need to be configured at least once (either preconfigured by the operator or manually by the user).

To change the settings, launch the GlobeTrotter® Connect 3 main window. You can do this by double clicking on the Systray icon or by selecting "Open GlobeTrotter Connect" from the Systray Icon menu.



**Figure 13: Basic View**

Click on "Show settings" to make the configuration options visible.
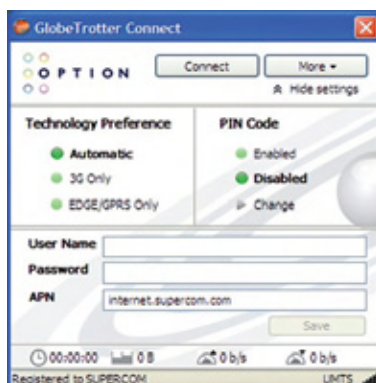


**Figure 14: Advanced View**

### 9.4.3.1 APN

The Access Point Name (APN) defines your route to the internet. Your mobile operator can supply the APN (some operators may also specify a user name and password if required).

Most users will never have to change this setting. If you have entered the APN manually a button saying Automatic will appear next to the Save button. If you press this button the software will try to 'guess' the APN needed based on your SIM.

### 9.4.3.2 Enable / Disable the Pin Code
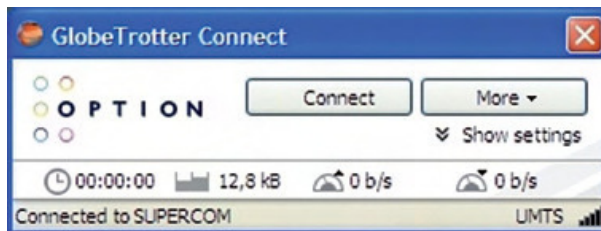
By clicking on "Enabled" or "Disabled" you can enable or disable the PIN code on your SIM. For security reasons you will have to provide the PIN code before you can disable the PIN code. If you enable the PIN code you'll have to enter a new code.

### 9.4.3.3 Technology Selection

It is recommended that you allow your *iCON® 452* to decide what technology to use to connect to the internet. Sometimes local conditions will make connecting difficult, and the default setting "Automatic" may not give optimum performance.

In these circumstances you can experiment by forcing the data connection on to "3G Only" or "EDGE/GPRS Only". Remember to switch back the setting to "Automatic" when conditions change.

## 9.5   Additional Features

Via the "More" button additional features are available.
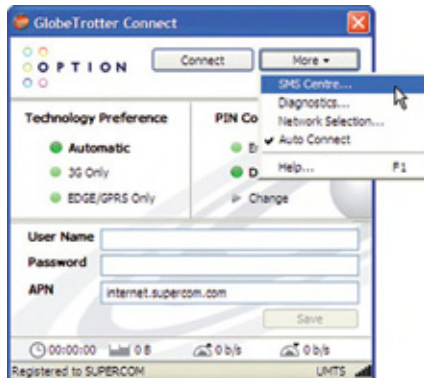


**Figure 15: Accessing additional functionality**

### 9.5.1   Using the SMS Centre

To launch the SMS Centre click the "More" button and select "SMS Centre". On the left-hand side you will see the different folders:

- Inbox
- Sent
- Unsent (contains draft SMSs)
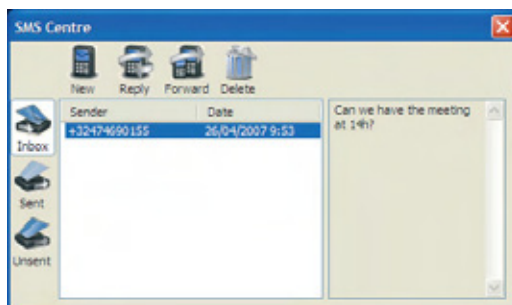


**Figure 16: SMS Centre**

Click on any of these folders to see the messages it contains. To read a message, click on it in the Sender or Date column. The text of a selected message is shown in the grey box on the right.

To Reply or Forward a message, select it as above and press the appropriate button. A new message window opens containing the Reply number and the text to be forwarded.

To create a new message, press the "New" button. The New SMS Message window opens and you can start typing your message (maximum 160 characters). To send the message, fill in the recipient's telephone number and click "Send". If you prefer to send your message at a later time click the "Save" button which automatically stores your message in the Unsent folder for later use.
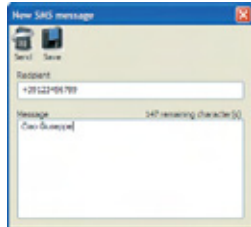


**Figure 17: New Message**

To delete a message, select it as explained above, and press the "Delete" button.

## 9.5.2   Network Selection

GlobeTrotter® Connect 3 will automatically select a network for you. However, you can select a network manually. To do this, simply choose "Network Selection" via the "More" button and select "Manual". GlobeTrotter® Connect 3 will start scanning for available networks (this may take several minutes). Once the scan is completed, the "Select" button will allow you to choose a network. In a similar way you can go back to Automatic mode.

## 9.5.3   Auto (Re)Connect

If "Auto Connect" is selected, GlobeTrotter® Connect 3 will try to connect as soon as the network and GlobeTrotter® Connect 3 are available. If a connection is dropped, GlobeTrotter® Connect 3 will try to re-establish the connection as soon the network is available again.

If the you manually Disconnect (press the "Disconnect" button), the Auto Connect feature is disabled until you re-launch GlobeTrotter® Connect 3.
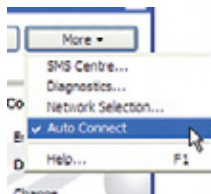


**Figure 18: Activating Auto Connect**

Note: Auto Connect only works on the Home network.

# 10 TROUBLESHOOTING

If you are having trouble getting a reliable connection, please check with your network provider for advice on network coverage in your area.

Other characteristics such as network cell handover, dead coverage spots, geographic or structural obstructions, etc. may also affect the performance of the data transmission.

| Symptom / possible causes | Possible solution |
|---|---|
| No LED burning. | Check if the device is firmly plugged into a USB port or check the connection of the cable if you are using this. If still not working, try to use another USB port. |
| No SIM inserted. | Disconnect the iCON® 452. Insert the SIM and reconnect the iCON® 452. |
| Insufficient signal strength. | Move the device to a location with better coverage (e.g. a window). The extension cable can be of help for this. Use the signal strength tool to see the signal strength. |
| SIM card was not present when connecting the device to a USB port. | Disconnect the device, insert the SIM and reconnect. |
| Drivers are not properly loaded. Device shows yellow exclamation marks in the PC's Device Manager window. | Close communication software that might be accessing the device. Close all ports before disconnecting the device from your computer. Reinsert the device. |
| LED is blinking, but does not change to solid after an attempt to connect. | The APN is not correct. Check the settings with the ones that you've obtained from your network operator. |
| You are roaming and the network you are using does not allow data links with your home operator. | Manually select another network that supports data links with your home operator. |
| Your connection software doesn't detect the device. | Probably due to faulty driver installation. Remove previously installed connection software. Also remove any other drivers of similar devices. Re-install the software. |
| Conflict with other programs. | Disable or remove any other communication program that might connect with the device. |
| Slow speed and/or no or weak UMTS/HSUPA network where you are. | Check in the communication software tool which settings are used ("UMTS preferred" is recommended) and also check which network is used (UMTS / HSUPA or GPRS / EDGE). |

# 11 DETAILED TECHNICAL SPECIFICATIONS

## Specifications

3G
- Quad-band 850/1900/2100/AWS
- HSDPA modes:
- HSDPA 1.8: Categories 1-4, 11 and 12
- HSDPA 3.6: Categories 5 and 6
- HSDPA 7.2: Category 8
- HSUPA 2.0: Category 5
- HSUPA 5.76: Category 6
- UE Power Class 3 (power class 4 for 1900 MHz)

E-GPRS
- 850/900/1800/1900 MHz
- GSM Power Class 4 (2W) for 850/900 bands
- GSM Power Class 1 (1W) for 1800/1900 bands
- EDGE/GPRS air interface
- 3GPP Rel99 with selected Rel4 features
- EDGE 8PSK class E2 (+27 dBm in 850/900 bands, +26 dBm in 1800/1900 bands)
- GPRS/EGPRS Multislot Class 12 (4 slots Rx, 4 slots Tx)
- GPRS/EDGE Class B Type 1 MT
- GPRS CS1-CS4; EDGE MCS1-MCS9
- EDGE data throughput (peak): 247Kbps
- EDGE data throughput (average): 200Kbps uplink and 215Kbps downlink
- Circuit-switched data: 14.4 and 9.6Kbps

## Terminal Equipment Interfaces

- USB 2.0 high speed interface, fully compatible with USB 1.1 interface
- Drivers: Windows® 2000 Pro, Personal and XP Pro/Home, Windows Vista®  and Mac OS® 10.4, 10.5
- PCSC compatible driver, compliant with ISO 7816 and 3GPP TS11.11
- SIM-ME interface as specified in 3GPP GSM TS11.11 and GSM 11.12 and with compliance to ISO 7816
- SIM Application toolkit capable SIM to 3GPP GSM TS11.14
- NDIS or Standard modem emulation for compatibility with terminal programs/dialers and for use with proprietary operating systems. AT Interface 3GPP TS27.005, ATD*99# and ATD*99***<CID># support
- Multiple communication ports for simultaneous data call and network coverage reports

## Hardware Specifications

- USB stick with retractable USB connector
- Status LED indicators
- SIM card interface compliant with 3GPP 31.101 and 31.102 supporting 1.8 and 3V UICCs

## Environmental

- Operating Temperature 0 to + 40° C
- RoHS compliant

**O P T I O N**
WIRELESS TECHNOLOGY

| Approvals and Certifications |
|---|
| • All applicable regulatory approvals (i.e. FCC, R&TTE, PTCRB), Operator and Infrastructure IOT<br>• Microsoft WHQL certified drivers |

| Current Dimensions (LxWxH) |
|---|
| • In device 76 x 27 x 13 mm<br>• Weight 22g |

# 12 PRODUCT SUPPORT AND ADDITIONAL HELP

GlobeTrotter® Connect 3 updates will be made available on the Option® support website.

## 12.1 Technical Support

Questions and answers regarding GlobeTrotter® Connect 3 can be found on the Option® support website.

## 12.2 Help

To access the Help file go to "Help" via the "More" button.

# APPENDIX A: LIMITED WARRANTY

**HARDWARE**: Option® warrants its products to be free from defects in workmanship and materials, under normal use and service, for one year. If a product does not operate as warranted during the applicable warranty period, Option® shall, at its option and expense, repair the defective product or part, deliver to Customer an equivalent product or part to replace the defective item. All products replaced will become property of Option®. Replacement products may be new or reconditioned. Option® shall not be responsible for any software, firmware, information or memory data of Customer contained in, stored on, or integrated with any products returned to Option® pursuant to any warranty.

**SOFTWARE**: Option® warrants that the software programs licensed from it will perform in substantial conformance to the program specifications therefore for a period of ninety (90) days from the date of purchase from Option® or its Authorized Reseller. Option® warrants the magnetic media containing software against failure during the warranty period. No updates are provided. Option®'s sole responsibility hereunder shall be (at Option®'s discretion) to replace any defective media with software, which substantially conforms to Option®'s applicable published specifications. Customer assumes responsibility for the selection of the appropriate applications program and associated reference materials. Option® makes no warranty that its products will work in combination with any hardware or applications software products provided by third parties, that the operation of the software products will be uninterrupted or error-free, or that all defects in the products will be corrected. For any third-party products listed in the Option® software product documentation or specifications as being compatible, Option® will make reasonable efforts to provide compatibility, except where the non-compatibility is caused by a "bug" or defect in the third party's product.

**STANDARD WARRANTY SERVICE**: Standard warranty service for hardware products may be obtained by delivering the defective product, accompanied by a copy of the dated proof a purchase, to Option®'s Corporate Service Center or to an Authorized Option® Reseller during the applicable warranty period. Standard warranty service for software products may be obtained by calling Option®'s Corporate Service Center or an Authorized Reseller, within the warranty period. Products returned to Option®'s Corporate Service Center must be pre-authorized by Option® with a Return Material Authorization (RMA) number marked on the outside of the package, and sent prepared, insured, and packaged appropriately for safe shipment. The repaired or replaced item will be shipped to Customer, at his own expense, not later than thirty (30) days after receipt by Option®.

**WARRANTIES EXCLUSIVE**: If an Option® product does not operate as warranted above, customer's sole remedy shall be repair or replacement, at Option®'s option. The foregoing warranties and remedies are exclusive and are in lieu of all other warranties, express or implied, either in fact or by operation of law, statutory or otherwise, including warranties of merchantability and fitness for a particular purpose, Option® neither assumes nor authorizes any person to assume for it any other liability in connection with the sale, installation, maintenance or use of its products. Option® shall not be liable under this warranty if its testing and examination disclose that the alleged defect in the product does not exist or was caused by Customer's or any third person's misuse, neglect, improper installation or testing, unauthorized attempts to repair, or any other cause beyond the range of intended use, or by accident, fire or other hazard.

**LIMITATION OF LIABILITY**: In no event, whether based in contract or tort (including negligence) shall Option® be liable for incidental, consequential, indirect, special or punitive damages of any kind, or for loss of revenue, loss of business, or other financial loss arising out of or in connection with the sale, installation, maintenance, use, performance, failure, or interruption of its products, even if Option® or its Authorized Reseller has been advised of the possibility of such damages.

**O P T I O N**
WIRELESS TECHNOLOGY

# APPENDIX B: HEALTH, SAFETY AND CERTIFICATION INFO

CE 0681
FCC-ID NCMOGI0452

### Your iCON® 452 is like a mobile phone
Your iCON® 452 uses the same technology as a mobile phone. It is important that you always obey all safety regulations related to mobile phone use. If you have any doubt about the safe operation of your iCON® 452 you should remove the iCON® 452 from the PC and seek advice from authorized personnel.
This device may neither be connected to a USB hub, nor to a PC network, nor to a USB 1.0 interface.

### Handle with care
This device is designed to be plugged directly into the USB port of a computer, however, every precaution should be taken to avoid stress on the device should the computer be lifted, moved, relocated or packaged. Should regular movement of this nature be envisaged, an extender cable (sometimes supplied with the device) should be used so as to avoid damage to the device. It should be noted that any damage sustained as a result of the aforementioned mishandling will be regarded as "User Damage" and shall render the product warranty null and void.

### 1. Safety Measurements
Please read the following guidelines carefully. Not following these guidelines can cause harm to the USB stick, yourself or other persons.

### 1.1 General recommendations for use
- Always treat your product with care and keep in a clean and dust-free place. Do not expose your product to open flames or lit tobacco products.
- Do not expose to liquid, moisture or humidity. Do not expose the iCON® 452 to rain or other liquids.
- Do not drop, throw or try to bend your product.
- Do not paint your product.
- Do not attempt to disassemble your product. Doing so may be dangerous and it will void the warranty.
- Do not touch the antenna unnecessarily. (This is located either inside the product or as an external antenna.)

**1.2 Traveling:** Handle the USB stick with care while traveling. It is recommended to remove the USB stick from the laptop.

**1.3 Ambient temperatures:** Do not expose the iCON® 452 or the antenna to ambient temperatures beyond the range of -10 and +55 degrees Celsius.

**1.4 Explosive atmosphere:** Turn off your PC in any area with a potentially explosive atmosphere. It is rare, but your PC could generate sparks, which could cause an explosion or fire. Areas with a potentially explosive atmosphere are not always clearly marked. They include fuelling areas (petrol filling stations), below deck on boats, fuel or chemical transfer or storage facilities, and areas where the air contains chemicals or particles, such as grain, dust, or metal powders. Do not transport or store your PC and accessories in the compartment of a vehicle which contains flammable gas, liquid or explosives.

**1.5 Blasting areas – construction sites:** Turn off your PC when in a blasting area in order to avoid interfering with two-way radios used in blasting operations.

**1.6 Do not use on aircraft:** Using a wireless devices on aircraft can cause interference and is illegal. Remove your iCON® 452 if you intend to use your PC whilst in an aircraft. Do not use it when the plane is on the ground without permission from the aircraft crew.

**1.7 Do not use in hospitals:** Please ensure you follow any local regulations or rules. People are often asked to switch off all electronic devices in some areas of a hospital. This is a recommendation that Option® fully supports. Using the iCON® 452 close to sensitive electronic devices could possibly result in interference. If you intend to use your PC in such areas, you must remove the iCON® 452.

**1.8 Interference from radio signals:** Option® relies on advice from health authorities and relevant expert bodies about potentially undesirable reactions to radio emissions from the *iCON® 452*.

**1.9 Immunity to interference:** Electromagnetic interference is the disturbance of the normal operation of a device due to its response to radio signals from an external source. Occasionally, in some situations you may hear short sounds coming from audio equipment such as radio or multimedia PC. However, these audible signals do not interfere with the operation of the equipment.

The Directive from the European Commission (2004/108/EC) governing all forms of electronic equipment concerns interference that such equipment produces, and its immunity to interference from outside. Any equipment compliant with that directive is unlikely to suffer interference. All wireless devices may get interference which could affect performance.

**1.10 Cardiac pacemakers, implanted defibrillators and other medical implant devices**
It is possible that the *iCON® 452* may interfere with some types of pacemakers or implanted defibrillators when operated close to the implanted device. You should seek advice from your doctor that is specific to the implant before using the *iCON® 452*. Health authorities in many countries have set up advisory services for medical devices and implants including providing advice about maintaining separation distance between the mobile device or other radio frequency equipment and the implant. Option® operating companies reflect the advice given by their relevant health authority or national advisory service, and as a minimum recommend a separation distance of at least 20cm between the *iCON® 452* or other radio frequency terminal equipment and the embedded device.

**1.11 Hearing devices:** People with hearing aids or other cochlear implants may experience interfering noises when using mobile devices or when one is nearby. The level of interference will depend on the type of mobile device, the type of hearing device and the distance between the two. Increasing the distance between the *iCON® 452* and hearing device may reduce interference.

**1.12 Children:** Do not allow children to play with your *iCON® 452*. They could hurt themselves or others, or could accidentally damage the *iCON® 452*. Your *iCON® 452* contains small parts with sharp edges that may cause an injury or which could become detached and create a choking hazard.

**1.13 Driving:** Do NOT use the *iCON® 452* while driving. Park the vehicle first.

**1.14 SIM cards:** To protect against damage from electrostatic discharge (ESD) do not touch the SIM card connectors. As a precaution, always make sure that the *iCON® 452* is already in your hand before you insert or remove the SIM card.

**1.15 Accessories:** Only use Option® approved accessories. Do not connect with incompatible products. When used with accessories, Option® can only guarantee safe and correct operation of our products if the accessories are tested and approved by us.

**1.16 Safe distance:** The *iCON® 452* has been thoroughly tested to comply with SAR requirements. These tests simulate the absorption by the human body of radiation from the *iCON® 452*.

This device complies with the SAR regulation as stated by the FCC.
The measurements were made according to the Supplement C to OET Bulletin 65 of the Federal Communications Commission (FCC) Guidelines [OET 65] for evaluating compliance of mobile and portable devices with FCC limits for human exposure (general population) to radiofrequency emissions. The device was tested in all applicable USB orientations with a separation of 5mm to the flat phantom. The FCC guidelines define a limit of 1.2W/kg averaged over a mass of 1g for single platform devices, in this case a notebook platform.

This device complies with the SAR regulation as stated by the European Council Recommendation.
The SAR limit as defined by the European Council Recommendation is 2.0W/kg for a mass of 10g (European Council Recommendation 1999 519 EC), based upon ICNIRP guidelines. Details are available upon request.
For day-to-day use we would advise the user to keep a minimum distance from the antenna of 20cm.
Users concerned with the risk of Radio Frequency exposure may wish to limit the duration of their calls and to position the antenna as far away from the body as is practical.

**OPTION**
WIRELESS TECHNOLOGY

## 2. Certification requirements

### 2.1 Federal communications commission notice

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, we cannot 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 on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.

### 2.2 Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Option®, could void the user's authority to operate the equipment.

**This device complies with Part 15 of the FCC rules.**
This device complies with Part 15 of the 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 undesirable operation.

### 2.3 Exposure Information to Radio Frequency Energy

This USB 2.0 device has been tested in a notebook for compliance with the SAR requirements as stated by the FCC.

Users concerned with the risk of Radio Frequency exposure may wish to limit the duration of their calls and to position the antenna as far away from the body as is practical.

The USB Stick has been tested with specific integral antenna for SAR compliance with one notebook having vertical and horizontal USB slots with a separation distance of 5mm between the panthom and the device. The device can be used in notebook computers with substantially similar physical dimensions, construction, and electrical and RF characteristics.

### 2.4 Manufacturer's disclaimer statement

The information in this document is subject to change without notice and does not represent a commitment on the part of the vendor. No warranty or representation, either expressed or implied, is made with respect to the quality, accuracy or fitness for any particular purpose of this document. The manufacturer reserves the right to make changes to the content of this document and/or the products associated with it at any time without obligation to notify any person or organization of such changes. In no event will the manufacturer be liable for direct, indirect, special, incidental or consequential damages arising out of the use or inability to use this product or documentation, even if advised of the possibility of such damages.

For questions regarding your product or declaration, contact:
Option | Gaston Geenslaan 14 | 3001 Leuven | Belgium | www.option.com

### 2.5 System requirements

- USB 2.0 slot.
- Must be supplied by a SELV (Safety Extra Low Voltage) circuit with limited power.

For questions regarding your product or FCC declaration, contact:
Option | Gaston Geenslaan 14 | 3001 Leuven | Belgium | www.option.com

To identify this product we refer to the Part, Series or Model number found on the product.

**OPTION**
WIRELESS TECHNOLOGY