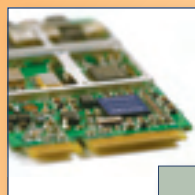


GLOBETROTTER PCI EXPRESS MINI CARD

QUICK START GUIDE



CONNECT
ANYTIME,
ANYWHERE

ABOUT THIS DOCUMENT

Overview and Purpose

This document describes the Module Development Kit hardware, software and installation instructions.

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Version history

Date	Version	Author(s)	Revision(s)	Remarks
Aug 8, 2006	V01-D1	R. Biesemans		Initial version
June 26, 2006	V01-D2	G. Van Overbeke	S. Lodewijckx	Generic document and revision
July 3, 2006	V01-D3	G. Van Overbeke	S. Lodewijckx	Revision changes
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July 13, 2006	V01-F1	G. Van Overbeke		Final Version
Aug 8, 2006	V01-F3	G. Van Overbeke		Revision changes

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1 INTRODUCTION

For evaluation purposes the GlobeTrotter PCI Express mini cards modules are housed in a cradle, offering a convenient evaluation and development platform. This document further describes the Module Development Kit hardware and software installation and basic usage instructions for Windows XP English edition.

This Module Development Kit can be used for all Option modules with the PCI Express interface:

- GTM351
- GTM353
- GTM378

Design specific information for the Modules is outside of the scope of this document and can be found in the respective Integration Manuals instead.

To make a successful connection to the Internet following prerequisites are assumed:

- Module Development Kit
- Live Network connection (GPRS and/or EDGE and/or 3G and/or HSDPA)
- Activated (U)SIM for the available network
- Host platform with an USB host controller (e.g. laptop or PC desktop)

2 OVERVIEW

The Module Development Kit consists of a main PEPIJN Cradle board which provides a standard USB interface, a SIM card holder and an external power supply for the GlobeTrotter Modules. With this cradle it is possible to connect the GTM card to any standard USB host controller.

Points of interest:

1. Option PCI Express Mini Card
2. PCI Express connector
3. 8/16 bit CODEC jumper: see section 9
4. 1.8 Volt LED indication
5. USB power LED: indicates that USB is connected and powered
6. Power LED: indicates that the GTM module is powered with 3.3 Volts
7. Registration and USB activity LED: indicates that the module has registered to the mobile network when it burns continuously. Also indicates USB communication activity when the LED is blinking
8. USB connector and cable
9. Power plug and cable
10. Audio jack and headset
11. RF connector and cable
12. Module locking mechanism
13. External antenna

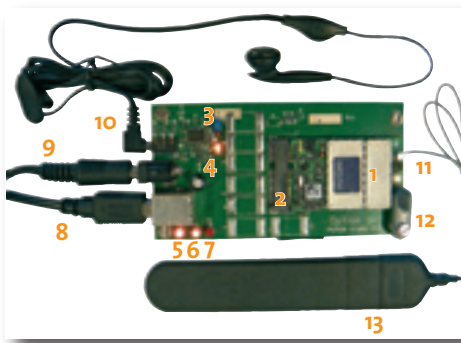


Figure 1: Pepijn Cradle with module and accessories

And for the bottom view:

1. SIM card holder
2. SIM card eject mechanism
3. Audio CODEC chip reset button
4. Small USB connector¹



Figure 2: Pepijn Cradle bottom view

To get your module working correctly, please follow the installation instruction carefully and in the order of Chapter 4 and 5. After which you can proceed with Chapter 6, 7, 8 and 9.

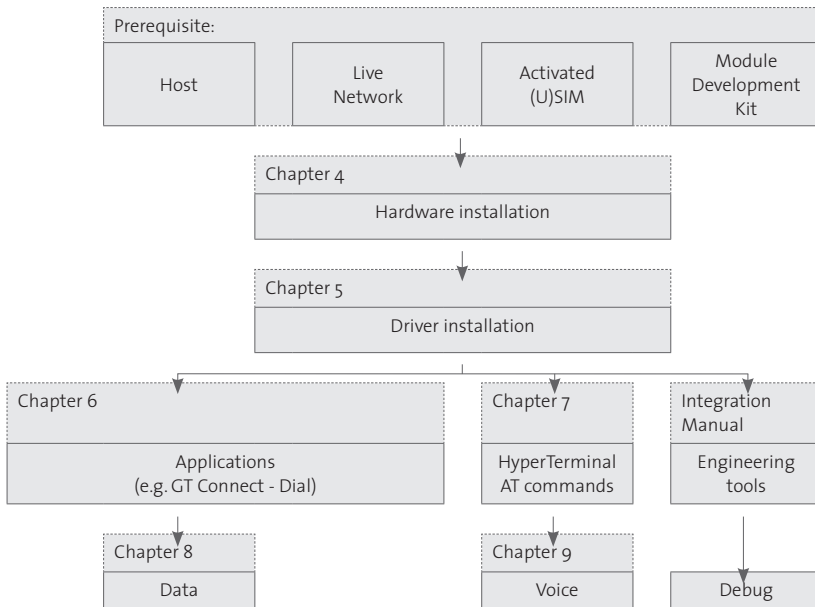


Figure 3: Module Development Kit overview

¹ The small and big USB connector both work for the same USB interface

3 PACKAGE CONTENT

Your Module Development Kit comes with the following items:

- PCI Express Mini Card module(s)
- Pepijn Cradle main board(s)
- USB cable(s)
- Power adaptors (5VDC / min 1A @ 100-240V – European plug)
- External antenna(s)
- RF cable(s) with SMA connector(s)
- Headset(s)
- CD-ROM with dashboard installation and driver package

The software package consist of Windows XP, Windows 2000 and Windows XP x64 bit edition drivers. Also a dashboard application and engineering tools are provided. These tools can be used to set up a connection to a network provider.

To set up a successful data connection to the Internet you will need to have mobile network coverage and an activated SIM card from your local operator.



Figure 4: Module Development Kit

4 HARDWARE INSTALLATION

Step-by-step instructions:

(1) Insert the module skew into the cradle and (2) push the module down, so it makes proper contact in the PCI Express connector. (3) Secure the module with the locking mechanism.

Remark: Fasten the screw of the locking mechanism when it becomes too loose by holding one finger on top of the screw and turning the leg in counter clockwise direction.

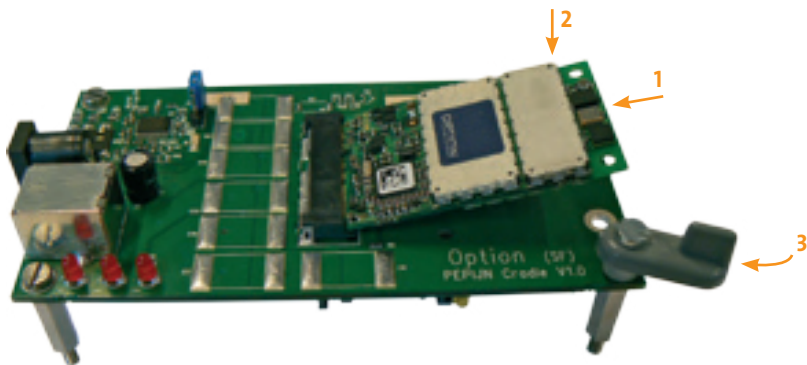


Figure 5: Module and Cradle board

(4) Carefully insert your SIM card in the SIM card holder (with the contact side up), and (5) insert the holder into the socket, making sure it is aligned correctly. (6) To open the SIM card holder, press the small eject button with the tip of a pen (you may need to apply gentle force).

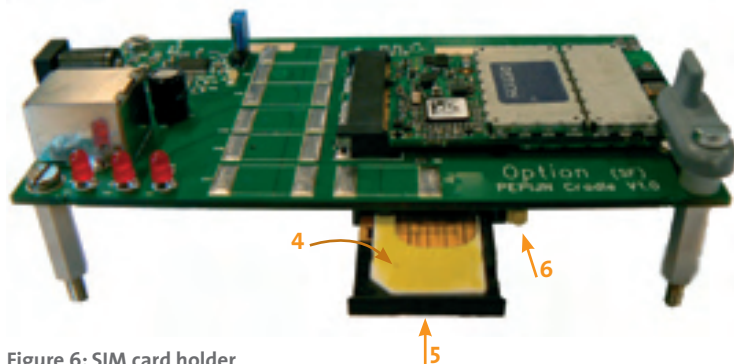


Figure 6: SIM card holder

(7) Connect the external antenna (or SMA connector cable for test equipment) to the RF connector on the module.

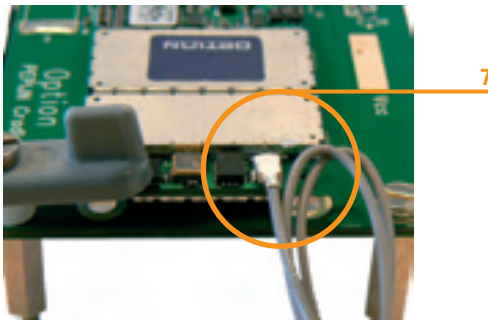


Figure 7: RF connector on the module

(8) Connect the headset into the audio jack. Next, (9) connect the power supply plug (the adapter should already be connected to the mains) to the evaluation platform. And when you are ready you can (10) connect the USB cable from the GTM cradle to your PC. At this point your module should be detected by the host PC. Proceed with the next Chapter.

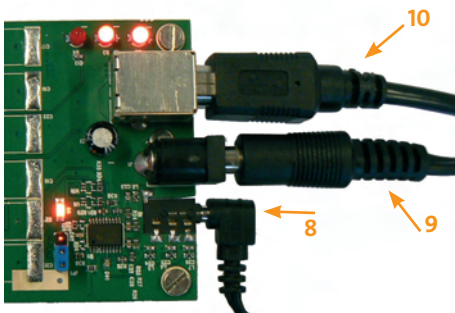


Figure 8: Top to bottom: USB cable, power plug and audio jack

NOTES:

In case a hard reset of the unit is necessary, unplug the power supply and wait until the power led (led closest to the fan) is fully extinguished before reconnecting the power supply (A large buffer capacitor on the cradle board needs about 10 seconds to discharge).

5 DRIVER INSTALLATION

Following drivers are available for Win XP, Win 2K and Win XP x64 edition:

- Device: GlobeTrotter Module 3G+
- Multifunction Adapter: GlobeTrotter Module 3G+ Flip-Flop Bus
- Ports: GlobeTrotter Module 3G+ Diagnostics Port
- Ports: GlobeTrotter Module 3G+ Application Port
- Network: GlobeTrotter Module 3G+ Network Card
- Modem: GlobeTrotter Module 3G+ Modem
- Smart Card: GlobeTrotter Module 3G+ Smart Card Interface (Optional)

For full functionality of your module, you need to make sure all drivers are installed correctly.

5.1 Installation procedure:

(1) If you have not already done so, install and connect the cradle as described in chapter 4.

The unit is connected correctly only if the “Found New Hardware” balloon and subsequent the “Welcome to the Found New Hardware” Wizard appears.

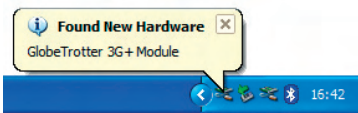


Figure 9: Found New Hardware



Figure 10: Welcome to the Found New Hardware

- (2) For Windows XP: on the first dialog (“Can Windows connect to Windows Update to search for software?”) select “No, not this time”
- (3) On the next dialog, select ”Install software automatically (Recommended)”. At this point make sure the CD-ROM with drivers is inserted into your optical drive.

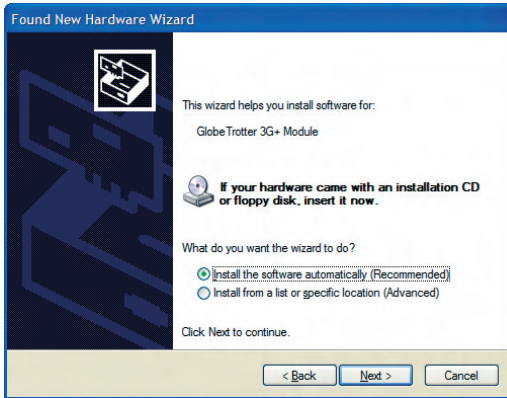


Figure 11: Install the software automatically (Recommended)

Or if you know the location of the drivers yourself you can select “Install from a list or specific location (Advanced)”. In this case make sure to select the option “Include this location in the search:” in the next screen and enter the correct path to your drivers.

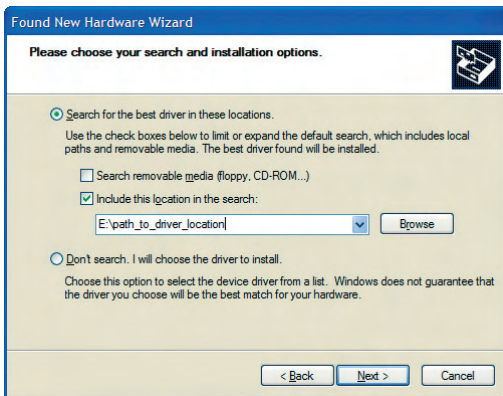


Figure 12: Install from a list or specific location (Advanced)

(4) For the driver signing warning, click “Continue Anyway”:

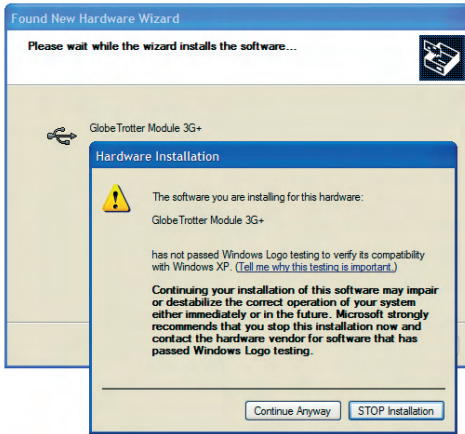


Figure 13: Continue Anyway

(5) Click “Finish” in the next screen “Completing the Found New Hardware Wizard”

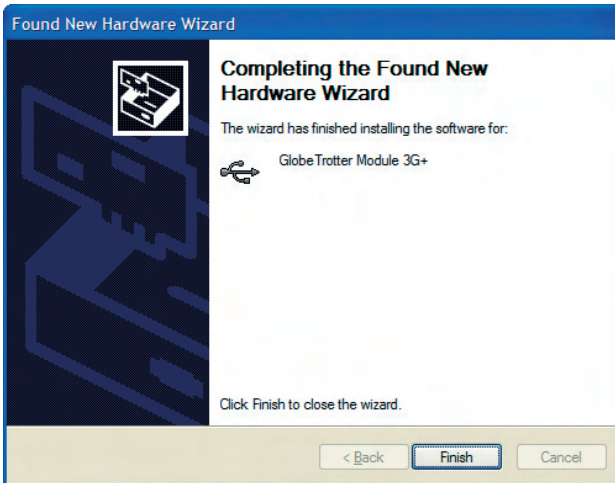


Figure 14: Completing the Found New Hardware Wizard

(6) Repeat step 3 to 5 for all mentioned drivers.

(7) On successful installation of all drivers the device manager will show following typical installed devices.

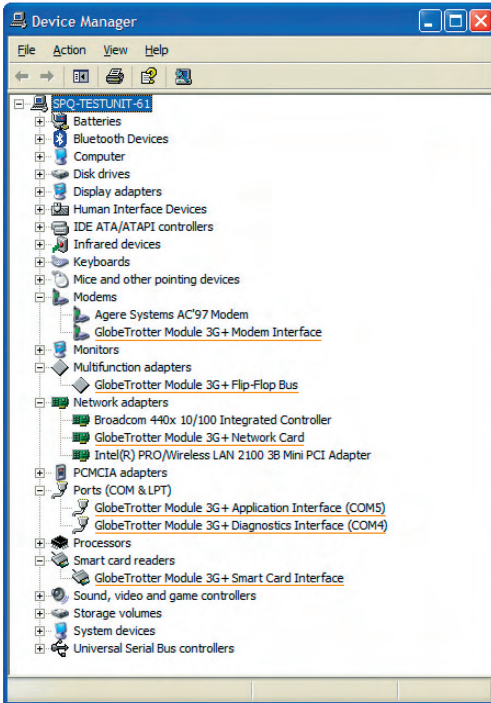


Figure 15: Device manager after driver installation

To get to device manager go to “Start” menu and select “Run”. In the next dialogue type “devmgmt.msc” as shown on the next screenshot:

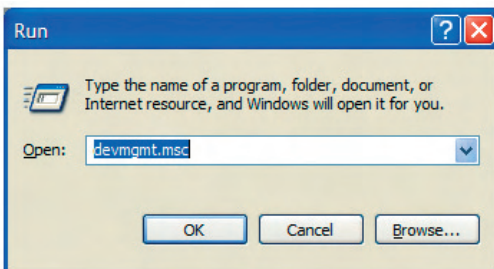


Figure 16: Run to device manager

6 DASHBOARD APPLICATION: GT CONNECT

GlobeTrotter Connect is a dashboard application. This chapter describes the installation of the dashboard application.

(1) Installation file: Brows on the CD-ROM to the directory “\Software_package\GTConnect” where you can find the installation file of the dashboard.

(2) Start installation: double click in the “GlobeTrotterConnect.msi” file and the window in **Figure 17** will pop up.



Figure 17: GT Connect installation wizard

(3) Click “Next” to continue the installation. **Figure 18** will be displayed. Choose the folder in which the application program may be installed, and click “Next”.



Figure 18: Installation destination folder

[OPTION CONFIDENTIAL]

(4) The GT Connect application is now ready for installation. Click “Next” and the actual installation will start (Figure 19).



Figure 19: GT Connect ready to install

(5) When everything is installed correctly, Figure 20 will be shown. Click “Finish” to close the installation wizard.



Figure 20: Successfully installed GT Connect

(6) A shortcut of the application can be found on your desktop. To start the application, double click on the shortcut.



Figure 21: Shortcut to GT Connect