IGI Mobile

GWU-300/310/320 User Manual

(Mobile WIMAX 2.3/2.5/3.5GHz USB Dongle Modem)

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1 Introduction

This document let you know how to use and install device for mobile WIMAX USB dongle modem. This device is USB dongle type modem for high speed mobile internet access through mobile WIMAX network.



- Model : GWU-300/GWU-310/GWU-320
- Standard : Mobile WiMAX Wave2/MIMO, IEEE 802.16e
- Frequency : 2.3/2.5/3.5GHz
- Interface : USB 2.0
- Antenna : 2 internal diversity antenna
- Data Throughput : Downlink 33 Mbps, Uplink 16 Mbps
- O/S : Windows 2000, XP, VISTA, WIN7, MAC OS
- Dimension : 29 x 66 x 8 mm
- Weight : 14 g

2 Appearance

2.1 Top View

External drawing of GWU-310 and components description



USB CONNECTOR

COMPONENT	DESCRIPTION
USB CONNECTOR	USB Connect
STATUS LED	Status Display LED

2.2 Side View

External drawing of GWU-310 and components description



COMPONENT	DESCRIPTION		
USB CONNECTOR HINGE	USB Connector hinge		
STATUS LED	GWU-310 RF status display LED		

3 Installation

3.1 GWU-310 CM (Connection Manager) Install

Insert GWU-310 USB WIMAX Modem to your PC. After that, you can see the dialog that is started automatically.



3.1.1 Language Select

GWU-310 CM supports English and Korean. Select language option and click "Next".

IGIMOBILECM - InstallShield Wizard	- • •
Choose Setup Language Select the language for the installation from the choices below.	
English Spanish	
InstallShield	Next > Cancel

3.1.2 Welcome

After you selecting language options, you can see a welcome view. Click "Next".



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3.1.3 Connect USB Modem

If you select device type to USB Modem, you must connect USB Modem to PC for installing device driver on your PC



3.1.4 Select Destination Folder

Select installation folder that you want.

IGIMOBILEC	M - InstallShield Wizard		
Choose D Select fo	Destination Location Ider where setup will install files.		ANY.
	Install IGIMOBILECM to: C:\Program Files\IGIMOBILE		<u>C</u> hange
InstallShield -		< <u>B</u> ack <u>N</u> ext≻	Cancel

3.1.5 Install Confirm

If you finished selection install option, click "Next". If you change option again, click "Back" and change option.

(
IGIMOBILECM - InstallShield Wizard	×
Ready to Install the Program	and the second
The wizard is ready to begin installation.	Contraction of the second
Click Install to begin the installation.	
If you want to review or change any of your installation settings, click Back. the wizard.	Click Cancel to exit
Least-NChield	
< <u>B</u> ack Install	Cancel

3.1.6 CM Installation

GWU-310 CM Installation view.

IGIMOBILECM - InstallShield Wizard	EX
Setup Status	
The InstallShield Wizard is installing IGIMOBILECM	
Installing	
C:\Program Files\IGIMOBILE\mfc80u.dll	
InstallShield	
	Cancel

3.1.7 Device Driver Installation

GWU-310 CM Install wizard will install device driver and protocol driver automatically.

IGIMOBILECM - InstallShield Wizard	—
Setup Status	
INSTALL: IGIMOBILECM Modem Device Driver	
InstallShield	Cancel

3.1.8 Install Finished

IGIMOBILECM - InstallShield Wizard					
	InstallShield Wizard Complete The InstallShield Wizard has successfully installed IGIMOBILECM. Click Finish to exit the wizard.				
	< <u>B</u> ack Finish Cancel				

4 How to Use CM (Connection Manager)

4.1 Run Connection Manager Program

After installation, IGIWIMAXCM will be started automatically. If it is started, it will find our USB modem and will get information automatically like below.

UI for normal users.



UI for test engineers. (Click "Wimaxion" logo at above UI for users and then type "igimobilecm" + "Enter Key", Then you can see a debug view like below!)

IGIWCM-Debug						
NetWorks Pro	ovision Link S vorks	tatus	Statistic	cs Informa	tion CLI	
Name	NAP ID	CINR		RSSI		
None	00:00:00	27		-70		
Refresh		Device	: Au	th Settings BOAR	Channels D CONNECTED	
C Channaichte		I		Mol ative Wireles	s Technology	
Show wirele	ss icon in syste	em tray				
				ОК	Close	

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4.2 Channel Configuration

You can change channel configuration. Select "Networks " menu. And then Click "Channels...".

IGIWCM-Debug						
NetWorks Pro	ovision Link S works	tatus Sta	tistics	Informa	tion CL	I
				v	Enable	Radio
Name	NAP ID	CINR	R	SSI		
None	00:00:00	27	-7	o		
Refresh		Device	Auth	Settings	Chanr	nels
				BOARI		CTED
		IG	Creativ		ile Technol	₽gγ
Show wirele	ss icon in syste	em tray				
				ок	Clo	ose

At this dialog box, you can add, remove and change the channels. For example, Click "New" button, and then you may create below channel values.

Channels					
ChannelID	Frequency	Bandwidth	Duration	FFT	
0	2550000	10000	5000	1024	
	Delete	fresh	OK	Cancel	

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Dialog	
New Channel Values	
Channel ID :	1
Frequency(KHz) :	2550000
BandWidth(KHz) :	10000 👻
Frame Duration(us) :	5000
FFT SIZE :	1024
	OK CANCEL

After setting channel values, if MS found WIMAX networks, you can see the BS information at "Networks" menu. If MS does not find WIMAX networks, disable "Enable Radio" and then enable "Enable Radio" again.

IGIWCM-Debug									
NetWorks Pro	vorks	tatus	Statistic	s Info	rmation	CLI			
Enable Radio									
Name	NAP ID	CINR		RSSI					
None	00:00:00	27		-70					
Refresh		Device	Au	th Settir	ngs Cl	hannels			
				BC	DARD CO	INNECTE	Ð		
Show wirele	ss icon in syste	em tray			obile eless Tec	⊇ hnology			
				ОК		Close			

4.3 Authentication Setting

This Connection Manager supply various Authentication Setting function which are supported EAP-TLS, EAP-TTLS and EAP-AKA.

4.3.1 EAP-AKA

Select "Networks" menu.

IGIWCM-Debug							
NetWorks	Provision Link	Status St	atistics	Informa	tion CLI		
Available N	letworks				Enable F	Radio	
Name	NAP ID	CINR	R	SSI			
None	00:00:00	27	-7	ro			
Refresh		Device	Auth	Settings	Chann	els	
				BOARI		CTED	
		10	Creatin		ile ^{s Technolo}	gy	
Show wir	reless icon in syst	tem tray					
				ок	Clo	se	

Click "Auth Settings" button, And then you may set the Authentication values as you need in below Authentication settings dialog box.

Authentication Set	tings 🗧	×
Auth Setting		
Auth Type : AKA	→ Inner Auth Type : AKA_NOSIM	-
WNID :	MYG000000006	
Realm :	@igimobile.com	Realm
к:	11 22 33 44 55 66 77 88 99 00 aa bb c	
OPc :	11 22 33 44 55 66 77 88 99 00 aa bb-	OPC
Show Debug Ou	itput	
Certificates		
Root Certificate :		
CRL :		
User Certificate :		
User Key :		
Key PassWord :		
	OK	

For example, if you need EAP-AKA and AKA_NOSIM, you select "AKA" and then "AKA_NOSIM".

An then input the WNID in "WNID:" and REALM in "Realm:" and input K in "K:" and input OPc in "OPc".

If WNID is "MYG0000000006", input the "MYG000000006" in "WNID:"

If the Realm is "@igimobile.com" style, input the "@igimobile.com" in "Realm:".

If the K is "11 22 33 44 55 66 77 88 99 00 aa bb cc dd ee ff" style, input the "11 22 33 44 55 66 77 88 99 00 aa bb cc dd ee ff" in "K:". The number is separated by space.

If the OPc is "11 22 33 44 55 66 77 88 99 00 aa bb cc dd ee ff" style, input the "11 22 33 44 55 66 77 88 99 00 aa bb cc dd ee ff" in "OPc: ". The number is separated by space.

4.3.2 EAP-TLS , EAP-TTLS

Select "Networks" menu.

IGIWCM-Debug									
NetWorks	Provision	Link St	tatus	Stati	stics	Informa	tion	CLI	
- Available M	Available Networks								
Name	NAP II)	CINR		R	SSI			
None	00:00:	:00	27		-7	0			
									-
Refresh	1		Device		Auth :	Settings	Cr	nannels	
						BOAR	D CO	NNECTE	ED
				GI	Λ) -	oile	-	
	Creative Wireless Technology								
Show wi	Show wireless icon in system tray								
L				(OK		Class	
						UK		Close	

Click "Auth Settings" button, And then you may set the Authentication values as you need in below Authentication settings dialog box.

> Identitv
Inner Identity
DassWord
Fassivoru
Select Certificate Files

For example, if you need EAP-TTLS and MSCHAPv2, you select "TTLS" and then "MSCHAPv2".

An then input the ID in "Inner Identity:" and the password in "Password:". If ID is "aaaa@xxxx.com" style, input the "aaaa@xxxx.com" in "Inner Identity:"

If the ID is "aaaa" style, input the "aaaa" in "Inner Identity:", you don't need input field in "Identity:". But, enter any string to "Indentity:" for test.

For the "Certificates", you may select certification file in specific directory location.

4.4 Connectting

If all above setting is finished, check if MS searched available networks or not at the Newworks pannel like below. If there is notting to be displayed and If channels setting is correct, then disable "Enalbe Radio" and then enable "Enable Radio" button again.

IGIWCM-De	ebug				x
NetWorks	Provision	Link Status	Statistics	Information	n CLI
- Available N	Networks			V E	nable Radio
Name	NAP II	CINR	R	SSI	
None	00:00:	00 27	-7	0	
Refresh	1	Device	Auth	Settings	Channels
				BOARD C	
Show wi	reless icon i	n system tray		\obi e Wireless Te	e chnology
		,			
				ОК	Close

If there is available networks, then click "CONNECT" button at UI for normal users.



4.5 Device Change

IGIWIMAXCM is made for various type of our products. It can connect SIMPLE CPE, CPE with WIFI and USB Modem.

If you want to user other types of product, you can change devcie type by clicking "Device" like below.

IGIWCM-Debug								
NetWorks	Provision	Link Status	Statistics	Informatio	on CLI			
- Available Ne	Available Networks							
Name	NAP ID	CINR	R	SSI				
None	00:00:0	0 27	-7	70				
			_					
Refresh		Device	Auth	Settings	Channels			
				BOARD	CONNECTED			
		1	GIN	امل	le			
Creative Wireless Technology								
Show wire	eless icon in	system tray	/					
				ок	Close			

Just click MODEL and change Model. All other configuration will be changed automatically. After changing MODEL types, Restart CM. Then it will find device and connect if available.

Device Inter	Device Interface Config							
-Interface C	Interface Config							
MODEL :	CPE Wit	th WIFI	-	USB	S	OCKET		
SOC IP :	192	. 168	. 1	. 1	POR	T: 3800		
				ок		Cancel		

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5 Internet Test

5.1 Internet Explorer

Start Internet Explorer on your PC and then use internet.

Microsoft Corporation - Microsoft	oft Internet Explorer			
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools	Help			
🌀 Back 🔹 🕥 - 💌 🛃 🦿	🏠 🔎 Search 👷 Favorit	es 🚱 🔗 🍓 🔜 🎕	\$	
Address 🔕 http://www.microsoft.com/er	n/us/default.aspx		🔽 🋃 Go 🛛 Links	» 🌀 SnagIt 📑
🙆 Upgrade your Internet experier	nce			^
Microsoft		2	Web	Your pote
Windows Office All Products Buy	/ Now Downloads &	Partner & Customer	Security &	Training &
	11 Idis	Solutions	opuates	Events
Experience	e this in Silverlight			
Download I	the free plug-in →		GE	T MORI
			EC	DIECO
We'	re all in this	HARVARD		e special offers
4		BUSINESS		e special offers
το	getner	IdeaCast	- 2	Visual Studio 200
Negotia	tion strategies	AUDIO		
for an u	ncertain economy		01010101	01010101010
) javascript:void(0)			👋 🧶 In	ternet