



SWU – 3120 User Guide

WiMax USB Modem/WCM

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1.For your safety

Read this simple guideline. Ignoring guideline may cause device from working properly and cause damage to device.

Do not use near BLASTING

Follow any restrictions. Do not use the device where blasting is in progress.

Do not use in hospitals

- Follow any restrictions. Switch the device off near medical equipment

Do not use in aircraft.

Follow any restrictions. Wireless devices can cause interference in aircraft.

Interference

All wireless devices may be susceptible to interference which could affect performance.

Water-resistance

Your device is **not water-resistant. Keep dry.**

Service

Do not attempt to service this modem as you please. Refer all service to qualified service personnel.

1.For your safety

Read this simple guideline with reference to the previous page.

❑ Do not store the device in hot areas

High temperature can warp or melt certain plastics and shorten the life of electronic devices.

❑ Do not store the device in cold areas

When the device returns to its normal temperature, moisture can form inside the device and damage electronic circuit boards.

❑ Do not leave the device in a closed car for a long time

When the temperature in a car reach over 80°C, it can damage your device permanently.

❑ Do not forcibly connect the device to a USB port. Doing so may cause damage to the device.

❑ Avoid severe impact.

Do not bend or expose to impacts. Doing so may cause data loss.

2.Before using Modem

System Requirements

CPU & memory	Pentium IV Processor or faster, 128MB RAM or more
Interface	USB 2.0
Supported OS	Windows /XP/Vista(32Bit)

- Insert UICC correctly. If you insert it inversely, card slot may be damaged.

- Do not force the SIM into the SIM slot.

- When internet is connected, don't remove UICC. The modem & UICC may incur problems and not work properly.

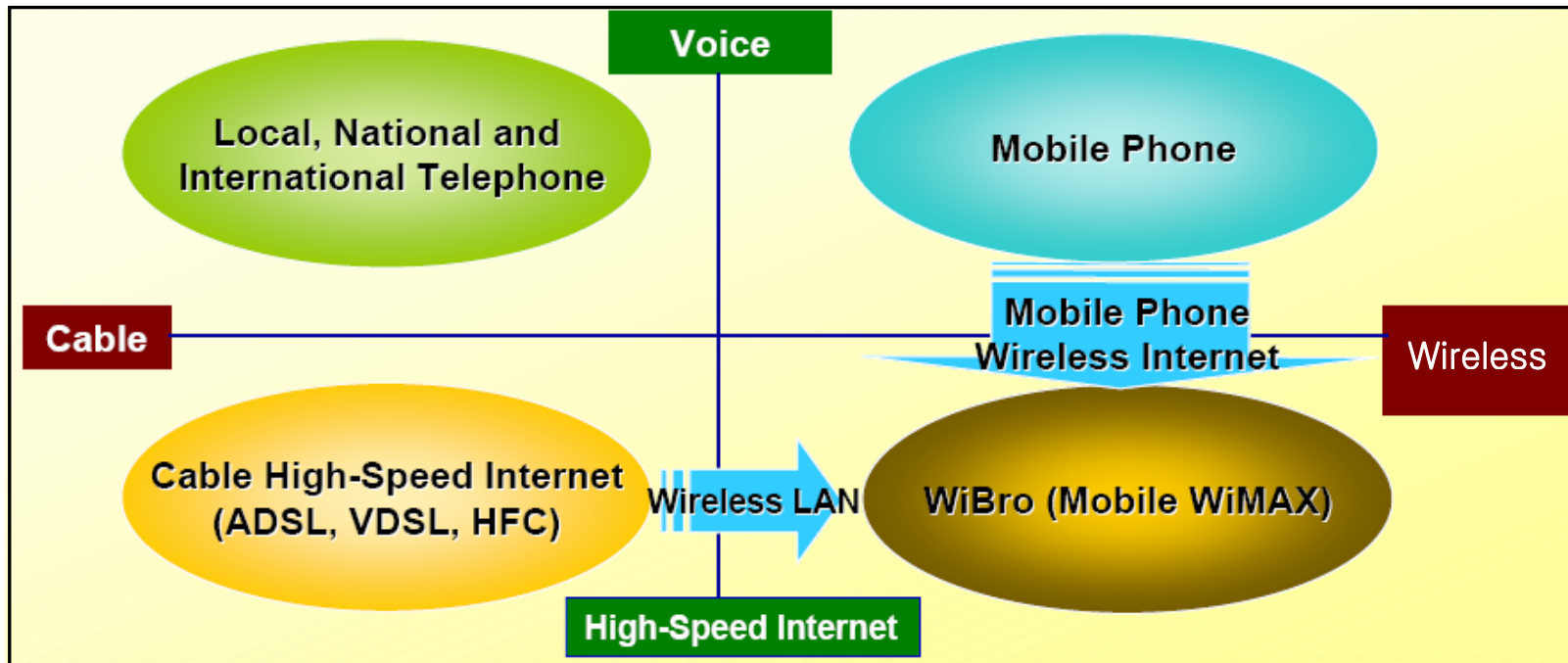
2. Before using modem

Mobile WiMAX Service Concept

Anytime, Anywhere and Even in Motion, High Transmission Speed Service Enabled

Complementary Mobility of High-Speed Internet-Wireless LAN

Cheaper than Mobile this device Wireless Internet (Low Investment Cost, High Transmission Capacity)

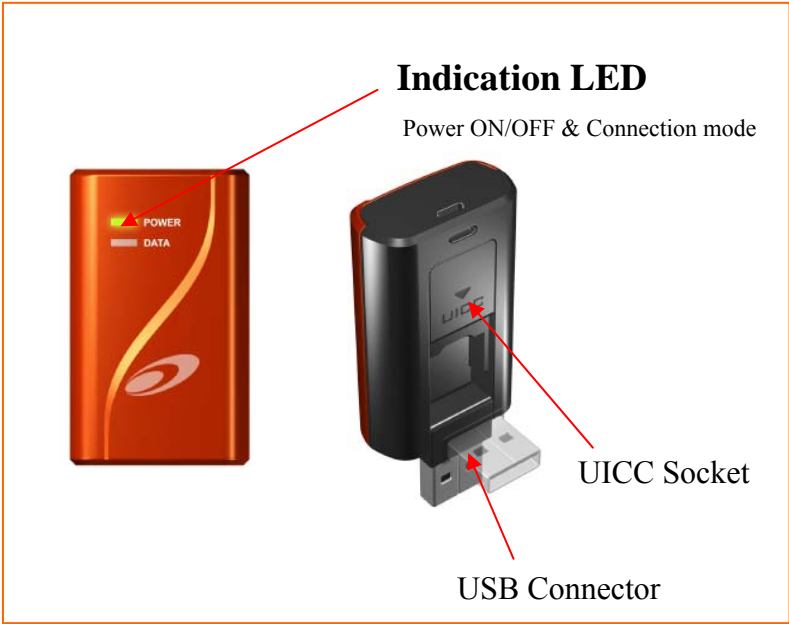


3. Basic Usage

3.1 Inspect Package Contents

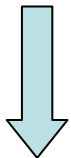


3.2 Parts Description

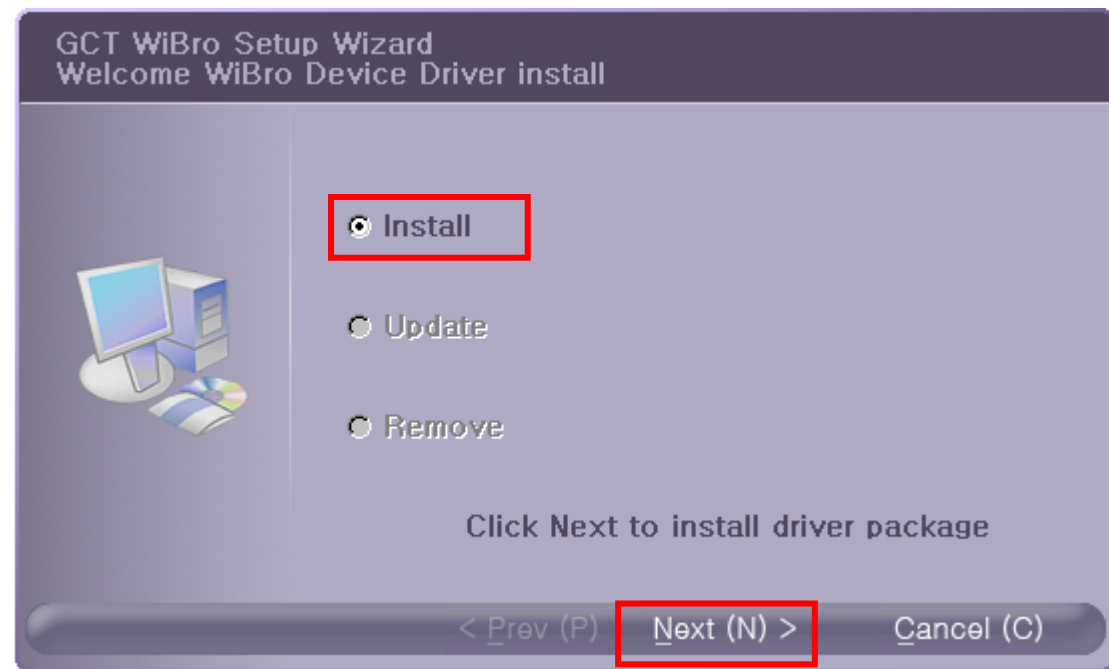
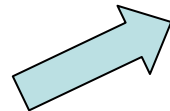


4. Driver Installation

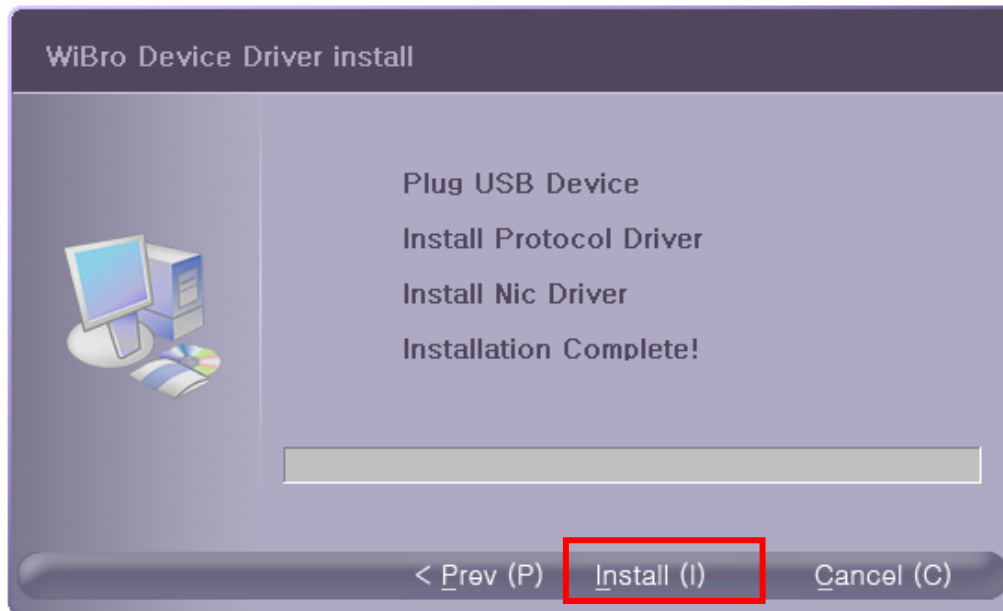
- If you have previous WCM or Driver version, uninstall it first.
- Plug USB Dongle into your USB port.
- Double Click [GdmSetup_WiBro_W2_v2.0_20080625]



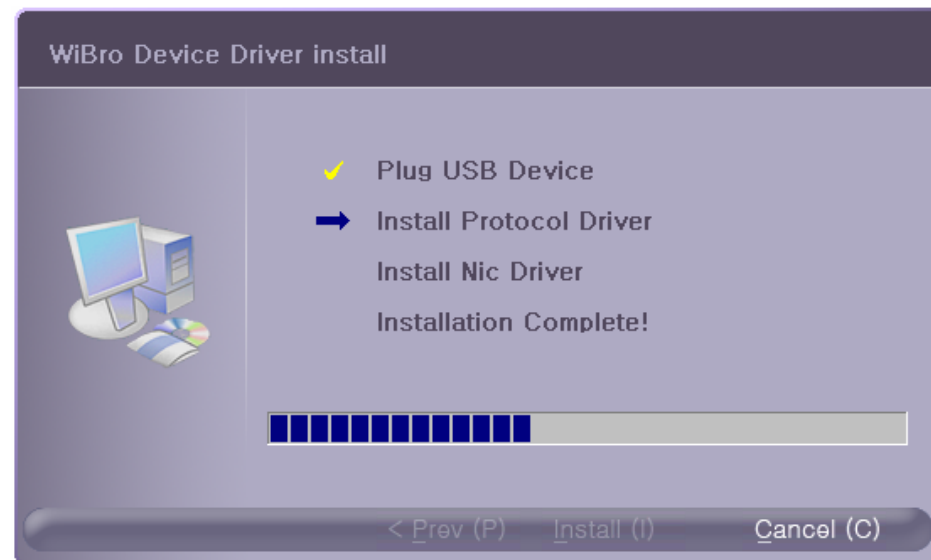
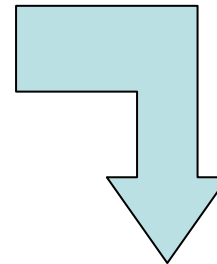
GdmSetup_WiBro_W2_v2.0_20080625



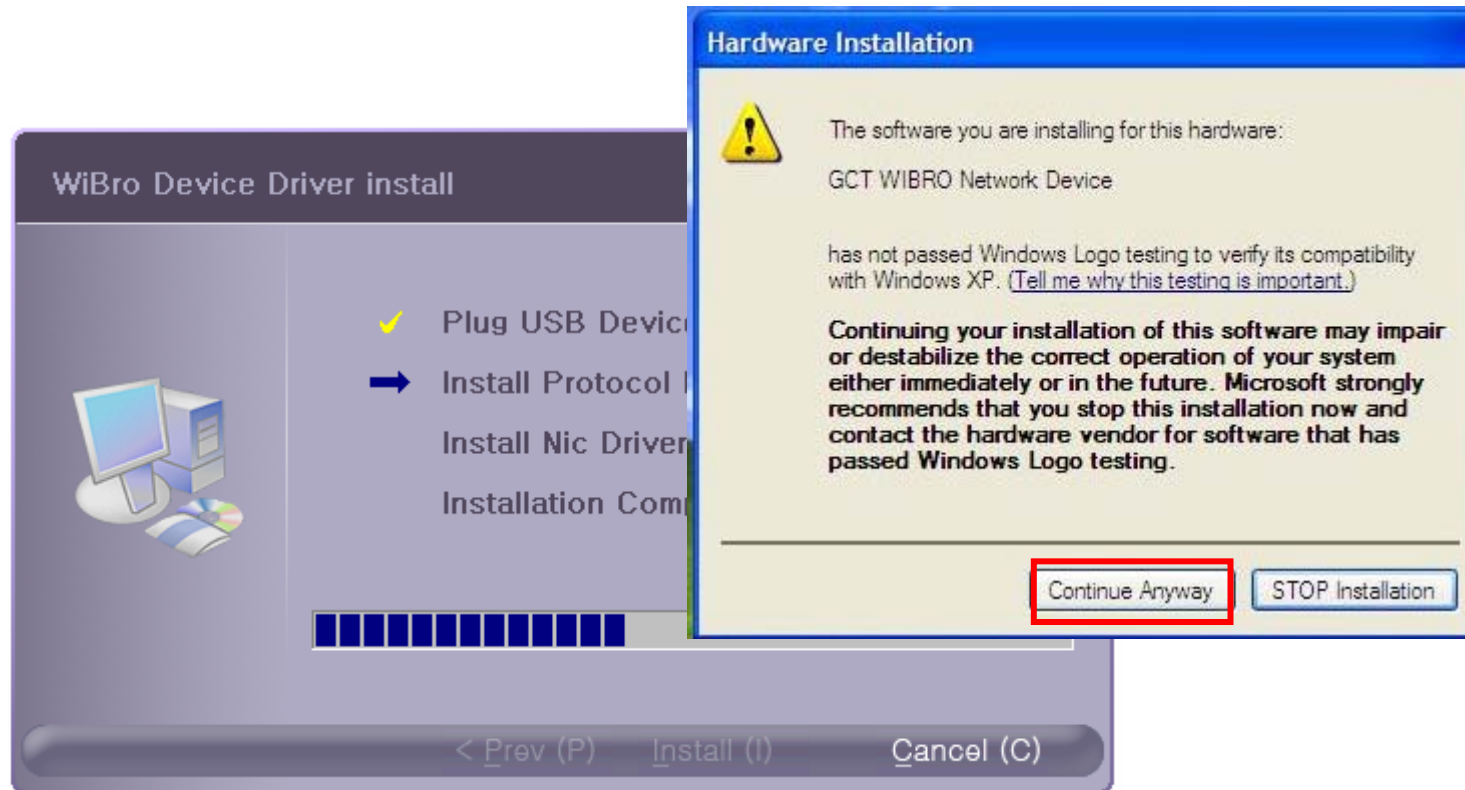
4. Driver Installation



Click "Install"

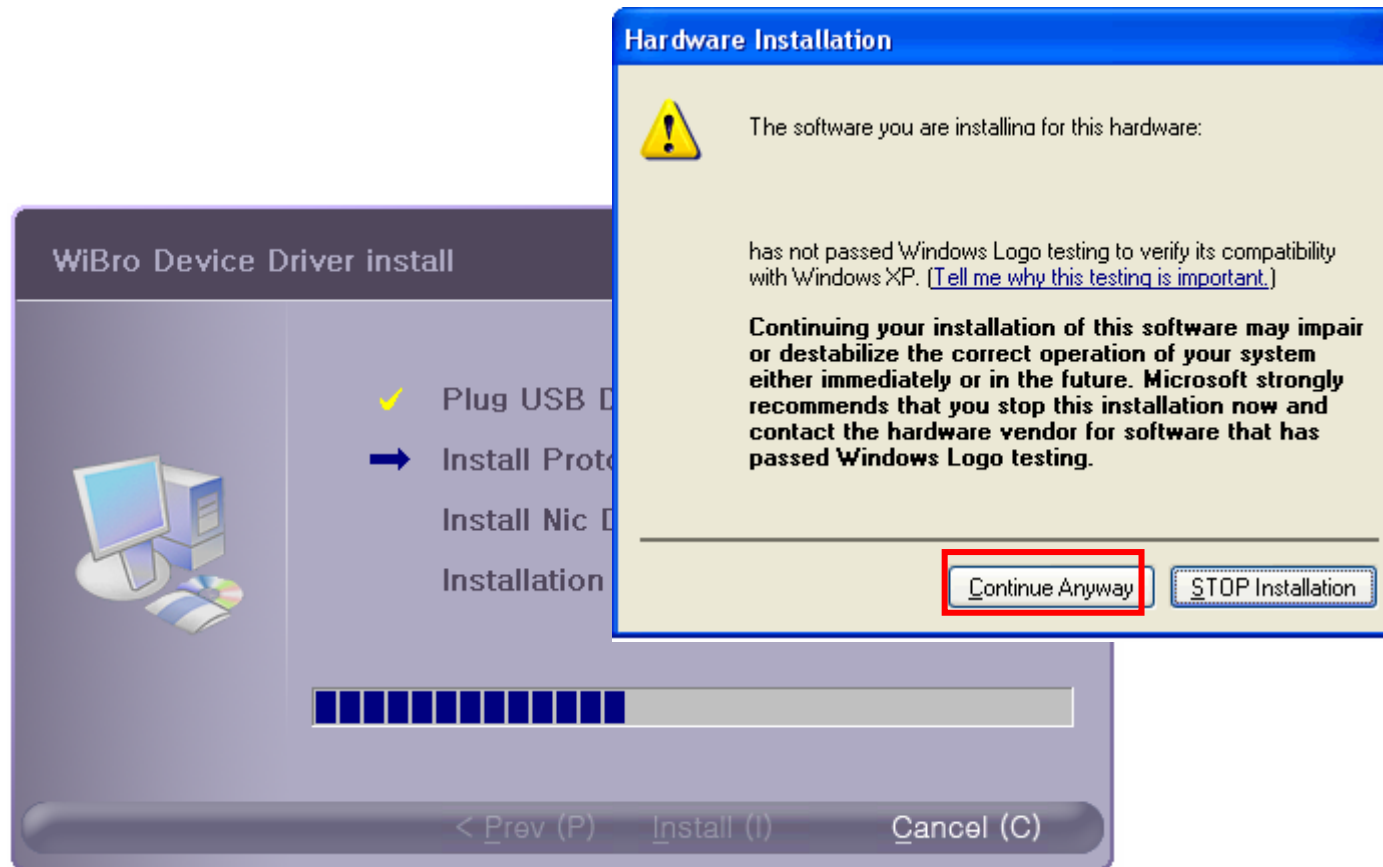


4. Driver Installation



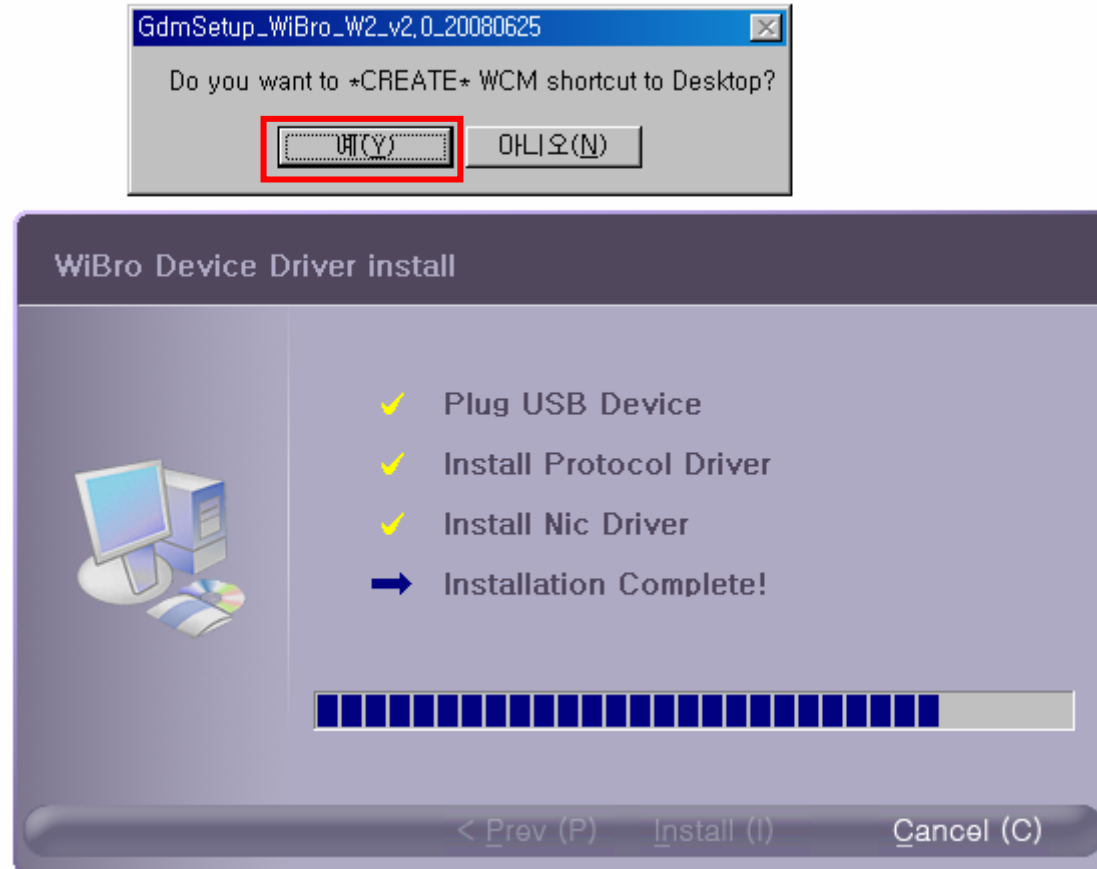
Click [Continue Anyway]

4. Driver Installation



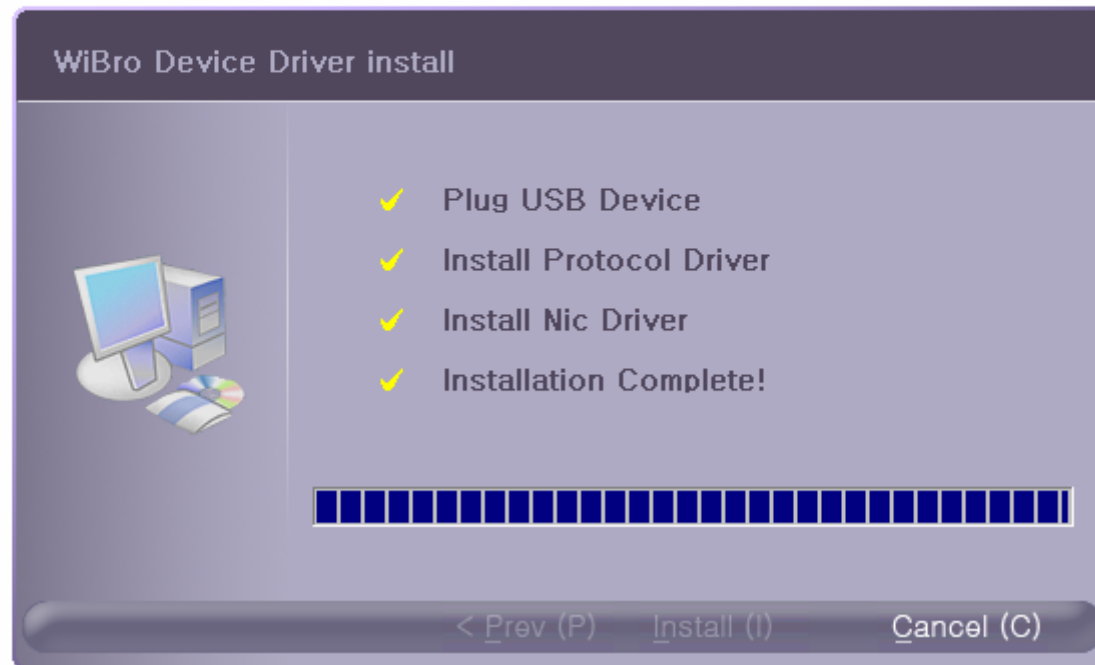
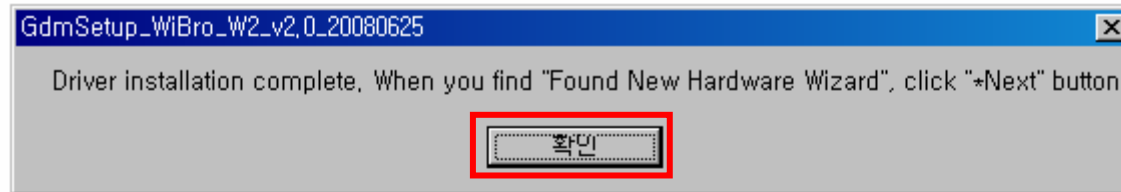
Click [Continue Anyway]

4. Driver Installation

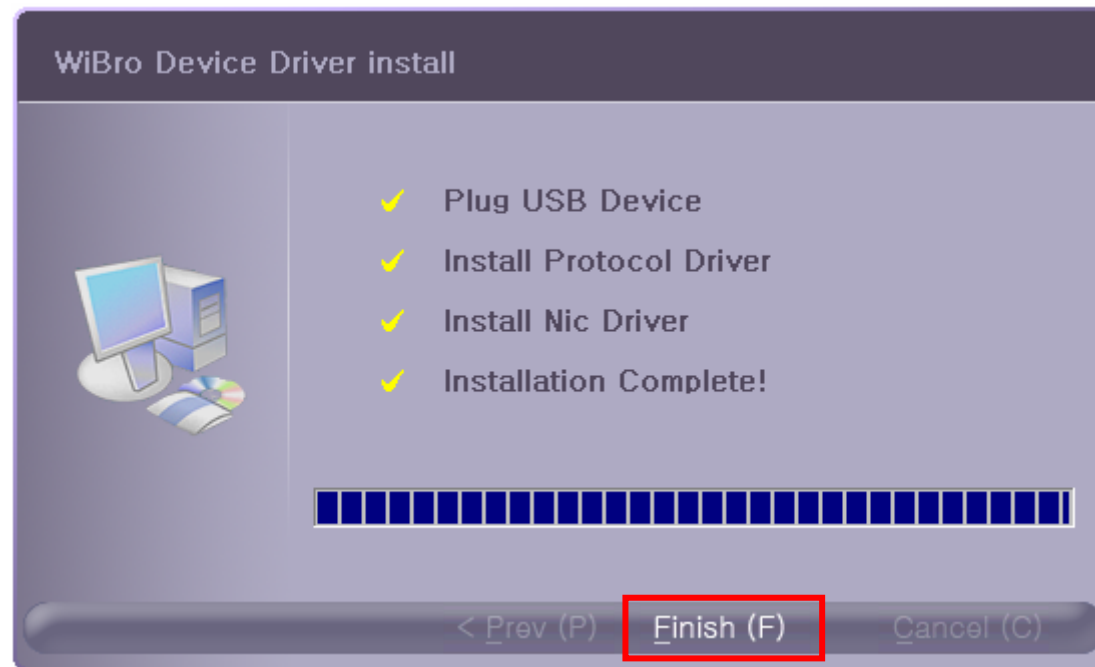


● Chick [Y] Button

4. Driver Installation



4. Driver Installation



- Click [Finish] button. Restart your PC.

4. Driver Installation

- Click [Next] button on 'Found New Hardware Wizard' screen



4. Driver Installation



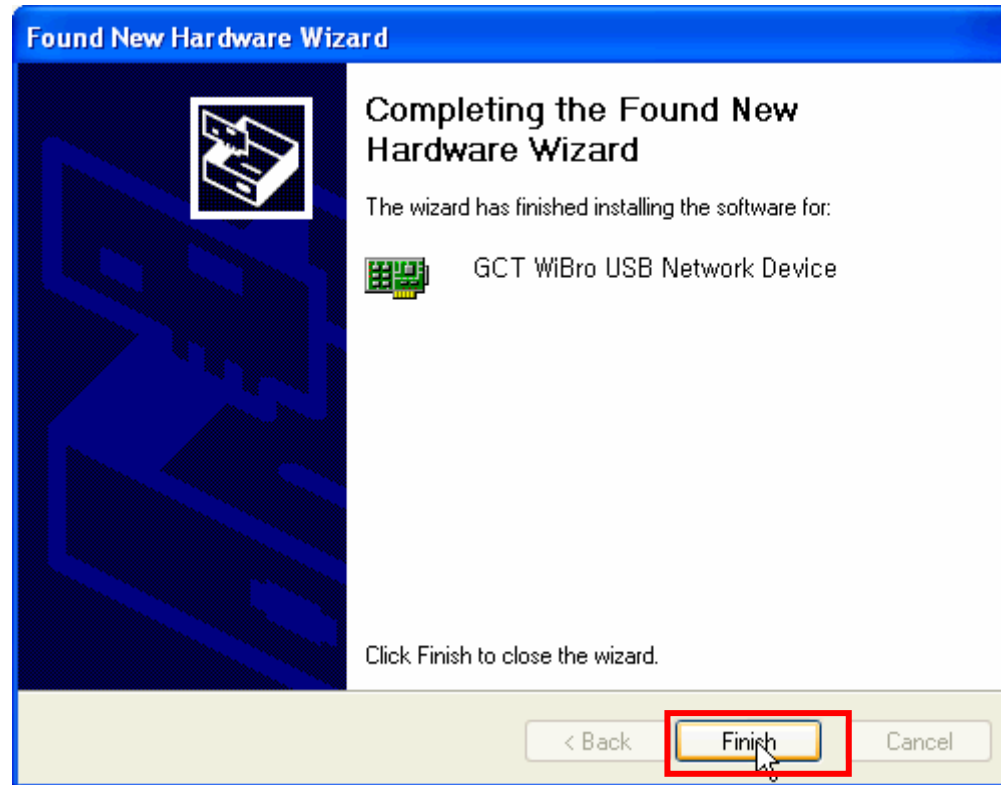
● Click [Next] button to continue

4. Driver Installation



● Click [Continue Anyway] button

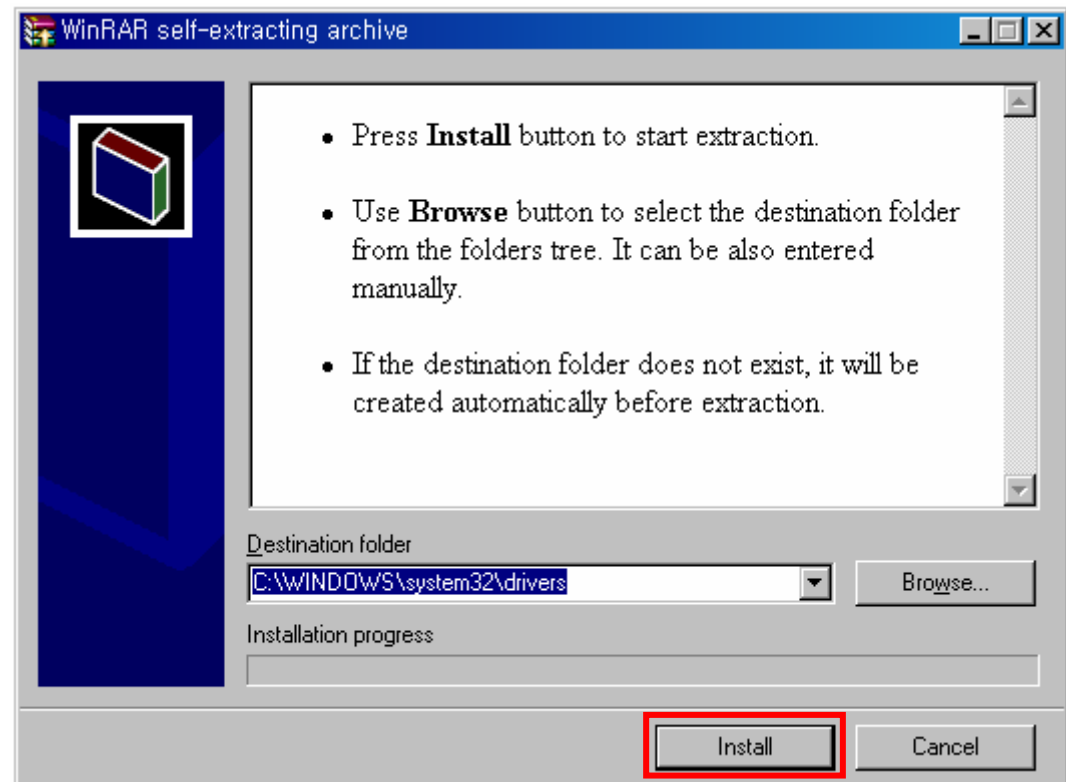
4. Driver Installation



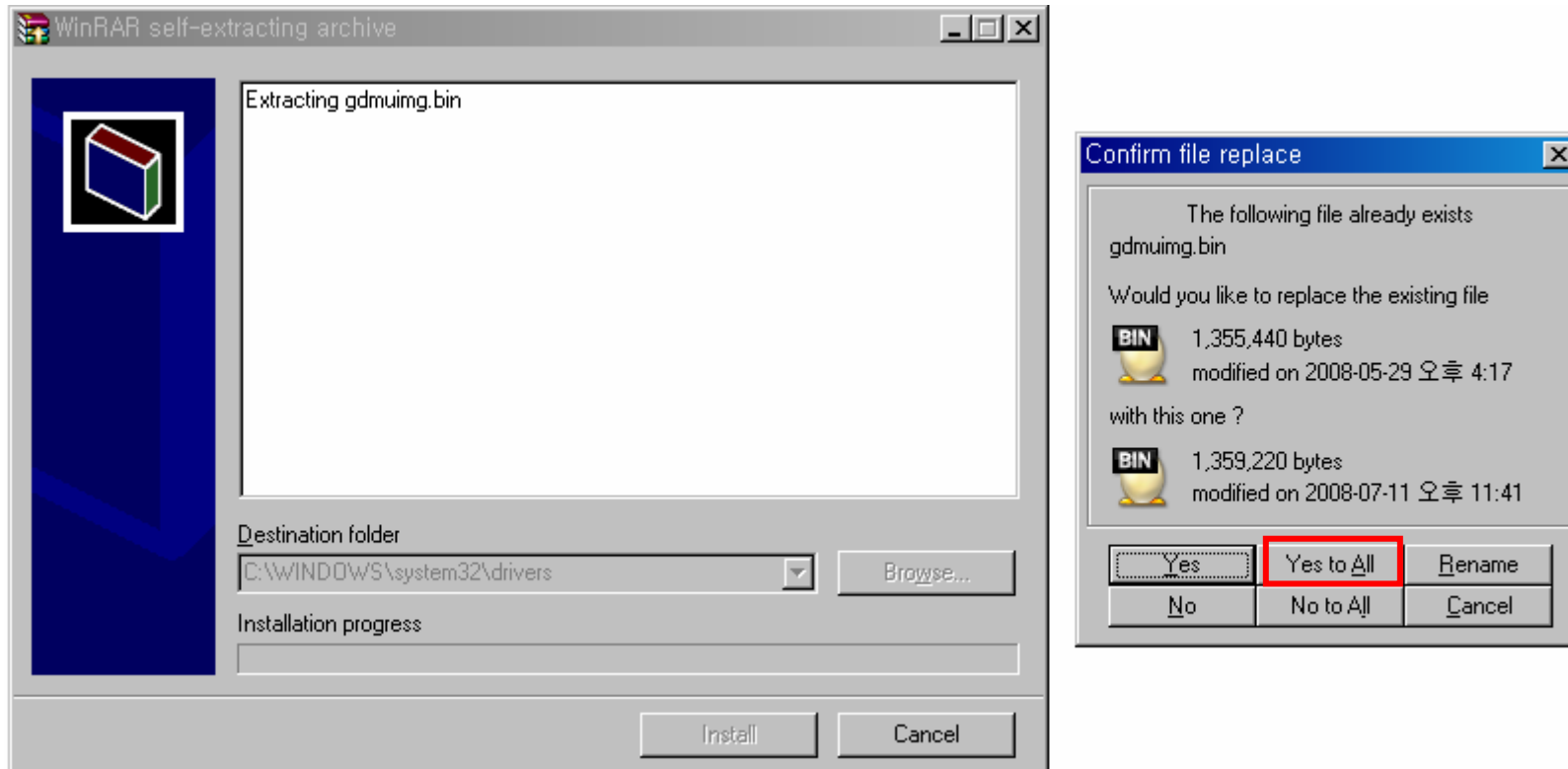
● Click [Finish] button

4. Driver Installation

- USB Dongle을 제거합니다.
- [gdmuimg.exe] 을 클릭하여 실행합니다.
- [Install]을 선택하여 실행합니다.



4. Driver Installation

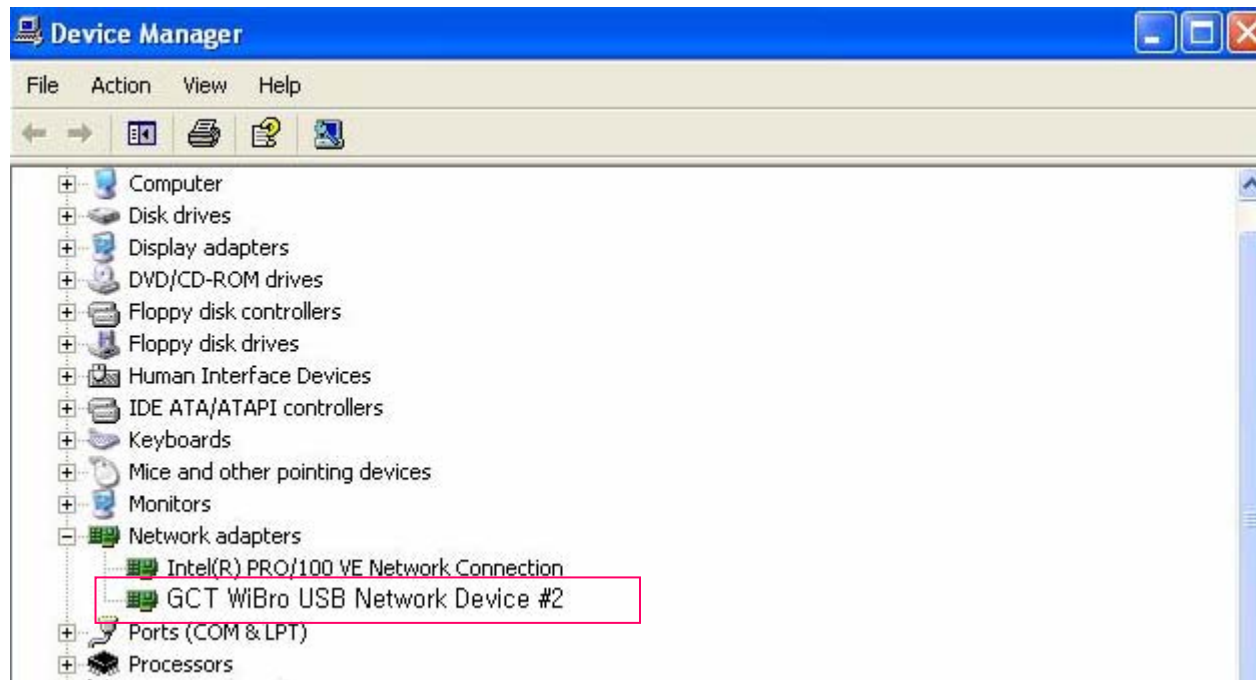


● Confirm file replace화면에서 [Yes to All] 을 클릭합니다.

4. Driver Installation

Verification

- Plug USB Dongle into your USB port
- If GCT Wibro USB Network Device is connected on Device Manager screen, it's installed normally.

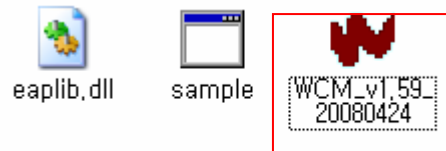


- Run WCM program

5. How to use WCM

5.1 Running WCM

To start WiMAX Connection manager , Select [WCM]



5. How to use WCM

- ❑ After driver installation, the system detects the GCT WiBro modem on its attachment. The WCM is launched by running WCM.exe.
- ❑ If the Wibro modem is not attached, the WCM prints messages that it cannot find WiMax device. (Figure 1)
- ❑ After WiBro modem is attached, the WCM detects the modem device successfully and performs initialization procedure. (Figure 2)

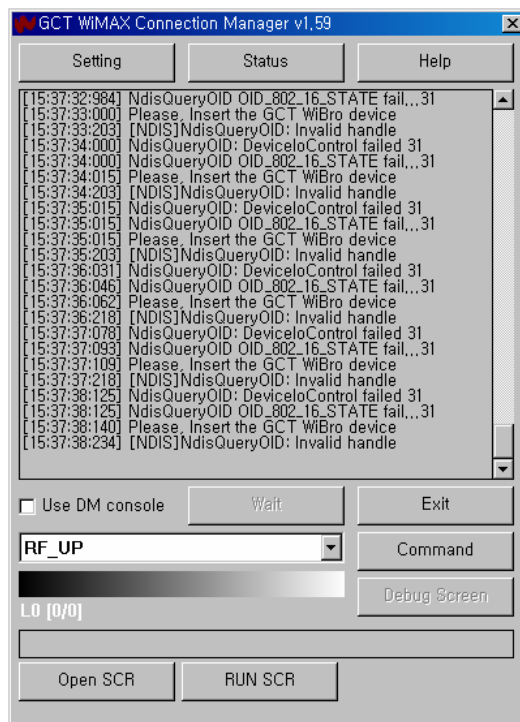


Figure 1

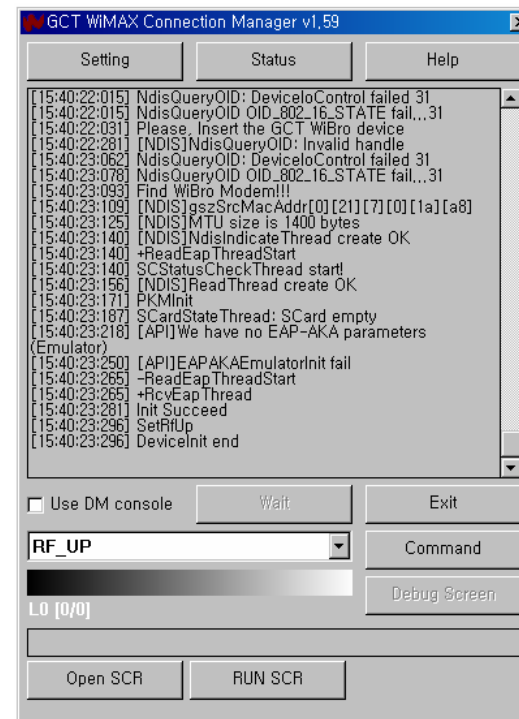
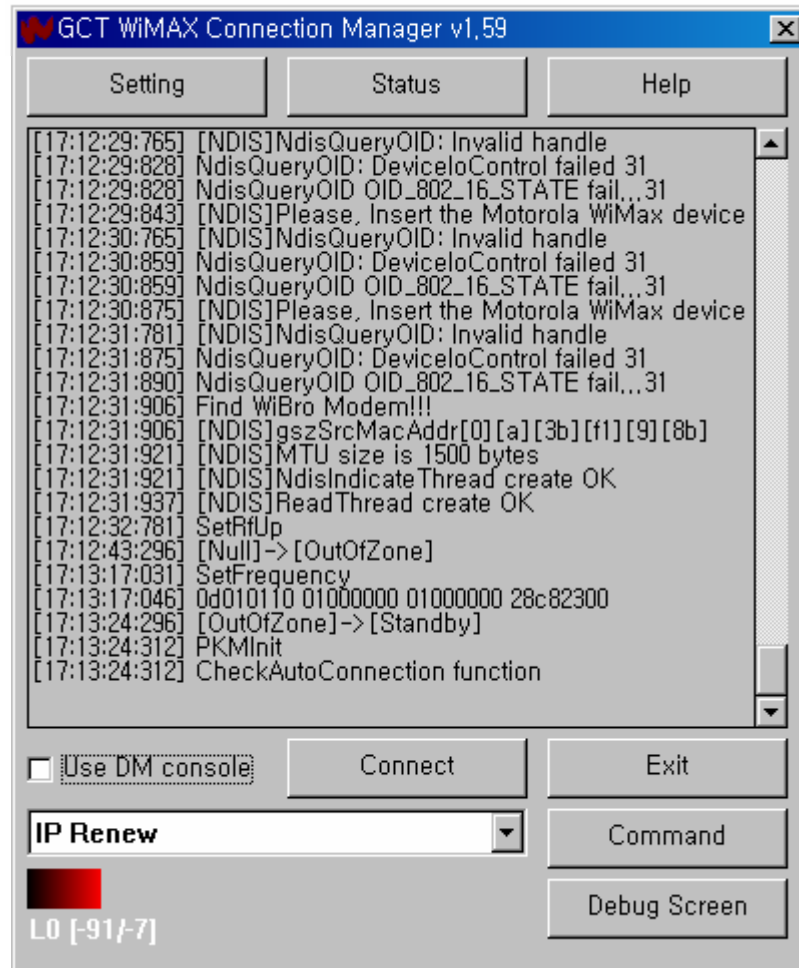


Figure 2

5. How to use WCM



Connected

The WCM allows user to start network-entry by activating “Connect” button.

Status : User can monitor the network status in more detail.

Setting

User can configure the global operation of WiBro at the “Setting” menu of the WCM.

5. How to use WCM

5.2 Setting

The screenshot shows the 'Environment Setting' dialog box with the following sections:

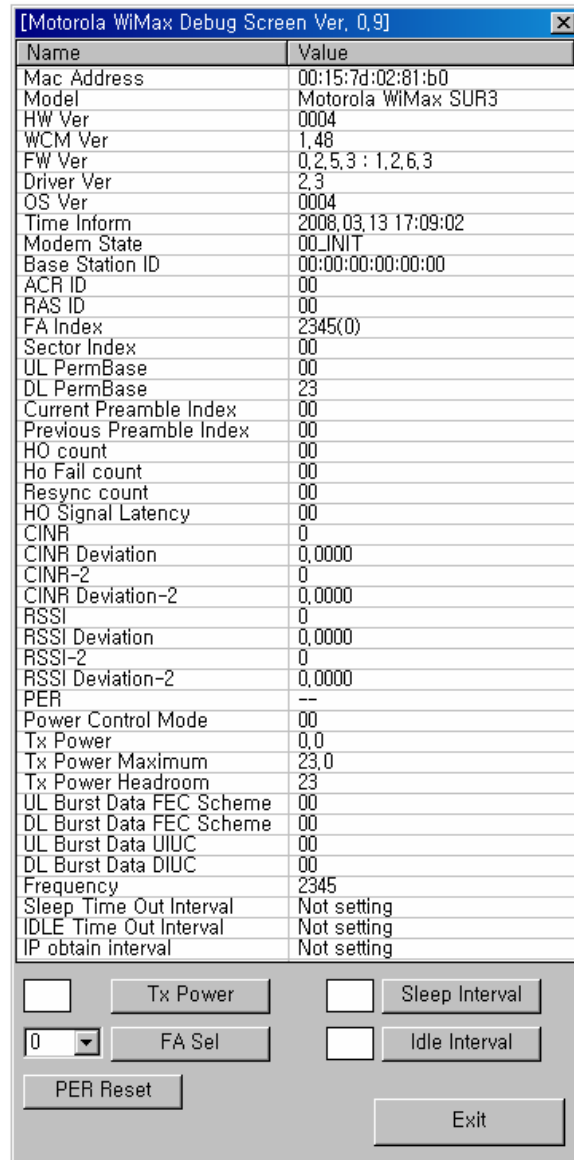
- Authentication:** Includes a 'Use Security' checkbox, an 'EAP Type' dropdown menu set to 'EAP-AKA (WCM emulator)', and fields for 'Inner NAI (ID)', 'Inner NAI Password', 'Outer NAI (Anonymous ID)', 'CA Cert.', '2nd CA Cert.', 'Client Cert. File', 'Private Key File for Client Cert.', and 'Private Key Password'. Each certificate and key file field has 'File' and 'Null' buttons.
- EAP-AKA emulator:** Includes a 'Load from NV memory' checkbox and fields for 'WNID', 'Realm', 'K', 'OP', and 'OPc'.
- WCM Log:** Includes checkboxes for 'Enable WCM Log file' and 'Enable UART Log file'.
- Etc:** Includes a checked 'IP Release' checkbox, a 'Run SCR file on startup' checkbox, and radio buttons for 'Auto Connection(AC)' and 'Manual Connection(MC)'. The 'Manual Connection(MC)' option is selected.

At the bottom, there are 'Save' and 'Cancel' buttons. A slider for 'EAP Fragmentation Size (800 ~ 1400)' is set to 1024, and a 'Use Delimiter' checkbox is unchecked.

- Mode(Use PKM) : Authentication mode is used.
 - PKM Type
 - * EAP-AKA : S/W EAP-AKA without USIM card
 - * EAP-AKA(Use USIM) : EAP-AKA using USIM
 - * EAP-MD5 : Use EAP-MD5
 - * EAP-TTLS(MSCHAPV2) : Use MSCHAPV2
- Auto Connection : WCM initiates network entry automatically
- Manual Connection : Network entry is controlled manually
- All settings becomes effective after “Save” button is pressed.

5. How to use WCM

5.3 Debug Screen



[Motorola WiMax Debug Screen Ver. 0.9]

Name	Value
Mac Address	00:15:7d:02:81:b0
Model	Motorola WiMax SUR3
HW Ver	0004
WCM Ver	1.48
FW Ver	0,2,5,3 : 1,2,6,3
Driver Ver	2,3
OS Ver	0004
Time Inform	2008.03.13 17:09:02
Modem State	00_INIT
Base Station ID	00:00:00:00:00:00
ACR ID	00
RAS ID	00
FA Index	2345(0)
Sector Index	00
UL PermBase	00
DL PermBase	23
Current Preamble Index	00
Previous Preamble Index	00
HO count	00
Ho Fail count	00
Resync count	00
HO Signal Latency	00
CINR	0
CINR Deviation	0,0000
CINR-2	0
CINR Deviation-2	0,0000
RSSI	0
RSSI Deviation	0,0000
RSSI-2	0
RSSI Deviation-2	0,0000
PER	--
Power Control Mode	00
Tx Power	0,0
Tx Power Maximum	23,0
Tx Power Headroom	23
UL Burst Data FEC Scheme	00
DL Burst Data FEC Scheme	00
UL Burst Data UIUC	00
DL Burst Data DIUC	00
Frequency	2345
Sleep Time Out Interval	Not setting
IDLE Time Out Interval	Not setting
IP obtain interval	Not setting

Control buttons: Tx Power, Sleep Interval, FA Sel (0), Idle Interval, PER Reset, Exit

- TX Power : User can control TX Power.
- FA Sel : User can select Frequency.
- PER Reset : User can reset PER
- Sleep Interval : User can adjust sleep interval
- Idle Interval : User can adjust idle Interval

6. Product Specification

Air Interface	IEEE 802.16e
Frequency Band	2.50 GHz
Frequency Accuracy	± 100 Hz
Size	54(W) x 31(H) x 15.5(D) mm
Weight	19 g
Output Power	MAX 200 mW (23 dBm)
Operating Temperature	- 10 degree ~ + 50 degree
relative humidity	0 % ~ 85 %

7. Service Center

A/S field

Please inform us product model name and problem status when you inquire.

- Product AS 0000-0000
- Customer complaint 000 00000

Operator field

Value-added Service and telethis device bill etc

- this device number **000**



Quality Warranty

Model	SWU-3120
Purchase Date	20 . . .
Purchase Place	
Serial Number	

Name	
Address	
Telethis device	

Gratuitous Service

Seowon intech guarantees this product against defects in materials and workmanship for a period of one year from original date of purchase.

Compensatory Service

In case of not defect

- If you request the service in case of not defect, you have to pay a charge so please make sure to read the user manual first.

In case of consumer fault

- in case of improper care by customer like flooding, impact etc
- in case of repair or disassembling by consumer at random
- in case of defect due to repair by improper person who is not our company engineer or partner's engineer
- in case of defect with using separate product which is not provided by our company
- in case of defect or damage due to other carelessness

In case of miscellaneous

- in case of natural disaster such as fire, salt damage and flood damage
- in case of running out durability of wasteful components

RF EXPOSURE INFORMATION

Your **WIMAX USB Modem** is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. 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 evaluate on of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

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. The SAR tests are performed in several positions and locations as required by the FCC. The highest SAR value for this device is **0.728W/kg**. While there may be differences between the SAR levels of 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 of this device is on file with the FCC and can be found under the Display Grant section of <http://www.fcc.gov/oet/fccid> after searching on FCC ID : **V7MSWU-3120**.

Near-Body Operation

To maintain compliance with FCC RF exposure requirements, maintain a **0.5cm**, separation distance between the user's body and this device.

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 on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technical for help.

WARNING: *This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.*

This device complies with Part 15 of the FCC's Rules. Operation is subject to the following two Conditions:

1. This device may not cause harmful interference, and
2. This device must accept ant interference received, including interference that may cause undesirable operation.