

Quanta WiMAX Connection Manager User Guide

Version 1.01



Contents

1.	Introduction	4
2.	Hardware installation	4
3.	Driver installation and un-installation	5
3.1.	Un-install the previous WiMAX NDIS Driver	5
3.2.	Install WiMAX NDIS Driver	6
4.	WiMAX Utility installation	9
4.1.	.NET Framwork 2.0	9
4.2.	WinPcap Library installation	9
4.3.	Quanta WiMAX Connection Manager installation	11
5.	Configure the WiMAX Card by Quanta WiMAX Connection Manager	13
5.1. confi	Use Quanta WiMAX Connection Manager to setup WiMAX connection without security guration.	13
5.2. confi	Use Quanta WiMAX Connection Manager to setup WiMAX connection with security guration.	21
6.	Appendix	30
6.1.	Use Quanta Config File Editor to setup configuration file parameters	30
6.2.	Configuration File Parameters	31
6.3.	Setup WCM network configuration to static IP address	35



Revision History

Version	Release Date	Description
1.00	07/04/2007	1st User Guide Release
1.01	08/02/2007	Update some pictutes

1. Introduction

The CardBus of WiMAX Connection Manager supports IEEE 802.16e-2005 state of the art Scalable OFDMA based Technology. It provides users a seamless broadband wireless access, video streaming at home, office or on the move. To protect information transmitting through wireless network, standard security Sublayer PKMv2 EAP based user authorization/authentication and AES for data encryption are supported.

Easy-to-use Windows XP-based utility provide the graphic user interface is for system/link status, configuration and firmware upgrade.

The following chapters we will show you how to install from hardware to software step by step

- Hardware Installation
- NDIS Driver Installation and Old driver un-installation (for previous version)
 - Windows Utility Installation
 - .Net Framework 2.0
 - WinPcap Library
 - Quanta Wimax Connection Manager

2. Hardware installation

- 1. Locate the available CardBus card slot on your Laptop.
- 2. Then insert the CardBus Subscriber into the CardBus card slot.



3. Remove method: To remove the CardBus Subscriber, Please press the Eject Button of the CardBus card slot. To make it stretch out. Then, push the Eject Button and the CardBus Subscriber will slide out slightly. And pull it out of the slot.

3. Driver installation and un-installation

3.1. Un-install the previous WiMAX NDIS Driver

- 1. You have to plug the WiMAX Connection Manager card into your laptop before unload the old WiMAX NDIS driver.
- 2. Right-click on "**My Computer**", in the Start menu, and choose "**Properties**"
- 3. On the "Hardware" tab, choose "Device Manager"
- 4. Expand the "Network Adapters" entry



- 6. Choose "**OK**" to confirm the device removal.
- 7. The old WiMAX NDIS driver has been removed.





3.2. Install WiMAX NDIS Driver

- 1. Please, un-install your previous WiMAX NDIS driver before you install the new WiMAX NDIS driver (reference: Chapter 3.1).
- 2. Please, use WinRAR to decompress the WiMAX_Driver.rar to your C disk.
- 3. It will create a **WiMAX_Driver** folder in your C disk (C:\ WiMAX_Driver).
- 4. When first connect the CardBus Subscriber to your laptop, the operating system (Windows XP) will detect a new device and start the "Found New Hardware Wizard" automatically.
- 5. Please select the "No, not this time" option
- 6. Click the "<u>N</u>ext >" button to continue the installation.



ardware Wizard
ndows will search for current and updated software by king on your computer, on the hardware installation CD, or on Windows Update Web site (with your permission). ad our privacy policy
n Windows connect to Windows Update to search for tware? Yes, this time only Yes, now and every time I connect a device No, not this time
ck Next to continue.

- 7. Please select the "Install from a list or specific location (Advanced)" option.
- 8. Click the "<u>N</u>ext >" button to continue the installation.





- 9. When prompt to choose your search and installation options, select "Don't search. I will choose the driver to install." option.
- 10. Click the "<u>N</u>ext >" button to continue the installation.

11. Please click the "Have Disk..." button to continue the installation.





12. Select C:\ WiMAX_Driver from pull-down menu and click the 'OK' button to continue the installation





13. Windows XP has found the driver in this directory. Please click "<u>N</u>ext >" button to install the driver.



14. Please click on "Continue Anyway" button.



15. Please click the "Finish" button to complete the installation.

Found New Hardware Wiz	ard
	Completing the Found New Hardware Wizard
	The wizard has finished installing the software for:
	BCM CARDBUS t3 Network device
	Click Finish to close the wizard.
	< Back Finish Cancel

4. WiMAX Utility installation

4.1. .NET Framwork 2.0

In order to run Quanta WiMAX Connection Manager (WCM), the .NET Framework Version 2.0 (or higher) must be installed. The .NET Framework 2.0 is already installed on many Windows XP computers. If you see a Windows error message that begins 'This application has failed to start because the application configuration is incorrect. ...' as soon as you try running the WCM, it's very likely that you do not have the .NET 2.0 framework installed on your computer.

To obtain the Framework, go to the Microsoft Download Center (http://www.microsoft.com/downloads/), search for ".NET Framework Version 2.0 Redistributable Package (x86)", and follow the installation instructions given by Microsoft.

4.2. WinPcap Library installation

In order to run the Quanta WCM with EAP authentication, the WinPcap package must be installed on your computer. WinPcap is already installed on many Windows XP computers. If you see a Windows error message stating that the "**wpcap.dll**" file could not be found, you will need to install WinPCAP.

To obtain WinPCAP, go to <u>http://www.winpcap.org/</u>, click on "Get WinPcap" on the left frame, download the "WinPcap auto-installer (driver + DLLs)", and run this installer. You do not need to install the WinDump package.

- 1. Download "WinPcap_4_0.exe" from <u>http://www.winpcap.org/</u>.
- 2. Please execute "WinPcap_4_0.exe", and click the "<u>N</u>ext >" button.





3. Please click the "<u>N</u>ext >" button.



4. Please click the "I Agree" button.



5. Please click the "Finish" button to complete the WinPcap library installation.





4.3. Quanta WiMAX Connection Manager installation

- 1. Please, use WinRAR to decompress the "QuantaWCM Installer.rar" to your laptop.
- 2. Then enter "QuantaWCM Installer/" folder and execute "setup.exe" to install Quanta WCM.



3. Please click "<u>N</u>ext >" button.

🖗 Quanta WiMAX Connection Manager Utility 📃 🗖 🔀
Welcome to the Quanta WiMAX Connection Manager Utility Setup Wizard
The installer will guide you through the steps required to install Quanta WiMAX Connection Manager Utility on your computer.
WARNING: This computer program is protected by copyright law and international treaties. Unauthorized duplication or distribution of this program, or any portion of it, may result in severe civil or criminal penalties, and will be prosecuted to the maximum extent possible under the law.
Cancel < Back Next>



- If you want to install the utility to a 4. different folder, you can click the "B<u>r</u>owse..." button.
- You can choose "Just me" or "Everyone" to 5. change who can use the utility.
- Please click the "<u>N</u>ext >" button to keep 6. going on.

Quanta WiMAX Connection Man	ager Utility		
Select Installation Folde	r		
The installer will install Quanta WIMAX Co	onnection Manager	Utility to the fol	owing folder.
To install in this folder, click "Next". To in	istall to a different fo	lder, enter it be	low or click "Browse".
Folder:			
C.Program Files/QuantaWC500/Quan	ata WCM\		Browse
			Disk Cost
Install Quanta WIMAX Connection Mar computer: © <u>E</u> veryone O Just <u>m</u> e	nager Ublity for your	self, or for anyo	ne who uses this
	Cancel	< <u>B</u> ack	Next >

Please click the "<u>N</u>ext >" button to install 7. the utility.

🛃 Quanta WiMAX Connection Man	ager Utility		
Confirm Installation			
The installer is ready to install Quanta Wi	MAX Connection Ma	nager Utility on your	computer.
Click "Next" to start the installation.			
	Cancel	< <u>B</u> ack	Next >

Please click the "<u>C</u>lose" button to complete 8. the installation.

🚰 Quanta WiMAX Connection Manager Utility	
Installation Complete	
Quanta WiMAX Connection Manager Utility has been successfully installed. Click "Close" to exit.	
Please use Windows Update to check for any critical updates to the .NET Framework.	
Cancel < Back	Close



9. You can start to use the utility, "Quanta WCM" to setup and configure the WiMAX subscriber (WCM).



After finished Quanta WCM installation, if Quanta WiMAX card was inserted and power on, you can double click the "QuantaWCM" icon to lunch the WCM. Before first running the WCM, it's necessary to configure firmware configuration file, such that it could make it effect on your system.

You can double click the "Quanta Configuration File Editor" icon to modify the related parameters, such as bandwidth, center frequency. Once you lunch the Quanta WCM, it will automatically connect to BS with strongest signal and provide you service. Please, refer to chapter 6.2 to get detail information about the configuration file parameters.

5. Configure the WiMAX Card by Quanta WiMAX Connection Manager

5.1. Use Quanta WiMAX Connection Manager to setup WiMAX connection without security configuration

1. Please, double click the "QuantaWCM" icon to lunch the WCM.

Q Quanta Wireless Connection Mar				
File Options Tools About				
General Stats TCP/IP Device	Debug			
Base Stations Base Station ID Press the Search button to Look for base stations	Preamble Frec ID MH	t BW z MHz	RSSI dBm	CINR dB
	Search	J		
Connection Status				
			Connect	
Waiting for PHY sync start				.:i



Qua<u>nta Wirele</u>ss Connection Manager

- **-** ×

2. Please, click "Option" on the Menu to setup the WiMAX configuration.



3. You can choose the "Enable MAC management message logging" option to active/de-active MAC message log to file.

MAC Manageme	ent Message Logging
_ Enable MAC Log File Name	C:\Program Files\QuantaWC500\QuantaWCM\QuantaWCM_MAC
Status request pe	riod (0 = Off) 2 sec



Please, click "Network Search" tab to setup 4. WiMAX configuration (Frequency, Bandwidth, etc.)

IAC Managem Enable MA	ent Message Logging Browse
log File Name	C:\Program Files\QuantaWC500\QuantaWCM\QuantaWCM_MAC
eriodic Link S	atus Request
Status request p	eriod (0 = Off) 2 sec

5 MHz 7 I nter Frequencies	vIHz 8.75	MHz 🚺 10 MHz
election Mode Scan EEPROM List	🔘 Scan Range	🔿 Scan List
can Frequency Range (MHz)Scan Fre	quency List (MHz)
Start 0.00		Frequency
Stop 0.00	▶ <u>1</u>	0.00
Step 0.00	2	0.00
0,00	3	0.00
	4	0.00
	5	0.00
		0.00

- You can setup "Bandwidth", "Selection 5. Mode", and "Center Frequencies".
- Please, click the "OK" button to complete 6. the networking setting.

Center Frequen	cies	MHz	1	3.75 MHz	✓ 10 MH	z
Selection Mo	de PROM List	🔿 Scan	Range		Scan List	
- Scan Frequen	cy Range (MHz)	Scar	Frequen	cy List (MHz)	
Start	0,00			Freq	uency	^
Stop	0.00		1	1	2540.	5
Sten	0.00		-	2	0.0	0
	10100			3	0.0	
			-	5	0.0	0
				6	0.0	0
				7	0.0	0 💌



- 7. Click the "Authentication" tab.
- 8. Please, **don't click** the "Enable authentication" option. (We disable the PKMv2-EAP feature)
- Quanta WCM General Network Search Authentication Security Advanced Remote Operation Operate remotely over proxy MAC Management Message Logging Browse ... Enable MAC management message logging Log File Name C:\Program Files\QuantaWC500\QuantaWCM\QuantaWCM_MAC Periodic Link Status Request Status request period (0 = Off)2 sec OK Cancel General Network Search Authentication Security Advanced Authentication Please, don't Enable authentication feature Enable authentication Use direct Ethernet connection to RADIUS server RADIUS Server Parameters IP Address Secret Logging EAP Supplicant logging level Error × RADIUS Client logging level Error ~ Log file name C:\Program Files\QuantaWC500\QuantaWCM\ Browse ... OK Cancel Quanta WCM General Network Search Authentication Security Advanced Remote Operation Operate remotely over proxy MAC Management Message Logging Browse ... Enable MAC management message logging Log File Name C:\Program Files\QuantaWC500\QuantaWCM\QuantaWCM_MAC. Periodic Link Status Request Status request period (0 = Off)2 sec OK Cancel
- 9. When you click the "Security" tab, you can not modify any configuration. Because, you disable authentication feature.



Security—— User Name	myname			
Password	******	(***		
Anonymous Ide	ntity anonymous	3		
EAP Method	TTLS		·	
Inner EAP	MSCHAP	12	·	
Ca Certificate	C:\Program	n Files\Quanta\	WC500\Quanta	Browse

- 10. Please, click the "Advance" tab and don't modify any configuration for this current software.
- 11. Then click the "OK" button to complete the Networking setting.

Log File Name C: Program Files Quanta WCS00 Quanta WCM Quanta WCM_MAC Periodic Link Status Request Status request period (0 = Off) 2 sec OK Cancel a. WCM neral Network Search Authentication Security Advanced Set Adapter MAC Address AAC Address	Operate remo MAC Manageme Enable MAC	tely over proxy nt Message Logging management message logging Browse
Periodic Link Status Request Status request period (0 = Off) 2 sec OK Cancel a WCM neral Network Search Authentication Security Advanced Set Adapter MAC Address MAC Address	Log File Name	C:\Program Files\QuantaWC500\QuantaWCM\QuantaWCM_MAC
Status request period (0 = Off) 2 sec OK Cancel a WCM neral Network Search Authentication Sec Security Advanced Set Adapter MAC Address MAC Address IAC Address :_:::::::::::::::::::::::::::::::::::	^o eriodic Link Sta	itus Request
OK Cancel	štatus request pe	riod (0 = Off) 2 sec
a WCM neral Network Search Authentication Security Advanced Set Adapter MAC Address IAC Address		
neral Network Search Authentication Security Advanced Set Adapter MAC Address IAC Address		OK Cancel
Set Adapter MAC Address IAC Address	a WCM	OK Cancel
AAC Address:_:_:_:	a WCM neral Network	OK Cancel Search Authentication Security Advanced
	ia WCM neral Network Set Adapter MA	OK Cancel Search Authentication Security Advanced C Address

Ignore "Waiting For Network Entry Command" link status notifications

OK

Cancel

📃 Skip Network Search



12. Now, we come back the Quanta WCM General window and click the "Search" button to start network searching.

Peral plats ICP/IP Device	Debug			
Base Station ID	Preamble Freq ID MHz	BW MHz	RSSI dBm	CINR dB
Press the Search button to look for base stations				
	Search			
Connection Status				
		Co	nnect	
		Co	nnect	
		Co	nnect	

Quanta Wireless Connection M	anager			
File Options Tools About				
Jeneral Stats TCP/IP Device	Debug			
Base Stations				
	Preamble Freq	BW	RSSI	CINR
Base Station ID	ID MHz x17_2540.500_10.000	-76	dBm 20	dВ
	Search			
Connection Status				
Connection Status				
		Co	nnect	
onnection error (No Sync)				



13. If it finds a BS, it will automatically connect to this BS.

🛯 Quanta Wireless Connection Manager 📃 🗖 🔀
File Options Tools About
General Stats TCP/IP Device Debug Base Stations
Connected to Base Station 4D:3C:2B:00:5E:6F
Connection Status
Base Station ID 4D:3C:2B:00:5E:6F Preamble Index 23 UL Cell ID 0 RSSI Mean -73 dBm Disconnect CINR Mean 22 dB UL Center Freq 2540 MHz RSSI -73 dBm CINE 20 4D
CINR 22 dB
Network Entry completed

14. Please, click the "Stats" to display WiMAX information.

File Options Tools	About	
General Stats TCP/	IP Device Debug	
BaseID	00:2b:3c:4d:5e:6f	Reset
Modem state	Waiting for DSA ACK	
Frame number	11124763	
Num frames recvd	276	
Frames in Error	1	
FER	0.004	
Num Of CRC Errors	0	
Num Of Hcs Errors	0	
CenterFrequency	2540	
CUR CINR	26 dB	
CUR RSSI	-69 dBm	
Tx power	17 dBm	
Current DL rate	0 kbps	
Current UL rate	0 kbps	
Number of bytes:		
From Host	0	
To Host	0	



15. Please, click the "TCP/IP" tabe to display your networking information.



16. Please, click the "Device" tab to display WiMAX device information.

🚱 Quanta Wireless Conne	ction Manager	
File Options Tools	About	
General Stats TCP/IP	Device Debug	
SS Info	Response	
Firmware Version Driver Version Library Version Baseband Chip Version RF Chip Version MAC Address	3.1.64 1.0.20.0 2.4.37 bece0200 5200 00-17-c4-02-3c-e6	
Natwork Entry completed		



17. Please, click the "Debug" tab to display WiMAX debugging messages



5.2. Use Quanta WiMAX Connection Manager to setup WiMAX connection with security configuration

1. Please, double click the "QuantaWCM" icon to lunch the WCM.

Quanta Wireless Connection Mar				
File Options Tools About				
General Stats TCP/IP Device	Debug			
Base Stations Base Station ID Press the Search button to look for base stations	Preamble Freq ID MHz	BW MHz	RSSI dBm	CINR dB
	Search			
Connection Status				
		C	Connect	
Waiting for PHY sync start				.:



2. Please, click "Option" on the Menu to setup the WiMAX configuration.



3. You can choose the "Enable MAC management message logging" option to active/de-active MAC message log to file.

inta WC	M								
General	Network :	Search Auti	hentication	n Securit	y Adva	nced			
Remote	e Operation								
Op	erate remot	ely over pro	ку						
MACI	Managemer	t Message L	ogging			_			1
Ena	able MAC :	nanagement	message l	logging			Brows	е	J
Log F	ile Name	C:\Program	n Files\Qu	iantaWC5)0\Quant	taWCN	4\Quant	aWCM	_MAC
		_	017		<i>a</i> 1	1			
			UK		Cancel				



Please, click "Network Search" tab to setup 4. WiMAX configuration (Frequency, Bandwidth, etc.)

IAC Managem Enable MA	ent Message Logging Browse
log File Name	C:\Program Files\QuantaWC500\QuantaWCM\QuantaWCM_MAC
eriodic Link S	atus Request
Status request p	eriod (0 = Off) 2 sec

5 MH	z 71	MHz	8.	75 MHz	10 MHz	
iter Frequ election N	encies Íode					
🖲 Scan E	EPROM List	🔘 Scan	Range		🔘 Scan List	
can Frequ	ency Range (MHz	:)	Scan	Frequency Li	st (MHz) —	
Start	0.00			Frequency	7	1
Stop	0.00			1	0.00	
Stop	0.00			2	0.00	
Dieb	0.00			3	0.00	-
				4	0.00	-
				6	0.00	-
				7	0.00	V

- You can setup "Bandwidth", "Selection 5. Mode", and "Center Frequencies".
- Please, click the "OK" button to complete 6. the networking setting.

Center Frequencies	/ MHz		3.75 MHz	. I0 MHz	
Selection Mode O Scan EEPROM List	🔿 Scan	. Range		Scan List	
-Scan Frequency Range (MI	Hz)	Scar	Frequen	cy List (MHz)	
Start 0.00			Freq	luency	^
Stop 0.00	1	1	1	2540.5	
Sten		-	2	0.00	
10.00			3	0.00	
		-	5	0.00	2
			б	0.00	
			7	0.00	*



- 7. Click the "Authentication" tab.
- 8. Please, click the "Enable authentication" option. (We enable the PKMv2-EAP feature)
- Quanta WCM General Network Search Authentication Security Advanced Remote Operation Operate remotely over proxy MAC Management Message Logging Browse ... Enable MAC management message logging Log File Name C:\Program Files\QuantaWC500\QuantaWCM\QuantaWCM_MAC Periodic Link Status Request Status request period (0 = Off)2 sec OK Cancel General Network Search Authentication Security Advanced Authentication 🔽 Enable authentication Use direct Ethernet connection to RADIUS server **RADIUS Server Parameters** IP Address Secret Logging EAP Supplicant logging level ~ Error RADIUS Client logging level Error ~ Log file name C:\Program Files\QuantaWC500\QuantaWCM\ Browse ... OK Cancel Quanta WCM General Network Search Authentication Security Advanced Remote Operation Operate remotely over proxy MAC Management Message Logging Browse ... Enable MAC management message logging Log File Name C:\Program Files\QuantaWC500\QuantaWCM\QuantaWCM_MAC Periodic Link Status Request Status request period (0 = Off)2 sec OK Cancel
- 9. Please, click the "Security" tab to setup your authenticated configuration.



Jser Name	myname
^o assword	******
Anonymous Identity	anonymous
EAP Method	TTLS
Inner EAP	MSCHAPv2
Ca Certificate	C:\Program Files\QuantaWC500\Quanta Browse

- 10. Please, click the "Advance" tab and don't modify any configuration for this current software.
- 11. Then click the "OK" button to complete the Networking setting.

neral <u>Network</u> Remote Operation Operate remot	Search Authentication Security Advanced
MAC Managemer Enable MAC	nt Message Logging management message logging Browse
 Log File Name	C:\Program Files\QuantaWC500\QuantaWCM\QuantaWCM_MAC
Status request per	10d (0 = Off) 2 sec

	CM					_		
General	Network	Search	Authenticatic	n Security	Advanc	ed		
Set A	lapter MA	C Addre	ss		7.5	tur.		
MAC	Address							
		<u> </u>						
Debu	ging Optio	ns						
I Ie	nore "Wait	ing For	Network Entr	v Command	" link stat	us notifica	tions	
	. NT . 1			,				
	tip Networl	z Search						
			OF		Consel			
			OK		Cancel			



12. Now, we come back the Quanta WCM General window and click the "Search" button to start network searching.

ase Stations	Device Debug				
Base Station ID	Preamble ID	Freq MHz	BW MHz	RSSI dBm	CINR dB
Base Station ID Press the Search but	ID ston	MHz	MHz	dBm	dB
o look for base sta	ations				
	Sea	rch			
onnection Status					
onnection Status					
onnection Status					
onnection Status			Co	nnect	
onnection Status			Co	nnect	
connection Status			Co	nnect	
connection Status			Co	nnect	

Quanta Wireless Connection M	anager			
File Options Tools About				
Jeneral Stats TCP/IP Device	Debug			
Base Stations				
	Preamble Freq	BW	RSSI	CINR
Base Station ID	ID MHz x17_2540.500_10.000	-76	dBm 20	dВ
	Search			
Connection Status				
Connection Status				
		Co	nnect	
onnection error (No Sync)				



13. If it finds a BS, it will automatically connect to this BS.

强 Quanta Wireless C	Connection Manager	
File Options Too	ols About	
General Stats TC Base Stations	CP/IP Device Debug	
Connecte	ed to Base Station 4D:3C:2B:00:5E:6F	
-Connection Status		
Base Station ID	4D:3C:2B:00:5E:6F	
Preamble Index	23	
RSSI Mean	-73 dBm Disconnect	
CINR Mean	22 dB	
UL Center Freq	2540 MHz	
RSSI -73 dBm		
CINR 22 dB		
Network Entry complete	ed	
in the second		

14. Please, click the "Stats" to display WiMAX information.

File Options Tools	About	
eneral Stats TCP/	IP Device Debug	
BaseID	00:2b:3c:4d:5e:6f	Reset
Malan and	Weiter for DCA ACK	
Modem state	Waiting for DSA ACK	
Frame number	11124763	
Num frames recvd	276	
Frames in Error	1	
FER	0.004	
Num Of CRC Errors	0	
Num Of Hcs Errors	0	
CenterFrequency	2540	
CUR CINR	26 dB	
CUR RSSI	-69 dBm	
Tx power	17 dBm	
Current DL rate	0 kbps	
Current UL rate	0 kbps	
Number of bytes:		
From Host	0	
To Host	0	



15. Please, click the "TCP/IP" tabe to display your networking information.



16. Please, click the "Device" tab to display WiMAX device information.

🚱 Quanta Wireless Conn	ection Manager	
File Options Tools	About	
General Stats TCP/IF	Device Debug	
SS Inf	Response	
Firmware Version Driver Version Library Version Baseband Chip Version RF Chip Version MAC Address	3.1.64 1.0.20.0 2.4.37 bece0200 5200 00-17-c4-02-3c-e6	
Network Entry completed		



17. Please, click the "Debug" tab to display WiMAX debugging messages

Quanta Wireless Connection Manager	
File Options Tools About	
General Stats TCP/IP Device Debug	
Pause	Clear
	^
State = Network Entry completed	
Network entry response received (Type = 2 - Subtype = 2 - Length = 48)	
Network Entry Status Received	
Link status = Link OF ACHIEVED State - Network Entry completed	
Received Messare End (type-2 sub-type-2)	
1000100 12000g0 210 (0)p0-2 000 (0p0-2)	
***** Sending link status request	
Sent: 02 00 03 00	
***** Message sent successfully	
D 1 116 Ch . (0 50 01 00)	
Casta - Naturala Estart and Start (U:08:U1.29)	
Natwork antry response received (Type = 2 - Subtype = 2 - Length = 48)	
Network Entry Status Received	
Link status = LINKUP ACHIEVED	
State = Network Entry completed	
	_
	*
1	
etwork Entry completed	



6. Appendix

6.1. Use Quanta Config File Editor to setup configuration file parameters

1. Please, double click the "**Quanta Config File Editor**" icon to lunch the Config File Editor.



2. Click the "File" on the Menu, and click "Open" to open a configuration file.





 Please, open the "C:\WINDOWS\system32\drivers\ macxvi.cfg" configuration file and click "Open" button.



- 4. You can modify the configuration parameters after you load macxvi.cfg finished.
- 5. Please, refer to next chapter that descript configuration parameters what you can modify.
- 6. Please, click the "File" and select "Save" or "Save as" to save your modified.

🔾 Hex 💿 Dec			
Parameter	Value (dec)	Comments	^
Config File Version	17		
Center Frequency	2540	635 MHz	
Band A Scan	0		
Band B Scan	0		
Band C Scan	0		
Rtps Enable	0		
nRtps Enable	0		
eRtps Enable	0		
Ugs Enable	0		
Handoff Enable	1		
Handoff Threshold	0		
HO Reserved1	0		
HO Reserved2	0		
HO Reserved3	0		
HO Reserved4	0		
OL Power Control Enable	1		
OffsetSS	0		
UL AMC - Tx Power Report	1		
PC Reserved2	0		
PC Reserved3	0		
PC Reserved4	0		
PKMv2 Enable	0		*

6.2. Configuration File Parameters

The following table shows configuration parameters as found in Config File Version 17. You can use "Quanta Config File Editor" utility to edit the "C:\WINDOWS\system32\drivers\ macxvi.cfg" configuration file.

Parameter	Description	Comment
Configuration File Version	This parameter is changed whenever a parameter is added or dropped. In other words this defines the config file template version.	A configuration file is matched to a specific firmware release.
Center Frequency	0: Enable scanning Non Zero: specific center frequency in MHz.	Example: Center Frequency = 2545.75 (should be a multiple of 0.25 MHz)



		Please check with Beceem communications to find out supported center frequencies for a given solution.
Band A Scan	1: Band-A is scanned	When a fixed frequency is
Band B Scan	1: Band-B is scanned	configured, this parameter
Band C Scan	1: Band-C is scanned	shouldin t be configured.
Rtps Enable	0: Disable Rtps 1: Enable Rtps	
nRtps Enable	0: Disable nRtps 1: Enable nRtps	
eRtps Enable	0: Disable eRtps 1: Enable eRtps	
Ugs Enable	0: Disable Ugs 1: Enable Ugs	
Handoff Enable	0: Disable Hand Off 1: Enable Hand Off	
HandoffThreshold		
HO Reserved #1		
HO Reserved #2		
HO Reserved #3		
HO Reserved #4		
OL Power Control Enable	0: Disable Open Loop Power Control 1: Enable Open Loop Power Control	
OffsetSS		
UL AMC - Tx Power Report		
PC Reserved #2		
PC Reserved #3		
PC Reserved #4		
PKMv2 Enable	0: Disable PKMv2 1: Enable PKMv2	
PKMv2 Reserved #1		
PKMv2 Reserved #2		
PKMv2 Reserved #3		
PKMv2 Reserved #4		
IdleMode Enable	0: Disable Idle Mode 1: Enable Idle Mode	
Idle Mode timer	Idle Mode timer value in seconds	
Idle Mode Options		
IDLE Mode Reserved #2		
IDLE Mode Reserved #3		
IDLE Mode Reserved #4		
ARQ Enable	0: Disable ARQ 1: Enable ARQ	



ArqType		
ARQ Reserved #1		
ARQ Reserved #2		
ARQ Reserved #3		
ARQ Reserved #4		
MacParameter	0: Broadcast CID value 0xffff	
inter urumotor	1: Broadcast CID value 0xfeff	
UL PRBS	0: UL PRBS seed encoded to 0. 1: UL PRBS based on frame number	
Random FA Select		
Harq Enable	0: Disable HARQ 1: Enable HARQ	
Compressed Map Enable	0: Disable Compressed Map 1: Enable Compressed Map	
Default DIUC	This value is set as the preferred DIUC setting in the unicast ranging request to the BS	
EEPROM Start	0x20001000: For MII interface 0x10000200: For all other interface	
Customize	Each byte of this parameter has a special meaning. It is organized as <byte3>< Byte2><byte1><byte0> Byte3: 00 Full MAC mode selected 03 VSG mode selected Byte2: Interface type Byte1: Controls MAC/PHY layer functions Byte0: Reserved</byte0></byte1></byte3>	Example: Customize = 0x03000100
Firmware Options	Bit 0 : Skip link down request bit:Bit 0 set to 0: enable link down notificationand authentication during resyncBit 0 set to 1: The firmware doesn't honor theLINK DOWN request from the driver.Similarly, the firmware does not wait for theLINK UP request to start re-entry.Please note that firmware waits for theLINKUP request from the driver to start thenetwork entry after boot up even if this bit issetBit 1: Control MAC management messagelogging.Bit 1 set to 0: Enable MAC managementmessage logging.Bit 1 set to 1: Disable MAC managementmessage logging.	
Bandwidth	5000000: 5 MHz 7000000: 7 MHz 8750000: 8.75 MHz	Example: Bandwidth = 10000000
ShutDown Timer Value	10000000: 10 MHz Shutdown value in terms of frames	
EncrSupport	1: Enable Encryption	



NumOfSAId		
RadioParameter	 [3:0] = 2, always [7:4] is Band Select [15:8] is a board type that should be zero unless specified by Beceem otherwise. For example: 0x22: For MS120 units supporting Board Type 2.3 to 2.4G 0x32: For MS120 units supporting Board Type 2.5 to 2.7G 0x42: For MS120 units supporting Board Type 3.4 to 3.6G For BCS200, Band Select is a don't care. 	Radio Parameter is obvious when Center Frequency is non-zero and is a don't care in such a case
PhyParameter1 PhyParameter2	This parameter decides the number of DL, UL symbols and TTG value. 0xFFFFFFFF: This is a special value. It forces Use of values as defined in firmware for a given Bandwidth selection. Other values can be configured as follows PhyParameter1 e.g. 0xccccbbaa cccc = [31:16] 80 * Value of TTG in us bb = [15:08] Number of DL symbols aa = [07:00] Number of UL symbols	Example: for 26 DL, 21 UL, TTG = 105.71us, program as 0x21091a15
PhyParameter3		
m_u32TestOptions		
MaxMACDataperDLFrame		
MaxMACDataperULFrame		
Corr2MacFlags	This parameter consists of a bit map for enabling/disabling Corrigendum-2 updates. This should be 0 unless testing for Corrigendum-2. Bit 0: ARQ Bit 1: Encryption Bit 2: HARQ Bit 3: HO Bit 4: Idle Mode Bit 5: Sleep Mode Bit 6: MBS Bit 7: MIB Bit 8: MIMO Bit 9: Bit 10: Network Entry Bit 11: Bit 12: RLC – NE Bit 13: Security Bit 14 Signaling/DSx Bit 15: RLC-Other	



Corr2PhyFlags	This parameter is currently not used. It is a	
	enabling/disabling Corrigendum-2 updates in	
	PHY. This should be 0 unless testing for	
	Corrigendum-2.	

6.3. Setup WCM network configuration to static IP address

- 1. Plugin WCM card to your Laptop.
- 2. Setup WCM with a static IP address as the below procedures.
- 3. Open Windows **Start** menu.
- 4. Open Control Panel.
- 5. Classic view: **Open Network Connections** Category view: Select **Network and Internet Connections**, and then **Network Connections**.
- 6. Double-click on your active LAN or Internet connection.
- 7. Click **Properties**.
- 8. In the **General** tab, highlight the **Internet Protocol (TCP/IP)** item, and click **Properties**.
- 9. In the General tab, click "Use the following **IP address**" and input as below:
 - IP address: The static IP address you want to assign to computer (192.168.0.200)
 - Subnet mask: 255.255.255.0
 - Default gateway: skip.
- 10. In "Use the following DNS server addresses", skip.
- 11. Click OK.
- 12. Click **OK** to close each window.

eneral	Authentication	Advance	d		
Connect	using:		<u> </u>		_
B Se	quans sqn1	110 WiMA)	K Adapter		
This con	nection uses t	he following	items:	Configu	ire
	Client for Min	and Nature	dra		
	Client for Mich	Sharing for	Microsoft	Networks	
	Internet Proto	col (TCP/IP		tothonto	
	I REFIEL FIOLO				
_	Internet Hoto	cor (rer / ir			
	internet i roto				
lŋ	stall	Unin	tall	Properti	es
Descri	stall	Unine	tal	Properti	es
Descri Trans wide a acros	stall tion nission Contro rea network p : diverse interc	Unine I Protocol/Ir rotocol that connected n	stall	Properti ocol. The defa	ault
In Descri Trans wide a acros	stall nission Contro e a network p diverse interc icon in notific	Unin: I Protocol/Ir rotocol that connected n ation area w	stall ntemet Proto provides co etworks.	Properti occl. The defa mmunication	ault



his capability. Otherwise, you nee he appropriate IP settings.	automatically if your network supports ad to ask your network administrator for		
Obtain an IP address automatically			
Ose the following IP address			
<u>I</u> P address:	192 . 168 . 0 . 200		
Subnet mask:	255 . 255 . 255 . 0		
Default gateway:			
Obtain DNS server address	automatically		
• Use the following DNS serve	er addresses:		
Preferred DNS server:			
Alternate DNS server:			

FCC STATEMENT FOR PORTABLE DEVICE

Federal Communication Commission Interference Statement

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 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 technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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 undesired operation.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. To maintain compliance with FCC RF exposure compliance requirements, please follow operation instruction as documented in this manual.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

CE STATEMENT FOR PORTABLE DEVICE

This device complies with the essential requirements of the R&TTE Directive 1999/5/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the R&TTE Directive 1999/5/EC

EN 60950-1:2001

Safety of Information Technology Equipment

EN 301 489-1 V1.6.1: (2005-09)

Electromagnetic compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical Requirements

EN 301 489-4 V1.3.1: (2002-08)

Electromagnetic compatibility and radio spectrum matters (ERM); Electromagnetic compatibility (EMC) standard for radio equipment and services; Part 4: Specific conditions for fixed radio links and ancillary equipment and services

EN50392: (2004-01)

Generic standard to demonstrate the compliance of electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (0 Hz - 300 GHz)

ETSI EN 302 326-2 V1.2.2: (2007-06)

Fixed Radio Systems; Multipoint Equipment and Antennas; Part 2: Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive for Digital Multipoint Radio Equipment

ETSI EN 302 326-3 V1.2.2: (2007-06)

Fixed Radio Systems; Multipoint Equipment and Antennas; Part 3: Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive for Multipoint Radio Antennas

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©Česky [Czech]	[Jméno výrobce] tímto prohlašuje, že tento [typ zařízení] je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
Dansk [Danish]	Undertegnede [fabrikantens navn] erklærer herved, at følgende udstyr [udstyrets typebetegnelse] overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
Deutsch [German]	Hiermit erklärt [Name des Herstellers], dass sich das Gerät [Gerätetyp] in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
Eesti [Estonian]	Käesolevaga kinnitab [tootja nimi = name of manufacturer] seadme [seadme tüüp = type of equipment] vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
en English	Hereby, [name of manufacturer], declares that this [type of equipment] is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Español [Spanish]	Por medio de la presente [nombre del fabricante] declara que el [clase de equipo] cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
■Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ [name of manufacturer] ΔΗΛΩΝΕΙ ΟΤΙ [type of equipment] ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
Français [French]	Par la présente [nom du fabricant] déclare que l'appareil [type d'appareil] est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
Italiano [Italian]	Con la presente [nome del costruttore] dichiara che questo [tipo di apparecchio] è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo [name of manufacturer / izgatavotāja nosaukums] deklarē, ka [type of equipment / iekārtas tips] atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių [Lithuanian]	Šiuo [manufacturer name] deklaruoja, kad šis [equipment type] atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
n Nederlands [Dutch]	Hierbij verklaart [naam van de fabrikant] dat het toestel [type van toestel] in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
Malti [Maltese]	Hawnhekk, [isem tal-manifattur], jiddikjara li dan [il-mudel tal-prodott] jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
Magyar [Hungarian]	Alulírott, [gyártó neve] nyilatkozom, hogy a [típus] megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
Polski [Polish]	Niniejszym [nazwa producenta] oświadcza, że [nazwa wyrobu] jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
Português [Portuguese]	[Nome do fabricante] declara que este [tipo de equipamento] está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.

Slovensko	[Ime proizvajalca] izjavlja, da je ta [tip opreme] v skladu z bistvenimi zahtevami
[Slovenian]	in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensky	[Meno výrobcu] týmto vyhlasuje, že [typ zariadenia] spĺňa základné požiadavky
[Slovak]	a všetky príslušné ustanovenia Smernice 1999/5/ES.
🗐 Suomi [Finnish]	[Valmistaja = manufacturer] vakuuttaa täten että [type of equipment = laitteen tyyppimerkintä] tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish]	Härmed intygar [företag] att denna [utrustningstyp] står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.