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User manual
For
WUS-N18M USB Wi-Fi module

Model Number: WUS-N18M

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1.0 Scope

1.1 Document

This document is to specify the product requirements for **WUS-N18M USB Wi-Fi module**. This Card is based on Atheros chipset that complied with IEEE 802.11g, IEEE 802.11b, IEEE 802.11n standard from 2.4~2.5GHz, and it can be used to provide up to 54Mbps for 802.11g, 11Mbps for 802.11b and 150Mbps for 802.11n to connect your wireless LAN.

With seamless roaming, fully interoperability and advanced security with WEP standard, **WUS-N18M USB Wi-Fi module** offers absolute interoperability with different vendors' 802.11g, 802.11b and 802.11n Access Points through the wireless LAN.

1.2 Product Features

- Compatible with IEEE 802.11n standard to provide wireless 150Mbps data rate.
- Compatible with IEEE 802.11g standard to provide wireless 54Mbps data rate
- Compatible with IEEE 802.11b standard to provide wireless 11Mbps data rate
- Operation at 2.4 ~ 2.5GHz frequency band to meet worldwide regulations
- Dynamic date rate scaling at 6, 9, 12, 18, 24, 36, 48, 54 for IEEE 802.11g.
- Dynamic date rate scaling at 1, 2, 5.5, and 11Mbps for IEEE 802.11b
- Maximum reliability, throughput and connectivity with automatic data rate switching
- Support wireless data encryption with 64/128-bit WEP for security
- Support infrastructure networks via Access Point and ad-hoc network via peer-to-peer communication
- Support WEP, 802.1x, WPA and WPA2 enhanced security
- Drivers support Windows 2K, XP 32/64-bit, Vista 32/ 64-bit
- RoHS compliant

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Installation

```
;*************************************************************************************
;
; RT2870QA.inf
;
;   This installation script supports Windows 98,Me,2000 & XP for the
;   Ralink UsbDumpr_RT2870 series Wireless LAN Card.
;
;   Copyright (c)2008, Ralink Technology Corp., All Rights Reserved
;   All Rights Reserved.
;   Developed by RaLink Technology, Corp. -- http://www.ralinktech.com
;
;*************************************************************************************

[Version]
DriverVer=11/14/2008, 1.00.01.0000
Signature="$Chicago$"
Compatible=1
Class=Net
ClassGUID={4d36e972-e325-11ce-bfc1-08002be10318}
Provider=%Provider%
;CatalogFile=UsbDumpr_RT2870.CAT          ;;for WHQL certified


[ControlFlags]

;***********Ralink 802.11b board  ***********
ExcludeFromSelect = USB\VID_148F&PID_2870
ExcludeFromSelect = USB\VID_18E8&PID_6196


[Manufacturer]
%V_Provider%=Adapters


[Adapters]
```

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```
; DisplayName              Section              DeviceID
; -----------              -------              --------
%UsbDumpr_RT2870.DeviceDesc%   =UsbDumpr_RT2870.ndi,     USB\VID_148F&PID_2870
%UsbDumpr_RT2770.DeviceDesc%   =UsbDumpr_RT2870.ndi,     USB\VID_148F&PID_2770
%UsbDumpr_RT3070.DeviceDesc%   =UsbDumpr_RT2870.ndi,     USB\VID_148F&PID_3070
%UsbDumpr_RT3071.DeviceDesc%   =UsbDumpr_RT2870.ndi,     USB\VID_148F&PID_3071
%UsbDumpr_RT3072.DeviceDesc%   =UsbDumpr_RT2870.ndi,     USB\VID_148F&PID_3072
%UsbDumpr_RT2070.DeviceDesc%   =UsbDumpr_RT2870.ndi,     USB\VID_148F&PID_2070
%UsbDumpr_RT3572.DeviceDesc%   =UsbDumpr_RT2870.ndi,     USB\VID_148F&PID_3572
%UsbDumpr_RT3370.DeviceDesc%   =UsbDumpr_RT2870.ndi,     USB\VID_148F&PID_3370
%UsbDumpr_RT8070.DeviceDesc%   =UsbDumpr_RT2870.ndi,     USB\VID_148F&PID_8070
%UsbDumpr_RT8070.DeviceDesc%   =UsbDumpr_RT2870.ndi,     USB\VID_0471&PID_20DD
%UsbDumpr_RT8070.DeviceDesc%   =UsbDumpr_RT2870.ndi,     USB\VID_2001&PID_3C17

;*************************************************************************************************
; Windows 9X specific entries
;*************************************************************************************************

[UsbDumpr_RT2870.ndi]
AddReg=Common.reg, UsbDumpr_RT2870.ndi.reg
CopyFiles=win9x.CopyFiles


;*************************************************************************************************
; NT specific entries
;*************************************************************************************************

[UsbDumpr_RT2870.ndi.NT]
AddReg=Common.reg, UsbDumpr_RT2870.ndi.NT.reg
Characteristics=0x84            ; NCF_REMOVABLE | NCF_HAS_UI | NCF_PHYSICAL
BusType=5
CopyFiles=NT.CopyFiles

; NT services sections
[UsbDumpr_RT2870.ndi.NT.Services]
AddService=UsbDumpr_RT2870, 2, UsbDumpr_RT2870.Service, common.EventLog
```

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```
[UsbDumpr_RT2870.ndi.reg]
HKR, ,                  NTMPDriver,     0, RT2870QA.sys
HKR, Ndi,                 DeviceID,       0, "USB\VID_148F&PID_2870"

HKR, ,                  RunningWin9X,   0, "1"
HKR, ,                  DevLoader,      0, *ndis
HKR, ,                  DeviceVxDs,     0, RT2870QA.sys
HKR, ,                  EnumPropPages,  0, "netdi.dll,EnumPropPages"

;
; NDIS Info
;
HKR, NDIS,                LogDriverName,  0, "UsbDumpr_RT2870"
HKR, NDIS,                MajorNdisVersion,1, 03
HKR, NDIS,                MinorNdisVersion,1, 0A

HKR, ,                  BusType,        0, 5
HKR, NDI,                 CardType,       0, "PCI"

;
; Interfaces
;
HKR, Ndi\Interfaces,          DefUpper,       0, "ndis3"
HKR, Ndi\Interfaces,          DefLower,       0, "ethernet"
HKR, Ndi\Interfaces,          UpperRange,     0, "ndis3"
HKR, Ndi\Interfaces,          LowerRange,     0, "ethernet"

;
; Install sections
;HKR,Ndi\Install,ndis3,,"UsbDumpr_RT2870.install"


[win9x.CopyFiles]
RT2870QA.sys ; Win9x Installation

;*******************************************************************************************
; common regs for NT and W9x
;*******************************************************************************************
```

```
HKR,"Parameters","MaximumTransferSize",0x10001,4096
HKR,"Parameters","DebugLevel",0x10001,2
HKR,"Parameters","BulkUsbEnable",0x10001,1


;*****************************************************************************************
; DestinationDirs
;*****************************************************************************************

[DestinationDirs]
NT.CopyFiles=12    ; system32\drivers subdirectory on NT
win9x.CopyFiles=11    ; system32 subdirectory on win9x

[NT.CopyFiles]
RT2870QA.sys ; NT Installation
;RT2870.bin ; Binary file of firmware

[SourceDisksNames]
1=%INSTALL_DISK_STR%,,,

[SourceDisksFiles]
RT2870QA.sys=1


;*****************************************************************************************
; NT specific
;*****************************************************************************************

[UsbDumpr_RT2870.ndi.NT.reg]
HKR, Ndi,                   Service,        0, "UsbDumpr_RT2870"
HKR, Ndi\Interfaces,            UpperRange,     0, "ndis5"
HKR, Ndi\Interfaces,            LowerRange,     0, "ethernet"

[UsbDumpr_RT2870.Service]
DisplayName=%UsbDumpr_RT2870.Service.DispName%
ServiceType=1               ;%SERVICE_KERNEL_DRIVER%
StartType=3                 ;%SERVICE_AUTO_START%
ErrorControl=1              ;%SERVICE_ERROR_NORMAL%
```

ServiceBinary=%12%\RT2870QA.sys

LoadOrderGroup=NDIS

[common.EventLog]

AddReg=common.AddEventLog.reg

[common.AddEventLog.reg]

HKR, , EventMessageFile,
0x00020000,"%%SystemRoot%%\System32\netevent.dll,%%SystemRoot%%\System32\drivers\RT2870QA.sys"

HKR, , TypesSupported, 0x00010001, 7

;***

; Strings

;***

[strings]

Provider= "Ralink"

V_Provider= "Ralink Technology Corp."

UsbDumpr_RT2870.DeviceDesc= "RT2870 QATest USB WDM Driver"

UsbDumpr_RT2770.DeviceDesc= "RT2770 QATest USB WDM Driver"

UsbDumpr_RT3070.DeviceDesc= "RT3070 QATest USB WDM Driver"

UsbDumpr_RT3071.DeviceDesc= "RT3071 QATest USB WDM Driver"

UsbDumpr_RT3072.DeviceDesc= "RT3072 QATest USB WDM Driver"

UsbDumpr_RT2070.DeviceDesc= "RT2070 QATest USB WDM Driver"

UsbDumpr_RT3572.DeviceDesc= "RT3572 QATest USB WDM Driver"

UsbDumpr_RT3370.DeviceDesc= "RT3370 QATest USB WDM Driver"

UsbDumpr_RT8070.DeviceDesc= "RT8070 QATest USB WDM Driver"

UsbDumpr_RT2870.Service.DispName= "RT2870 QATest USB WDM Driver Service"

INSTALL_DISK_STR= "RT2870 QATest Wireless LAN Installation Disk"

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Federal Communication Commission Interference Statement

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.

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 generate, use 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 thatto 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 transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Radiation Exposure Statement:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This device is intended only for OEM integrators under the following conditions:

1) The antenna must be installed such that 20 cm is maintained between the antenna and users, and
2) The transmitter module may not be co-located with any other transmitter or antenna.

As long as 2 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed

IMPORTANT NOTE: In the event that these conditions can not be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: “Contains FCC ID: BOUWUSN18M”. The grantee's FCC ID can be used only when all FCC compliance requirements are met.

Manual Information To the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user’s manual of the end product which integrates this module.

The end user manual shall include all required regulatory information/warning as show in this manual.