# **ORiNOCO® 802.11n Access Points**

**Safety and Regulatory Guide** 

# **Products Covered**

ORiNOCO® AP-800 ORiNOCO® AP-8000 ORiNOCO® AP-8100





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#### **ORiNOCO® 802.11n Access Points - Safety and Regulatory Guide**

Documentation Version: 1.5 P/N 75963, October 2012

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# Preface

This chapter contains information on the following:

- About this Guide
- Products Covered
- Related Documents
- Documentation Conventions

#### **About this Guide**

This guide contains important, safety and regulatory compliance information to be followed while installing the ORiNOCO® 802.11n Access Points.

#### **Products Covered**

Tabulated below are the ORiNOCO® Access Points covered in this guide, along with their model numbers.

Product(s)	Model Numbers
ORiNOCO® AP-800 - US	9422-US
ORiNOCO® AP-800 - WD	9422-WD
ORinoco® AP-800 - JP	9422-JP
ORiNOCO® AP-8000 - US	9411-US
ORinoco® AP-8000 - WD	9411-WD
ORinoco® AP-8000 - JP	9411-JP
ORiNOCO® AP-8100 - US	AP-8100 - US
ORiNOCO® AP-8100 - WD	AP-8100 - WD
ORinoco® AP-8100 - JP	AP-8100 - JP

#### **Related Documents**

For more information, please refer to the following additional documents that are available at Proxim's support site http://support.proxim.com.

- **Quick Installation Guide (QIG)**: A quick reference guide that provides essential information to install and configure the device.
- Hardware Installation Guide: A guide that provides a hardware overview of ORiNOCO® Access Points and details the installation procedures and hardware specifications of the device.
- **Software Management Guide**: A guide that provides step-by-step instructions to configure, manage and monitor the device by using Web Interface.
- **Reference Guide**: A guide that provides essential information on how to configure, manage and monitor the device using Command Line Interface.

## **Documentation Conventions**

#### **Icon Representation**

Name	Image	Meaning
Note		A special instruction that draws the attention of the user.
Important	()	A note of significant importance, that a user should be aware of.
Caution		A warning, that cautions the user of the possible danger.

# 1

# **Safety and Regulatory Information**

This chapter contains the following safety and regulatory information:

- ORiNOCO® AP-800 and AP-8000
  - Safety Information (USA, Canada, European Union and Japan)
  - Federal Communications Commission (FCC) Compliance
  - Central European Statement
  - Industry Canada statement
  - Certifications
  - Information for Professional Installers
- ORiNOCO® AP-8100
  - Safety Information (USA, Canada, European Union and Japan)
  - Federal Communications Commission (FCC) Compliance
  - Central European Statement
  - Industry Canada statement
  - Certifications

# 1.1 ORiNOCO® AP-800 and AP-8000

### 1.1.1 Safety Information (USA, Canada, European Union and Japan)

ORiNOCO® AP-800 and AP-8000 devices have been evaluated to, and comply with the safety standards **UL60950:2000**, and **IEC60950:1999**.

When using these devices, follow the following basic safety precautions to reduce the risk of fire, electric shock and injury to persons:

- 1. Devices must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation.
- 2. Device must be used and installed indoors only, with a distance of at least 20 cm from external sources or contact.
- 3. These products are suitable for installation in air handling spaces (plenum) and hence excercise care as you install the device in a plenum.
- 4. To power on the device, use only PoE or AC/DC adapter that are supplied by Proxim Wireless Corporation, on request.
- 5. To avoid the risk of electric shock from lightning, do not use these products during an electrical storm.
- 6. Installation of these products must conform to local regulations and codes.
- 7. When using the device with an external antenna, follow the guidelines described in the *Quick installation Guide*, that is provided with the product package.
- 8. Do not connect or disconnect the power cable to the device when the power injector is plugged into an AC power outlet.
- 9. No user serviceable parts; all repairs and service must be handled by a qualified service center. Do not disassemble the device. By opening or removing any covers, you may expose yourself to hazardous energy parts. Incorrect reassembly of these devices can cause a malfunction and/or electric shock when the units are subsequently used.
- 10. Do not insert any objects of any shape or size inside these devices while powered on. Object may contact hazardous energy parts that could result in a risk of fire or personal injury.
- 11. Do not remove or alter the marking label provided on these devices.

### 1.1.2 Federal Communications Commission (FCC) Compliance

These devices operate at 2.4 GHz, 5.15 - 5.35 GHz, 5.47 - 5.725 GHz and 5.725 - 5.85 GHz, in compliance with Part 15 of the FCC Rules. In addition, this Class B digital apparatus complies with Canadian ICES-003. *Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.* 

Operation is subject to the following two conditions: 1) these devices may not cause harmful interference, and 2) these devices must accept any interference received, including interference that may cause undesired operation.

To comply with the FCC radio frequency exposure requirements, the following antenna installation and device operating configurations must be satisfied:

- The 9422-US and 9411-US models must be used and installed indoors only, with a distance of atleast 20 cm (8 inches) from external sources or contact.
- Antennas must not be co-located and must not operate in conjunction with any other antenna or transmitter.

Refer 'ORINOCO® 802.11n Access Points - Hardware Installation Guide' for cabling, mounting, and antenna installation instructions.

#### 1.1.2.1 Modifications

Changes or modifications to the device that are not expressly approved by the manufacturer of the product, could void the user's authority to operate the equipment and the warranty.

#### 1.1.2.2 Warnings

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 and Industry Canada Rules. These limits are designed to provide reasonable protection again 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 and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment to 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

#### **1.1.3 Central European Statement**

The device complies with the EMC directive 89/336/EEC, Low Voltage Directive 73/23/EEC and R&TTE Directive 1999/5/EC. Compliance with these directives implies conformity to harmonized European standards (European Norms) that are listed on the EU Declaration of Conformity that has been issued by Proxim Wireless Company for these devices.

#### 1.1.3.1 Countries of Operation and Conditions of Use

The device may be used in the following EU and EFTA countries: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxemburg, Malta, Netherlands, Norway, Poland, Portugal, Slovak Republic, Slovenia, Sweden, Switzerland, and the United Kingdom.

Requirements for indoor vs. outdoor operation, licensing and allowed channels of operation applied in EU and EFTA countires is as described below:

#### 2.4 GHz Operation

These devices may be operated indoors in all EU and EFTA countries using the 2.4 GHz band (Channels 1-13).

#### 5GHz Operation

- These devices requires the user or installer to properly enter the current country of operation on the 5 GHz radio configuration window as described in the 'ORINOCO® 802.11n Software Management Guide', before operating the device.
- The device will automatically limit the allowable channels determined by the current country of operation. Incorrectly entering the country of operation may result in illegal operation and may cause harmful interference to other systems. The user is obligated to ensure the device is operating according to the channel limitations, indoor/outdoor restrictions and license requirements for each European Community. For more information, refer the *Frequency Domains and Channels* chapter of 'ORINOCO® 802.11n Access Points Software Management Guide'.
- These devices employ a radar detection feature required for European Community and EFTA country operation in the 5 GHz band. This feature is automatically enabled when the country of operation is correctly configured for any European Community or EFTA country. The presence of nearby radar operation may result in temporary interruption of operation of the device. The radar detection feature will automatically restart operation on channel free of radar.

The user/installer must use the provided configuration utility to check the current channel of operation and make necessary configuration changes to ensure operation occurs in conference with the European National spectrum usage laws. Tabulated

• These devices are restricted to indoor use when operated in EU and EFTA countries using the 5.15-5.35 GHz band (Channels 36, 40 44, 48, 52,56, 60, and 64). See the table below for the allowed channels in each band.

Frequency Band (MHz)	Allowed Channels No.	Usage	Maximum EIRP (mW)
5150-5250	36,40,44,48	Indoor use only	200
5250-5350	52,56,60,64	Indoor use only	200
5470-5725	100,104,108,112,116,120, 124,128,132,136,140	Indoor use only	1000

#### **Operation Using 5GHz Channels in the European Community**

below is the overview on allowed 5GHz channels, along with the maximum EIRP values.

#### Transmit Power Control (TPC) for 5GHz Operation

These devices employ TPC to reduce the potential for interference to other communication systems operating in the 5 GHz frequency bands. The TPC feature implemented in this Wireless LAN device must be configured by the end user when operating in any European Community or EFTA country. The end-user must follow the procedure explained in the 'ORINOCO® 802.11n Software Management Guide' (available at the support site http://support.proxim.com), in order to operate the device in accordance with European regulatory requirements for TPC.



- The TPC procedure should be repeated when relocating the wireless device within the current wireless network or to a wireless network in a new location.
- The installer must use the configuration utility provided with the device to ensure the channels of operation are in conformance with the spectrum usage rules.

#### 1.1.4 Industry Canada statement

ORiNOCO® AP-800 and AP-8000 comply with RSS-210 of the Industry Canada Rules. Operation is subject to the following two conditions: (1) These devices may not cause harmful interference, and (2) these devices must accept any interference received, including interference that may cause undesired operation.

Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

- The device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;
- High-power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

#### Avertissement:



- les dispositifs fonctionnant dans la bande 5 150-5 250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;
- De plus, les utilisateurs devraient aussi être avisés que les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) pour les bandes 5 250-5 350 MHz et 5 650-5 850 MHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL.

#### 1.1.4.1 Radiation Exposure Statement

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and any external source or contact.

#### Déclaration d'exposition aux radiations

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps

### 1.1.5 Certifications

#### 1.1.5.1 Certification Summary

Following are the AP-800 and AP-8000 certifications and their certification numbers:

Certification	Certification Number
FCC	PPD-AR5BMB82
IC	4104A-AR5BMB82
ETSI	CE 0984 🚺
Taiwan	CCAB09LP1640T3

Certification	Certification Number
Japan	For AP-800: 003WWA090024 003XWA090025 003YWA090026
	For AP-8000: 003WWA080989 003XWA080990 003YWA080991

1.1.5.2 Federal Communications Compliance (FCC) Certificate

СОРҮ	F	EDERAL COMMUNICATIONS COMMISSION WASHINGTON, D.C. 20554			СОРҮ				
		GRANT OF EQUIPMENT AUTHORIZATION Certification							
		Certification							
Atheros Communica	tions. Inc.								
5480 Great America I	Parkway			Date of	Grant: 04/04/2008				
Santa Clara, CA 9505 United States	4			Application I	Dated: 10/25/2007				
Attention: Michael G	reen , Manager, Global Prod	uct Compliance							
		NOT TRANSFERABLE							
		ION is hereby issued to the nam							
	Rules and Regulations listed	ent identified hereon for use und below.	ler the Commi	ssion's					
	FCC IDENTIFIER: PPI	-AR5BMB82							
		eros Communications, Inc.							
		censed National Information Ir 11a/b/g/n MPCI Module	frastructure	TX					
		Frequency	Output	Frequency	Emission				
Grant Notes	FCC Rule Parts	Range (MHZ)	Watts	Tolerance	Designator				
CC ND	15E 15E	5180.0 - 5320.0	0.064						
	15E	5180.0 - 5320.0 5190.0 - 5310.0	0.156						
	15E	5500.0 - 5700.0	0.049						
	15E	5500.0 - 5700.0	0.108						
	15E	5510.0 - 5670.0	0.191						
Power listed is conducted. The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.									
for satisfying RF expo				CC: This device is certified pursuant to two different Part 15 rules sections.					
for satisfying RF expo	•								
for satisfying RF expo	complies with the Transmit Po	Part 15 rules sections. wer Control (TPC) and Dynamic	Frequency Se	election (DFS) req	uirements in				
for satisfying RF exposed CC: This device is cert ND: This UNII device (	complies with the Transmit Po		Frequency Se	election (DFS) req	uirements in				
for satisfying RF expos CC: This device is cer ND: This UNII device ( Section 15.407(h) Mail To: Michael Heckrotte, E	complies with the Transmit Po ngineering Manager		Frequency Se	election (DFS) req	uirements in				
for satisfying RF expos CC: This device is cer ND: This UNII device ( Section 15.407(h) Mail To: Michael Heckrotte, E COMPLIANCE CERT	ngineering Manager FICATION SERVICES		Frequency Se	election (DFS) req	uirements in				
for satisfying RF expos CC: This device is cer ND: This UNII device is Section 15.407(h) Mail To: Michael Heckrotte, E COMPLIANCE CERTI 47173 BENICIA STRE	complies with the Transmit Po ngineering Manager FICATION SERVICES		Frequency Se	election (DFS) req	uirements in				
for satisfying RF expos CC: This device is cer ND: This UNII device ( Section 15.407(h) Mail To: Michael Heckrotte, E COMPLIANCE CERT	complies with the Transmit Po ngineering Manager FICATION SERVICES		Frequency Se	election (DFS) req	uirements in				
for satisfying RF expos CC: This device is cer ND: This UNII device i Section 15.407(h) Mail To: Michael Heckrotte, E COMPLIANCE CERTI 47173 BENICIA STRE	complies with the Transmit Po ngineering Manager FICATION SERVICES		Frequency Se	election (DFS) req	uirements in				

#### 1.1.5.3 Industry Canada Certificate

5480 Great America Parkway Santa Clara ,95054	NC. Our Reference No AN0712242 IC Submission No 64885 Radio Certification No4104A-AR5BMB82 Date January 8, 2008
Attention: Michael Green	
Dear Sir/Madame,	
	ted documents, and am pleased to advise that this device meets ements for certification. The field offices have been notified.
This certification identification informa or on a separate label that shall be indel	the model number must be shown on each equipment model, tition may be shown on the equipment model identification plat- ible and tamper proof. The certification number shall be guipment is certified as described on the attached certification
Certificate(s) are attached for the follow	ving model(s):
AR5BMB82	
A website has been established which it	ncludes the status of applications.
The address is <u>http://spectrum_ic.gc.ca/</u>	-certi
Sincerely	
Mon C.2 hr	
Mike C. I. Kuo/Director of Certification	n Division

#### 1.1.5.4 Taiwan Certificate



NCC Statement- For 5G Band products or 2.4G & 5G products

#### 低功率電波輻性電機管理辦法

第十二條經型式認證合格之低功率射頻電機,非經許可,公司、商號或使 用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。 第十四條低功率射頻電機之使用不得影響飛航安全及干擾合法通信;經發 現有干擾現象時,應立即停用,並改善至無干擾時方得繼續使用。 前項合法通信,指依電信規定作業之無線電信。低功率射頻電機須忍受合法通信 或工業、科學及醫療用電波輻射性電機設備之干擾。 在5.25G~5.35G頻帶內操作之無線資訊傳輸設備僅適於室內使用



- Operation in 5.25 to 5.35 GHz is limited to indoor use only.
- Only channels 56, 60, and 64 can be used in 5.25 5.35 GHz band.
- IEEE 802.11b/g modes support 11 channels.

### 1.1.5.5 Japan Certification Information



?: Operation in 5.2 and 5.3 GHz is limited to indoor use only.

Below images are the Japan certifications for AP-800 and AP-8000.

#### For AP-800:

	Type Certificate		Type Certificate	Type Certificate		
Certified to	Proxim Wireless Corporation	Certified to	Proxim Wireless Corporation	Certified to	Proxim Wireless Corporation	
Classification of specified radio equipment	Article 2-1-19 2.4GHz Wide Band low power data communication system	Classification of specified radio equipment	Article 2-1-19-3 SGHz band low power data communication system	Classification of specified radio equipment	Article 2-1-19-3-2 SGHz band low power data communication system (5.6GHz Out-Door Use)	
Type of emissions, frequency and antenna power	G1D 2412~2472MHz(SMHz Interval 13 channels) 0.008W/MHz D1D,G1D 2412~2472MHz(SMHz Interval 13 channels) 0.004W/MHz D10,G1D 2422~2462MHz(SMHz Interval 9 channels) 0.001W/MHz	Type of emissions, frequency and antenna power	D1D,G1D 5.18~5.32GHz/20MHz interval 8 channels) 0.0038W/MHz D1D,G1D 5.19,5.23,5.27,5.31GHz 0.001W/MHz	Type of emissions, frequency and antenna power	D1D,G1D 5.50~5.70GHz(20MHz interval 11 channels) 0.0038W/MHz D1D,G1D 5.51~5.67GHz(40MHz interval 5 channels) 0.001W/MHz	
Model Name	AP800	Model Name	AP800	Model Name	AP800	
Vendor Name	Proxim Wireless Corporation	Vendor Name	Proxim Wireless Corporation	Vendor Name	Proxim Wireless Corporation	
Certified Number	003WWA090024	Certified Number	003XWA090025	Certified Number	003YWA090026	
Certified Date	January 14, 2009	Certified Date	January 14, 2009	Certified Date	January 14, 2009	
Remark	No.09-0024	Remark	No.09-0025	Remark	No.09-0026	
	at the above mentioned certification by type has been granted in e provisions of Article 38-24, Paragraph 1 of the Radio Law. 14, 2009 DSP Research,		the above mentioned certification by type has been granted in e provisions of Article 38-24, Paragraph 1 of the Radio Law. 14, 2009 DSP Research,	This is to certify th accordance with th Date: January	It the above mentioned certification by type has been granted in e provisions of Article 38-24, Paragraph 1 of the Radio Law. 14, 2009 DSP Research,	

#### For AP-8000:

	Type Certificate		Type Certificate		Type Certificate
Certified to	Proxim Wireless Corporation	Certified to	Proxim Wireless Corporation	Certified to	Proxim Wireless Corporation
Classification of specified radio equipment	Article 2-1-19 2.4GHZ Wide Band low power data communication system	Classification of specified radio equipment	Article 2-1-19-3 SGHz band low power data communication system	Classification of specified radio equipment	Article 2-1-19-3-2 SGHz band low power data communication system (5.6GHz Out-Dooi Use)
requency and	G1D 2412~2472MHz(5MHz interval 13 channels) 0.008W/MHz D1D,G1D 2412~472MHz(5MHz interval 13 channels) 0.004W/MHz D1D,G1D 2422~2462MHz(5MHz interval 9 channels) 0.001W/MHz	Type of emissions, frequency and antenna power	D1D,G1D 5.18~5.32GHz/20MHz interval 8 channels) 0.0038WMHz D1D,G1D 5.19,5.23,5.27,5.31GHz 0.001WMHz	Type of emissions, frequency and antenna power	D1D,G1D 5.50~5.70GHz(20MHz interval 11 channels) 0.0038W/MH D1D,G1D 5.51~5.67GHz(40MHz interval 5 channels) 0.001W/MHz
Model Name	AP8000	Model Name	AP8000	Model Name	AP8000
Vendor Name	Proxim Wireless Corporation	Vendor Name	Proxim Wireless Corporation	Vendor Name	Proxim Wireless Corporation
Certified Number	003WWA080989	Certified Number	003XWA080990	Certified Number	003YWA080991
Certified Date	January 9, 2009	Certified Date	January 9, 2009	Certified Date	January 9, 2009
Remark	No.08-0989	Remark	No.08-0990	Remark	No.08-0991
	the above mentioned certification by type has been granited in provisions of Article 38-24, Paragraph 1 of the Radio Law. 9, 2009 DSP Research,		the above mentioned certification by type has been granted in provisions of Article 38-24, Paragraph 1 of the Radio Law. 9, 2009 DSP Research,		the above mentioned certification by type has been granted in provisions of Article 38-24, Paragraph 1 of the Rado Law. 9, 2009 DSP Research,

# **1.1.6 Information for Professional Installers**

A professional installer can connect up to three external antennas to the AP-800 and six external antennas to AP-8000.

All products using external antennas must be professionally installed, and the transmit power of the system must be adjusted by the professional installers to ensure that the system EIRP is in compliance with the limit specified by the regulatory authority of the country of application.

Follow the mounting instructions described in the 'Quick Installation Guide' (supplied with the product package) to connect the antennas and antenna cable to the device and refer the following sections:

- Adjusting Tx Output Power
- · Antenna Types and Maximum Gain

#### 1.1.6.1 Adjusting Tx Output Power

Transmit output power can be reduced by selecting "Enable TX Power Control" on the **Configure > Interfaces > Op Mode** screen. Refer to the *ORINOCO® 802.11n Access Points - Software Management Guide*, for more information.

Band	EIRP Limit (dB	EIRP Limit (dBm) Max Tx Power (dBm)			)
	USA and Canada	EU	Japan (20 MHz*)	Japan (40 MHz*)	Russia
2.4 - 2.4835 GHz (Point-to-Multipoint)	36	20	≤ 22.14	<b>≤</b> 19.13	24**
2.4 - 2.4835 GHz (Point-to-Point)	When G < 6: 36 When G $\geq$ 6, use the following equation: 30 - $\frac{G-6}{3}$ + G	20	≤ 22.14	<b>≤</b> 19.13	24**
5.15 - 5.25 GHz	23	23	<b>≤</b> 10	<b>≤</b> 6.98	17
5.25 - 5.35 GHz	30	23	<b>≤</b> 10	<b>≤</b> 6.98	24
5.35 - 5.47 GHz	NA	NA	NA	NA	30
5.47 - 5.725 GHz	30	30	<b>≤</b> 16.98	<b>≤</b> 13.98	30
5.725 - 5.850 GHz (Point-to-Multipoint)	36	14	NA	NA	30
5.725 - 5.850 GHz (Point-to-Point)	No limit	14	NA	NA	30
5.825 - 6.425 GHz	NA	NA	NA	NA	30

\* With TPC functionality

\*\* This power is applicable to 11g mode only

#### 1.1.6.2 Antenna Types and Maximum Gain



Where antenna gain +Tx power are above legal EIRP limit, antenna cable loss (pad) is used to attenuate the EIRP to below legal limit.

For devices using external antennas, professional installers should select only the antenna types listed in the following table, with gain not exceeding the listed maximum gain for each type.

Frequency Band (GHz)	Antenna Type	Maximum Gain (dBi)
2.4 GHz	Omni	3
5 GHz	Omni	5

#### For Japan

2.4 GHz External Antennas

Frequency Range (GHz)	Antenna Type	Maximum Gain (dBi)
2.4 - 2.485	Omni	10
2.4 - 2.5	Omni	3
2.4 - 2.5	Sector	14
2.3 - 2.7	Panel	20
2.4 - 2.5	Parabolic	24

5 GHz External Antennas

Frequency Range (GHz)	Antenna Type	Maximum Gain (dBi)
4.9 - 5.875	Omni	5
5.4 - 5.7	Omni	13
4.9 - 5.9	Sector	17
4.9 - 5.875	Panel	30
5.25 - 5.85	Parabolic	33.4

# **1.2 ORiNOCO® AP-8100**

#### 1.2.1 Safety Information (USA, Canada, European Union and Japan)

ORiNOCO® AP-8100 have been evaluated to, and comply with the safety standards **UL 60950-1:2011** and **IEC 60950-1:2012**.

When using this device, follow the following basic safety precautions to reduce the risk of fire, electric shock and injury to persons:

- 1. Device must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation.
- 2. Device must be used and installed indoors only, with a distance of at least 21 cm from external sources or contact.
- 3. This product is suitable for installation in air handling spaces (plenum) and hence excercise care as you install the device in a plenum.
- 4. To power on the device, use only PoE (supplied by Proxim Wireless Corporation, on request) or AC/DC adapter (supplied along with the product package).
- 5. To avoid the risk of electric shock from lightning, do not use this product during an electrical storm.
- 6. Installation of this product must conform to local regulations and codes.
- 7. Do not connect or disconnect the power cable to the device when the power injector is plugged into an AC power outlet.
- 8. No user serviceable parts; all repairs and service must be handled by a qualified service center. Do not disassemble the device. By opening or removing any covers, you may expose yourself to hazardous energy parts. Incorrect reassembly of these devices can cause a malfunction and/or electric shock when the units are subsequently used.
- 9. Do not insert any objects of any shape or size inside these devices while powered on. Object may contact hazardous energy parts that could result in a risk of fire or personal injury.
- 10. Do not remove or alter the marking label provided on these devices.

# 1.2.2 Federal Communications Commission (FCC) Compliance

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 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.

Device operation within 5.15 ~ 5.25GHz is restricted to indoor environment. The band from 5600-5650 MHz will be disabled by the software during the manufacturing and cannot be changed by the end user. This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.

: 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 collocated or operating in conjunction with any other antenna or transmitter.

#### 1.2.2.1 Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. To comply with the FCC radio frequency exposure requirements, equipment should be installed and operated with minimum distance 21cm between the radiator and any external source or contact.

#### **1.2.3 Central European Statement**

This device complies with the essential requirements of the R&TTE Directive 1999/5/EC. Tabulated below are the test methods applied, in order to prove presumption of conformity with the essential requirements of the R&TTE Directive 1999/5/EC.

Standard	Description
EN60950-1:2006+A11:2009	Safety of Information Technology Equipment.
EN50385: 2002	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).
EN 300 328 V1.7.1: 2006	Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband Transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using spread spectrum modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive.
EN 301 893 V1.5.1: 2008	Broadband Radio Access Networks (BRAN); 5 GHz high performance RLAN; Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive

EN 301 489-1 V1.8.1: 2008	Electromagnetic compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements.
EN 301 489-17 V2.1.1: 2009	Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for 2,4 GHz wideband transmission systems and 5 GHz high performance RLAN equipment

This device is a 2.4 GHz wideband transmission system (transceiver), intended for use in all EU member states and EFTA countries, except in France and Italy where restrictive use applies. In Italy the end-user should apply for a license at the national spectrum authorities in order to obtain authorization to use the device for setting up outdoor radio links and/or for supplying public access to telecommunications and/or network services.

This device should not be used for setting up outdoor radio links in France and in some areas the RF output power may be limited to 10 mW EIRP in the frequency range of 2454 – 2483.5 MHz. For more information, please contact the national spectrum authority in France.

Česky	[Jméno výrobce] tímto prohlašuje, že tento [typ zařízení] je ve shodě se základními požadavky a
[Czech]	dalšími příslušnými ustanoveními směrnice 1999/5/ES.
Dansk	Undertegnede [fabrikantens navn] erklærer herved, at følgende udstyr [udstyrets
[Danish]	typebetegne/sej overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
[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.
et 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.
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.
el 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.
it Italiano	Con la presente (nome del costruttore) dichiara che questo (tipo di apparecchio) è conforme ai
Italian]	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.
Mederlands [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, <i>[isem tal-manifattur]</i> , jiddikjara li dan <i>[il-mudel tal-prodott]</i> 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 [Slovenian]	[Ime proizvajalca] izjavlja, da je ta [tip opreme] v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensky [Slovak]	[Meno výrobcu] týmto vyhlasuje, že [typ zariadenia] spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
fi 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.

#### 1.2.3.1 Countries of Operation and Conditions of Use

This device may be used in the following EU and EFTA countries: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxemburg, Malta, Netherlands, Norway, Poland, Portugal, Slovak Republic, Slovenia, Sweden, Switzerland, and the United Kingdom.

Requirements for indoor vs. outdoor operation, licensing and allowed channels of operation apply in EU and EFTA countries is as described below:



The installer must use the configuration utility provided with this device to ensure the channels of operation are in conformance with the spectrum usage rules.

#### 2.4 GHz Operation

• This device may be operated indoors in all EU and EFTA countries using the 2.4 GHz band (Channels 1-13).

#### 5GHz Operation

- This device requires the user or installer to properly enter the current country of operation in the 5 GHz radio configuration window as described in the 'ORiNOCO® 802.11n Access Points Software Management Guide', before operating the device.
- This device will automatically limit the allowable channels determined by the current country of operation. Incorrectly entering the country of operation may result in illegal operation and may cause harmful interference to other systems. The user is obligated to ensure the device is operating according to the channel limitations, indoor/outdoor restrictions and license requirements for each European Community. For more information, refer the *Frequency Domains and Channels* chapter of 'ORiNOCO® 802.11n Access Points Software Management Guide'.
- This device employs a radar detection feature required for European Community and EFTA country operation in the 5 GHz band. This feature is automatically enabled when the country of operation is correctly configured for any European Community or EFTA country. The presence of nearby radar operation may result in temporary interruption of operation of this device. The radar detection feature will automatically restart operation on channel free of radar.
- This device is restricted to indoor use when operated in EU and EFTA countries. For more information on the allowed channels for a frequency domain, refer 'ORINOCO® 802.11n Access Points Software Management Guide', available at support site http://support.proxim.com.

#### 1.2.4 Industry Canada statement

This device complies with RSS-210 of the Industry Canada 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.

Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

- The device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;
- The maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall comply with the e.i.r.p. limit;
- The maximum antenna gain permitted for devices in the band 5725-5825 MHz shall comply with the e.i.r.p. limits specified for point-to-point and non point-to-point operation as appropriate.
- Users should also be advised that high-power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

#### Avertissement:



- les dispositifs fonctionnant dans la bande 5 150-5 250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;
- le gain maximal d'antenne permis pour les dispositifs utilisant les bandes 5 250-5 350 MHz et 5 470-5 725 MHz doit se conformer à la limite de p.i.r.e.;
- le gain maximal d'antenne permis (pour les dispositifs utilisant la bande 5 725-5 825 MHz) doit se conformer à la limite de p.i.r.e. spécifiée pour l'exploitation point à point et non point à point, selon le cas.
- De plus, les utilisateurs devraient aussi être avisés que les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) pour les bandes 5 250-5 350 MHz et 5 650-5 850 MHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL.

#### 1.2.4.1 Radiation Exposure Statement

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 21cm between the radiator and any external source or contact.

#### Déclaration d'exposition aux radiations

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 21 cm de distance entre la source de rayonnement et votre corps

# **1.2.5 Certifications**

#### 1.2.5.1 Certification Summary

Certification	Certification Number
FCC	HZB-AP8100
IC	1856A-AP8100
ETSI	<b>€</b> 0506 <b>0</b>
Japan	R 201-125627

#### 1.2.5.2 Industry Canada Certificate

#### 1.2.5.3 Federal Communications Compliance (FCC) Certificate

TCB		GRANT OF EQUIPMENT AUTHORIZATION			TCB
		Certification			
	ler.	ued Under the Authority of the			
		ral Communications Commissi			
		Bv:			
		<b>2</b> 7.			
		Curtis-Straus LLC		Date of	Grant: 08/07/2012
		One Distribution Center Circle Littleton, MA 01460	Suite #1	Application	Dated: 08/07/2012
Proxim Wireless Corpo	ration				
1661 Buckeye Drive					
Milpitae, CA 96035					
Attention: Cor van de V Compilance Manager	Vater , Sr. Regulatory and				
		NOT TRANSFERABLE			
	EQUIPMENT AUTHORIZATION	is hereby issued to the named G	RANTEE and I	ALD ONLY	
		on for use under the Commission			
	FCC IDENTIFIER: HZB-	AP8100			
	Name of Grantee: Proxim	n Wireless Corporation			
		nsed National Information Infra ss 802.11 abon Router	structure TX		
		Frequency	Output	Frequency	Emission
Grant Notes	FCC Rule Parts	Range (MHZ)	Watte	Tolerance	Designator
CC MO	16E	6180.0 - 5240.0	0.036		
	6	The apparence N/	alla.		
		ower. End-users and responsible			
		is to ensure RF exposure complia			
		ovide a separation distance of at i n conjunction with any other arter			
		icled to indoor usage only. This d			
20 MHz and 40 MHz ban	dwidth mode. 🛛 🕅 📖		\$ 6/3 [2]		
	(A +	A W VHA	1 + 12		
CC: This device is certif	led pursuant to two different Part	15 rules sections.	8 7 19		
MO: This Multiple input	Multiple Output (MIMO) device wa	as evaluated for multiple transmitt	ed signals as in	dicated in the filing.	
	N/	X NO WIT AP	* 11		
	ALC: NO	Co. Concerner	18		
		NOT TEAMAN AND POLY	19		
	1	NO. MIMIESIV			
		MM1551	er.		
		MM155	97		

#### 1.2.5.4 Central European (ETSI) Certificate

Equipment:	Wireless 802.11 abgn Router
Brand Name:	Proxim
Test Model No.:	AP-8100
Applicant:	Proxim Wireless Corporation
Test Banast Mar	LD110721C33A
that the equipmer requirement limits Under Test (EUT standards herein s EN 60950-1:2006	+ A11:2009 + A1:2010
We, Bureau Verit that the equipmer requirement limits Under Test (EUT standards herein s EN 60950-1:2006	In the above has been tested in our facility and found compliance with the of applicable standards. The test record, data evaluation and Equipment configurations represented herein are true and accurate under the specified.
We, Bureau Verit that the equipmer requirement limits Under Test (EUT standards herein s EN 60950-1:2006	nt above has been tested in our facility and found compliance with th of applicable standards. The test record, data evaluation and Equipmen ) configurations represented herein are true and accurate under the specified. + A11:2009 + A1:2010
We, Bureau Verit that the equipmer requirement limits Under Test (EUT standards herein s EN 60950-1:2006	nt above has been tested in our facility and found compliance with th of applicable standards. The test record, data evaluation and Equipmen ) configurations represented herein are true and accurate under the specified. + A11:2009 + A1:2010

#### 1.2.5.5 Japan Certification

telefication by The Netherlands Chamber of Commerce 5955356 www.telefication.cem				
Certificate Of Radio Equipment in JAPAN No.: 12215627/AA/00				
Telefication, operating as Conformity Assessment Body (CAB ID Number: 2011) with respect to Japan, declares that the listed product complies with the Technical Regulations Conformity Certification of Specified Radio equipment (ordinance of MPT N* 37, 1981) Product description: Wireless 802.11 abgn Router Trademark: Proxim Family name: - Type designation: AP-8100 Serial No: - Hard- Software release No: 1.00/v4.1.0(505250) Manufacturer: Proxim Wireless Corporation Address: 1561 Buckeye Drive City: CA \$5035 Milpitas Country: United States City: CA \$5035 Milpitas Country: United States				
CAB WJ M. Jong Manager Product Certification	S 124			
Annex 1 to Certificate of Radio Equipment in Japan       08 August 2012         Number: 12215027/AA/0D       Annex 1, Page 1 of 1         • The validity of this Certificate is limited to products, which are equal to the one examined in the type-examination.       • When the manufacturer (or holder of this certificate) is placing the product on the Japanese market, the product must be affixed with the following Specified Radio Equipment marking:				
R 201-125627				
Remarks and observations The following conditions are applicable: MIMO: 2TX/2RX. Antennas for 2.4 GHz equipment with digital modulation: - Embedded antenna, max gain of 3 dBl at 2.4 GHz - Embedded antenna, max gain of 4 dBl at 5 GHz				

# **Statement of Warranty**



# **Warranty Coverage**

Proxim Wireless Corporation warrants that its products are manufactured solely from new parts, conform substantially to specifications, and will be free of defects in material and workmanship for a Warranty Period of 1 year from the date of purchase.

# **Repair or Replacement**

When Proxim determines that a returned product does not meet the warranted criteria during the warranty period, Proxim at its option, will either: (a) repair the defective product; (b) replace the defective product with a new or refurbished product that is at least equivalent to the original; or (c) refund the price paid for the defective product. Generally, products are repaired or replaced within thirty (30) business days of receipt of the product at a Proxim Logistical/Repair Center. The warranty period for repaired or replacement products is ninety (90) days or the remainder of the original warranty period, whichever is longer. These three alternatives constitute the customer's sole and exclusive remedy and Proxim's sole and exclusive liability under warranty provisions.

# **Limitations of Warranty**

Proxim's warranties do not apply to any product (hardware or software) which has (a) been subjected to abuse, misuse, neglect, accident, or mishandling, (b) been opened, repaired, modified, or altered by anyone other than Proxim, (c) been used for or subjected to applications, environments, or physical or electrical stress or conditions other than as intended and recommended by Proxim, (d) been improperly stored, transported, installed, or used, or (e) had its serial number or other identification markings altered or removed.

Buyers can contact Proxim Wireless Customer Service Center either by telephone or via web. Support and repair of products that are out of warranty will be subject to a fee. Contact information is shown below. Additional support information can be found at Proxim Wireless's web site at http://support.proxim.com.

Contact technical support via telephone as follows:

#### **USA and Canada Customers**

Phone: +1-408-383-7700; +1-866-674-6626

Business Hours: 24x7 live response. Tier 3 support: 8 a.m. to 5 p.m. M-F PDT (UTC/GMT -7 hrs)

#### **International Customers**

Phone: +1-408-383-7700; 0800-916475 (France); 8-800-100-9485 (Russia)

Business Hours: 24x7 live response. Tier 3 support: 8 a.m. to 5 p.m. M-F PDT (UTC/GMT -7 hrs)

# **General Procedures**

When contacting the Customer Service for support, Buyer should be prepared to provide the product description and serial number and a description of the problem. The serial number should be on the product.

In the event the Customer Service Center determines that the problem can be corrected with a software update, Buyer might be instructed to download the update from Proxim Wireless's web site or, if that's not possible, the update will be sent to Buyer. In the event the Customer Service Center instructs Buyer to return the product to Proxim Wireless for repair or replacement, the Customer Service Center will provide Buyer a Return Material Authorization ("RMA") number and shipping instructions. Buyer must return the defective product to Proxim Wireless, properly packaged to prevent damage, shipping prepaid, with the RMA number prominently displayed on the outside of the container. Calls to the Customer Service Center for reasons other than product failure will not be accepted unless Buyer has purchased a Proxim Wireless Service Contract or the call is made within the warranty period. After the warranty period, Technical Support is fee based (detailed in Technical Services and Support).

If Proxim Wireless reasonably determines that a returned product is not defective or is not covered by the terms of this Warranty, Buyer shall be charged a service charge and return shipping charges.

# **Other Information**

#### Search Knowledgebase

Proxim Wireless stores all resolved problems in a solution database at the following URL: http://support.proxim.com.

#### Ask a Question or Open an Issue

Submit a question or open an issue to Proxim Wireless technical support staff at the following URL: http://support.proxim.com/cgi-bin/proxim.cfg/php/enduser/ask.php.

# B

# **Technical Services and Support**

# **Obtaining Technical Service and Support**

If you are having trouble using the Proxim product, please read this guide and the additional documentation provided with your product. If you require additional support to resolve your issue, please be ready to provide the following information before you contact Proxim's Technical Services team:

- Product information
  - Part number and serial number of the suspected faulty device
- Trouble/error information
  - Trouble/symptom being experienced
  - Activities completed to confirm fault
  - Network information (What kind of network are you using?)
  - Circumstances that preceded or led up to the error
  - Message or alarms viewed
  - Steps taken to reproduce the problem
- ServPak information (if a Servpak customer):
- ServPak account number
- Registration information
  - If the product is not registered, date and location where you purchased the product.

Technical Support is free for the warranty period from the date of purchase.

# **Support Options**

### **Proxim eService Web Site Support**

The Proxim eService Web site is available 7x24x365 at http://support.proxim.com. On the Proxim eService Web Site, you can access the following services:

- **Product Download Page**: Provides quick links to product firmware, software, and documentation downloads.
- **Proxim TV Links**: A link to helpful video tutorials.
- **Knowledgebase**: A solution database of all the resolved problems. You can search by product, category, keywords, or phrases.
- Live Chat: Chat with a support technician on-line or request to call back at a later time.
- Open Ticket / Ask Question: Submit a question to our technical support staff who will reply to you by email.
- **My Account / Tickets**: Login to check the status of your questions, modify your answer update notifications, update your personal profile, or access restricted information and features.
- **Provide Feedback**: Submit a suggestion, complaint, or other feedback about the support site.

#### **Telephone Support**

Contact technical support via telephone as follows:

#### **USA and Canada Customers**

Phone: +1-408-383-7700; +1-866-674-6626

Business Hours: 24x7 live response. Tier 3 support: 8 a.m. to 5 p.m. M-F PDT (UTC/GMT -7 hrs)

#### **International Customers**

Phone: +1-408-383-7700; 0800-916475 (France); 8-800-100-9485 (Russia)

Business Hours: 24x7 live response. Tier 3 support: 8 a.m. to 5 p.m. M-F PDT (UTC/GMT -7 hrs)

#### ServPak Support

To provide even greater investment protection, Proxim Wireless offers a cost-effective support program called ServPak. ServPak is a program of enhanced service support options that can be purchased as a bundle or individually, tailored to meet your specific needs. Whether your requirement is round the clock technical support or advance replacement service, we are confident that the level of support provided in every service in our portfolio will exceed your expectations.

- Advanced Replacement of Hardware: Can you afford to be down in the event of a hardware failure? Our guaranteed turnaround time for return to factory repair is 30 days or less. Those customers who purchase this service are entitled to advance replacement of refurbished or new hardware guaranteed to be shipped out by the Next Business Day. Hardware is shipped Monday – Friday, 8:00 AM – 2:00 PM (PST).
- **Extended Warranty**: Extend the life of your networking investment by adding 1, 2, or 3 years to your products standard warranty. This service coverage provides unlimited repair of your Proxim hardware for the life of the service contract. The cost of an extended warranty is far less than the cost of a repair providing a sensible return on your investment.
- 7x24x365 Technical Support: This service provides unlimited, direct access to Proxim's world-class Tier 3 technical
  support engineers 24 hours a day, 7 days a week, 365 days a year including Holidays. Customers who purchase this
  service can rest assured that their call for technical assistance will be answered and a case opened immediately to
  document the problem, troubleshoot, identify the solution and resolve the incident in a timely manner or refer to an
  escalation manager for closure.
- **8x5 Technical Support**: This service provides unlimited, direct access to Proxim's world-class technical support 8 hours a day, 5 days a week from 8:00AM 5:00PM (PDT). Typically, technical support is provided for free for the entire time the product is covered by a Proxim warranty. Beyond this period, technical support is available at cost on a per incident basis. With the 8x5 Technical Support service, technical support will be available for the duration of the ServPak contract at no additional costs.
- **Software Maintenance**: It's important to maintain and enhance security and performance of wireless equipment and Proxim makes this easy by providing a Software Maintenance program that enables customers to access new features and functionality, rich software upgrades and updates. Customers will also have full access to Proxim's vast knowledgebase of technical bulletins, white papers and troubleshooting documents.
- **Priority Queuing Phone Support**: This service provides customers with a one hour response time for technical phone support. There is no waiting in line for those urgent calls for technical support.

#### **Packaged Services**

- 24 x 7 Enhanced ServPak
  - 24 x7 Technical Support
  - Software Maintenance
  - Advanced Hardware Replacement
  - Extends Warranty\*
  - Knowledge Base Access

- Priority Queuing
- \* if units are out of standard warranty
- 8 x 5 Enhanced ServPak
  - 8 x 5 Technical Support
  - Software Maintenance
  - Advanced Hardware Replacement
  - Extends Warranty\*
  - Knowledge Base Access
  - Priority Queuing
- \* if units are out of standard warranty

#### ServPak Standalone Services

- Extended Warranty ServPak
- Advance Hardware Replacement ServPak

#### Proxim Warranty vs. ServPak Service

Service Features	ServPak	Warranty
Expert Technical Support	Technical Support, Configurations, Troubleshooting	Duration of Product Warranty. 8X5 Normal Business Hrs
Priority Queuing	Available	-
Knowledge Base Access	Available	Available
Software Upgrades	Available	-
Advance Replacement Service	8x5xNBD	-

- Not a feature service option

To purchase ServPak support services, please contact your authorized Proxim distributor. To receive more information or for questions on any of the available ServPak support options, please visit our website <a href="http://www.proxim.com/support/servpak">http://www.proxim.com/support/servpak</a>, call Proxim Support (See Telephone Support) or send an email to <a href="http://servpak@proxim.com">servpak@proxim.com</a>, servpak an email to <a href="http://servpak@proxim.com">servpak@proxim.com</a>, servpak an email to <a href="http://servpak@proxim.com">servpak@proxim.com</a>, servpak an email to <a href="http://servpak@proxim.com">servpak@proxim.com</a>, servpak@proxim.com</a>

# **Technical Support Policy**

#### **Technical Support for Current Products during Warranty Period**

All Customers are entitled to free technical support for the Proxim products they purchase from Proxim's authorized resellers or distributors. Technical Support is defined as communication via the Proxim Support website (http://support.proxim.com) and/or via telephone. This technical support will be provided for free for the entire time the product is covered by a Proxim warranty. The term of Proxim's warranty is determined according to the agreement under which the product was sold and generally varies from 3 months to 2 years depending on the product. If a Customer disagrees with Proxim's determination of warranty duration, a request for review supported by a copy of all product purchase documentation may be submitted.

#### **Technical Support for Current Products after Warranty Period**

After the warranty period, technical support on products then being sold by Proxim will be based upon one of the following three options Customers can choose:

- Customers can choose to purchase one of Proxim's ServPak extended warranty and enhanced support packages for the product
- Customers can choose to purchase one-time per-incident technical support for the product for a fee
- Customers can choose to call the reseller or distributor who sold them the product for technical support

### **Tech Support on Discontinued Products**

Technical Support on some products that Proxim has declared as EOL (End of Life) or otherwise is no longer selling is available based upon one of the following three options Customers can choose:

- For some discontinued products, Customers can choose to purchase one of Proxim's EOL ServPak support packages for the product
  - No EOL ServPak support package will be available for any product discontinued more than 5 years ago
  - No EOL ServPak support package is available for certain discontinued products
- Customers can choose to purchase one-time per-incident technical support for the product on a per hour basis at a rate of \$125 an hour (4 hours minimum payable in advance by major credit card). This fee is payable in addition to any RMA fee that may be charged to subsequently repair the product.
- Customers can choose to call the reseller or distributor who sold them the product for technical support

All Proxim technical support for discontinued products, whether through an EOL ServPak package or otherwise, is provided on a "best effort" basis and is subject to the continued availability of necessary components, equipment, and other technical resources.

Note that Proxim is unable to support or warrant any equipment that has been modified, whether this modification is physical, or if third-party software codes have been loaded onto the product.