

Stratum™ X1

Safety and Regulatory Guide

Products Covered

Stratum™ X1

-SX1-1023C



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Stratum™ X1 - Safety and Regulatory Guide

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Preface

About this Guide

This document contains the safety and regulatory compliance information for the following Stratum™ products:

- **Stratum™ X1 Series**
 - SX1-1023C

Related Documents

In addition to this guide, please refer to the following documents for *Stratum™ X1* products that are available at Proxim's support site <http://support.proxim.com>.

- **Quick Installation Guide (QIG):** A quick reference guide that provides essential information for installing and configuring the device.
- **Device Management Guide** - A guide that gives an overview of the device user interface and explains the step-by-step procedure to configure, manage and monitor the device by using Graphical User Interface.
- **Software Configuration Guide:** A guide that provides software configuration information for Proxim devices.
- **Hardware Installation Guide:** A guide that provides a hardware overview and details about the installation procedures and hardware specifications.
- **CLI Guide** - A guide that gives instructions on how to configure, manage and monitor the device using Command Line Interface.

Proxim recommends you to visit its support site <http://support.proxim.com> for regulatory information and latest product updates.

Stratum™ Series - Regulatory Information

1

This chapter contains information on the following:

- [Safety Information \(USA, Canada and European Union and UK\)](#)
- [Federal Communications Commission \(FCC\) Compliance](#)
- [Industry Canada Compliance](#)
- [Certification Summary](#)

1.1 Safety Information (USA, Canada and European Union and UK)

Listed below are the product(s) and their corresponding safety standards that they comply with:

Product(s)	Standards
SX1-1023C	IEC 62368-1:2018 UL 62368-1:2019 CSA C22.2 No. 62368-1:19 EN IEC 62368-1:2020+A11:2020 BS EN IEC 62368-1:2020+A11:2020

All products are intended to be installed, used, and maintained by experienced telecommunications personnel only.

When using these products, basic safety precautions should always be followed to reduce the risk of fire, electrical shock, and injury to persons, including the following:

- Devices must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation.
- Installation of these products in the end use must conform to local regulations and codes.
- Devices are to be used with and powered only by the Power Injector provided.
- A 16-amp circuit breaker is required at the power source.
- The devices are intended to be grounded. Use a 12 AWG earthing conductor at a minimum.
- Do not connect or disconnect the power cable from the device when the power injector is plugged into an AC power outlet.
- Devices should be serviced by trained personnels only. 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 malfunction and/or electric shock when later used. There are no user serviceable parts; all repairs and services must be handled by a qualified service center.
- 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.
- Do not remove or alter the marking label provided on these devices.
- To avoid the risk of electric shock from lightning, do not use these devices during an electrical storm.
- RJ-45 maximum available current is 1.33A.

WARNING: These devices are intended for installation in accordance with Articles 110-18, 110-26, and 110-27, 725, 800, and 810 of the United States National Electric Code ANSINFP 70, and per the applicable Articles in the Canadian National Electric Code.

1.2 Federal Communications Commission (FCC) Compliance

The Stratum™ devices have been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WARNING:

- *To comply with FCC part 15 rules in the United States, the system must be professionally installed to ensure compliance with the Part 15 certification. It is the responsibility of the operator and professional installer to ensure that only certified systems are deployed in the United States. The use of the system in any other combination (such as co-located antennas transmitting the same information) is expressly forbidden.*

The device operation is subject to the following two conditions:

1. The device may not cause harmful interference
2. The device must accept any interference received, including interference that may cause undesired operation.

This device and its antenna(s) must not be co-located or operate in conjunction with any other antenna or transmitter.

The FCC radio-frequency exposure guidelines for an uncontrolled environment can be satisfied.

1.2.1 Modifications

The FCC requires the user to be notified that any changes or modifications to this device that are not expressly approved by the manufacturer may void the user's authority to operate the device. The correction of interference caused by unauthorized modification, substitution or attachment will be the responsibility of the user. The manufacturer and its authorized resellers or distributors are not liable for any damage or violation of government regulations that may arise from failing to comply with these guidelines.

WARNING:

- *Modification of this device to receive cellular Radio Telephone service signals is prohibited under FCC Rules and Federal Law.*
- *Modifications not expressly approved by the manufacturer could void the user authority to operate the equipment under FCC Rules.*

1.2.2 New Host Configuration

FCC Class II Permissive Change must be filed by the Grantee for each new host configuration. A particular host is the same series or similar models having the same form factor, physical size, and component layout and construction.

Grantee contact information for FCC filing as below:

Company Name: Proxim Wireless Corporation

Contact Person: Ken Lim

Address: 2114, Ringwood Avenue, SAN JOSE, CA 95131, USA.

Tel.: +1 408-383-7600

Email: klim@proxim.com

Any new antenna type, or higher gain antenna used in host will require a FCC Class II Permissive Change filing.

The transmitter's power is measured as field strength, if the C2PC permissive change investigation indicates that the module's power has increased from the original filing test report, the manufacturer, lab, and TCB must investigate to determine if the initial module tested in a standalone module was improperly granted. The module may require a new FCC ID. An inquiry maybe submitted to review a specific case, but the Permissive Change can only be granted once the issue is resolved.

C2PC shall comply the following requirement:

Confirm and document the continued compliance for the fundamentals under the specific rule part granted for the module (Rule: FCC CFR Title 47, Part 15, Subpart C, Section 15.225).

Confirm and demonstrate with the radiated test that no additional parasitic, non-compliant emissions exist due to ingress (parasitic oscillations, radiation of stray signals within a host, etc.), are present.

Full compliance testing is necessary.

1.2.3 FCC Radiation Exposure Statement

The Stratum™ devices comply with FCC radiation exposure limits set forth for an uncontrolled environment.

Tabulated below are the products and the FCC radiation exposure limits followed by the devices:

Product(s)	Standards
SX1-1023C	- Product models using external antennas require professional installation. The antennas used for professional installation must be fixed-mounted on outdoor permanent structures with a minimum separation distance from the antenna to the users for antennas according to the below table: - Antennas must not be co-located and must not operate in conjunction with any other antenna or transmitter.

Antenna Model	Frequency (MHz)	Minimum Separation Distance (CM)
TM55D-HVOMNI-12	5150 to 5250	40
	5250 to 5350	20
	5470 to 5725	23
	5725 to 5850	40
TM55D-HVSCTR-21	5150 to 5250	40
	5250 to 5350	30
	5470 to 5725	30
	5725 to 5850	40
MT-466010/NVH	5150 to 5250	100
	5250 to 5350	45
	5470 to 5725	45
	5725 to 5850	100
TM55L-DPDISH-35	5150 to 5250	180
	5725 to 5850	180

Regulatory Information

XD1C-B180B15D-01A (Integrated)	5150 to 5250	40
	5250 to 5350	20
	5470 to 5725	20
	5725 to 5850	40
Chip Antenna	2402 to 2480	20

1.2.4 Installation within TDWR Range

Before mounting and installing the device, please check the distance between the device location and the near by Terminal Doppler Weather Radar (TDWR). You can find the locations of the airport weather radars from the Wireless Internet Service Providers Association (WISPA) database at <http://spectrumbridge.com/udrs/home.aspx>. If the distance from the device to any TDWR is less than 35kms, then the radio is not allowed to operate in channels closer than 30 MHz relative to the TDWR frequency (above and below). To protect these TDWR, the channels up to 30 MHz must be blacklisted so they cannot be selected as operational channel. In addition to blacklisting of the channels, register the location of the device radio in the WISPA database, so that any interference caused by the operation of the radio can be addressed in compliance with the Part 15 requirements.

For example: Consider the TDWR location at Phoenix, AZ operating at 5610 MHz (N 33 25 14; W 112 09 46). If the device is installed within 35kms radial distance from this location then avoid operating in (5580 - 5640) MHz band. Also, blacklist all channels overlapping the 5580 - 5600 MHz band (5600 - 5650) is already removed from operation list of our device).

1.3 Industry Canada Compliance

The Stratum devices comply with Canadian ICES-003 and license-exempt RSS standard(s).

The device operation is subject to the following conditions:

- This device may not cause interference
- This device must accept any interference, including interference that may cause undesired operation of the device

WARNING:

- **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.**

NOTES:

- This device and its antenna(s) must not be co-located or operated in conjunction with any other antenna or transmitter.
- Under Industry Canada regulations, the radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.
- The devices are designed to operate with disabled operation between 5600-5650 MHz within the 5470-5725 MHz band.
- The device automatically discontinues transmission in case of absence of information to transmit, or operational failure. Note that this is not intended to prohibit transmission of control or signaling information or the use of repetitive codes which is required by the technology.
- Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate these devices.

- This radio transmitter has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain. Antenna types not included in this list, and having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Conformité Industry Canada

Les appareils Stratum sont conformes aux normes canadiennes ICES-003 et RSS sans licence. Le fonctionnement de l'appareil est soumis aux conditions suivantes:

- Cet appareil ne doit pas provoquer d'interférences.
- Cet appareil doit accepter toute interférence, y compris les interférences qui peuvent provoquer un fonctionnement indésirable de l'appareil.

ATTENTION:

- **Les radars haute puissance sont attribués en tant qu'utilisateurs principaux (c'est-à-dire utilisateurs prioritaires) des bandes 5250-5350 MHz et 5650-5850 MHz. Ces radars pourraient provoquer des interférences et / ou endommager les appareils LE-LAN.**

REMARQUES:

- Cet appareil et son (ses) antenne(s) ne doivent pas être co-localisés ou utilisés avec une autre antenne ou un autre émetteur.
- En vertu de la réglementation d'Industrie Canada, l'émetteur radio ne peut fonctionner qu'avec une antenne d'un type et d'un gain maximum (ou moindre) approuvés pour l'émetteur par Industrie Canada. Pour réduire les interférences radio potentielles pour les autres utilisateurs, le type d'antenne et son gain doivent être choisis de telle sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne soit pas supérieure à celle nécessaire pour une communication réussie.
- L'appareil est désactivé entre 5600-5650 MHz dans la bande 5470-5725 MHz.
- L'appareil interrompt automatiquement la transmission en cas d'absence d'informations à transmettre ou de panne de fonctionnement. Notez que cela ne vise pas à interdire la transmission d'informations de commande ou de signalisation ou l'utilisation de codes répétitifs requis par la technologie.
- Tout changement ou modification non expressément approuvé par le fabricant peut annuler le droit de l'utilisateur à utiliser cet appareil.
- Cet émetteur radio a été approuvé par Industrie Canada pour fonctionner avec les types d'antennes énumérés ci-dessous avec le gain maximum autorisé. Les types d'antennes non inclus dans cette liste, et ayant un gain supérieur au gain maximum indiqué pour ce type, sont strictement interdits d'utilisation avec cet appareil.

Frequency Band	Antenna Type	Maximum Gain (dBi)
(5.250-5.350)GHz / (5.470-5725)GHz / (5.725-5.850)GHz	Panel	28
	Omni Directional	12
	Sector	21
	Panel (Integrated)	15
(5.725 - 5.850) GHz	Parabolic Dish	35
(2.402 - 2.480)GHz	Chip Antenna	2

1.3.1 IC Radiation Exposure Statement

This device complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. The device should be installed and operated with a minimum distance between the antenna and the user according to the below table. Under such configuration, the IC RSS-102 radiation exposure limits set forth for an population/uncontrolled environment can be satisfied.

Déclaration d'exposition aux radiations

Cet équipement est conforme aux limites d'exposition aux rayonnements IC RSS-102 établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de distance entre la source de rayonnement et votre corps conformément au tableau ci-dessous. Dans ces conditions, les limites d'exposition aux rayonnements IC RSS-102 établies pour un environnement non contrôlé peuvent être satisfaites.

Antenna Model	Frequency (MHz)	Minimum Separation Distance (CM)
TM55D-HVOMNI-12	5250 to 5350	20
	5470 to 5725	23
	5725 to 5850	40
TM55D-HVSCTR-21	5250 to 5350	30
	5470 to 5725	30
	5725 to 5850	40
MT-466010/NVH	5250 to 5350	45
	5470 to 5725	45
	5725 to 5850	100
TM55L-DPDISH-35	5725 to 5850	180
XD1C-B180B15D-01A (Integrated)	5250 to 5350	20
	5470 to 5725	20
	5725 to 5850	40
Chip Antenna	2402 to 2480	20

1.4 European (ETSI) and UK Compliance

The Stratum devices comply with the Low Voltage Directive (LVD) (2014/35/EU) and Radio Equipment Directive (2014/53/EU). Compliance with these directives implies conformity to harmonized European standards (European Norms).

1.4.1 Countries of Operation and Conditions of Use

The devices may be used in the following EU and EFTA countries: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden and the United Kingdom.

The professional installer must use the configuration utility provided with the device to ensure that EIRP and the channels of operation are in conformance with the spectrum usage rules for EU and EFTA countries as described below.

1.4.2 5GHz Operation

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.

Regulatory Information

The 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 a channel free of radar.

1.4.3 Transmit Power Control (TPC) for 5 GHz operation

It is recommended not to disable ATPC on the device. However, if you wish to manually set TPC level, use professional installer services to ensure TPC level is set properly and complies with European regulatory requirements.

NOTE:

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.

1.5 Certification Summary

1.5.1 USA (See [USA - Certification](#))

Models	Frequency Band	Certification/Reference Number
SX1-1023C -US	(5.150 - 5.250)GHz (5.250 - 5.350)GHz (5.470 - 5.725)GHz (5.725 - 5.850)GHz (2.402 - 2.480)GHz for BLE	FCC ID: HZB-MEGA2 Contains Transmitter Module FCC ID: HZB-MEGA5

1.5.2 Canada (See [CANADA - Certification](#))

Models	Frequency Band	Certification/Reference Number
SX1-1023C	(5.150 - 5.250)GHz (5.250 - 5.350)GHz (5.470 - 5.725)GHz (5.725 - 5.850)GHz (2.402 - 2.480)GHz for BLE	IC: 1856A-MEGA2 Contains Transmitter Module IC: 1856A-MEGA5

1.5.3 ETSI (See [ETSI - Certification](#))

Models	Certification/Reference Number
SX1-1023C	CE

1.5.4 UK (See [UK - Certification](#))

Models	Certification/Reference Number
SX1-1023C	UKCA

1.5.5 CB (See [CB - Test Certificate](#))

Models	Certification/Reference Number
SX1-1023C	JPTUV-167228

Information for Professional Installer

2

This chapter contains information on the following:

- Information for Professional Installers
 - Adjusting Tx Output Power
 - Antenna Gain Configuration

2.1 Information for Professional Installers

All products 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.

2.1.1 Adjusting Tx Output Power

NOTE: When the system is set to transmit at the maximum power, professional installers must ensure that the maximum EIRP limit is not exceeded. To achieve this, they may have to add attenuation between the device and the antenna when a high gain antenna is used.

Use the following formula in combination with the table of EIRP limits in US and EU countries to calculate system transmit power (based on EIRP limits) of these countries:

$$\text{Tx Power (dBm)} = \text{EIRP Limit (dBm)} + \text{FL (dB)} - \text{G (dB)}$$

where,

Tx Power = Output power measured at the antenna input

EIRP Limit = EIRP limits specified below

FL = Feeder loss including loss of connectors

G = Antenna Gain

Transmit output power can be reduced by using **Automatic Transmit Power Control (ATPC)**, or manually setting the **Transmit Power Control (TPC)**. For information to automatically or manually set TPC, refer to **Software Management Guide** available at <http://support.proxim.com>.

Regulatory Domain	Frequency (MHz)	Max EIRP (dBm)	
		PTP Mode (QB)	PTMP Mode (MP)
US SKU			
United States 5GHz	5150 ~ 5250 (Non-DFS)	30	30
	5250 ~ 5350(DFS)		
	5500 ~ 5725(DFS)		
	5725 ~ 5850 (Non-DFS)		
United States 5.8GHz	5725 ~ 5850 (Non-DFS)	53	36(Base Station), 53(Subscriber Unit)
United States1(5.3, 5.4 GHz)	5250 ~ 5350(DFS)	30	30
	5500 ~ 5725(DFS)		

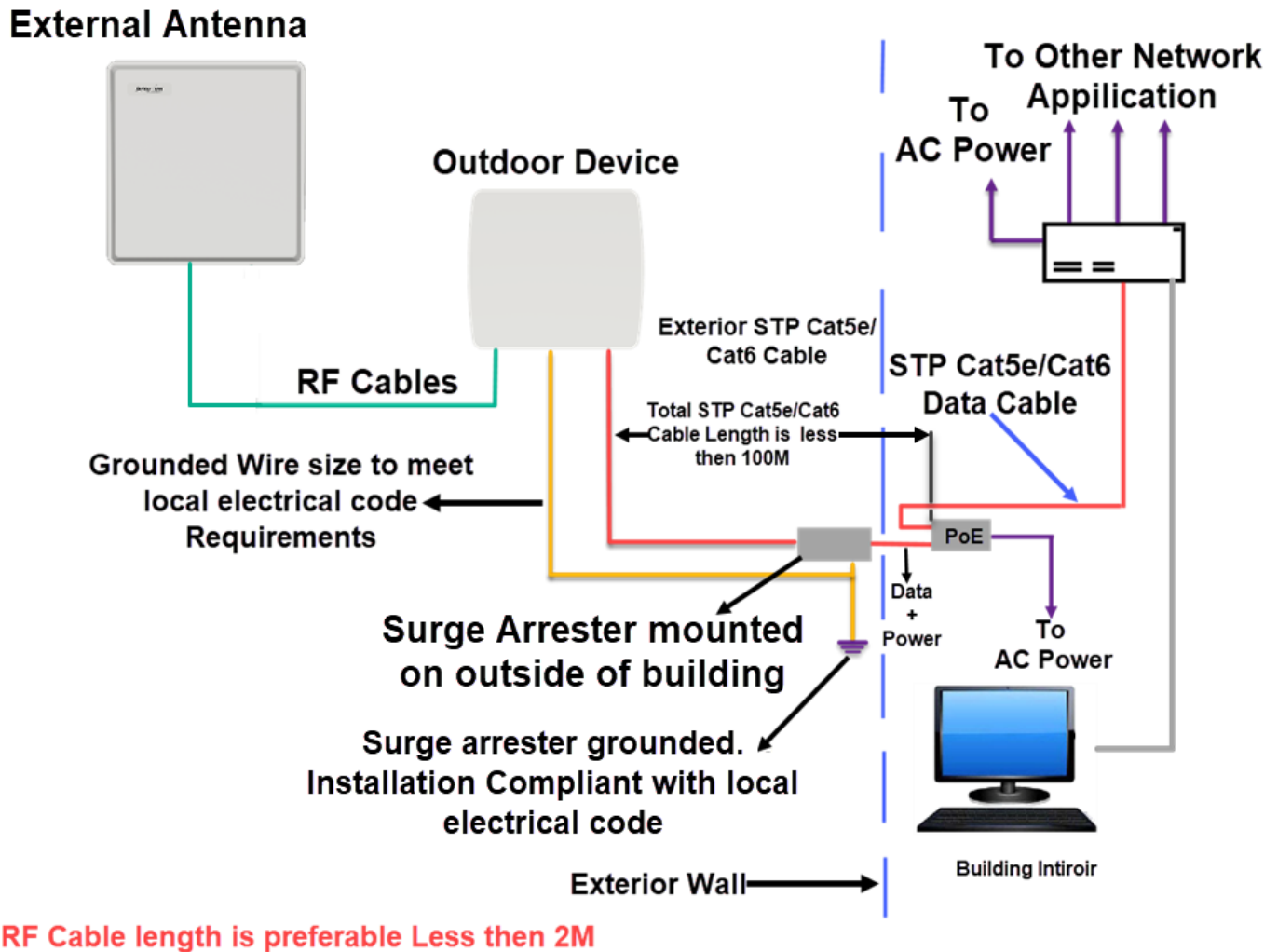
United States2(5.3, 5.8 GHz)	5250 ~ 5350(DFS)	30	30
	5725 ~ 5850 (Non-DFS)		
United States3 (5.2, 5.8 GHz)	5150 ~ 5250 (Non-DFS)	53	36(Base Station), 53(Subscriber Unit)
	5725 ~ 5850 (Non-DFS)		

WD SKU			
World 5 GHz	5150 ~ 5925 (Non-DFS)	100	100
United States 5GHz	5150 ~ 5250 (Non-DFS)	53	36(Base Station), 53(Subscriber Unit)
	5250 ~ 5350(DFS)		
	5500 ~ 5725(DFS)		
	5725 ~ 5850 (Non-DFS)		
United States 5.8GHz	5725 ~ 5850 (Non-DFS)	53	36(Base Station), 53(Subscriber Unit)
United States1 (5.3, 5.4 GHz)	5250 ~ 5350(DFS)	30	30
	5500 ~ 5725(DFS)		
United States2 (5.3, 5.8GHz)	5250 ~ 5350(DFS)	53	36(Base Station), 53(Subscriber Unit)
	5500 ~ 5725(DFS)		
United States3 (5.2, 5.8 GHz)	5150 ~ 5250 (Non-DFS)	53	36(Base Station), 53(Subscriber Unit)
	5725 ~ 5850 (Non-DFS)		
Canada 5 GHz	5150 ~ 5250 (Non-DFS)	23 (Indoor)	23 (Indoor)
	5250 ~ 5350(DFS)	30	30
	5470 ~ 5600(DFS)		
	5650 ~ 5725(DFS)		
	5725 - 5.850 (Non-DFS)	53	36(Base Station), 53(Subscriber Unit)
Europe 5.4 GHz	5470 ~ 5600 (DFS)	30	30
	5650 ~ 5725 (DFS)		
Europe 5.8 GHz	5725 ~ 5875 (DFS)	36	36
UK 5.8 GHz	5725~5795	36	36
	5815~5850		

IMPORTANT! You must add external attenuation pad if the calculated EIRP is over the limit. If you are at the TPC limit, reduce the power and continue with the attenuation.

2.1.2 Antenna Gain Configuration

When using external antenna, the professional installer should ensure to configure proper antenna gain so that the radio does not exceed the EIRP allowed per regulatory domain.



Calculate the antenna gain as follows:

Antenna Gain to be configured = Antenna Gain of the antenna used - Cable Loss

Example: Consider an example where the device is operating in United States 5.3 GHz with the EIRP 30 dBm. The antenna gain of the antenna used is 23 dBi and the cable loss is 1dB.

Given this case, Configurable Antenna Gain = [23 dBi – 1 dB] = 22 dBi

$$\text{Maximum Radio Power} = \text{EIRP} - \text{Configured Antenna Gain}$$

$$= 30 \text{ dBm} - 22 \text{ dBi}$$

= 8 dBm

With this configuration, the ATPC feature will limit the radio power to a maximum of 8 dBm to avoid exceeding EIRP limit of 30 dBm.

USA - Certification

A

Given below are the USA certification details for the following products:

- SX1-1023C -US

TCB

GRANT OF EQUIPMENT
AUTHORIZATION

Certification

Issued Under the Authority of the
Federal Communications Commission

By:

TUV Rheinland of North America, Inc.,
1279 Quarry Lane Suite A
Pleasanton, CA 94566

Date of Grant: 02/14/2025
Application Dated: 01/23/2025

TCB

Proxim Wireless Corporation
2114 Ringwood Avenue
San Jose, CA 95131

Attention: Ken Lim , Accounting Manager

NOT TRANSFERABLE
EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE,
and is VALID ONLY for the equipment identified hereon for use under the
Commission's Rules and Regulations listed below.

FCC IDENTIFIER: HZB-MEGA2					
Name of Grantee: Proxim Wireless Corporation					
Equipment Class: Digital Transmission System					
Notes: Startum X1 & Stratrum X3					
<u>Grant Notes</u>	<u>FCC Rule Parts</u>	<u>Frequency Range (MHZ)</u>	<u>Output Watts</u>	<u>Frequency Tolerance</u>	<u>Emission Designator</u>
	15C	2402,0 - 2480,0	0,0027		

Output power listed is conducted Peak power. Professional installation is required.
The antenna(s) used for this transmitter must be installed to provide a separation
distance of at least 0,4 m from all persons and not be co-located with any other
transmitters except in accordance with FCC multi-transmitter product procedures as
described in this filings. End-users and installers must be provided with antenna
installation instructions and transmitter operating conditions for satisfying RF
exposure compliance. This device contains limited single modular transmitter
EdgeAX5 (Contains FCC ID:HZB-MEGA5).



TCB

GRANT OF EQUIPMENT
AUTHORIZATION

TCB

Certification
Issued Under the Authority of the
Federal Communications Commission
By:

TUV Rheinland of North America, Inc.
1279 Quarry Lane Suite A
Pleasanton, CA 94566

Date of Grant: 02/14/2025

Application Dated: 01/24/2025

Proxim Wireless Corporation
2114 Ringwood Avenue
San Jose, CA 95131

Attention: Ken Lim , Accounting Manager

NOT TRANSFERABLE

EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE,
and is VALID ONLY for the equipment identified hereon for use under the
Commission's Rules and Regulations listed below.

FCC IDENTIFIER: HZB-MEGA5
Name of Grantee: Proxim Wireless Corporation
Equipment Class: Unlicensed National Information Infrastructure
TX
Notes: EdgeAX 5GHz Radio
Modular Type: Limited Single Modular

<u>Grant Notes</u>	<u>FCC Rule Parts</u>	<u>Frequency Range (MHz)</u>	<u>Output Watts</u>	<u>Frequency Tolerance</u>	<u>Emission Designator</u>
MO	15E	5180.0 - 5240.0	0.08035		
MO	15E	5190.0 - 5230.0	0.09886		
MO	15E	5210.0 - 5210.0	0.09528		
MO	15E	5745.0 - 5825.0	0.07178		
MO	15E	5755.0 - 5795.0	0.06295		
MO	15E	5775.0 - 5775.0	0.05821		

Limited Modular Approval. This modular transmitter is only approved for use by the grantee in its own products and not intended for sale to third parties. This module is limited, only the grantee to file a Class II or Class II permissive change for each new host configuration per test plan defined in the module integration instructions. Output power listed is conducted power. Professional installation is required. Device operates with specific antennas in MIMO configurations as described in this filing. The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 1.8 m from all persons and not be co-located with any other transmitters except in accordance with FCC multi-transmitter product procedures. The installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance. This device has 20 MHz, 40 MHz and 80 MHz bandwidth modes.

MO: This Multiple Input Multiple Output (MIMO) device was evaluated for multiple transmitted signals as indicated in the filing.

CANADA - Certification

B

Given below are the USA certification details for the following products:

- SX3-1023C

TECHNICAL ACCEPTANCE CERTIFICATE
 CERTIFICAT D'ACCEPTABILITÉ TECHNIQUE


CERTIFICATE NO.: No. DE CERTIFICATION:	IC: 1856A-MEGA2	MARKETING NAME (PMN): NOM DE MARQUE DU PRODUIT (NMP):	Stratum X1, Stratum X3
CERTIFICATE TYPE: TYPE DE CERTIFICATION:	New Family Certification	HARDWARE VERSION (HVIN): VERSION DU MATÉRIEL (NIVM):	Megabit 5 single, Megabit 5 multi
TYPE OF EQUIPMENT : GENRE DE MATÉRIEL	Other	FIRMWARE VERSION (FVIN): VERSION LOGICIEL (NIVL):	Openwrt Chaos Calmer
ISSUED TO: DÉLIVRÉ À:	Proxim Wireless Corporation 2114 Ringwood Ave, San Jose, CA 95131, United States Of America		
TESTED BY: TESTÉ À:	TÜV RHEINLAND (INDIA) PVT. LTD. 27/B, 2nd Cross, Electronics, City Phase 1, Bangalore 560 100, India	Company Number: NUMERO DE COMPAGNIE:	27711
CONTACT: CONTACT:	B.R. Guruprasad Tel.: N/A	Email: Fax:	guruprasad.br@ind.tuv.com N/A
Frequency Range Low High MHz	RF Power Conducted Watt	Emission Designator (TRC-43 e.g.- 150KP1D)	Specification Standard RSS No. & Issue No.
2402 2480	0.0027	1M03F1D	RSS-247, Issue 3
-- --	--	--	--

ANTENNA TYPE & GAIN: Chip Antenna with 1.5 dBi (Max.)

Certification of equipment means only that the equipment has met the requirements of the above-noted specification. Licence applications, where applicable to use certified equipment, are acted on accordingly by the ISED issuing office and will depend on the existing radio environment, service and location of operation. This certificate is issued on condition that the holder complies and will continue to comply with the requirements and procedures issued by ISED. The equipment for which this certificate is issued shall not be manufactured, imported, distributed, leased, offered for sale or sold unless the equipment complies with the applicable technical specifications and procedures issued by ISED.

La certification du matériel signifie seulement que le matériel a satisfait aux exigences de la norme indiquée ci-dessus. Les demandes de licences nécessaires pour l'utilisation du matériel certifié sont traitées en conséquence par le bureau de délivrance d'ISED et dépendent des conditions radio ambiantes, du service et de l'emplacement d'exploitation. Le présent certificat est délivré à la condition que le titulaire satisfasse et continue de satisfaire aux exigences et aux procédures d'ISED. Le matériel à l'égard duquel le présent certificat est délivré ne doit pas être fabriqué, importé, distribué, loué, mis en vente ou vendu à moins d'être conforme aux procédures et aux spécifications techniques applicables publiées par ISED.

I hereby attest that the subject equipment was tested and found in compliance with the above-noted specification.

J'atteste, par la présente, que le matériel a fait l'objet d'essai et a été jugé conforme à la spécification ci-dessus.

Certifier: Sam Lin
Date: January 27, 2025
Signature:
Title: Certifier

TÜV Rheinland of North America Inc., 1279 Quarry Ln., Suite A, Pleasanton, CA 94566 USA
 Tel: (925) 249-9123 Fax: (925) 249-9124
 Product Approval Certificate
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MS-0044716

Revision 5

TECHNICAL ACCEPTANCE CERTIFICATE

CERTIFICAT D'ACCEPTABILITÉ TECHNIQUE



CERTIFICATE NO.: No. DE CERTIFICATION:	IC: 1856A-MEGA5	MARKETING NAME (PMN): NOM DE MARQUE DU PRODUIT (NMP):	EdgeAX5
CERTIFICATE TYPE: TYPE DE CERTIFICATION:	Single New Model Limited Modular Approval	HARDWARE VERSION (HVIN): VERSION DU MATÉRIEL (NIVM):	Megabit 5 dual
TYPE OF EQUIPMENT : GENRE DE MATÉRIEL	Other	FIRMWARE VERSION (FVIN): VERSION LOGICIEL (NIVL):	QRCT4-GUI Program
ISSUED TO: DÉLIVRÉ A:	Proxim Wireless Corporation 2114 Ringwood Ave, San Jose, CA 95131, United States Of America		
TESTED BY: TESTÉ A:	TÜV RHEINLAND (INDIA) PVT. LTD.	Company Number: NUMÉRO DE COMPAGNIE:	27711
	27/B, 2nd Cross, Electronics, City Phase 1, Bangalore 560 100, India		
CONTACT: CONTACT:	B.R. Guruprasad Tel.: N/A	Email: Fax:	guruprasad.br@ind.tuv.com N/A

Frequency Range Low High MHz	RF Power Conducted Watt	Emission Designator (TRC-43 e.g.- 150KP1D)	Specification Standard RSS No. & Issue No.
5745 5825	0.07178	19M1D1D	RSS-247, Issue 3
5755 5795	0.06295	38M0D1D	RSS-247, Issue 3
5775 5775	0.05821	76M9D1D	RSS-247, Issue 3
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ANTENNA TYPE & GAIN: Panel Antenna with 28 dBi (Max.), Omni Directional Antenna with 12 dBi (Max.), Sector Antenna with 21 dBi (Max.), Dish Antenna with 35 dBi (Max.), Integrated Panel Antenna with 23 dBi (Max.), Integrated Panel Antenna with 15 dBi (Max.)

This modular is only approved for use by the grantee in its own host product, not intended for sale to the third parties. Test was performed with the specified host equipment.

HMN are Stratum X3 and Stratum X1

Certification of equipment means only that the equipment has met the requirements of the above-noted specification. Licence applications, where applicable to use certified equipment, are acted on accordingly by the ISED issuing office and will depend on the existing radio environment, service and location of operation. This certificate is issued on condition that the holder complies and will continue to comply with the requirements and procedures issued by ISED. The equipment for which this certificate is issued shall not be manufactured, imported, distributed, leased, offered for sale or sold unless the equipment complies with the applicable technical specifications and procedures issued by ISED.

La certification du matériel signifie seulement que le matériel a satisfait aux exigences de la norme indiquée ci-dessus. Les demandes de licences nécessaires pour l'utilisation du matériel certifié sont traitées en conséquence par le bureau de délivrance d'ISDE et dépendent des conditions radio ambiantes, du service et de l'emplacement d'exploitation. Le présent certificat est délivré à la condition que le titulaire satisfasse et continue de satisfaire aux exigences et aux procédures d'ISDE. Le matériel à l'égard duquel le présent certificat est délivré ne doit pas être fabriqué, importé, distribué, loué, mis en vente ou vendu à moins d'être conforme aux procédures et aux spécifications techniques applicables publiées par ISDE.

I hereby attest that the subject equipment was tested and found in compliance with the above-noted specification.

J'atteste, par la présente, que le matériel a fait l'objet d'essai et a été jugé conforme à la spécification ci-dessus.

Certifier: Sam Lin

Date: January 27, 2025

Signature:

Title: Certifier

TÜV Rheinland of North America Inc., 1279 Quarry Ln., Suite A, Pleasanton, CA 94566 USA
Tel: (925) 249-9123 Fax: (925) 249-9124

MS-0044716

Product Approval Certificate
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Revision 5

ETSI - Certification

Given below are the products with the ETSI Certification:

- SX1-1023C

CERTIFICATE

of Conformity

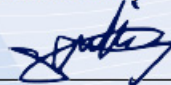
Registration No.: AK 50661795 0001
Report No.: IN254TU8 001
Holder: Proxim Wireless Corporation
2114 Ringwood Avenue,
San Jose, CA 95131
USA
Product: Radio Equipment
(Stratum™ X1 & Stratum™ X3)

Type designation listed on the next page

The certificate of conformity refers to the above-mentioned product. This is to certify that the specimen is in conformity with the assessment requirement mentioned on the next page. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity.

Date: 2025-01-13

Certification Body



Sam Lin



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TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

www.tuv.com

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Precisely Right.

CERTIFICATE

of Conformity

Registration No.: AK 50661795 0001

Product: Radio Equipment
(Stratum™ X1 & Stratum™ X3)

Tested according to: EN 301893 V 2.1.1:2017
EN 300328 V 2.2.2:2019
EN 302502 V 2.1.1:2017
EN 303413 V1.2.1:2021
EN IEC 62311:2020

Identification: Type Designation
SX3-1020A-WD SX1-1023A-WD SX3-1021A-WD
Remark:
Refer to test report IN254TU8 001 for details.



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TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

www.tuv.com

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Page 2 of 2



Declaration of Conformity

Proxim Wireless Corporation
 2114 Ringwood Ave, San Jose, CA 95131
 United States of America
 Tel: 408 383 760 Fax: 408 383 7680
 Email: jalexandre@proxim.com

January 13th, 2025

We, Proxim Wireless Corporation, hereby declare that the products:

Stratum X1 Series	SX1-1023C-WD
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Are in conformity with the following standards and Directives:

EMC/EMI	EN 301 489-1 v2.2.3, EN 301 489-17 v3.2.6, EN 301-489-19 v2.2.1 EN 55032:2015+A1:2020, EN 55035:2017+A11:2020 EN IEC 61000-3-2:2019+A1:2021, EN 61000-3-3:2013+A2:2021
Safety	EN IEC 62368-1:2020+A11:2020
SAR	EN 62311:2020
5 GHz Radio	EN 301 893 v2.1.1, EN 302 502 v2.1.1
Bluetooth	EN 300 328 v2.2.2
GNSS	EN 303 413 v1.2.1
Directives	European Radio Equipment Directive (2014/53/EU), Low Voltage Directive (2014/35/EU), Electromagnetic Compatibility (2014/30/EU)

The following types of antennas with the listed maximum gain may be used with the devices, when device output power is properly adjusted to ensure of EIRP compliance with the local regulation.

Antenna Type	Maximum Gain (dBi)
5GHz Omni	12 dBi
5GHz Integrated Panel	15 dBi
5GHz Panel	28 dBi
5GHz Sector	21 dBi
2.4GHz PCB (Bluetooth)	1.5 dBi

Jérôme Alexandre
 Director of Product Marketing

UK - Certification

Given below are the products with the authorization to use UL Mark:

- SX1-1023C

CB - Test Certificate



Given below is the CB Test certification for the following products:

- SX1-1023C

		Ref. Certif. No. JPTUV-167227
IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME		
CB TEST CERTIFICATE		
Product	Stratum X1 (Wireless Ethernet Devices)	
Name and address of the applicant	Proxim Wireless Corporation 2114 Ringwood Avenue, San Jose, CA 95131 USA	
Name and address of the manufacturer	Proxim Wireless Corporation 2114 Ringwood Avenue, San Jose, CA 95131 USA	
Name and address of the factory	Proxim Wireless Corporation 2114 Ringwood Avenue, San Jose, CA 95131 USA	
<i>Note: When more than one factory, please report on page 2</i>		
Ratings and principal characteristics	Input: 56Vdc 0.536A - via Ethernet Port	
Trademark / Brand (if any)	Stratum™	
Customer's Testing Facility (CTF) Stage used	N/A	
Model / Type Ref.	SX1-UUVWY-ZZ (UU=10 or 20, V=2 or 4, W=0-9, Y=A or B or C, ZZ can be 2 alphabets)	
Additional information (if necessary may also be reported on page 2)	For model differences, refer to the test report.	
A sample of the product was tested and found to be in conformity with	IEC 62368-1:2018 See Test Report for National Differences	
As shown in the Test Report Ref. No. which forms part of this Certificate	IN24K1T4 001	
This CB Test Certificate is issued by the National Certification Body		
 TÜVRheinland®		TÜV Rheinland Japan Ltd. 4-25-2 Kita-Yamata, Tsuzuki-ku Yokohama 224-0021, Japan Mail: info@jpn.tuv.com
Date:	2024-11-28	Signature:  Ramble Xie

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Disclaimer: This is an electronically released document. The authenticity can be verified on the IECCE Website "http://certificates.iecee.org" (1.30 / 0)