

Regulatory Compliance Addendum for the Multi-Mode Wireless LAN Unit (WLU-2100) 822-2210-001

CPN 963-4891-001 Rev -

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Revision History

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-001	-	10-23-2006	Senthilkumar Rajagopal	Initial Release

1 Introduction

The Rockwell Collins Wireless LAN Unit (WLU-2100, 822-2210-001) is capable of operating in the 2.4000-2.4835 GHz frequency range. To comply with the numerous different Regulatory bodies around the world, the following information is required to be included with the Wireless LAN Unit to enable the device to be installed and operated in a manner compliant with the different regulatory requirements around the world.

Due to the frequent regulatory changes which occur within the telecommunications industry, this document will require periodic maintenance. The information in this document is valid on the date it is published.

2 Country Allowability

NOTICE: It is the policy and/or law of certain countries that wireless spread spectrum transmission in the 2.4 band may not be accomplished inside such countries (including their airspace) (Non-Allowing Countries). In such instances, the user of the WLU Product procured hereby, may not be allowed to use such Product while in a Non-Allowing Country. It is incumbent on the user of the WLU Product to identify and comply with the laws of the Non-Allowing Countries. SELLER SHALL NOT BE RESPONSIBLE FOR THE CONSEQUENCES OF USE OF ITS WLU PRODUCT WHERE SUCH USE IS PROHIBITED.

3 Declarations

- a. Changes or modifications made to the WLU-2100 which are not expressly approved by Rockwell Collins could void the user's authority to operate the equipment.
- b. This device complies with Part 15 rules. Operation is subject to the following two conditions:
 - i) This device may not cause harmful interference, and
 - ii) This device must accept any interference received, including interference that may cause undesired operation.
- d. This device has 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.
- e. Cet appareil numérique de la classe A respecte les exigences du Règlement sur le matériel brouilleur du Canada.
- f. The WLU-2100 has been found to be compliant to the requirements set forth in CFR 47 Sections 2.1091, and 15.247 (b) (4) addressing RF Exposure from radio frequency devices as defined in Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields. The equipment should be installed more than 20 cm (7.9 in.) from your body or nearby persons. The access point must be installed to maintain a minimum 20 cm (7.9 in.) co-located separation distance from other FCC approved indoor/outdoor antennas used with the WLU-2100. Any antennas or transmitters not approved by the FCC cannot be co-located with the WLU-2100.
- g. This device complies with ETSI EN 300 328 V 1.6.1.
- h. Caution: Exposure to Radio Frequency radiation. To conform to FCC RF exposure requirements this device shall be used in accordance with the operating conditions and instructions listed in the Installation Drawing 983-8163-050.
- i. The WLU-2100 contains a Cisco Aironet AP1242AG-A-K9 WLAN product. A User's Guide for the Cisco Aironet AP1242 may be downloaded from: http://www.cisco.com/en/US/products/hw/wireless/tsd_products_support_category_home.html. Note that the version of Cisco IOS embedded within the WLU-2100 is configuration-controlled by Rockwell Collins Firmware Configuration Index Document 963-4868-001. Future versions of the Cisco User's Guide could

discuss features and functionality not present in the version of IOS within the WLU-2100.

- j. The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Health Canada's web site at www.hc-sc.gc.ca/rpb. (RSS-102 Issue 2 November 2005)
- k. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (EIRP) is not more than that permitted for successful communication. (RSS-Gen Issue 1 September 2005)
- l. This device has been designed to operate with the antennas listed below, and having a maximum gain of +8dBi. Antennas not included in this list or having a gain greater than +8dBi are strictly prohibited for use with this device. The required antenna impedance is 50 ohms." (RSS-Gen Issue 1 September 2005)

Antenna Equipment Type	Part Number	Useage
PMAA-2000	822-1532-001	CWLU
MAA-2000	822-1531-001	TWLU

- m. The FCC with its action in ET Docket 96-8 has adopted a safety standard for human exposure to radio frequency (RF) electromagnetic energy emitted by FCC certified equipment. When used with approved Rockwell Collins antennas, the WLU-2100 product meets the uncontrolled environmental limits found in OET-65 and ANSI C95.1, 1991. Proper installation of the WLU-2100 and its antennas according to the instructions found in the Installation Drawing 983-8163-050 will result in user exposure that is substantially below the FCC recommended limits.
- n. This equipment is in compliance with the essential requirements and other relevant provisions of R&TTE Directive 1999/5/EC. This declaration is only valid for configurations (combinations of software, firmware, and hardware) provided and supported by Rockwell Collins. The use of software or firmware not provided and supported by Rockwell Collins may result in the equipment no longer being compliant with the regulatory requirements.
- o. The 2.4 GHz module inside the WLU-2100 is certified independently by the Telecommunications Regulatory Authority for each country or group of countries. Table 1 details the legal configurations for each approved country, based upon regulatory data acquired by Rockwell Collins, Inc. Operation of the WLU-2100 in any country not specifically listed is prohibited.

Table 1 WLU-2100 2.4 GHz 802.11 b/g Authorized Channels vs. Country

		CWLU & TWLU (except for Belgium TWLU)				
		United States ¹	EMEA ²	Canada	Singapore	France
Frequency Band (GHz) →		2.400 - 2.4835	2.400 - 2.4835	2.400 - 2.4835	2.400 - 2.4835	2.400 - 2.4835
CH #	Center Freq					
1	2.412	X	X	X	X	X
2	2.417	X	X	X	X	X
3	2.422	X	X	X	X	X
4	2.427	X	X	X	X	X
5	2.432	X	X	X	X	X
6	2.437	X	X	X	X	X
7	2.442	X	X	X	X	X
8	2.447	X	X	X	X	X
9	2.452	X	X	X	X	X
10	2.457	X	X	X	X	X
11	2.462	X	X	X	X	X
12	2.467	WLU-2100 is not capable of operation on Channels 12,13, or 14.				
13	2.472					
14	2.484					

Note: Channels with a bold **X** are non-overlapping in frequency. For installations with multiple WLU-2100s in close proximity to each other, each WLU-2100 should be configured on a separate non-overlapping channel which is legal for its Regulatory Domain. Wireless devices in close proximity to each other should not suffer mutual interference if they are operated on non-overlapping frequencies.

¹ United States (FCC) includes: Canada (CA), Kazakhstan (KZ), Philippines (PH), Russian Federation (RU), and United States (US).

² EMEA includes: Austria (AT), Belgium (BE: indoors), Cyprus (CY), Czech Republic (CZ), Denmark (DK), Estonia (EE), Finland (FI), France (FR), Germany (DE), Greece (GR), Hungary (HU), Ireland (IE), Italy (IT), Latvia (LV), Lithuania (LT), Luxembourg (LU), Malta (MT), Netherlands (NL), Norway (NO), Poland (PL), Portugal (PT), Slovakia (SK), Slovenia (SI), Spain (ES), Sweden (SE), Switzerland (CH), United Kingdom (UK).