



Nokia Solutions and Networks

Date: February 06, 2018

Federal Communications Commission Authorization and Evaluation Division

FCC ID: **2AD8UFZCWM2B1**

ATTESTATION

Product: AC220m Wi-Fi module ID US

Model: WM2B-AC220m

The module is a non-consumer product, certified and housed in a sealed enclosure in the host product, and is only accessible by trained /approved personnel and must be professionally installed. Unique (non-standard) antenna connectors are designed with the module. Approved antennas are cited in the test reports and in the user documentation. Currently only Professional Installers have access to these manuals. Professional installation does not permit use of any antenna other than what is approved with the transmitter as there are no external antenna connectors on the host product itself. The approved antennas used with the module are factory installed internally and are not accessible to the end user.

We **Nokia Solutions and Networks** hereby declare that requirements of KDB 353028 D01 Antennas Part 15 Transmitters v01 have been met and shown on the following questions. Further we declare that the info listed below are correct and represent the product in consideration under this filling.

1. Professional installation must be justified.

[Description: The device is an indoor access point and requires specially trained professionals to properly configure and install the product. For additional details, please refer to user manual exhibit.](#)

2. Professional installation does not permit use of any antenna with the transmitter; the permitted types of antenna specified as below.

Description: The antenna(s) listed below have been tested with the AP in compliance with FCC Rule Part 15 requirements, more details please refer to test reports.

Antenna Mfg and Type	Frequency Band (MHz)	Tx Paths	Per Chain Max Antenna Gain (dBi)		Beam Forming Directional Gain (dBi)		CDD Directional Gain (dBi)	
			Ant 0	Ant 1	For Power	For PSD	For Power	For PSD
Nokia PIFA	2412 ~2462	2	4.27	5.17	7.74	7.74	5.17	8.18
	5150 ~ 5250	2	5.10	6.03	8.59	8.59	6.03	9.04
	5725 ~ 5850	2	5.73	5.18	8.47	8.47	5.73	8.74

3. The applicant should address the following items when justifying professional installation.

- (1) To qualify for professional installation, please explain why the hardware is not readily available to average consumer.

Description: The end product is a non-consumer product, certified and housed in a sealed enclosure, and is only accessible by trained /approved maintenance personnel and must be professionally installed.

- (2) Marketing – Applicant must ensure device cannot be sold via retail to the general public or by mail order.

Description: This product and will not be sold directly to the general public through any retail store or outlets. It will be sold to authorized carrier operators or installers only.

- (3) Applicant must show that device intended use is not for consumers and general public.

Description: Devices are for industrial/commercial use. This is clearly stated in the grant and in the user manuals.

(4) Explain what is unique, sophisticated, complex, or specialized about the equipment that REQUIRES it to be installed by a professional installer?

Description: Due to this device is indoor access point and installation must be to dedicated Nokia controllers in order to operate, therefore professional installation and configuration is required for this device. Refer to Software Operating Description for additional details.

4. Other professional installation requirements.

(1) Installation must be controlled.

Description: The product will be distributed through Nokia controlled distribution channel(s) which have specially trained professionals to install this product.

(2) Installed by licensed professionals.

Description: The product will be distributed through Nokia controlled distribution channel(s) which have specially trained professionals to install this product.

(3) Installation requires special training.

Description: The product requires special programming and must interface with dedicated Nokia controllers in order to operate. Professional installers are required to perform configuration and field strength measurements when installing the product.

Sincerely,



(Signature)

Terry Schwenk

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