



Date: May 13, 2016

UNII DEVICE SECURITY INFORMATION

Element Materials Technology.
 100 Frobisher Business Park
 Malvern
 Worcestershire
 WR14 1BX
 UK

RE: Certification Application
 FCC ID: NQ8ND7507

To Whom It May Concern:

We, Pace Micro Technology plc hereby declare that the requirements of KDB594280 D02 U-NII Device Security v01r02 have been met and shown on the following questions.

SOFTWARE SECURITY DESCRIPTION	
General Description	1. Describe how any software/firmware update will be obtained, downloaded, and installed. Software that is accessed through manufacturer’s website or device’s management system, must describe the different levels of security.
	Answer: The user can update software/firmware from PACE/Layer3 update center.
	2. Describe all the radio frequency parameters that are modified by any software/firmware without any hardware changes. Are these parameters in some way limited, such that, it will not exceed the authorized parameters?
	Answer: All the radio frequency parameters are Transmit power, operating channel, modulation type, Only authorized parameters are available and can be set in software.
	3. Describe in detail the authentication protocols that are in place to ensure that the source of the



	<p>software/firmware is legitimate. Describe in detail how the software is protected against modification</p> <p>Answer: The SW image has a digital signature associated with it. Any modifications to the SW image will cause the digital signature verification to fail.</p> <p>4. Describe in detail the verification protocols in place to ensure that installed software/firmware is legitimate.</p> <p>Answer: Digital signature verification is performed on both SW upgrade and SW load</p> <p>5. Describe in detail any encryption methods used to support the use of legitimate software/firmware.</p> <p>Answer: Digital signature utilizes asymmetric cryptography.</p> <p>6. For a device that can be configured as a master and client (with active or passive scanning), explain how the device ensures compliance for each mode? In particular if the device acts as master in some band of operation and client in another; how is compliance ensured in each band of operation?</p>
	<p>Answer: Only authorized parameters are available and can be set in software.</p>
Third-Party Access Control	<p>7. Explain if any third parties have the capability to operate a US sold device on any other regulatory domain, frequencies, or in any manner that is in violation of the certification.</p> <p>Answer: Not aware of any such method/ capabilities today for 3rd parties</p>
	<p>8. What prevents third parties from loading non-US versions of the software/firmware on the device? Describe in detail how the device is protected from “flashing” and the installation of third-party firmware such as DD-WRT.</p> <p>Answer: The devices are HW configured to only accept US SW loads. Digital signature verification is performed on both SW upgrade and SW load.</p>
	<p>9. For Certified Transmitter modular devices, describe how the module grantee ensures that hosts manufactures fully comply with these software security requirements for U-NII devices. If the module is controlled through driver software loaded in the host, describe how the drivers are controlled and managed such that the modular transmitter parameters are not modified outside the grant of authorization.</p>
	<p>Answer:</p>
	<p>Answer:</p>



	All radio parameters are limited by SW settings pre-determine by the FCC radio regulatory approval process . Digital signature verification is performed on both SW upgrade and SW load.
SOFTWARE CONFIGURATION DESCRIPTION	
USER CONFIGURATION GUIDE	10. To whom is the UI accessible? (Professional installer, end user, other.)
	Answer: Professional installer and the end user.
	a. What parameters are viewable to the professional installer/end-user?
	Answer: The Professional Installer can only access which networks to join and related passwords for those networks. The User Interface does not allow access to those parameters (power, frequency of operation, country code settings) that may impact the compliance of the device
	b. What parameters are accessible or modifiable by the professional installer?
	Answer: The end user can only access which networks to join and related passwords for those networks. The User Interface does not allow access to those parameters (power, frequency of operation, country code settings) that may impact the compliance of the device
	i. Are the parameters in some way limited, so that the installers will not enter parameters that exceed those authorized?
	Answer: Yes, all radio parameters are limited by SW settings pre-determine by the FCC radio regulatory approval process. These parameters are in a drop-down list in the GUI and cannot to outside of these approved values.
ii. What controls exist that the user cannot operate the device outside its authorization in the U.S.?	
Answer:	



	<p>The radios are configured at manufacturing to be US only. These loads control the limits of the operation of the radio.</p>
	<p>c. What parameters are accessible or modifiable to by the end-user?</p>
	<p>Answer:</p>
	<p>The end user has no access to parameter settings.</p>
	<p>i. Are the parameters in some way limited, so that the installers will not enter parameters that exceed those authorized?</p>
	<p>Answer: Yes, all radio parameters are limited by SW settings pre-determine by the FCC radio regulatory approval process. These parameters are in a drop-down list in the GUI and cannot to outside of these approved values.</p>
	<p>ii. What controls exist that the user cannot operate the device outside its authorization in the U.S.?</p>
	<p>Answer: The radios are configured at manufacturing to be US only. These loads control the limits of the operation of the radio.</p>
	<p>d. Is the country code factory set? Can it be changed in the UI?</p>
	<p>Answer: Yes, the country code is factory set. It cannot be changed in the UI.</p>
	<p>i. If so, what controls exist to ensure that the device can only operate within its authorization in the U.S.?</p>
	<p>Answer: The radios are configured at manufacturing to be US only and only ND7507 US SW loads can be installed.</p>
	<p>e. What are the default parameters when the device is restarted?</p>
	<p>Answer: The device goes to a default (approval) Tx channel and power level based on factory country setting.</p>
	<p>11. Can the radio be configured in bridge or mesh mode? If yes, an attestation may be required. Further information is available in KDB Publication 905462 D02.</p>
	<p>Answer: Bridge or Mesh mode is not supported.</p>
	<p>12. For a device that can be configured as a master and client (with active or passive scanning), if this is user configurable, describe what controls exist, within the</p>



	UI, to ensure compliance for each mode. If the device acts as a master in some bands and client in others, how is this configured to ensure compliance?
	Answer: Client is not supported for this device.
	13. For a device that can be configured as different types of access points, such as point-to-point or point-to-multipoint, and use different types of antennas, describe what controls exist to ensure compliance with applicable limits and the proper antenna is used for each mode of operation. (See Section 15.407(a))
	Answer: NA

Yours Sincerely,

Pace plc

Company Officer: Mr Joseph Ryan, Corporate Approvals Manager

Telephone Number: +44 (0)1274 537287

Email: joseph.ryan@pace.com



ISO 9001:2008 – FM 35904
ISO 14001:2004 – EMS 60224
ISO 27001:2005 – IS 89282

BRINGING TECHNOLOGY HOME
www.pace.com

Registered in England No. 1672847