

# Pismo Labs Technology Limited

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Date: 2018-09-26

FCC ID: U8G-P817

## Software Operational Description

We, Pismo Labs Technology Limited hereby declare that requirements of KDB594280 have been met and shown on the following question.

1. Describe how any software/firmware update will be obtained, downloaded, and installed.

*Description:*

1. Firmware can be download at <http://www.peplink.com/support/downloads/> and upgrade via web UI interface
  2. Firmware can be pushed onto the managed devices from InControl2 at [incontrol2.peplink.com](http://incontrol2.peplink.com) to perform upgrade automatically
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?

*Description:*

1. Channel and channel bandwidth are defined options for users to select
3. Are there any authentication protocols in place to ensure that the source of the software/firmware is legitimate? If so, describe in details; if not, explain how the software is secured from modification.

*Description:*

1. Firmware are encrypted with integrity check to ensure the validity of its content
  2. Without passing the firmware integrity check, no upgrade will be performed
4. Are there any verification protocols in place to ensure that the software/firmware is legitimate? If so, describe in details.

*Description:*

1. Firmware are protected by encryption and its checksum for integrity check
  2. Without passing the firmware integrity check, no upgrade will be performed
5. Describe, if any, encryption methods used.

*Description:*

- SSL / TKIP / AES
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?

*Description:*

- The device can be operated as master and client.
- If the MAX Transit Quad is used as a master / wireless access point, it can communicate with one PC or one cell phone over 2.4G in one channel, and can communicate with another PC or another smartphone over 5G in another channel.
- If the MAX Transit Quad is used as a client and works/connect after another wireless access point to the internet, e.g. a Aruba is already used as a Wireless access point, and the WAP delivers communication in channel 6, then our MAX Transit Quad can only operate in the same channel 6.

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7. How are unauthorized software/firmware changes prevented?

*Description:*

1. Firmware are protected by encryption and its checksum for integrity check
2. Without passing the firmware integrity check, no upgrade will be performed

8. Is it possible for third parties to load device drivers that could modify the RF parameters, country of operation or other parameters which impact device compliance? If so, describe procedures to ensure that only approved drivers are loaded.

*Description:*

It is not possible

9. 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.

*Description:*

It is not possible

10. What prevents third parties from loading non-US versions of the software/firmware on the device?

*Description:*

It is not possible

11. For modular devices, describe how authentication is achieved when used with different hosts.

*Description:*

It is not modular device

12. To whom is the UI accessible? (Professional installer, end user, other...)

a) What parameters are viewable to the professional installer/end-user?

*Description:*

Both professional installer and end user can modify below parameters:  
Mode, Channel Bandwidth, Primary Channel, Channel, Transmit Power, Beacon Interval, Legacy Rate Sets, SSID, Security Type, but only within ROM pre-set authorized range.

b) What parameters are accessible or modifiable to the professional installer?

*Description:*

Same as above.

i) Are the parameters in some way limited, so that the installers will not enter parameters that exceed those authorized?

*Description:*

All above parameters have pre-defined range according to the certification test result. They are stored in the ROM and shown in UI, which not allow user to adjust beyond the pre-set value.

ii) What controls exist that the user cannot operate the device outside its authorization in the U.S.?

*Description:*

All parameters (RF, Frequencies and etc.) indicating different countries are permanent settings in the ROM. So if a device is a product for US, it cannot be changed for another region.

c) What configuration options are available to the end-user?

*Description:*

Mode, Channel Bandwidth, Primary Channel, Channel, Transmit Power, Beacon Interval, Legacy Rate Sets, SSID, Security Type, but only within ROM pre-set authorized range.

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i) Are the parameters in some way limited, so that the installers will not enter parameters that exceed those authorized?

*Description:*

All above parameters have pre-defined range according to the certification test result. They are stored in the ROM and shown in UI, which not allow user to adjust beyond the pre-set value.

ii) What controls exist that the user cannot operate the device outside its authorization in the U.S.?

*Description:*

All parameters (RF, Frequencies and etc.) indicating different countries are permanent settings in the ROM. So if a device is a product for US, it cannot be changed for another region.

d) Is the country code factory set? Can it be changed in the UI?

*Description:*

It is factory set and cannot be changed in the UI.

i) If so, what controls exist to ensure that the device can only operate within its authorization in the U.S.?

*Description:*

All parameters (RF, Frequencies and etc.) indicating different countries are permanent settings in the ROM. So if a device is a product for US, it cannot be changed for another region.

e) What are the default parameters when the device is restarted?

*Description:*

The parameters that user latest saved in the UI.

13. 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.

*Description:*

It does not support mesh or bridge to connect another AP.

14. 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 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?

*Description:*

User can only change channel for GUI, and GUI has limited the selectable channel, so user has no way to break compliance on our device.

15. 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))

*Description:*

User can only change channel for GUI, and GUI has limited the selectable channel, so user has no way to break compliance on our device.

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If you should have any question(s) regarding this declaration, please don't hesitate to contact us.  
Thank you!



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