Attestation for 24hr check

This is an attestation for 24hr check of the Access Point Product "EAP787" (the "Product") of TP-Link Systems Inc. ("tp-link") to determine geographic coordinates and location uncertainty, for 6GHz Standard Power and Automated Frequency Coordination (AFC) support. The FCCID of the "Product" is 2BH7FEAP787.

Section I describe attestations regarding a daily geographic location confirmation and a daily AFC confirmation will be performed according to the requirements in KDB 987594 D01 U-NII 6GHz General Requirements v03 clause 11.2.

Corporation： TP-Link Systems Inc.

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Catalogue

Abbreviations and acronyms

Definition	Acronyms
Automated Frequency Coordination	AFC
Access Point	AP
Federal Communications Commission	FCC
Low Power Indoor	LPI
Standard Power	SP
Low Power Indoor Access Point (6 GHz)	6ID
Standard Power Access Point (6 GHz)	6SD
Transport Layer Security	TLS
Basic Service Set	BSS
Media Access Control	MAC
Service Set Identifier	SSID

1. Periodically (Daily) AFC confirmation and power cycle operation

A daily AFC inquiry will be performed as required by the regulation. An AFC inquiry will be performed after any power cycle operation as illustrated by the steps in Figure 1.
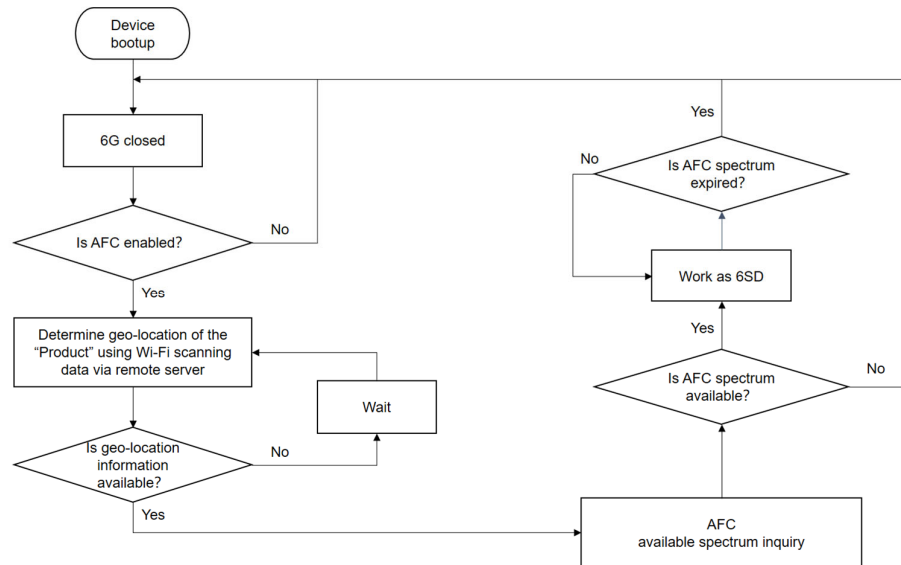

Figure 1 – Working flow diagram of the "Product" to perform AFC confirmation daily or after a power cycle

The behavior of the "Product" after a power cycle is described as following:

The product close the 6G band temporarily after power cycle. After it successfully determines the geo-location and requests available spectrum, it will work at SP mode as a 6SD access point. The "AFC Software" will continuously check whether the spectrum is expired and close the 6G band once the AFC response data expire or go to a new AFC execution cycle. The AFC spectrum response is valid for one day, which necessitates a daily AFC inquiry is performed.

1.1. Geo-location information gathering after power cycle

Once boot up after power down or reboot, the "Product" close the 6G band temporarily. It tries to get location info by the "Wi-Fi Positioning Server" and " Building Elevation Server" witch

are described in detail in Geolocation Justification Report, Chapter 1, via Wi-Fi scanning etc., comply with 47 CFR 15.407(k)(8)(ii) regulation. The geo-location information is stored on volatile storage memory and will lose when device shutdown or reboot. The "AFC Software" will use the obtained geo-location information to do an AFC inquiry for 6SD available spectrum from an FCC-approved AFC system.

1.2. Periodically AFC confirmation

A daily (per 24 hours) AFC inquiry will be performed as required by the 47 CFR 15.407(k)(8)(iv) regulation. The implementation mechanism is to create software timers, and the timers trigger retry to obtain AFC available frequencies and associated power levels, when the old AFC response expires or 24 hours is passed, and also, before the daily AFC inquiry, the "AFC Software" will redetermine the geo-location information by the "Wi-Fi Positioning Server" and " Building Elevation Server".

If the "AFC Software" fails to determine the geo-location or failed to contact with the AFC server, it will continue to operate in 6SD mode until 11:59 p.m. of the following day if a valid AFC spectrum is not available and then close the 6G band in compliance with the 47 CFR 15.407(k)(8)(i) and (iv) regulation.

1.3. Method of executing 24hr check

Every time when we recevice AFC query result from AFC System,we can know the expiration time from the result. As we introduced in Chapter 1.2,there is a timer in our AFC application,the timer will trigger to do a new AFC query after a "waiting time"(waiting time = expiration time – current time).And if there is no expiration time in the result or the waiting time is illegal(the waiting time is less than 0 or larger than 24-hour),the timer will trigger the query after 24 hours.