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Federal Communications Commission

Date: November 18, 2008

Attn: Andrew Leimer

Reference: FCC IDs SK6XN8, SK6XN12 and SK6XN16

Dear Mr. Leimer

The products referenced above are currently awaiting approval by the FCC and are subject to the FCC's internal evaluation of DFS functions. The three products are very similar to each other in terms of DFS performance and rf characteristics. You have already requested a sample of the SK6XN8 for the purposes of pre-grant DFS testing, so I wanted to let you know about the other two models to, hopefully, expedite their testing and streamline your test plan for the three devices.

The similarities and differences between the three radios are summarized in the two tables that accompany this letter. Please note that formal DFS testing was performed by Elliott Labs on the model XN16 and a limited number of tests were repeated on the model XN8 to verify that the detection threshold was not affected. All of this is detailed in the Elliott Test Report and in the cover letters for each of the applications.

Please advise if you need additional information or clarification on any of the details provided.

Yours sincerely,

Mark Briggs  
Staff Engineer (EMC)



DFS Similarities and Differences

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FCC ID	SK6XN8	SK6XN12	SK6XN16
Technology (e.g. ; 802.11x, frame based, MIMO, etc)	802.11a/n supporting 2x2 MIMO in the 5GHz bands using the internal antenna and 1x (single-stream) using an external antenna. MIMO modes support both 20MHz and 40Mhz channels. Legacy 802.11a modes only support a 20Mhz channel. The external antenna is the low gain antenna but only supports the 802.11a legacy mode (20MHz channel) with the external antenna.		
Differences in DFS functions	All three units use the same DFS algorithms for detection, CAC and non-occupancy		
Differences in hardware	The three models share the same main digital control board and the rf boards are the same. The differences are in the number of rf transceivers installed on each of the rf boards. There are four rf boards in each device, and each rf board can have up to 4 transceivers installed. For the XN8 only two transceivers are installed on each board. In the XN12 3 transceivers are installed and in the XN16 4 transceivers are installed. The XN8, therefore, has a total of 8 individual 802.11 transceivers, the XN12 has 12 transceivers and the XN16 has 16 transceivers. The transceivers use identical circuitry.		
Differences in software	The three models all use the same software, with only minor differences to account for the capabilities of the various transceivers connections to the internal antennas.		
Receiver	All three systems use the same rf transceivers.		
Other differences	None		
Transmit power	Max eirp 5250-5350725, per channel: 27.1dBm Max eirp 5470-5725, per channel: 27.0dBm		
Test Lab(s) – RF	Elliott Labs – preliminary tests on XN8 and XN16 showed no significant differences in the emissions or RF-related parameters therefore final measurements in test report are on one model.		
Test Lab(s)- DFS	Elliott Labs – complete test of XN16 and limited re-test on the XN8 to verify that de-population of the board did not affect threshold and confirm the algorithms were working correctly.		