

## Non-Conformities FCC ID: EO9CCU100T (CKC CS Ref # E10-000099-01)

The items listed below represent requests for information following review of this application for certification under United States (FCC) regulations. Further question may arise pending review of responses to these items.

<b>OK</b>	<b>ID</b>	<b>#</b>	<b>Non-Conformity or Comment</b>	<b>Submitted Response</b>	<b>Respondent / Date of Response</b>
X	TL	1	<p>The provided test report 90820-8.pdf is titled " FCC Part 15 subpart B Section 15.107 and 15.247 (FHSS) and RSS-210" However, 15.107 is missing from the data sheet, while 15.207 data sheets are resent.</p> <p>Please verify whether " FCC Part 15 subpart B Section 15.107" is a typo and provide a corrected test report.</p>	<p>Typo – fixed; sent back to report department.</p>	Jeff Gilbert – 10/21/2010
X	TL	2	<p>The test condition for spurious emission in the frequency range 30kHz- 30 MHz presented on 56 and page 58 of the test report 90820-8 are identical, please clarify whether this is a mistake.</p> <p>Please provide test report with revised test condition indicating emission profile of all modulation and intended frequency were evaluated.</p>	<p>The first data set was FM, the second was AM; all three modulations and all three frequencies were evaluated; only worst case reported. Report updated; sent back to report department.</p>	Jeff Gilbert – 10/21/2010
X	TL	3	<p>Page 55 of the test report 90820-8 and Page 51 of the test report 90820-7, the RBW used for measurement in the restricted band listed is 120kHz for emission below 100MHz and 100kHz .</p> <p>Please clarify whether radiated emission in the restricted band, falling within band 30kHz-30MHz, was measured with CISPR detector, with RBW set at 120kHz. Also please clarify whether restricted band emission above 1000MHz was measure with RBW of 100kHz.</p>	<p>Note removed; it is confusing. Below 1000 MHz, measurements were taken using a CISPR detector and the appropriate CISPR BW. Above 1000 MHz, peak measurements were taken using 1MHz/1MHz to satisfy 15.35 and average measurements were taken using the method proscribed in DA-00-705 and KDB 558074; 1 MHz / 10 Hz.</p>	Jeff Gilbert – 10/21/2010
X	C	4	<p>It is not clear how does the device with detachable antenna meets 15.203 requirement,</p> <p>Please provide a statemet to clarify compliance to 15.203 Antenna requirement.</p>	<p>the manual page 5 was updated to clearly state the installation must be done professional installers, therefore we do not need a "non-standard" connector.</p> <p>page 5: ! Important Proper installation of the</p>	holcomb;26oct10

				CCU/Repeater ensures trouble-free operation of the Itron Fixed Network system. The installation of both the collector and repeater must be done by professional installers.	
X	TL	5	<p>The AC voltage listed on Page 11 and page 14 of the test report 90820-8, page 10 and page 13 of the test report 90820-7 is 240V/60Hz. However the user manual stated operating voltage of 110/60 Hz in the installation procedure.</p> <p>Please clarify whether 240Vac/60Hz is the ONLY voltage of the public utility power line for which the device will be installed on. Please provide AC conducted data if the device also operate at 110Vac.60Hz.</p>	<p>Client stated that the device could operate at either 240/60 or 120/60. Max peak RF power and worst case AC line emissions were at 240VAC/60Hz so that was the data reported.</p> <p>Manual page 51 changed to 90VAC to 265VAC, 47Hz to 63Hz. CKC test report will have more</p>	Jeff Gilbert – 10/21/2010 holcomb;26oct10
X	TL	6	<p>The provided data on page 30 of the test report does not demonstrate on the average, the Hopping channel was occupied less than 0.4 sec in a 20 sec time frame.</p> <p>Please provide additional data showing the average number of time the hopping channel was occupied within 20 sec, multiply by the "channel on time" does not exceed 0.4 sec. Alternatively, additional statement with reference to the measure "channel on time" of Page 30 of the test report, explaining the algorithm that determines the pseudo random hop sequence does not allow transmission on the same hopping channel more than 0.4 second within 20 sec suffice to meet compliance.</p>	<p>The client declared that the maximum "on" time is 20 milliseconds. We measured 17.25 milliseconds. The client will have to provide technical data to explain how the algorithm that determines the pseudo-random hopping sequence does not allow transmission on the same hopping channel for more than 0.4 seconds within 20 sec period. <i>If</i> they use an algorithm that goes through the entire channel set before repeating any channel, then with a 20 ms transmission, it would be impossible to transmit on any one channel for more than 0.4 seconds in a 20 second period. But I don't know what they do.</p> <p>102210: EW Pending, spoke to report dept about the missing second paragraph of, P30 of 90820-8.</p>	Jeff Gilbert – 10/21/2010

				102510: EW, manufacturer declared timing statement added.	
X	C	7	Please clarify whether the input channel bandwidths matches the hopping channel bandwidths of their corresponding transmitters. ( Yes/ No)	Yes - THIS DEVICE IS OPERATED IN SYSTEMS THAT THE READING DEVICES, HAVE INPUT BANDWIDTHS THAT MATCH THIS DEVICE AND THAT STAY IN SYNCHRONIZATION. this was sent to Jeff to be included in the reports.	holcomb;26oct10
X	TL	8	MPE calculation is missing from the submittal package.  Please provide a MPE distance calculation to demonstrate combination of the maximum output power and the highest gain antenna satisfy the 20 cm RF exposure distance listed in the user manual.	11810: EW. Found MPE report 90820-13, 90820-14	
X	TL	9	114, 111, 108, 105, 102, 99 of the test report 90820-7, the highest frequency of measure is listed as 18GHz . Please clarify whether the emission was investigated up to the frequency range as specified in 15.3(a)(1) and please provide equipment list	Report department got the data, but the data was not put into the report; report department notified; will fix and issue new report.	Jeff Gilbert – 10/21/2010
X	TL	10	-6dB BW presented on Page 23, 24, 25 of the test report 90820-7. The RBW used is 1Mhz, however, per FCC document KDB 558074, " <i>Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100kHz.</i> "  Please provide revised test report with -6dB BW measured with RBW set at 100kHz, alternatively a statement to justify the accuracy of - 6dB BW measurement with RBW set at 1 MHz is acceptable.	This is an automated measurement in the spectrum analyzer. BWs are based on the power integrated over the OBW span; results will be the same if measured in 100 kHz or 1 MHz BW. Measurement was taken at the same time as RF power which was measured in a 1 MHz RBW and then integrated over 22 MHz; the same settings were used for both measurements.	Jeff Gilbert – 10/21/2010
X	TL	11	Test report 90820-7, It is not clear from the provided test condition which 802.11b or g was tested.  Please provide a revised test report with the signal mode identified in the test condition, so that the maximum recorded spurious emission of the signal can be identified and listed on the grant/certificate along	Results from 802.11b mode reported as this was worst case mode. Report amended - sent back to report department.	Jeff Gilbert – 10/21/2010

			with the signal type.		
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