

October 15, 2007

Chief, Authorizations Branch
Federal Communications Commission
7435 Oakland Mills Road
Columbia, MD 21046

Subject: Request for unlicensed Modular Transmitter Approval.

Reference: FCC 07-56A1 47 CFR 15.212

To Whom It May Concern:

Quanta Microsystems, Inc. hereby requests FCC Equipment Authorization as a Singular Modular Transmitter of the Quanta Microsystems, Inc. Model UM100 minicard, FCC ID: T5UUM100. Quanta Microsystems, Inc. intends to manufacture this device and market it under several brand names and brand I.D.s as a computer modular component. This letter addresses the information required by points one through eight of 47 CFR 15.212.

1. The modular transmitter must have its own RF shielding. Shielding necessary for normal operation is accomplished by a metal shield enclosure which attaches to the printed wiring board and encloses the RF circuitry, including the frequency-determining element.
2. The modular transmitter must have buffered modulation/data inputs. The QMI UM100 minicard receives data via the industry-standard USB 2.0 interface which is incorporated into the minicard interface. This USB interface is implemented within the I1480 integrated circuit as may be seen on sheet one of the schematic diagram included in the filing for FCC Equipment Authorization. The USB interface limits the data rate to those defined by the USB standard.
3. The modular transmitter must have its own power supply regulation. The QMI UM100 minicard receives power from the host system via the minicard interface. The +3.3V Volt source from the host system is used directly by the minicard module to power a +3.3V domain. The +3.3V source is also regulated on the module to produce two additional power domains required by the module circuitry; +1.3V and +1.2V. The power regulation topology may be seen on sheet five of the schematic diagram included in the filing for FCC Equipment Authorization.
4. The modular transmitter antenna must comply with the antenna and transmission system requirements of sections 15.203, 15.204(b) and 15.204(c). The antenna employed with the QMI UM100 is a Foxconn Model #MX3 or an Omron Model #HK2C. either antenna connects to the UM100 minicard via a type U.FL connector. The compliance test report contains data taken with each type demonstrating compliance with FCC requirements. The antenna and connecting cable will be installed permanently within the host system.

5. The modular transmitter must be tested in a stand-alone configuration. As described in section 2.6.3 of the test report included in the filing for FCC Equipment Authorization, the UM100 minicard plus antenna was tested external to the host system housing, a test fixture was used to provide power and the necessary USB data connection to the host system. The Um100 is designed with an industry standard minicard connector as its electrical and mechanical interface to the host system. This connector defines the deployment of the module which is intended to be directly connected to the host system.

6. The modular transmitter must be equipped with either a permanently affixed label or must be capable of electronically displaying its FCC identification number. The QMI UM100 minicard is intended to be placed within the host system enclosure unique to the brand I.D. under which it is being marketed. The prescribed label with the FCC Identifier will be applied to the outside of the housing. An example of the label which will be used is included in the filing for FCC Equipment Authorization.

7. The modular transmitter must comply with any specific rule or operating requirements applicable to the transmitter. Part 15.519 of the FCC rules and Regulations requires that a UWB transmitter shall transmit only when it is sending information to an associated receiver. That rules part also requires that the UWB intentional radiator shall cease transmission within 10 seconds unless it receives an acknowledgement from the associated receiver that its transmission is being received. An acknowledgment of reception must continue to be received by the UWB intentional radiator at least every 10 seconds or the UWB device must cease transmitting. This requirement is met by design and is implemented by the firmware encoded into the device.

8. The modular transmitter must comply with any applicable RF exposure requirements in its final configuration. There are no RF exposure requirements for hand-held UWB devices operating under subpart F of the FCC Rules and Regulations.

This letter and the information contained therein have been prepared by Alereon, Inc. on behalf of Quanta Microsystems, Inc. Alereon is acting as technical co-ordinator with QMI's appointed agent, TDK RF solutions, in preparing and submitting this application for Equipment Authorization.



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