



## AVNERA

### Letter of Attestation

April 15, 2008

Federal Communications Commission  
Authorization and Evaluation Division  
7435 Oakland Mills Road  
Columbia, Maryland 21046

Subject: Co-certification of additional product numbers under FCC ID V3CAVMD7F12A

To whom it may concern,

The purpose of this letter is to explain and justify the co-certification of additional devices under FCC ID V3CAVMD7F12A, in which the additional devices contain radios with emission characteristics identical to those measured under V3CAVMD7F12A, but differing only in their embedded firmware.

As described in the documentation for the certification application, Avnera's request under FCC ID V3CAVMD7F12A covers the testing and certification of the AVMD7212 module family, which modules are designed as the listener end of short range point-to-multi-point streaming audio transmission systems. As explained in the text and diagram below, however, the radio in the AVMD7212 family of modules is *identical* to that in a parallel family designated the AVMD7112, which latter modules are used as the listener end of single-point-to-single-point streaming audio systems.

The radios are identical in the two family lines, beginning with the use of a common transceiver contained in the silicon ICs at the heart of each module, and continuing through the remainder of the RF signal path on the module, out to and including the antennas.

Based on the detailed description on the following pages, we respectfully ask that the AVMD7112 family of modules be included for certification under FCC ID V3CAVMD7F12.

Respectfully submitted,

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## **Correspondence of AVMD7112 and AVMD7212 module families for co-certification purposes**

The AVMD7112 modules are used for single-sender/single-listener systems, while the AVMD7212 modules are used in single-sender/multiple listener applications.

Specific ways in which the radios in the two module families are identical are:

- 1) All modules of a given family type – that is, the AVMD7112 and AVMD7212 – share a common PCB substrate.
- 2) The difference between corresponding AVMD7112 and the AVMD7212 modules is due solely to the difference in the Avnera IC installed on the PCB; beyond the IC, the component values on corresponding modules are identical.

The AVMD7112 uses Avnera's AV7112 IC; the AVMD7212 uses the AV7212 IC

Any external radio components are *identical* between like modules within the two families.

- 3) The ONLY difference between an AV7112 IC and an AV7212 IC is the embedded firmware used to control the order of the over-the-air data; otherwise, the two ICs are identical down to the last transistor.
- 4) The radio components on all AV7112 and AV7212 ICs are *identical* at the silicon level.
- 5) The only difference between an AV7112 IC and an AV7212 IC is a single layer mask change to re-code the embedded firmware.

The only difference between the firmware on the AV7112 IC and the AV7212 IC is the order in which they handle over-the-air data packets; there is NO difference in the way the radios are configured or in which they operate.

- 6) Beyond the use of a different core IC, for any given module sub-type within the family the analog I/O, the external RF power amplifier (if used), and the interconnect method to the outside world, are identical.

A chart detailing the characteristics of the AVMD7212/7112 family members is shown on the following page.

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## **AVMD7212 / 7112 Family Characteristics**

<b>Part Number</b>	<b>OTA Protocol *</b>	<b>Core Silicon</b>	<b>RF PA?</b>	<b>Output Power</b>
AVMD7212-ACNA	Point-to-multi-point	AV7212	No	0dBm (nom)
AVMD7212-ACPA	"	"	Yes	+10dBm (nom)
AVMD7112-ACNA	Point-to- point	AV7112	No	0dBm (nom)
AVMD7112-ACPA	"	"	Yes	+10dBm (nom)

- OTA = Over the air

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