



AVNERA

Letter of Attestation

May 22, 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 V3CAVMD7F11A

To whom it may concern,

The purpose of this letter is to explain and justify the co-certification of additional devices under FCC ID V3CAVMD7F11A, in which the additional devices contain radios with emission characteristics identical to those measured under V3CAVMD7F11A, but differing only in their embedded firmware.

As described in the documentation for the certification application, Avnera's request under FCC ID V3CAVMD7F11A covers the testing and certification of the AVMD7211 module family, which modules are designed as the sender 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 AVMD7211 family of modules is *identical* to that in a parallel family designated the AVMD7111, which latter modules are used as the sender 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 AVMD7111 family of modules be included for certification under FCC ID V3CAVMD7F11.

Respectfully submitted,

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A V N E R A

Correspondence of AVMD7111 and AVMD7211 module families for co-certification purposes

The AVMD7111 modules are used for single-sender/single-listener systems, while the AVMD7211 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 AVMD7111 and AVMD7211 – share a common PCB substrate.
- 2) The difference between corresponding AVMD7111 and the AVMD7211 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 AVMD7111 uses Avnera's AV7111 IC; the AVMD7211 uses the AV7211 IC

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

- 3) The **ONLY** difference between an AV7111 IC and an AV7211 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 AV7111 and AV7211 ICs are *identical* at the silicon level.
- 5) The only difference between an AV7111 IC and an AV7211 IC is a single layer mask change to re-code the embedded firmware.

The only difference between the firmware on the AV7111 IC and the AV7211 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 AVMD7211/7111 family members is shown on the following page.

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AVMD7211 / 7111 Family Characteristics

Part Number	OTA Protocol *	Core Silicon	Audio Input	On-module RF PA	Output Power (dBm, nom)
AVMD7211-ACNA	Point -to-multi-point	AV7211	Analog	No	0
AVMD7211-ACPA	“	“	“	Yes	+10
AVMD7211-DCNA	“	“	Digital	No	0
AVMD7211-DCPA	“	“	“	Yes	+10
AVMD7111-ACNA	Point-to-point	AV7111	Analog	No	0
AVMD7111-ACPA	“	“	“	Yes	+10
AVMD7111-DCNA	“	“	Digital	No	0
AVMD7111-DCPA	“	“	“	Yes	+10

- OTA = Over the air

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