APPLIED MICRO DESIGN

Exhibit 04
Output Level Clarification
Model 1465 Head End System

Purpose of This Document

The purpose of this document is to address a question raised by ACB concerning the Downlink power levels.

Down Link Amplifier Output Levels

The gains of the 400 MHz and 800 MHz Downlink Channel Cards are set to have a nominal output of +20 dBm per carrier at the output of the Cross-Band Coupler (CBC), with the specified -10 dBm per carrier at the input of the channel cards.

Testing done at Washington Labs indicated that all of the 400 MHz windows had an output of 20 dBm ±0.5 dB, with the exception of Window 4 which was measured as 21.2dBm.

We can set the output gain with a resolution of 1 dB. Combined with parts tolerances and the amplifier gain, the actual change for a 1 dB step can be slightly more or less than 1 dB.

On Window 4 the lower setting resulted in an output level just under +20 dBm. We set the level to ensure at least +20 dBm, in case the customer actually checked our numbers.

These results are in line with test data we submitted to the customer and have been approved.

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