



APPLICATION NOTE:

AR6002 Antenna Diversity Support

Silex Technology America

201 East Sandpointe Suite 245

Santa Ana, CA 92707

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Summary:

The AR6002-based radio products incorporate only receive diversity within the hardware. No transmit diversity is supported. Transmitting is only done using the main or primary antenna.

Solution:

Silex has implemented an alternate method of antenna diversity. Our solution will change the antenna functionality to allow both transmit and receive diversity. When enabled, this implementation turns off the hardware receive diversity, in favor of an algorithm that will periodically check the signal strength from each antenna and switches to the antenna with the best signal for both transmitting and receiving.

The actual algorithm is much more complex than this; it includes alternating antennas when scanning, switching antennas when the RSSI value crosses a threshold and the throughput is below a specified rate, among other calculations.

To utilize this alternate antenna diversity, new WMI commands will be created to enable, disable, and to tune the diversity algorithm for customer applications.

Availability:

Once the new diversity algorithm is tested and verified, it will be rolled into Silex' next AR6002 base firmware release currently scheduled for late Q1, 2011.

About Silex Technology America

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