

Microphone Array Beam forming

A Microphone array is used to spatially sample a sound field. Such sound signals are processed by a spatial filter, called a beam former that exploits spatial diversity by combining the sound inputs to enhance the desired signal, far exceeding the performance that can be obtained using a single microphone. Consilient's beam forming algorithm, optimized for low CPU MHz, helps in designing voice triggered products that are normally power-constrained and 'always-on'.

- Supports 2, 3, 4 and 6 microphones in circular and linear array arrangements.
- Takes care of end fire as well as broadside configurations.
- Supports various spacing between mics, programmable at initialisation time.
- Multiple sample rates supported.
- Adaptive steering for tracking the source.
- Adaptive interference cancellation to attenuate 'in beam' noise.
- Forms very sharp beam to preserve the speech intelligibility even under high noise environment.
- Helps to improve far-field speech recognition accuracy rate significantly.
- Optional post filter function included to further attenuate the noise for voice call scenario.
- microphone gain compensation .
- Average SNR improvement of upto 18dB.
- Functions are C-callable