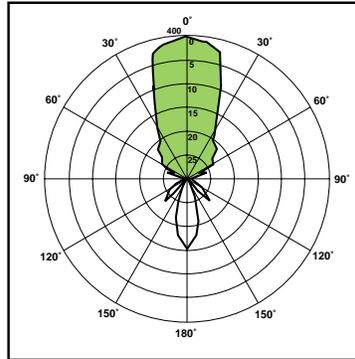


Digital Super Directional Array (DSDA® 2.0)

DSDA 2.0 is a sophisticated and robust noise-cancellation solution developed to bring a new level of clarity to voice communication applications. A unique feature of the technology is its ability to be embedded into speech-enabled hardware devices and enhance speech communications software products. DSDA 2.0 is adaptive and capable of being customized for a wide range of applications, so its superior noise cancellation capabilities can benefit not only users of desktop speech communications, but also users of any speech-enabled application ranging from an in-vehicle communication system to an Internet appliance to a wireless mobile communication device.



Polar Plot - DA-400 2.0 1/3 Octave @ 1 KHz

Patented DSDA adaptive microphone technology enables the optimal performance of headset-free, far-field voice input by creating a narrow reception cone of microphone sensitivity on the user's voice and canceling noise outside of that signal. DSDA version 2.0 utilizes a unique de-reverberation technique which dramatically reduces reverberation noise caused when a speaker's voice reverberates from walls or ceilings, which has the effect of degrading the performance of speech recognition applications. As a result, this software offers greater sensitivity and a superior solution for clear voice recognition with untethered, far-field voice communications.

Market Applications

Automotive: Telematics, AutoPCs, Mobile Multimedia Systems, Hands-Free Carphone Kits, Global Positioning Systems (GPS), etc.

Desktop: Speech Recognition, Internet Telephony, Videoconferencing, Voice Verification

Embedded Devices: Handheld PDA's, Set-top boxes, Professional Audio Systems, Surveillance devices, Intercoms (Home Automation), Hearing Aids, Interactive Kiosks, etc.

Specifications:

Adaptive Beamforming	2-8 Microphones
Flexible Array Structure	
Sharp Noise Reduction	Outside of a Reception Cone
Wide Tailored Frequency Range	Within 0-20 kHz
No Effect on Audio Quality	
Typical Bandwidth	0-16 kHz
Recommended Range of Operation	2' - 4'