

# When it comes to **DNN**, design matters

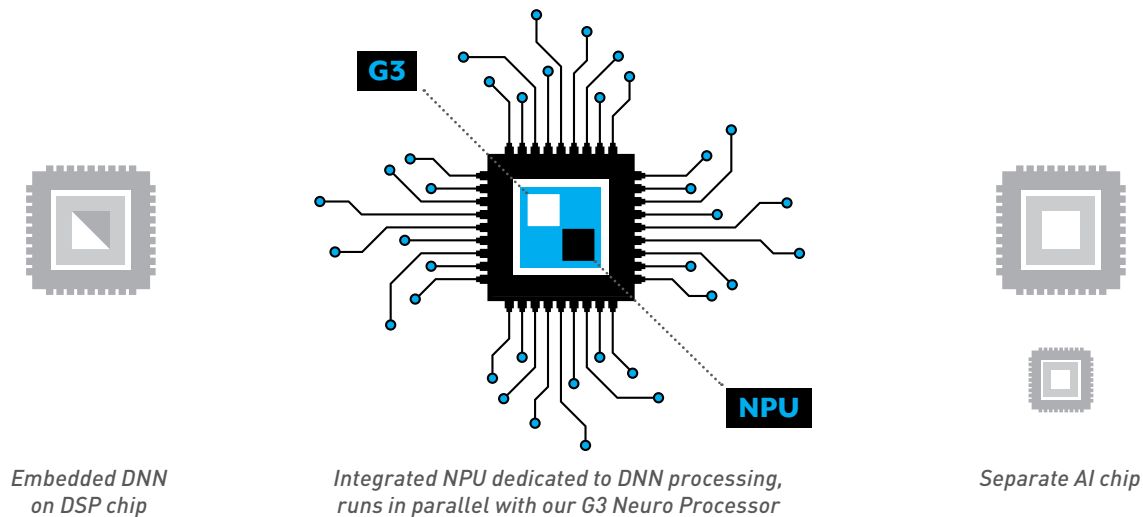


## The DNN difference

Hearing aids have traditionally used machine learning to perform automated processing with limited success in complex listening environments, like speech in noise. Deep Neural Networks (DNNs) leverage a brain-inspired method of training with a neural network for better outcomes in real-world environments. Omega AI RICs use **three always-on DNN features** for better hearing at any moment. Starkey's latest, DNN 360, includes two always-on features: DNN Directionality and DNN Spatial Awareness. These features have been shown to improve not only speech intelligibility (up to 28%), but also improve spatial awareness (up to 8 dB SNR), ensuring that better hearing in noise does not sacrifice other spatial cues.

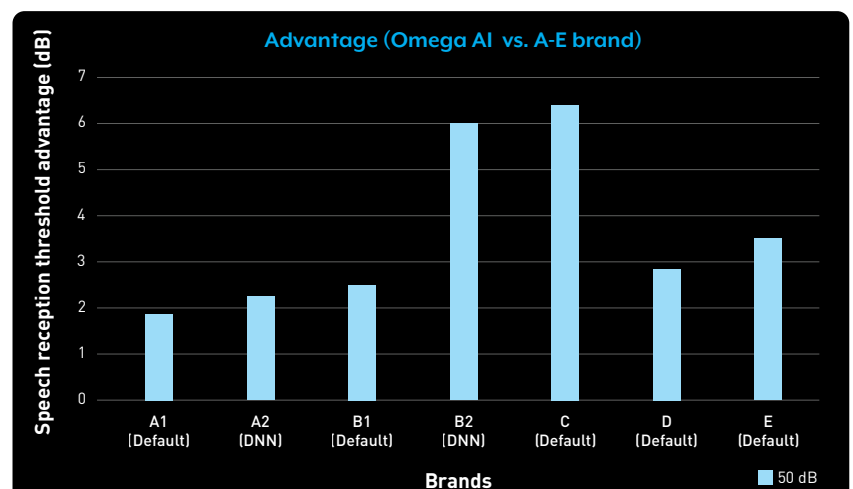
## No trade-offs: Starkey's DNN solution

DNN computation on a low-powered system like hearing aids requires advanced architecture and development to offer a highly efficient and lasting solution. Starkey's Neural Processing Unit (NPU) has an integrated DNN co-processor that runs in parallel with our G3 Neuro Processor for optimal performance. An NPU architecture is uniquely and specifically designed for fast and efficient DNN processing, which enables Starkey to continue adding DNN features with **no change to our industry-leading battery life**.



## Performance when it matters

Omega AI achieved superior performance in speech intelligibility measures compared to all major brands. These bars represent Omega AI's advantage at average speech level in realistic noisy situations over competitor models, including the DNN mode of models that offer a DNN feature. For example, **Omega AI offers over a 6 dB advantage compared to competitor B's DNN feature and competitor C's default setting<sup>1</sup>.**



<sup>1</sup>Marquardt, D., Taylor, L. Leading the industry in speech intelligibility. (2025). Starkey White Paper. Starkey logo and Starkey are registered trademarks of Starkey Laboratories, Inc. DNN 360, Omega and Neuro Processor are trademarks of Starkey Laboratories, Inc. ©2025 Starkey Laboratories Inc. All Rights Reserved. 11/25 FLYR4311-01-EN-ST