NCOREx®

Since the conception of Ncore® in 2011, the technology has always been at the forefront of high-performance Class D amplification. Despite the performance advantage Ncore® historically provided, the drive for improvement has always been present. It was this drive that led our research to Nilai®, our latest and most advanced Class D technology.

Although Ncore® amplification is still considered high-performance and far from obsolete, its ten years of service provided us with the opportunity to upgrade, bridging the gap to our latest Nilai® technology.

Ncorex® is a continuation of previous Ncore® efforts, benefiting from Nilai® research that enabled us to improve its loop filter while maintaining nearly all other favorable design concepts. Enhancing the loop filter allowed us to increase loop gain by 6dB in the top two octaves of the audio band, while adding some additional gain below that. This gave us more leeway to optimize various parameters while retaining exemplary audio performance. The result is a total of >60dB error correction within the entire audio band, greatly reducing all types of distortion originating from the power stage and output filter.

- >60dB loop gain across the audio band for ultra-low harmonic distortion, intermodulation distortion and negligible output impedance

NILAI®

Nilai® is the next step in class D amplification technologies which began with UcD, followed by Ncore®. One of the main concepts of UcD, incorporating the output filter into the feedback loop, has been an important factor for this entire line of developments. With UcD as a starting point, Ncore® brought us the giant step of 20dB extra loop gain throughout the audio band, without sacrificing any of the attributes which made UcD great. This effectively reduced distortion of the entire system by a factor of ten.

With Nilai® we have been able to accomplish another giant leap forward and increased loop gain again by more than 20dB across the audio band. This 20dB increase brings the total error correction to over 75dB across the audio band, reducing all types of distortion from the power stage and output filter to negligible levels. Another key benefit is its near-perfect second-order roll-off at the top of the frequency band, enabling increased bandwidth without the risk of issues from large amounts of out of band noise.

- >75dB loop gain across the audio band for negligible harmonic distortion, intermodulation distortion and output impedance
- Increased bandwidth to >70kHz
- Improved load invariant frequency response