Phonar's **D**igital **S**mart **S**ynthesis (DSS) technology

Pure Digital Sound from Source to each Loudspeaker drive unit

AN ACTIVE SPEAKER WITHOUT AMPLIFIERS

Imagine if you could connect your loudspeakers directly to your digital source component, and be able to playback studio quality 24-bit/96kHz recording, how much cleaner and detailed the sound would be without the DAC, preamp, power amps and all the cables connecting everything together. No need to visualise, it is now possible with the Phonar Verita Match wireless speakers featuring the propriety Digital Smart Synthesis (DSS) technology.

THE EVOLUTION OF HI-FI

In the recent years, the recording and delivery system have changed drastically. 24-bit/96kHz[1,2] is the de facto standard in studio environments for Hi-Res audio, and music is delivered over the net either by streaming or a download.

The 'Veritas Match' product range featuring the DSS technology specifically addresses, in radical and revolutionary ways, the technical limitations of a high-fidelity sound reproduction system consisting of traditional hi-fi separates.

Digital Smart Synthesis (DSS) is the next step forward, eliminating all analogue circuits completely. Immerse yourself in 24-bit/96kHz audio and uncover layers of richness and texture that were previously hidden, transforming the way you perceive and appreciate your favourite music.

WiSA HT WIRELESS TECHNOLOGY - 24-bit/96kHz

There are technical limitations which had to be appreciated and observed. Component availability, cost and reliability are important factors to consider when designing a system. The WiSA HT Technology satisfied our requirements, and we believe that this offers outstanding performance without cost penalties.

- 24-bit/96kHz is the de facto standard in studio environments
- 24-bit gives a dynamic range of 144 dB
- 96kHz sampling rate delivers up to 48kHz of high frequency
- WiSA HT Technology is a robust wireless system - WiSA HT transmits and receives uncompressed 24-bit/96 kHz sound over a dedicated wireless network it creates.
- WiSA technology makes it possible to mix and match WiSA-certified components seamlessly
- TOSLINK limits are 24-bit/96 kHz
- S/PDIF Optical connection gives galvanic isolation between the network streamer (e.g. WiiM Pro Plus) and the WiSA SoundSend
- Identical Stereo (L&R) channels - No master or slave

SYSTEM ARCHITECTURE – DSS Technology
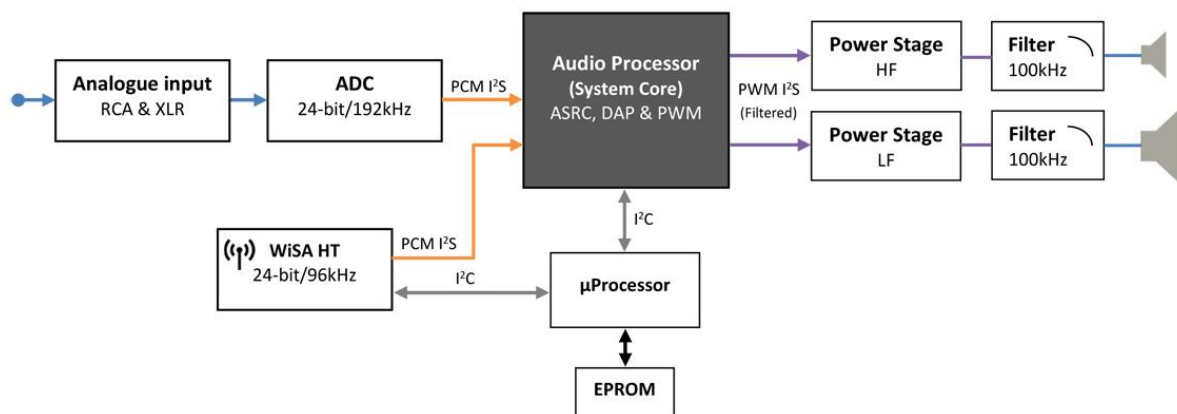
Technical Profile:

- 28-/56-bit DSP optimized for audio processing - for active crossover & room correction
- 32-/48-bit Audio & PWM Processing Architecture - Digital Volume control & PCM to PWM conversion.
- Multiple True Digital Audio Amplification (TDAA) units; sometimes referred to as Power DAC. Each is optimised for speaker drive unit being employed. The voice coil impedance of each drive unit is part of the TDAA circuit design. The power output of each TDAA unit is dictated by the drive unit power handling and impedance characteristics rather than designed for a specific random value.

References

1) Recording Academy recommendation standard
https://naras.a.bigcontent.io/v1/static/recommendations_for_hires_music_production_09_28_18_0

2) IASA-TC 04 (Second Edition, 2009), an accepted authority on digital audio preservation in the sound archiving field.
https://www.iasa-web.org/tc04/audio-preservation