

De-Wind Compact Neural Model

Technical data sheet — real-time wind noise removal compact neural model.

- EDGE AI
- REAL-TIME
- EMBEDDABLE
- PRIVACY-SAFE
- PATENTED

DEPLOYMENT MODES

Embedded Library

VST / AU Plugin

SDK — Linux / macOS / Windows

AUDIO INTERFACE

PARAMETER	SPECIFICATION
Sample Rate	48 kHz
Input Format	16-bit PCM, 24-bit PCM
Frame Size	1024 samples
Frame Duration	21.33 ms
Delay Compensation	1024 samples (21.33 ms)
Channel Support	Mono

MODEL CHARACTERISTICS

PARAMETER	VALUE
Total Parameters	12,553
Weight Precision	float32
Model Size	49 KB
Runtime RAM	38 MB
Compute Requirement	~1,213 MIPS
RT Headroom	~8.3 ms / frame

PERFORMANCE BENCHMARKS

Target platform: Dual ARM Cortex-A55 @ 1.7 GHz (AArch64, NEON enabled)			
METRIC	MIN	MAX	AVG
End-to-end frame processing	11 ms	13 ms	12 ms
Real-time factor (RTF)	0.57	0.78	0.59
CPU usage	—	—	59.3%
Processing load	—	—	1,213 MIPS
RAM usage	—	—	38 MB
Model binary size	—	—	49 KB

* Based on evaluation model. Specifications subject to change after production optimization.

SUPPORTED PLATFORMS

ARCHITECTURE	VARIANTS	OS / RUNTIME
ARM Cortex-A Series	A55 · A53 · A72 · A78	Android, Yocto, Buildroot
ARM Cortex-M Series	M33 · M55 · M85	Bare-metal, Zephyr, FreeRTOS
DSP Cores	Cadence HiFi · CEVA BX · Hexagon	Vendor SDK, RTOS
Neural Accelerators	NPU-enabled SoCs (Qualcomm, MediaTek...)	Optimized via TFLite / ONNX
Desktop / Server	x86-64 · Apple Silicon (M-series)	Linux · macOS · Windows

INTEGRATION

Available as standalone library or as a plugin on the **PYOUR Audio development framework** by **Absolute Audio Labs** — enabling fast product deployment for hearing aid and TWS earbud manufacturers.