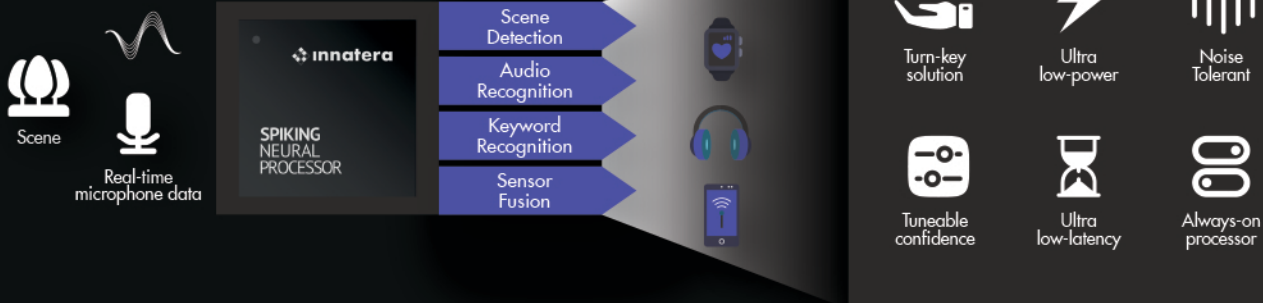# Audio Scene Classifier

SPIKING NEURAL PROCESSOR

For microphones, mobile devices, and hearing devices

Audio scene classification allows devices to be aware of the environment they operate in and use this information to adapt their operation. e.g. in noise cancelling headphones, this might mean adapting to the ambient noise profile of an airplane or a city bus. Innatera's ultra-low power Spiking Neural Processor allows audio scenes to be classified continuously, and for changes in ambient sound profiles to be detected rapidly, even for complex and noisy environments.

Scene

Real-time microphone data

SPIKING NEURAL PROCESSOR

Scene Detection
Audio Recognition
Keyword Recognition
Sensor Fusion

Turn-key solution
Ultra low-power
Noise Tolerant
Tuneable confidence
Ultra low-latency
Always-on processor

KPI	Innatera	Conventional MCU	Improvement
Accuracy	~90%	~90%	-
Power	0,436 mW	4 mW	10x
Inference latency	301 ms	1s	3x

 innatera