

ADAS Audio Sensor

(RLADAS-AS-V1)



The VBOX Audio Sensor captures audible warnings such as those given during Forward Collision Warning (FCW), Driver Status Monitoring (DSM) and Dooring scenarios. It can also be used to detect information functions such as Occupant Status Monitoring (OSM), Seat Belt Reminder (SBR) and Signpost Recognition (SPR).

The sensor has custom-built software that makes it user-configurable to react to any audible notification given by a vehicle under test.

You can configure thresholds to detect the required frequency over environmental noises from the test vehicle, such as road and car noise.

This unit differs from other similar sensors by being configurable to detect high-frequency haptic warnings by using the audible tone of the created vibration. The unit will capture these warnings and output the data, either to a VBOX for an immediate pass/fail result based on the scenario OR directly into a driving robot for a live reaction to a warning.

The VBOX Audio Sensor is designed to work alongside, or independent of, the other sensors in the VBOX ADAS Sensor Pack. It is just one of an array of warning detection methods produced by Racelogic to fulfil requirements set by regulatory and consumer groups, including UNECE and Euro NCAP, and for research and development activities.



Features

- Triggered by an audible warning or information function given by the test vehicle.
- Able to differentiate between exterior environmental noise and the required frequency.
- User configurable for multiple frequencies to trigger sequentially.
- User configurable to trigger from 'ALL' or 'ANY' frequency in multi-frequency tones.
- Built in microphone suitable for most applications. Additional external 'plug in' microphone included for high noise environments or concealed speaker units.
- Ability to delay outputs (Digital or CAN) to a fixed delay after the START of the tone.
- Integrated LEDs for clear ON/OFF confirmation when a tone has been sensed / triggered.
- Immediate CAN output contains time since Audio Start as part of its message.
- Digital output (0-5 V / open drain compatible)
- 5 mm internal thread for rigid mounting within the vehicle

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Specifications

Description	Values
Output Type	Open drain digital output with internal 5 V pull-up (12 V tolerant) / CAN
Operating Temperature range (C)	-40°C to +85°C
Power supply	6 to 30 V @ <50 mA
Weight	115 g excluding cables
Size	W = 66 mm, L = 68.5 mm (including connectors), H = 22.10 mm

PIN OUT Description

CAN/PWR (5-pin Lemo)

Pin #	Function	Connector
Pin 1	NA	
Pin 2	NA	
Pin 3	CAN High	
Pin 4	CAN Low	
Pin 5	Power Input 7 to 30 V	
Lemo Shell	Ground	

EXT MIC (4-pin Lemo)

Pin #	Function	Connector
Pin 1	External Microphone Input	
Pin 2	External Microphone Bias	
Pin 3	External Microphone Detect	
Pin 4	Microphone Ground	

TRIG OUT (3-pin Lemo to unterminated)

Pin #	Function	Connector
Pin 1	Power Input 7 to 30 V	
Pin 2	Digital Output / Open Drain Tolerant	
Pin 3	Ground	

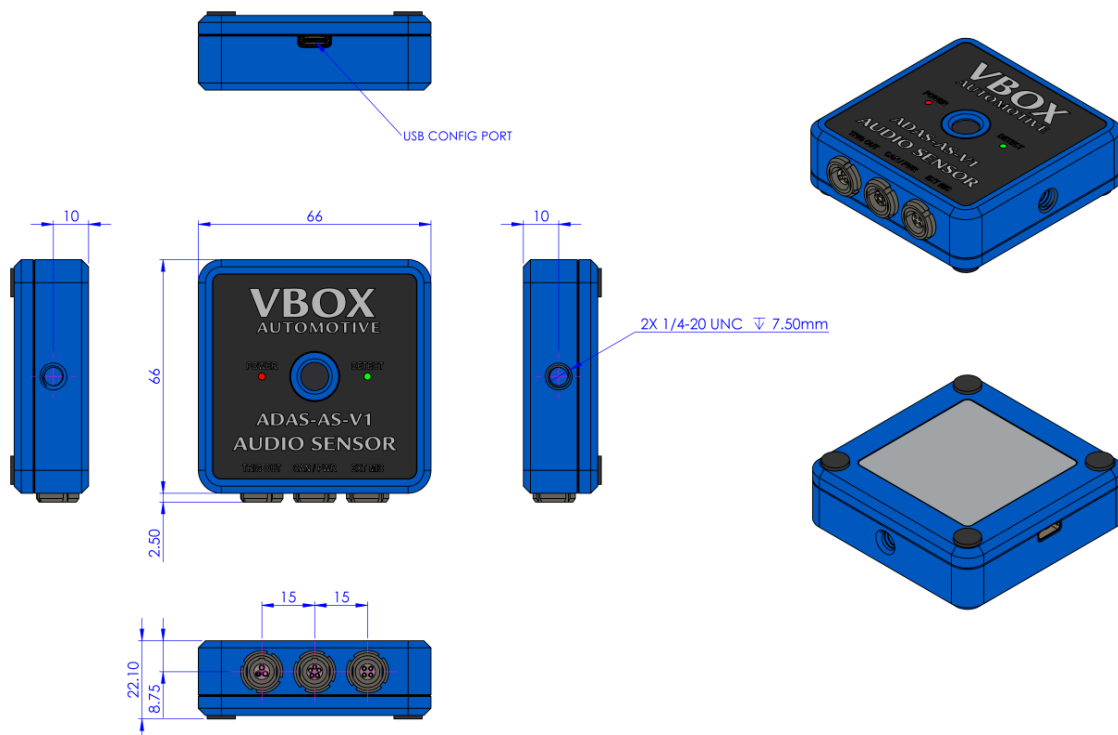
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Wiring

Wire Colour	Function	
Red	Power	
Green	Ground	
Yellow	Signal Ground	
Blue	Signal	

Dimensions



Package Contents

Description	Product Code
1 x Audio Sensor Unit	RLADAS-VS-V1
1 x USB-C to USB-A cable	TV1AM20MB31
1 x External Microphone	RLACS343
1 x 5-way LEMO to 5-way LEMO CAN cable	RLCAB005-C
1 x 3-way LEMO to 4 wire unterminated cable	RLCAB007-2