VALEO **MOBILITY KIT**

ULTRASONIC SENSOR SYSTEM

Valeo Ultrasonic Sensor System is a plug and play kit developed to allow users to easily interface with Valeo Ultrasonic Sensors.

Valeo Ultrasonic sensors are widely-used automotive grade ultrasonic sensors providing SDI (Sensor Distance Interface) and freespace output over CAN.The system will provide the direct distance detected by each sensor and freespace.

This kit contains twelve ultrasonic sensors, one ECU, sensor holders and one harness, as well as the necessary documents for easy integration and interface. This kit can be easily integrated into a variety of platforms and for various applications, including but not limited to ADAS, robotaxis, autonomous shuttles and delivery robots.

SPECIFICATIONS

ULTRASONIC SENSOR CHARACTERISTICS

Frequency	51.2 kHz
Minimum Distance	0.15 m *
Maximum Distance	4.1 m *
Horizontal Field of View	75° **
Vertical Field of View	45° **
Framerate (typical)	40 ms

POWER

Power supply	11–16 V
Power consumption	6 W

ENVIRONMENTAL CHARACTERISTICS

Operating Temperature Range	−40°C to +85°C
Sensor Protection Class	IP6KX, IPX6X, IPX7, IPX9K
ECU Protection Class	IP42

PHYSICAL CHARACTERISTICS

Ultrasonic Sensor Dimensions	47 × 28 × 26 mm (H × W × D)
Membrane Diameter	15 mm
Ultrasonic Sensor Weight	15 g
ECU Dimensions	24 x 118 × 68 mm (H × W × D)
ECU Weight	98 g

INTERFACE

CAN	250 kbit/s - 1000 kbit/s (adjustable)

SYSTEM COMPONENTS

HP Ultrasonic Sensors	12
Sensor Holders	12
ECU	1
Harness	1

DATA

Output	SDI (Sensor Distance Interface)
	Freespace information

The kit includes 12 Ultrasonic sensors, generic sensor holder, ECU and harness.

* 75mm diameter pipe, Laboratory Conditions: 20°C, 50% rel. air humidity, no disturbance noise
** Opening Angle against a flat plate (-3dB)

SMART TECHNOLOGY FOR SMARTER MOBILITY