



VALEO MOBILITY KIT

**ALL NEEDS
ALL VOLUMES
ALL FOR YOU**

SMART TECHNOLOGY FOR SMARTER MOBILITY

DESIGNED AND ENGINEERED FOR LEADING OEMs...

From droids and drones to transport shuttles and beyond, mobility applications continue to expand at a rapid rate. As a result, companies like yours are faced with a growing need for high-quality sensors and mobility solutions, but at a reasonable price.

Until recently, much of the research and product development was focused on autonomous vehicles and the high-volume needs of OEMs. However, Valeo has adapted its offering so all mobility players can get in on the action.

... BUT SCALED TO YOUR BUSINESS

Valeo combines its world-class innovation and technological excellence into a full range of high-performance plug-and-play kits, addressing all types of mobility requirements.

Find the optimal kit for your business, including ultrasonic sensors, fisheye cameras, near field LiDAR, and state-of-the-art laser scanners. Whether you need one, hundreds, or several thousand, we offer you a solution that fits!



PREMIUM BENEFITS FROM AN AUTO-INDUSTRY LEADER

► RELIABILITY

Backed by three decades of autonomous driving solutions, Valeo has pioneered new technologies in ranging, viewing and computer vision. Today, one out of four new cars worldwide are equipped with our Advanced Driver Assistance Systems.

► SIMPLICITY

No headaches or complex learning curves! Valeo mobility kits integrate seamlessly into your existing system thanks to solid compatibility, ROS nodes, decoders and raw data access allowing plug-and-play integration.

► SCALABILITY

With their flexible configurations, Valeo mobility kits adapt easily to all types of systems and applications. And at any quantity! You can acquire small volumes quickly and efficiently, or order larger volumes at competitive prices.

How do you benefit?

1. Choose your sensor...

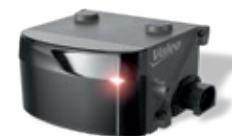
AVAILABLE SENSORS



OR



OR



OR



2. Set it up with ease...

SENSOR HOLDER

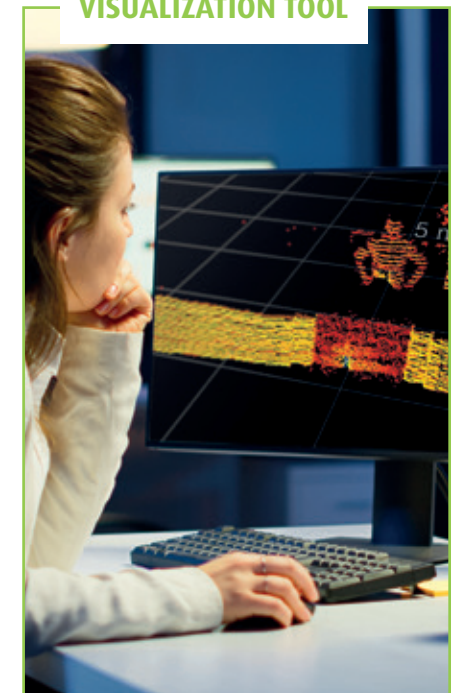


HARNESS



3. Connect to your computing platform and see the results

VISUALIZATION TOOL



DOCUMENTATION & SOFTWARE

Development tools (ROS decoders & SDK) and user manual (technology overview, specs & installation procedure)



GENERIC ULTRASONIC KIT

Integrating ultrasonic sensors can be extremely complex. But Valeo makes your life easier. Our generic ultrasonic kit comes with an auto-calibration feature that makes the whole process quick and simple.

- High-performance ultrasonic sensors
- 1 series parking ECU providing CAN output
- Holders for easy mounting via screws or glue
- 1 USB drive with full documentation, demo applications and SDK
- 1 cable harness to connect sensor, ECU and PC

Improved offers for large orders.



PLUG & PLAY SYSTEM

Data streaming via Ethernet or CAN with easy-to-use PC software



AUTOMATIC SENSOR CALIBRATION

Fully automated threshold configuration



FLEXIBLE CONFIGURATION

Free arrangement of 1-12 sensors, perfectly suited for droids and shuttles



CUSTOMER REFINEMENT

User-friendly configuration tool to refine your system for specific requirements



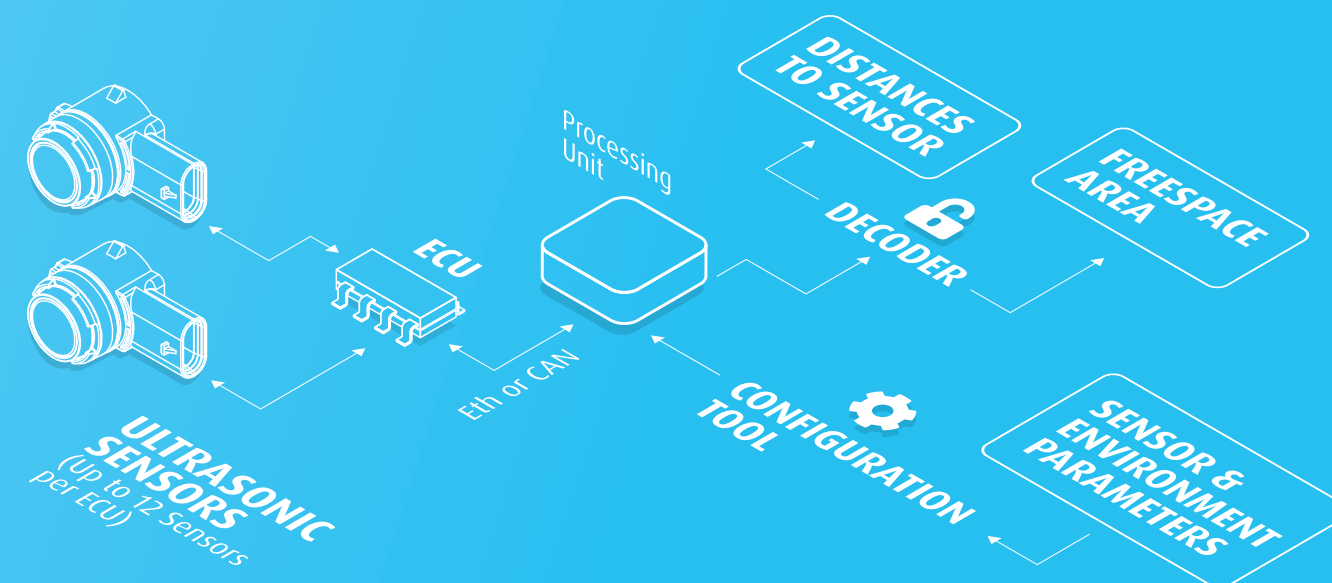
FULL FUNCTIONALITY

Availability of sensor distance and/or free-space information



EASY UPGRADE

Standardized sensor and ECU for simple upgrades to latest sensor hardware



GENERIC CAMERA KIT

When it comes to performance and safety, image is everything. Valeo produces large volumes of ultra-robust, automotive-grade cameras that deliver high-quality images in all environmental conditions. The HDR camera provides a sharp image over the full range, from below freezing to hot temperatures.

- 1 camera fisheye (1 megapixel or 2 megapixels)
- 1 100 Base T1 to ethernet converter
- 1 USB drive with full documentation, demo applications and SDK
- 1 cable harness to connect to converter and power

Datasheet available on <https://woodscape.valeo.com/dataset>



EASY INTEGRATION

Small form factor for flexible integration with all types of applications



MATURE SENSOR TECHNOLOGY

1 to 2 MP resolution with a frame rate of 30 fps from automotive-series production



BEST-IN-CLASS HDR

120 db HDR provides best-in-class quality image for complex use cases



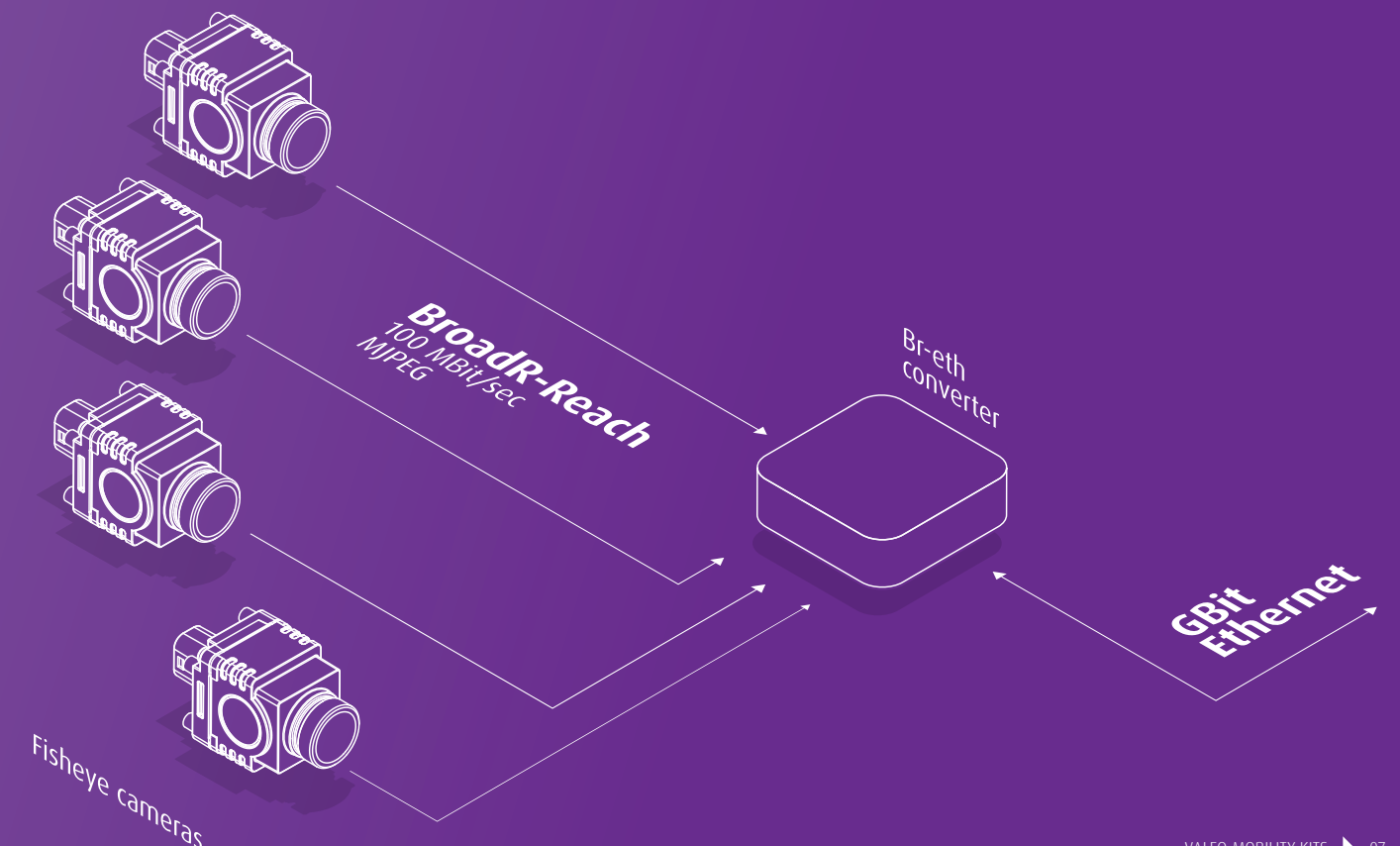
SUPPORT FUNCTIONS

Detection of soiled or blocked image sections (coming soon)



WIDE FIELD OF VIEW

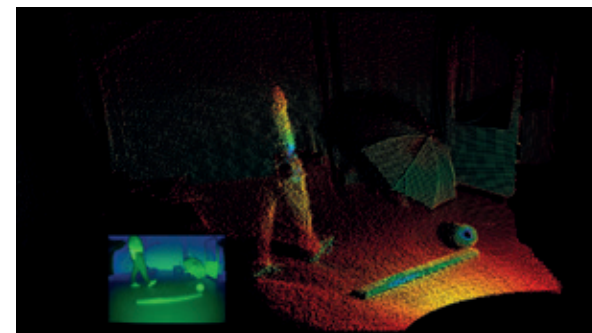
Fisheye lens for 195° horizontal and 155° vertical field of view



NEAR FIELD LiDAR

Ideal for low-speed maneuvering, Near Field LiDAR creates a 3D near-field cocoon to complement camera and radar detection. It detects the full shape of objects and obstacles, especially in blind spots and at close range. Broaden your possibilities with 78° x 110° field of view and sharp point-cloud-volume precision.

- 1 advanced prototype near field LiDAR sensor
- 1 prototype ECU with Ethernet output
- 1 cable harness to connect sensor, ECU and PC
- 1 USB drive with full documentation, demo applications and SDK



HIGH-RES POINT CLOUD

Outstanding precision with 0.4° resolution vertical and horizontal at up to 25 frames per second



WIDE FIELD OF VIEW

Captures 78° vertical and 110° horizontal, as close as 5 cm and as far as 30 m



SCALABLE ARCHITECTURE

Arbitrary sensor quantity for optimal coverage, sensor synchronization, point cloud fusion



SMART DESIGN

Sturdy solid-state configuration and compact format for easy integration all around the vehicle

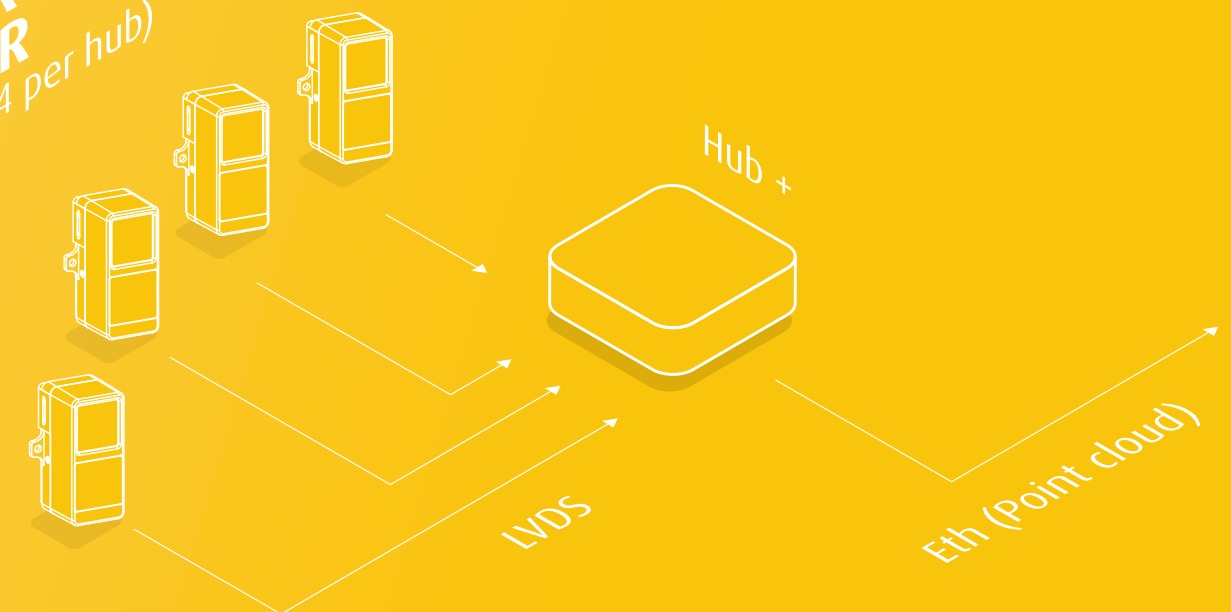


BLOOMING CORRECTION

Eliminates glare from highly reflective objects like street signs



NEAR FIELD
LiDAR
(Up to 4 per hub)



GENERIC SCALA® KIT

As the creator of the first-ever LiDAR-compliant 3D laser scanner for automotive-series production, Valeo is ideally positioned to address the strict specifications of this industry. Now you can benefit from those same high standards for your own mobility needs.

	SCALA® 1	SCALA® 2
In production since	2017	2021
Technology	Rotating Mirror	Rotating Mirror
Wavelength	905 nm	905 nm
Field of View (horizontal/vertical)	145° x 3.2°	133° x 10°
Resolution (horizontal/vertical)	0.25° / 0.8°	0.125° (inner) / 0.25° (outer lobes) / 0.6°
Update Rate	25 fps	25 fps
Points per Second (first return)	44 k	250 k
Interface	Automotive Ethernet	Automotive Ethernet
Package Size	60 × 108 × 102 mm (0.61 kg)	107 x 94 x 65 mm (0.75 kg)



PLUG & PLAY SYSTEM

Data streaming via BroadR-Reach or Ethernet, plus user-friendly PC software



FLEXIBLE CONFIGURATION

Free arrangement of 1 - N sensors for standard and cocoon applications



TIME SYNCHRONIZATION

PTP-based time synchronization for precise timestamping in multi-sensor systems



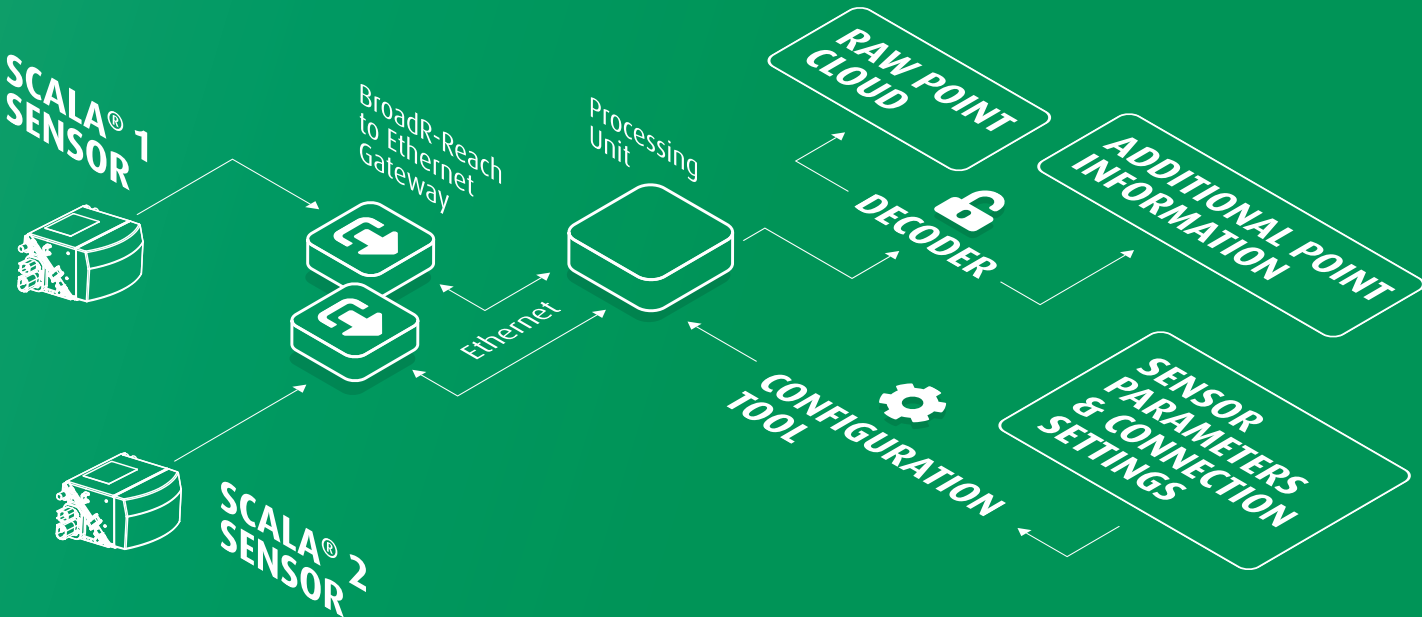
RAW DATA INTERFACE

Availability of the raw point cloud of the sensor for perception algorithm development



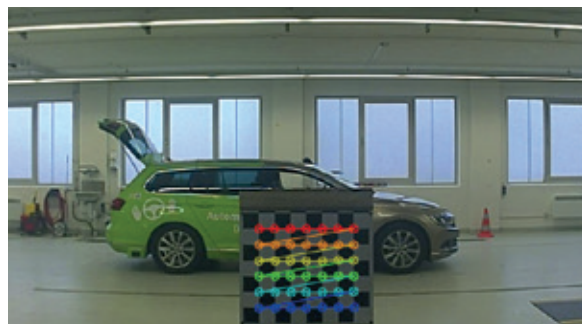
SENSOR FUSION

Fusion and visualization tool available to simplify multiple sensor setups



SERVICES, TOOLING & FUNCTIONS

In addition to our mobility kits, Valeo offers a wide range of optional solutions to help you calibrate your sensors, synchronize your systems, and enhance their functionality. Have a look and see which ones can boost your mobility experience.



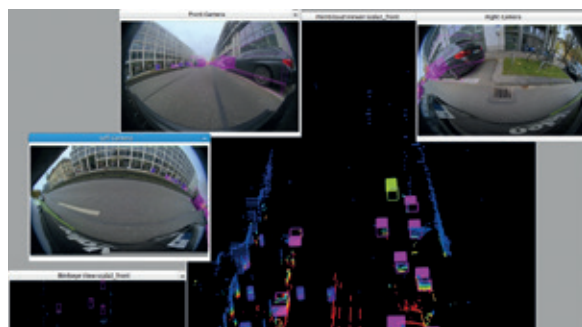
Extrinsic Sensor Calibration

If you're looking to calibrate your camera or LiDAR to a single- or multi-sensor setup, Valeo offers a variety of solutions, including static LiDAR, static camera to LiDAR, LiDAR to LiDAR, and SLAM-based LiDAR with high-precision motion sensors.



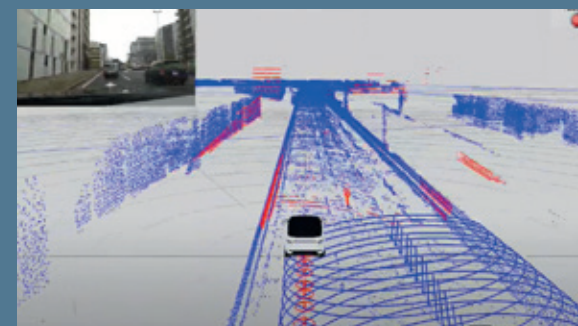
Precise Time Synchronization

Precise synchronisation between sensors is mandatory for new-generation perception algorithms. Valeo offers external synchronization devices compatible with mobility kits, some external sensors and external GPS.



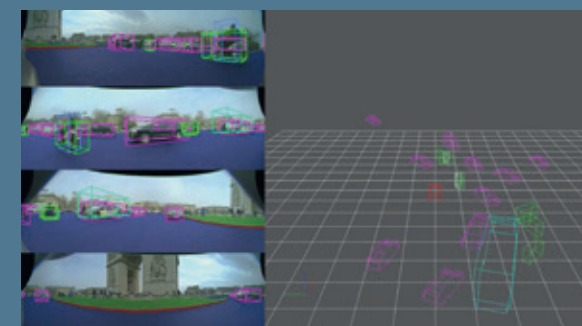
LiDAR Environmental Perception

Leveraging raw point clouds and various sensor configurations (one or multiple), Valeo's next-generation Environmental Perception system can provide 360° coverage around the vehicle, allowing you to better address diverse driving scenarios.



LiDAR Based Localization Mapping

A precise, robust and affordable localization and mapping solution, Valeo's Drive4U® Locate module enables centimetric accuracy in poor or lacking GPS conditions. It's suitable for both indoor and outdoor applications, including large-scale areas, and compatible with existing HD maps.



Advanced Camera Perception

Benefit from best-in-class recognition performance backed by multi-camera tracking and fusion and enhanced with state-of-the-art Deep Manta algorithms.



Bird's Eye View

Valeo's Camera Cocoon module provides a 360-degree view of your vehicles' surroundings, offering a smooth transition between multiple virtual viewpoints.



SENSOR-CLEANING

Maximize your safety with Valeo's automatic sensor-cleaning systems

Sensor technology is innovating the way you work. But for these systems to ensure flawless performance and safety, they must be kept impeccably clean. Traces of dust, dirt or water streaks can reduce detection distance and recognition ability.

Valeo offers a full range of cleaning and clearing systems for all your optical sensors.

CAMERA CLEANING

Fixed Nozzle

Benefit from our simple and efficient Fixed Nozzle cleaning system, covering various spray patterns and angles, all in one compact, lightweight and affordable design.

Telescopic Nozzle

Enjoy enhanced performance compared to Fixed Nozzle, and even simpler integration into the body of your vehicle. The Telescopic Nozzle is needed for fish-eye cameras. It minimizes fluid consumption and delivers better performance in winter.

Centricam

Centrifugal force keeps your cameras clear of rain and snow at all times. Coupled with the Fixed Nozzle, you'll steer clear of bugs, mud, salt and other dirty obstructions while reducing fluid consumption.

LiDAR CLEANING

LiDAR Telescopic Ramp

Discover the first cleaning system fully dedicated to LiDAR sensors and engineered with pedestrian protection in mind. Achieve stable performance at speeds up to 140 km/h, and save up to 36% of washing fluid compared to the competition. Optional defrost feature also available.

SMART LIQUID DISTRIBUTION

Electrovalve

Designed to optimize the fluid management of your sensor-cleaning system, Electrovalve lets you avoid the need for pricey and heavy (279g) pumps in large systems. This solution improves overall hydraulic efficiency ($K_v > 0.12$) and benefits from easy integration thanks to its stackable configuration.

ANY QUESTIONS?

If you have inquiries about any of our products or services, just get in touch. We'll be happy to speak with you!

Write us: cda.valeo-mobilitykits.mailbox@valeo.com

Learn more: valeo.com

on sales on [AutonomouStuff](#) and [Level Five Supplies](#).





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