

## Buy or build your ALPR camera with onboard processing: Turnkey solutions and certified components for ALPR



*Ready-to-use Camera with onboard ALPR processing or electronics kit for individual designs: CARRIDA offers versatile solutions for any project.*

**Many ALPR projects have similar requirements: Reliable reading results and highest detection rates for license plates, with a robust housing and easy to setup. Ideally, software and hardware are perfectly aligned and no external processing units are needed. This is what CARRIDA offers with their ready-to-use cameras. But in some projects, more flexibility is key. Therefore, CARRIDA offers proven electronics and components that can be utilized to build custom cameras, to integrate the hardware into existing housings or individual developments or for prototyping purposes. Both versions feature the CARRIDA SDK software library for high quality ALPR and perfect reading results.**

The brand new CARRIDA CAM Dragon+ is a ready-to-use and standalone camera that features onboard license plate recognition in a ultra-compact and robust housing. It can also determine the specific make&model of cars and classify different types of vehicles such as car, delivery vehicle, truck and bus. This enables detailed traffic statistics and is powered by AI-features of the well-proven CARRIDA SDK. Measuring only 91 x 62 mm, it's smaller than a smartphone, but comes with protection against dirt, dust and moisture in accordance with IP67 and is suitable for permanent outdoor use thanks to the integrated heater. A high-end image sensor from SONY® ensures the best possible image quality and first-class reading results even under difficult lighting and weather conditions and with changing irradiation. The result is a typical accuracy of over 99 percent, including damaged or bent license plates. Compared to CARRIDA's proven and cost-effective CARRIDA CAM Basic+, the new CARRIDA CAM Dragon+ provides a 3-times higher performance. Both models are available with different optics for working distances from 2-20 meters.

### **Build your own device: Proven platforms and components for rapid development**

Innovative ALPR applications, special use cases and specifications regarding hardware design and integration require individually developed cameras and complete solutions. For their easy development and design, CARRIDA offers camera kits and board-level cameras based on validated embedded processor platforms such as Raspberry Pi, NVIDIA Jetson Nano and other popular boards. Customers can choose the perfect level of integration for their project and start into development as fast and easy as possible. The embedded vision systems provide all components for image acquisition, processing and analysis based on validated components.

Customers who like to develop their individual ALPR solution only need to integrate the electronics quickly and easily into their solution or use the hardware for prototyping or pilot series. All components are perfectly adapted to the interaction with the CARRIDA Software Engine.

### **CARRIDA SDK: AI for perfect reading results and make&model recognition**

The CARRIDA Edge Solutions feature the versatile and powerful CARRIDA SDK ALPR library. It is hardware independent and works both on PCs running Windows or Linux and ARM based edge devices with Linux or Android. On top, the software uses Deep Learning for make and model recognition and added functionalities, such as the vehicle classifier. This means that the computer itself “learns” how to recognize a particular vehicle type. Therefore it is possible to run much more complex and thus more reliable recognitions. In addition to the number plate, the CARRIDA Software is able to check whether the vehicle type matches the number plate by checking a list stored on the system. It is also possible to categorize vehicles whose number plates are not stored in the system itself. This allows intelligent traffic management systems and helps parking providers, who do not know the majority of their customers, to increase their efficiency enormously.



*All CARRIDA devices feature the powerful Carrida SDK and utilize the same library, feature set and programming interface, whether edge device, PC or server / cloud application.*

## **About CARRIDA Technologies GmbH**

CARRIDA Technologies is a provider of ALPR software and solutions. Its product portfolio ranges from CARRIDA SDK, a hardware-independent software library that runs on any PC, edge device or server/cloud to edge solutions with onboard data processing. The company was founded in 2017 and is based in Germany and Austria.

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