Pushing the limits of ALPR cameras with a new ITS suite

As vision systems continue to become more advanced, there is a trend toward embedded systems being used within tolling, free-flow, and speeding and red light control applications. ITS users are continuously looking to improve the intelligence of IP cameras, to provide wireless camera control, and to offer additional functionalities with easy access and installation.

Tattile has achieved a breakthrough in machine vision technology with the design and development of an entirely new Vega Smart range of camera systems. The new ITS camera systems go beyond ALPR and offer functions and a level of integration that cannot be found elsewhere on the market.

Next-gen ALPR

An integral part of the new product line is the Vega Smart 2HD, a camera specifically designed for free-flow toll collection, traffic monitoring and security. The system is able to cover two lanes measuring up to 25ft (7.5m) each in width and detects vehicles at speeds of up to 155mph (250km/h). Standard functions include embedded ALPR, capturing monochrome vehicle images and color contextual vehicle images, optical speed evaluations, and the ability to read reflective and non-reflective license plates. An extra-sensitive sensor mounted to the Smart 2HD's contextual camera ensures high-quality images even in low light. The modular system architecture enables the hardware platform to be easily customized according to the complexity of each application.

These standard features are complemented by optional functionalities that transform the camera from a standard plate reader into a truly smart vehicle recognition and security system. First, a system can be added to recognize a vehicle's brand, class and color, and to offer HD streaming for video surveillance. Additionally, the Smart camera can be equipped to simultaneously run two different optical character recognition (OCR) systems on board. Real-time license plate identification is then performed by two independent software tools inside the system that provide maximum accuracy. Validated license plate data is a direct output from the camera, from the double OCR.

Above: **A front view of the Vega Smart 2HD camera**

Need to know

Tattile's Vega Smart 2HD ALPR system marks the next generation of scalable smart cameras

- The system is suitable for applications including toll collection, traffic monitoring and security
- The system can monitor two lanes across a width of 25ft (7.5m)
- Cameras that can be used in the system include the Vega Smart HD, the Vega Smart 2HD, the Vega Smart HD Color and the Vega Smart 2HD Color

Additional third-party analysis software is not necessary and this reduces the complexity of the system for the user, as well as operating costs.

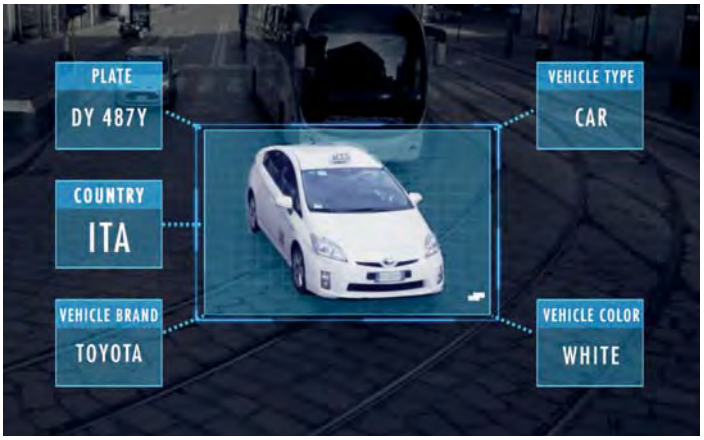
In all, the new Tattile Vega Smart 2HD ALPR system marks the next generation of highly scalable smart cameras. Its embedded intelligence provides maximum output at low cost because all of its algorithms run inside the system to deliver an output ready to be interpreted by the user.

Remote configuration app

For its new ALPR systems line, the ITS specialist has developed the Easinstall app, a solution that facilitates the installation and maintenance of new ALPR cameras. The installation pack and optional camera functions

Below: **Tattile's Easinstall app**

Above: **Tattile's new Vega Smart 2HD camera and its functions**



Above: **The camera can capture vehicles' license plates, color, brand and country of residence**

can be uploaded to the camera via remote connection, even when the system is already in operation.

This new app represents not only an essential time-saving tool for camera installers, but it also increases safety because on-site staff will no longer need to use gantries to carry out routine maintenance on the cameras. The app allows any authorized user to access a camera device without being physically connected to it. Thanks to Easinstall, road lines no longer need to be closed for maintenance, adjustment processes or to check the status of camera devices. Instead, the operator can carry out these checks remotely.

Once installed on an Android or iOS device, Easinstall can wirelessly detect all available cameras in the vicinity and automatically connect to them via service set identifier (SSID). The app then creates a hotspot connection to allow the control room to access the camera without any physical connection. In addition, a user who is on-site with the mobile device can reconstruct an ALPR camera's history by scanning its QR code (affixed to the device) and sending this data directly to the technical support team in the control room.

Another feature of Easinstall is that it supports Web view (video calling from the on-site worker), allowing technical support teams in the control room to have a live view of the scene. Technicians can also provide remote updates to the cameras.

With its new app and ALPR camera range, Tattile is redefining the way ITS systems are being handled. ○