

# Application Note

## Ghost Plates

### Addressing Ghost Plates with the TagMaster CT45 ANPR Camera

#### GHOST PLATES CAPTURED USING COLOUR OVERVIEW



#### OVERVIEW

Authorities are increasingly combating the use of “ghost plates” - illegitimate vehicle registration plates designed to evade detection by traditional enforcement tools. These plates often exploit materials or designs that obscure their characters, rendering them invisible to conventional Automatic Number Plate Recognition (ANPR) systems. The proliferation of such plates poses a significant challenge to traffic enforcement and road safety initiatives.

While modern ANPR systems leverage specialised Infrared (IR) cameras, advanced software recognition, and high-performance hardware, these tools may struggle with illegal or non-reflective plates. This creates a critical need for innovative solutions capable of addressing such scenarios effectively.

#### PROBLEM

Ghost plates and other illegitimate registration plate designs undermine traffic enforcement efforts by exploiting the limitations of traditional ANPR systems. These plates are often:

- 1. Non-reflective:** They lack the reflective properties that typical IR-based ANPR cameras rely on for detection.
- 2. Illegally modified:** Designed specifically to avoid recognition by software algorithms.
- 3. Location-specific challenges:** Certain environments aggravate the difficulty of detecting these plates, such as areas with poor lighting or high-speed traffic.

Even the combination of a specialised ANPR camera, a top-tier IR camera, and advanced software capabilities may not suffice in these scenarios. To address this gap, a system must integrate additional imaging technologies capable of capturing critical details under challenging conditions.

#### SOLUTION

TagMaster’s CT45 ANPR Camera delivers a comprehensive solution to the ghost plate problem by combining dual-camera functionality with advanced configurability. Equipped with both an IR camera and a colour overview camera, the CT45 provides unmatched flexibility to tackle the challenges posed by ghost plates.

##### 1. Dual-Camera Configuration:

- The CT45’s IR monochrome camera is optimised for traditional ANPR applications, delivering high accuracy in capturing reflective plates under various lighting conditions.
- The colour overview camera serves as a secondary imaging tool, providing high-resolution colour images that complement the IR camera’s output.

##### 2. Enhanced Detection for Ghost Plates:

- For sites with a high frequency of non-reflective or illegal plates, the CT45’s colour camera can be configured as a secondary ANPR sensor. This enables the system to process and analyse full-colour images, capturing details that IR cameras alone may miss.

##### 3. Integrated Software Support:

- Advanced recognition algorithms enhance the system’s ability to process data from both cameras, ensuring reliable detection and analysis of ghost plates.

#### CONCLUSION

The TagMaster CT45 ANPR Camera sets a new standard for addressing challenges posed by ghost plates and non-reflective registration designs. By integrating dual-camera functionality and configurable imaging options, the CT45 empowers enforcement authorities to enhance detection capabilities and uphold road safety standards. This innovative approach ensures robust performance in scenarios where traditional ANPR systems fall short, reinforcing TagMaster’s commitment to delivering cutting-edge traffic management solutions.

#### PRODUCTS USED

CT45 ANPR Camera