

VRE700 VEHICLE REGISTRATION UNIT

TRAFFIC IMAGING SYSTEM WITH INTEGRATED ANPR/ALPR



OVERVIEW

The Q-Free VRE700 Vehicle Registration Unit optimizes multi-lane free-flow (MLFF) and open road tolling operations with excellent performance in both single and multi-lane configurations. It captures dynamic vehicle data from multiple lanes of free flowing traffic with a single video tolling camera.

Designed to complement Q-Free's electronic toll collection systems, the VRE700 is utilized for automatic number plate recognition (ANPR) and tracking of vehicles passing through the charging point.

High-resolution digital cameras with an integrated illumination source track vehicles as they pass through the charging point, allowing the optimum combination of front and rear licence plate information along with other metadata from sensors such as On-Board Unit (OBU) readers and laser scanners. The rugged, durable design supports continued image acquisition performance even under challenging weather conditions.

Its hardware and software platform corresponds to the same platform available for the VRE690rev2. As a result, the VRE700 is fully compatible with previous generations with the ability to perform simultaneously with previous Q-Free VRE models.

BENEFITS

- Optimize multi-lane free-flow (MLFF) and open road tolling operations
- Reduce the number of cameras required for video tolling applications with a single, highly efficient video tolling camera
- Capture dynamic vehicle data from multiple lanes of free flowing traffic
- Install and adjust quickly and easily without road closure
- Meet extreme performance requirements in all weather conditions



SINGLE OR
MULTI-LANE
CONFIGURATIONS



HIGH-RESOLUTION,
DYNAMIC
VEHICLE DATA

FEATURES

- High-resolution digital ANPR and tracking cameras for single gantry operation and front or rear images of vehicles
- Infrared illumination with options of monochrome imaging or white-light illumination
- Reliable capture of both reflective and non-reflective plates
- High-speed communication over gigabit Ethernet
- Full remote configuration and health monitoring
- Integrated high-performance LED flash with 10 times the lifetime of conventional support light
- Mounting brackets specifically designed for quick mounting and installation
- Built-in pan, tilt, and roll – fine adjustment for quick installation allows adjustment of internal ANPR without road closure

ASSEMBLY EXAMPLES



ANPR imaging & tracking (A/T)



ANPR imaging



Context imaging

TECHNICAL SPECIFICATIONS

Max vehicle speed: 250 km/h
Image resolution: 2.2Mp

ANPR/ALPR CAMERA SPECIFICATIONS

Image size: 1,936 x 1,216 pixels
Grey levels: 256 (8 bit)
CMOs size: 11.3 x 7.1 mm

TRACKING CAMERA SPECIFICATIONS

Image size: 1,936 x 1,216 pixels
Grey levels: 256 (8 bit)
CMOs size: 11.3 x 7.1 mm

POWER CONSUMPTION

Camera unit: 50W + 10W heater
Flash unit: 15W

CONNECTIONS

Camera power: 24VDC (voltage)
M-12 S-coded (connector)
Camera communication: M12 A-coded (Ethernet)
Camera-flash communication and power: 3 x M12 Y-coded (signal/power)

MECHANICAL SPECIFICATIONS

SINGLE CAMERA UNIT

Size: 62 x 36 x 22 cm
Weight: 6.5 kg

SINGLE IR FLASH UNIT

Size: 30 x 18 x 11 cm
Weight: 1.6 kg

TOTAL SYSTEM WEIGHT

Single IR, 2x vertical mount flash: 15.2 kg