Advanced Technology for Traffic Applications

Intellectual Property: Kria S.r.l.

Functions

T-ID is the right solution for automatic vehicle identification and access control at car parks or private zones, metropolitan zones and highway tollgates.

Fast and easy T-ID installation does not require additional magnetic loops or photocells. T-ID runs in self-triggering mode.

T-ID processes each video signal frame in real time, automatically detecting and recognizing the car license plate, and eventually checking it against black and white lists.

T-ID reads license plates as well as any other alphanumeric code in an outdoor environment (e.g. freight container ISO codes, goods wagons, etc.).

T-ID does not require any special traffic canalization, barriers, civil works but simple installation rules to set the camera field of view.

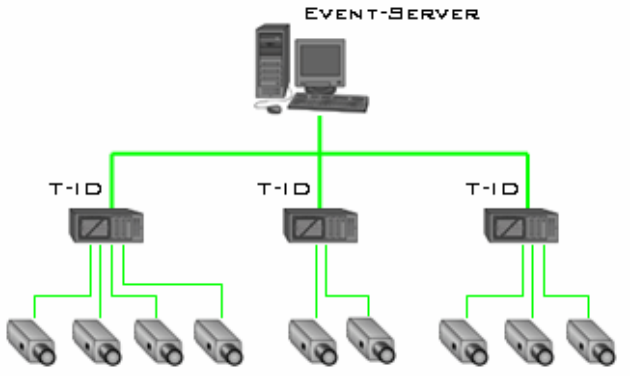
T-ID companion T-3D provides vehicle 3D classification.

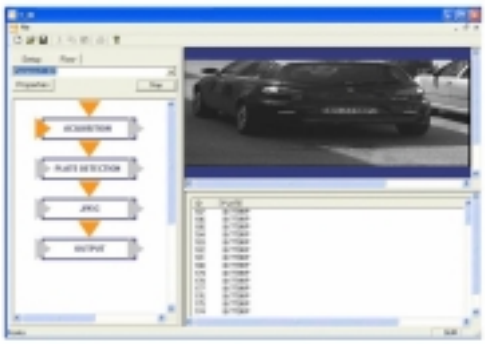
T-ID runs on a standard hardware platform and Windows Operating System.

System architecture

T-ID can process up to 150 images per second from multiplexed or parallel cameras. Normally 1-4 cameras are connected to each T-ID unit.

T-ID is paired to Event-Server and its archive providing identification and JPEG image for data retrieval and integration/network communication with third party architectures.





T-ID user-friendly GUI allows for easy configuration and process monitoring.

Kria S.r.l.	Via Maroncelli 36, 20038 Seregno (MI) Italy	Tel. +39.0362.328178 Fax. +39.0362.235088	Mail sales@kria.biz

Standard Applications	
Highway and road traffic	Multi lanes Free Running and Self triggering
Urban traffic	Stand alone or coupled to RF for enforcement
Tunnels	Security report
Car parks	Interfaced to car park access control
Container terminals	Freight ISO code identification

Technical data	
Hardware platform	Standard PC Pentium 2GHz(+)
Acquisition and processing (stop-go applications)	4 (upgradeable to 8) MUX PAL/CCIR [or NTSC/EIA] video IN up to 16 multiplexed image/sec
Acquisition and processing (non-stop applications)	3 Parallel PAL/CCIR [or NTSC/EIA] video IN 50 x 3 = 150 [or 60 x 3 = 180] continuous image/sec
Cabinet	Tower or rack 19" case
Camera	Special high sensitivity camera – custom DSP configuration
Housing	IP 66
I/O	13 contacts for 3rd party event synchronization
Lighting	Near-Infrared led matrix integrated in camera housing
Software	License Plate localization, Character segmentation and OCR designed by KRIA Context Free and Country-based Context customizations available User friendly configuration
Performance	Top "Class A" certified by UNI-10772 Italian standard Recognition rate higher than 99.5% Vehicles speed: 0 - 200 Km/h [125 mph] Plate rotation: +/-30 degrees Light contrast: 0 – 6000 lux gradient over the plate Stained license plates: detected + recovered by expected plate list

Installation	
Environment	Indoor or outdoor – Day and night
Setup	Fixed Camera 1-10 meter high
Field of view	Lens 5-20 degrees, 2-6 meters long, 2.2 meters wide

Real time output	
Vehicle Identification	License Plate Identification string
Vehicle tracking	Speed and direction estimation
Vehicle image	JPEG file
Electronic signature and security	Data and image records certified and protected by cryptography

System Integration	
Management Station	Event-Server standard SQL database and GUI
Vehicle classification Station	T-3D for three-dimensional shape and classification

Kria S.r.l.	Via Maroncelli 36, 20038 Seregno (MI) Italy	Tel. +39.0362.328178 Fax. +39.0362.235088	Mail sales@kria.biz