# Thai Global Technologies co., ltd. (TGT).



Thai Global Technologies co., ltd. presents the final software in the field of **Automatic Recognition Engines**: LPR -ANPR - ALPR- Container, Cargo Trains, and Hazard Plates)

Based on Bangkok in Thailand and evolving own technology, provides a system for GPS tracker system includes automatic vehicle location, trip booking, fare calculation and other dispatch functions, ANPR & LPR System has built a reputation for the delivery of innovative CCTV, ANPR and Access Control Solutions detecting and reading License Plates from Cars, Containers and Trains ID, Hazard Plates) very easy to install and to integrate into any OS, with the maximum reading reliability, thus offering an immediate time-to-market.

## Main Advantages on the ANPR - LPR - ALPR Software From TGT:

- Thai Global Technologies constantly evolving and improving
- 98% or bigger reliability rating on LPR (including damaged vehicle plates, etc.)
- Processing time of 50ms.
- Recognition of 2-line vehicle plates
- Provides reliability of each vehicle plate
- Provides reliability of each character
- Recognizes motorcycles (2 lines plates)
- Possibility of providing up to 8 vehicle plates in one image
- Reading from memory, BMP and JPG file...
- Hardware independent (cameras, frame-grabbers, etc.)
- Immediate integration with IP cameras (Bosch, Axis, Vivotek, Sony, Panasonic, LG, JVC, IDS-IMAGING, HIK, Mobotix, Lilin, Avigilon, etc.)
- Standard and free-flow versions



## And in the VPAR SERVER LPR - ANPR - ALPR version:

- Duplicated license plate filtering
- Shadow killer
- Slant Detection
- Perspective correction tools
- Integrates its own database (SQL server) to log every recognized license plate.
- Supports NVR's streaming protocols such as Bosch, Milestone, IndigoVision, Mirasys, AxxonSoft, NUUo, etc.
- Can send XML messages to third party systems.
- For each license plate logs:

License plates (up to 8 on the same image).

Confidence level.

Traffic direction.

Vehicle image (JPG file).

Timestamp, GPS position, camera Id, country, etc.

Location of the license plate in the image.

And more...

#### Main Applications:

The Automatic Number Plate Recognition (ANPR - ALPR - LPR) engines from TGT is especially indicated in the following areas:

- Border control
- Car parks
- "Find your car" (in Car Parks)
- Petrol stations
- Weigh stations for Lorries (trucks)
- Police patrol cars (on the road and in the city)
- Virtual "lifeguard" (for the transport of money and valuables)
- Traffic law enforcement (Red Light, pedestrian zones, bus lane...)
- · Access control of residential areas
- Access control of industrial estates
- Truck parking areas
- Speed cameras
- NCT Centers (vehicle inspection centers)





- Motorway: Toll bridges, average speed, etc
- Automatic bollards for restricted access to certain areas
- Car Counting
- Driving Offence Detection

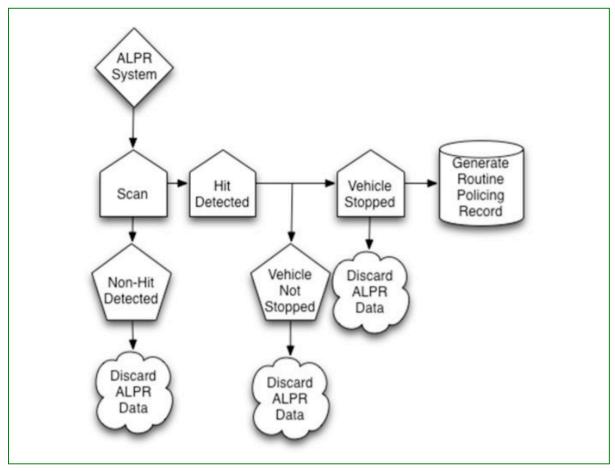
### **Request More Information:**

Take advantage now of the benefits that Thai Global Technologies Recognition engine brings.

Contact us for more information on our Recognition Software: LPR - ANPR - ALPR-Container, Cargo Trains, and Hazard Plates.

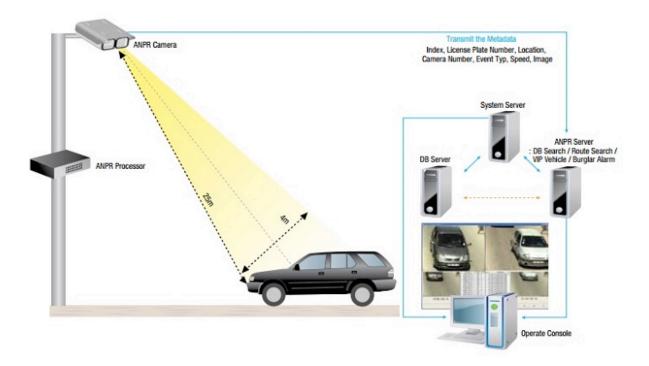
A model of such an ANPR system has been detailed in a paper 'ANPR: Code and Rhetorics of Compliance'.

The authors explain that "all collected data would be the result of normal policing records that follow a traffic stop/investigation of a vehicle". This means that no ANPR databases would exist. The below figure shows the data flow for such a system.



**Enforcement-Based ALPR/ANPR Data Flow** 

#### How it works



As a vehicle passes an ANPR camera, its registration number is read and instantly checked against database records of vehicles of interest. Police officers can intercept and stop a vehicle, check it for evidence and, where necessary, make arrests. A record for all vehicles passing by a camera is stored, including those for vehicles that are not known to be of interest at the time of the read that may in appropriate circumstances be accessed for investigative purposes. The use of ANPR in this way has proved to be important in the detection of many offences, including locating stolen vehicles, tackling uninsured vehicle use and solving cases of terrorism, major and organized crime. It also allows officers' attention to be drawn to offending vehicles whilst allowing law abiding drivers to go about their business unhindered.

#### Retention and access to stored data

ANPR cameras from police forces submit copies of vehicle registration marks to the Department of land transport ANPR Data Centre daily. ANPR data from each police force is stored together with similar data from other forces for a period of two years.

We have clear rules to control access to ANPR data to ensure that access is for legitimate investigation purposes. Members of staff only have access to ANPR data if it is relevant to their role and the majority of those who have permission may only do so for a maximum period of 90 days from the date it was collected. Some staff are authorized to access data for up to 2 years subject to authorization of a senior officer.

Searches of ANPR data can confirm whether vehicles associated with a known criminal has been in the area at the time of a crime and can dramatically speed up investigations.

#### **Camera locations**

In addition to being mounted within police vehicles, ANPR cameras within police forces are used at fixed locations where they will help to detect, deter and disrupt criminality. In line with national policy, we do not disclose details of our fixed locations as this information is likely to be of benefit to offenders and if known could reduce the value of ANPR to policing. National guidelines state that, if a police force proposes to install additional ANPR cameras, an assessment must be conducted that demonstrates a clear need, taking account of the following factors: national security and counter terrorism, serious, organized and major crime, local crime, community confidence and reassurance, and crime prevention and reduction.

In assessing whether new cameras are to be deployed, a Privacy Impact Assessment will be undertaken. Law enforcement agencies will consult with persons and organizations with a reasonable interest in the proposal unless that would be contrary to the purpose of the development, namely to detect, deter and disrupt criminality.

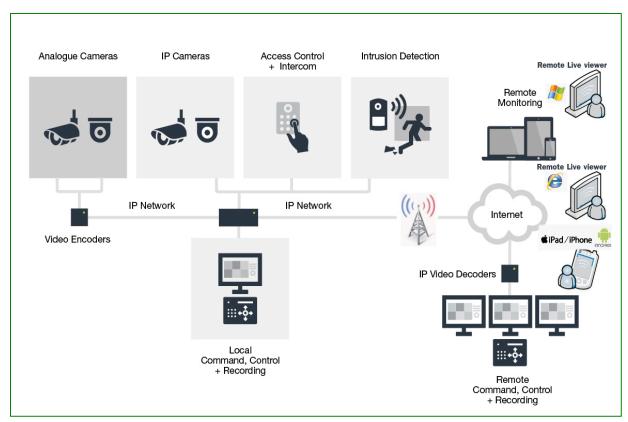
Law enforcement agencies are also committed to regularly review the location of ANPR cameras, in the context of the above criteria, to make sure that the continued deployment remains justified. All reviews will include consideration of the impacts on privacy.

Here at TGT we offer complete ANPR system or any component parts with professional system design advice from our highly experienced team. Our comprehensive product range includes ANPR Cameras, Recognition, Application and Back Office Software, Vehicle Processors and Video Capture Cards.

Our own ANPR Software and Devices are compact and lightweight and utilize the latest LED technology to deliver a new standard of plate reading. The cameras have been designed to be efficient, economic and technically appealing to installation engineers.

### **CCTV Systems**

Thai Global Technologies is approved and provides leading edge surveillance technologies in traffic management, ITS, and security markets.



# **Smart Eve**

The Smart Eye is a portable & automated pan-tilt-zoom camera system for displaying real time video or still images remotely.

Developed by TGT, this system uses solar powered trailers and wireless communications for maximum portability and mobility.

Smart Eye can be adapted to various applications such as: Work zone traffic management system.

Incident management.

Visual verification of on-site weather conditions.

Law enforcement & security applications.



#### Features:

- Solar powered trailers for maximum portability and mobility.
- Integrates video over IP technology and state-of-the-art wireless communications LAN/WAN technologies.
- Integrated System: all components work as one system.
- Allows remote pan-tilt-zoom control of the camera.
- Can work as a stand alone system of can be integrated with other ITS systems.
- Fast & easy set-up. Can be installed on site by one person.

#### **Access Control**

# **Under Vehicle Surveillance System**

Search vehicle undercarriage safely and effectively to spot hidden items such as... explosive devices, firearms, drugs and contraband, or even a hidden person





Under Vehicle Surveillance System (UVSS) captures underside vehicle image of moving vehicles up to a speed of 30Km/hr.





TGT is a certified partner of Bosch Security Systems in the Middle East. Our engineers are trained and certified by Bosch and this enables us to integrate state-of-the-art IP based surveillance systems in a wide range of applications that include:

- Traffic monitoring & surveillance
- Parking facility surveillance
- Surveillance system for secured areas such as:
- Banks, commercial buildings, airports, TV stations, universities, and more...

# **GPS Tracking System**

GPS is one of the smallest tracker in the market which is specially designed for Logistics fleet, Refrigerator lorry, Cement mixer, School bus, Taxi agency, Currier service, Ambulance car, Motorcycle, Pet, Children, Truck, and Electronic bike etc. The tiny size enables to be hidden in any place in the vehicle, even in the battery case, while delivering regular and accurate location records using state of the art GPS over the cellular network.

Flexible in the its programming options. The GPS Tracker can be easily re-programmed via SMS by the user to set and reset it's scheduled and motion detected location reporting.

## Key Features:

- ✓ Quad Band GSM, Enable to Work Worldwide
- ✓ U-Blox GPS Chip, 50 Channels, Accuracy: 10m.
- ✓ Weather-proof, ABS Casing Material
- ✓ Circular Geo-fencing, Exit Geo-fence Alert
- ✓ Movement Alert by SMS or Calling
- ✓ Tracking on Movement/ Standby on Motionless
- ✓ Different Report Basing on Movement / Motionless
- ✓ Mini Size for Covert Deployment: 65x38x20mm or 50x38x20mm
- ✓ Special SIM Card Slot Design
- ✓ SMS / GPRS Tracking and Query
- ✓ Address, Position, Map link available on Query
- ✓ Wide Power Supply for Vehicle, Motorcycle, E-bike etc.
- ✓ Free Web Access at any time.

