



EL PLATE

Containing traffic has proven to be one of the more difficult tasks in today's ever growing complex world. Not even the most advanced countries have been able to prevent their roads from clogging up with heavy traffic. The daily chaos resulting from car-related accidents and crimes along streets and highways makes the use of advanced technology imperative to these challenges.

The EITS Automatic Number Plate Recognition (ANPR) System is a technology designed to meet these challenges. As a fixed-mount computer for in-vehicle applications, the ANPR Unit is designed specifically for monitoring and enforcement purposes in the control of traffic flow.

The system can automatically take images of passing vehicles, and can locate and read the license plates from the captured images by using EITS FreeFlow ANPR Software. The software is capable of recognizing any number plate in the world. The result is given back in ASCII character codes. The data captured can then be transmitted through the integrated GSM/GPRS connection. The integrated GPS provides position log, and all data can be sent to a central server for further processing or database verification. The modem and GPS unit provide the option of receiving the control commands electronically from a distant HQ.

Police Enforcement

After the license plate has been identified it can then be cross-referenced against a police database. The primary objective of this is to identify vehicles that have been stolen, used in a crime or are in violation of some other law. Some systems are also linked to insurance databases to monitor if the vehicle is currently insured. In the United Kingdom, for example, ANPR enforcement has netted thousands of arrests related to stolen vehicles, vehicles carrying drugs and other stolen goods.

Traffic Control

Many cities and districts have developed traffic control systems to help monitor the movement and flow of vehicles around the road network. This had typically involved looking at historical data, estimates, observations and statistics such as:

- Car park usage
- Pedestrian crossing usage
- Number of vehicles along a road
- Areas of low and high congestion
- Frequency, location and cause of road works

Special cameras can be used to help traffic control centers by giving them live data, allowing for traffic management decisions to be made in real-time. By using ANPR on this footage it is possible to monitor the travel of individual vehicles, automatically providing information about the speed and flow of various routes. These details can highlight problem areas as and when they occur and helps the centre to make informed incident management decisions.

A well-planned ANPR system can provide an interactive and real-time web site showing details about traffic in the city. It can show information about car parks, ongoing road works, special events, and footage taken from CCTV cameras. ANPR systems can be used to provide average driving times along particular routes, giving drivers the ability to choose which one to take. In conjunction with other technologies, ANPR may also allow travelers to see the current situation using a mobile device with an Internet connection (such as WAP, GPRS or 3G), thus allowing them to be alerted to any problems that are ahead.

Additionally, ANPR may be configured to work in toll and charge zones.

Typical areas of usage:

- Police cars
- City or highway monitoring applications
- Patrolling for stolen cars
- Speed enforcement

Technical Specifications for the EITS-ANPR Unit

The EITS-ANPR unit is equipped with a large, intelligent touch screen display. The mobile unit contains embedded multimedia devices, a stereo amplifier, and a combination slim line DVD/CD unit. With its embedded heating and cooling system, the unit is protected from extreme environmental and mechanical conditions.



Mechanical and Temperature Data

- Size** Central Unit: Std DIN Car Radio Mounting Case for Dashboard Mounting
 Console Mounting: 189mm (w) x 61mm (h) x 177.5mm (d), 1.8 kg
 CD-ROM box: 189mm (w) x 19mm (h) x 177.5mm (d), 0.2 kg
 Display Unit: 212mm (w) x 180mm (h) x 25/45mm (d), 1.0 kg
- Operating Temperature** -25 °C to + 55 °C
Storage Temperature -40 °C to + 80 °C
Humidity 5% + 80 °C

Hardware Specifications

- CPU Unit**
 Mobile PIII 500Mhz with embedded FXVD4mc_s frame grabber card (PCI04 + format)
- Memory** 128MB RAM
Hard Disk 30 or 40 GB
- Display**
 Separate TFT LVDS display, 8.4" SVGA, 800X600 pixels, Touch Screen.
- Video** AGP, XGA controller, 4MB RAM, Direct CRT/LCD Control, 262000 colors
- Audio** Integrated mono speaker, 2x30W integrated stereo amplifier
- I/O** 4 x COM Standard Dsub9 Connector
 2 x USB, 2 X PS2 for keyboard and mouse
 GPS antenna, GSM antenna
 Digital Display Interface
 J1939 Vehicle power connector: Power Input: 4x digital input, 3x digital output, vehicle ignition
 Wake-up 1x PC/104+ on PCI-only Bus for std PC/104+ boards
 Audio I/O for Microphone and Stereo Out for External Amplifier
- CD/DVD/CD-R** Slim line (optional)
- Power Supply**
 Operating Voltage 12 VDC
 Computer unit's operating power consumption 12W including display and heating
- Electromagnetic**
 Compatibility (EMC) Fulfills the requirements of 95/54/EEC directive for ESA's radiated emissions
 Based on draft EN 55022 (1997)

Software Specifications

- Supported OS**
 Windows® 95/98/2000, Windows® NT/XP, Linux Mandrake® 7.6