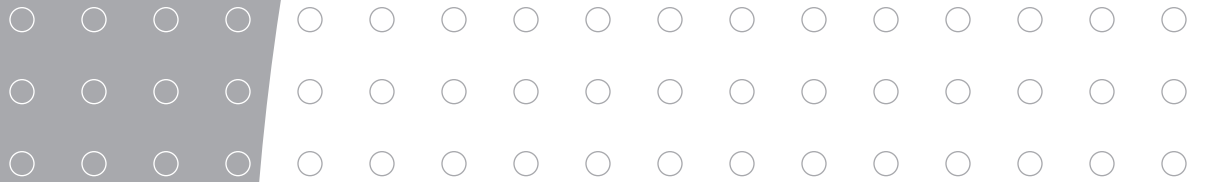




TELEGRA

Smart Traffic Management®



INTELLIGENT TRAFFIC MANAGER™



Intelligent Traffic Manager™

Telegra's topXview™ Intelligent Traffic Manager™ solution is exclusively designed for the Intelligent Transportation Systems (ITS) industry. It is the only comprehensive ITS solution that incorporates all traffic and infrastructure functions into one robust package. With Intelligent Traffic Manager, a single operator can control multiple subsystems, including video, communications, and complex open-road applications on highways and bridges, more easily and effectively than ever before.

By fully integrating all installed systems through a single workstation, Intelligent Traffic Manager offers simple, one-stop control of your roadway monitoring and management activities. Designed to meet diverse traffic management demands, Intelligent Traffic Manager has the built-in features that hands-on operators require:

Comprehensive Control Specifically designed for traffic monitoring centers, it supports all standard applications for control of complex roadway systems, especially tolled highways, monitored open-road freeways and bridges

Complete Integration Integrates all key subsystems required for bridge and open-road applications, including the most advanced video integration in the industry

Uniform Display Presents all systems in user-friendly graphical user interface (GUI) with icons designed specifically for the transportation industry

Universal Access Gives all traffic management staff easy access, but offers a hierarchical authorization function to protect sensitive information

Openness Efficient, driver-based system allows easy changes and additions

Proven With more than 20 years of experience, Telegra systems are installed and operating successfully in multiple countries throughout the world

DRIVING AUTOMATION FOR THE 21ST CENTURY.

Telegra's Intelligent Traffic Manager also enables operators to quickly obtain and assess information on road conditions, thereby improving safety and traffic flow on tollways, freeways and bridges. These are just a few reasons why Telegra is a leader in the Intelligent Transportation Systems industry.

THE ONE-STOP CHOICE FOR AUTOMATED TRAFFIC MANAGEMENT

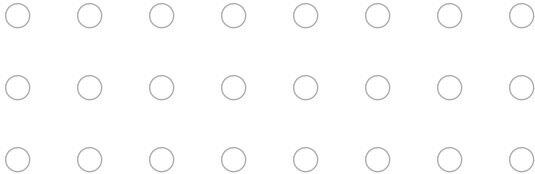
topXview Intelligent Traffic Manager has all the key features necessary to automate, analyze and report operations and traffic on bridges and along closed system or open roadways and tolled highways:

- » **Automation Components** A wide range of automated, semi-automated and manual scenarios and standard procedures are available
- » **Data Archiving** A simple and reliable archiving system can store all relevant data on a hard drive, DVD, CD or other media for future browsing, analyzing and organizing
- » **Reports and Graphs** Through a database and Web interface, users can access detailed reports concerning all system activities in clear, graphical forms designed according to traffic management process requirements
- » **Accessible Security** Telegra's Web interface uses the highest level of security so you can enjoy the benefit of "wherever/whenever" access with the confidence that all critical data is protected

A SINGLE CONNECTION FOR A SINGLE TRAFFIC MANAGEMENT SYSTEM

Intelligent Traffic Manager's central point of interaction is the main user interface. Through a series of drivers, users connect to all systems along the roadway for controlling and managing traffic flow, as well as viewing, analyzing and storing data. Telegra's Intelligent Traffic Manager is a complete ITS tool, integrating all the applications needed for comprehensive traffic management.

- » Integrates data regarding traffic and road conditions on bridges and on local roads, arterial roadways, toll roads, or freeways
- » Controls field devices and subsystems via WAN or LAN by means of fiber-optic, twisted-pair or wireless infrastructure
- » Displays real-time data received from field devices and subsystems regarding traffic, road conditions or the operating status and maintenance information of a field device via a graphic user interface
- » Uses a software algorithm to supplement data received from field devices and subsystems to disseminate the most accurate information to travelers



INTERFACING WITH TRAFFIC MANAGEMENT SUBSYSTEMS

Telegra's Intelligent Traffic Manager interfaces with all the key subsystems operators require to keep traffic moving freely on highways, toll roads and bridges. Intelligent Traffic Manager allows you to manage:

LED Displays and Variable Message Signs

- » Controls sign message data in real-time
- » Displays text and images on any size or type of sign, including programmable or variable message signs

Prismatic Message Signs

- » Controls sign message data displayed on any size of prismatic (electromechanical) variable message sign
- » Monitors operating status and maintenance requirements

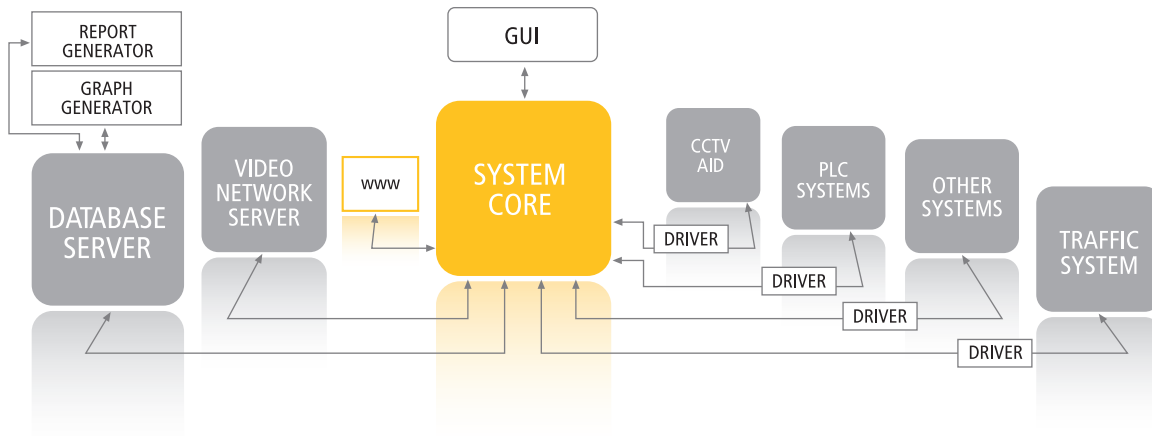
Traffic Counters and Classifiers

- » Displays live data on traffic volume and vehicle classification produced by traffic counters and vehicle classifiers of any type or size
- » Records traffic counts and classification data

Weather Station/Road Surface Sensors and Associated Weather Forecast/Warning Systems

- » Receives real-time data input regarding climate related conditions such as rain, snow, ice, mist or fog generated by any sensor device or equipment





- » Posts applicable weather station data on the affected bridge or roadway to alert drivers

Traffic Barriers

- » Operates single or multiple traffic control devices used to regulate traffic movement, such as traffic gates or movable barriers of any type or size
- » Monitors operating status and maintenance requirements of gates and barriers

Traffic Signal Heads and Flashers

- » Controls single or multiple traffic signalization devices or flashing lights of any type or size used to regulate traffic movement
- » Monitors operating status and maintenance requirements of signal and flashing equipment

Over Height Detectors

- » Controls single or multiple height detection devices used to monitor and measure vehicles
- » Issues warnings via message signs to non-compliant vehicles

Weigh-In-Motion (WIM) Systems

- » Receives live data input from weigh-in-motion equipment in the field

- » Collects and records truck traffic weight and credential information

Ramp Metering

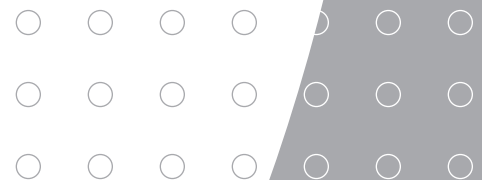
- » Operates single or multiple metering devices used on access ramps
- » Controls traffic movement in real-time via ramp metering equipment

Emergency Roadside Telephones

- » Interfaces with emergency roadside telephones or other communications systems of any type
- » Operates digital recording subsystems
- » Engages users with live emergency operator interface

Other Traffic Management Centers

- » Connects with other Traffic Management Centers while maintaining all of its capabilities to provide comprehensive center-to-center NTCIP operation



INTERFACING WITH VIDEO SUBSYSTEMS

The Intelligent Traffic Manager provides operators with real-time video of conditions on monitored roadways and bridges through an interface to a variety of video subsystems, including:

CCTV Systems

- » Uses live data input from any type or size of CCTV equipment to produce closed circuit video viewable in real-time in the control center via the graphic user interface
- » Operates digital recording subsystems
- » Allows emergency operator interface

Automated Incident Detection System

- » Receives live data input from any Automated Incident Detection (AID) system and displays data in real-time via the graphic user interface
- » Operates digital recording subsystems
- » Allows emergency operator interface

License Plate Recognition

- » Uses live data input from any installed License Plate Recognition System to display real-time video via graphic user interface
- » Operates digital recording subsystems
- » Allows emergency operator interface





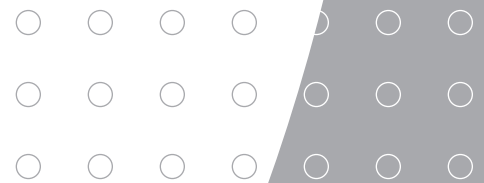
PITIZ Camera Control

- » Controls video camera equipment displayed on any size or type of sign, including programmable or variable message signs
- » Operates single or multiple cameras remotely

ROADSIDE FIELD CONTROLLER

Telegra's Roadside Field Controller (RFC) is an integral part of our Intelligent Traffic Management tool. The RFC collects data from traffic systems, such as weather conditions and vehicle counts, speeds and classifications, then processes and transfers the data to the traffic control center.

The RFC communicates wirelessly or via copper or optical cables to the control center or directly to equipment on the road. It is fully Ethernet-supported and can facilitate autonomous local operation if there is a communication breakdown. With a large non-volatile memory buffer, the RFC has the option to control electrical power equipment or connect directly to other subsystems using field bus protocols.



PRODUCT SPECIFICATIONS

Certifications	ISO 9001:2000 certification
Communications Interface	Ethernet, GSM/GPRS, Bluetooth, wireless; TLS; RS-232 (any TLS-compliant traffic system)
Database Interface	Server connectivity to worldwide Internet with report and graph generator
Drivers	Both standard and customized available
Functionality	Ergonomically advanced central user interface of traffic management and other roadside systems
Graphical User Interface	WYSWYG-based platform
Hardware Requirements	Windows 2000/XP; 512 MB RAM; Intel Celeron, 2.6 MHz; network ports; serial ports
Internet Interface	Limited to the generation of reports and database access; remote clients are permitted access via secured lines
Main System Components	System core gateway; subsystem drivers, graphical user interface clients; database historian; automation components
Manufacturer Experience	Over 20 years
Message Alert Platforms	Email; SMS; automatic; semi-automatic; manual
Platform Scalability	Unlimited maximum identification numbers of approximately four (4) billion traffic management and control devices of virtually any type or size
Reports and Graphs	Customized to meet traffic conditions and customer requirements
Supported Protocols	NTCIP; MODBUS; ISS AutoScope; various video switches
Supported Systems and Devices	Including but not limited to: variable message signs; traffic lights; variable speed displays; traffic controllers; barriers; vehicle detectors; weather data; roadway lighting; video cameras; roadside telephone systems; and PLC systems
System Architecture	System core via drivers to database server; PLC systems, traffic systems and other systems
System Requirements	Windows 2000/XP, a minimum of 512 MB of RAM, Intel Celeron 2.6 MHz or better, required hardware interfaces (network, serial ports, etc.)
Traffic Management Features	Including but not limited to interactive algorithm execution and procedural help for operators and maintenance staff
User Application	Ergonomically advanced central user interface of traffic management and other roadside systems
Warranty	Two years on all software



American Welding Association | ISO 9001:2000 Certification

Telegra is a member of AAAE, AASHTO, ATSSA, IBTTA, IEEE, IMSA, IRF, ITE, ITS America, NEMA, TEAM Florida, TEAM Texas and



TELEGRA
Smart Traffic Management®

3030 LBJ FREEWAY • SUITE 1385 • DALLAS, TEXAS 75234

1.877.282.3535 • PHONE 972.241.3535 • FAX 972.241.3541 • info@telegra-inc.com • www.telegra-inc.com