IQ CENTRAL®

ADVANCED TRAFFIC MANAGEMENT SYSTEM

JAM SERVICES, INC.

www.jamservicesinc.com

Call 925-455-5267

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ADVANCED TRAFFIC MANAGEMENT SYSTEM

IQ Central® is a revolutionary software system that is uniquely capable when it comes to managing traffic control and monitoring devices, both new and legacy, from a central location. Whether you wish to interface with older equipment, or the latest traffic control hardware, it is likely that IQ Central can perform the task. This Windows-based software has a friendly graphical interface that is easily adaptable to each user's needs, making a powerful option when a customized interface is desired.

IQ Central provides the powerful combination of a true NTCIP-based central system which also happens to provide backward compatibility to legacy hardware, thus creating a long-needed path from the systems that exist today, to the hardware we all wish to use tomorrow.

FEATURES

» Backward compatible, yet designed for the future

» Friendly, user-configurable graphical user interface

» Multiple map displays using either static image files or ESRI GIS map data

» Highly-configurable alarm monitoring

» Exporting and reporting services are based on widely-available and easily adapted Microsoft tools, namely Access databases, Word report formatting, and Excel data import and export

» Multi-user, networked system can be scaled to fit the size of the operations center

» Centrally commanded pattern changes

» Scheduled log file retrieval

» Interactive device programming

» Live volume and occupancy monitoring

» User-defined device groups

» Comprehensive help system and user documentation

» Capability to monitor the status of thousands of devices with second-by-second graphical representation

SUPPORTED DEVICES

Traffic Controllers and Master Controllers

IQ Central provides a unique capability to bridge the old and new when it comes to traffic controllers, since it can be used to control, program, monitor, and retrieve logs from individual intersection controllers, masters, and local controllers under masters.

» Peek IQ ATC® controllers, including:

  – IQ ASTC CBD controller
  – IQ ATC controller
  – IQ ATC NEMA TS2/2 controller
  – IQ 2070/ATC controllers

» Multisonics controllers:

  – 820A OSAM
  – OSAM 32 Master

» Peek controllers:

  – 3000E
  – M3000E Master
  – LMD-9200

» Traconex controllers:

  – 390CJ
  – TMM500 Master

» Transyt controllers:

  – 1880EL
  – 3800EL Master

» 170, 170E controllers with Wapiti software

» 170E/ATC controllers

» Basic support for any controller that uses the NTCIP 1202 standard ASC blocks

Video Cameras

» Cameras networked via an AxisMedia server

» NTCIP 1205-compliant cameras

Message Signs

» NTCIP 1203-compliant message signs

Sensors

» NTCIP 1209-compliant transportation sensor systems

Weather Stations
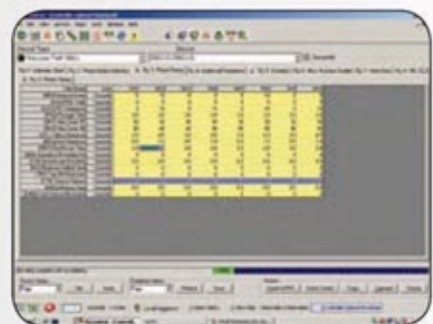
» NTCIP 1204-compliant environmental system sensors

COMMUNICATIONS SUPPORT

With IQ Central, NTCIP communications with supported devices can be achieved using any of these technologies:

» Direct serial (EIA-232)

» Dial-up modem

» Ethernet

» Radio modem

» Fiber optic modem

» PPP dial-up or serial

DEVICE PROGRAMMING

IQ Central has been especially enhanced to allow traffic engineers to control and program intersection controllers. This is done via an interface that mimics the data structures and front panel operation of each type of controller. And this capability is not limited to independent controllers; you can also program controllers that are operating under a master controller. The interface to do this provides graphical indicators of how the data has been modified, relative to the field device, and relative to the copy of the controller program that is stored in the IQ Central database.

Using this interface, parameters can be retrieved and set either individually, in groups, or as an entire device database.

SYSTEM MONITORING

Any device, device type or device group can be configured to poll on any NTCIP data objects. These data objects can then be used to drive a graphical representation of the device overlaid on the Map View. Up to four levels of zoom detail can be specified for each type of device, including a front panel view that is provided for traffic controllers, each showing live polling data in an easily-understood manner.

But IQ Central can perform many more types of status monitoring than your typical traffic management system, even those purporting to be 'advanced'. Because of its multi-device-type capabilities and its reliance on NTCIP standards, you could use IQ Central to monitor:

» The signal states of all intersections on a main arterial of intersection controllers, including pedestrian indicators and alarm indicators

» The volume and occupancy readings from intersection detectors

» The temperature, wind direction and wind speed from a weather monitoring station

» The current message being displayed on a variable message sign

» The video from a traffic camera, along with its current zoom and focus settings

All of these status items, and more, can be shown within the map view of IQ Central.

Polling data can also be configured as a basis for alarm test conditions on any NTCIP data object. Alarm polling and status polling can be configured at intervals that are synchronized or independent of one another. IQ Central then provides a complete global environment that allows an operator to easily see the status of the entire system.

With a map view, a device status view and an alarm monitoring list window open within IQ Central, the software provides an ideal environment for monitoring an entire traffic system from a central location.

TECHNICAL DETAILS

Server
Windows 2000 or XP, Intel P4 CPU (or equivalent) at 2GHz or better, 1GB RAM, 10GB free HD space
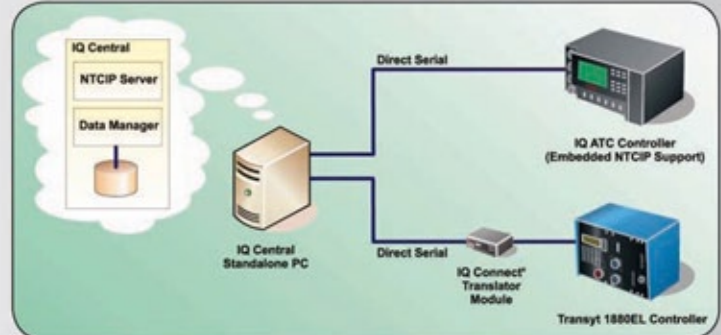
Workstations
Windows 2000 or XP, Intel P4 CPU (or equivalent) at 1.7GHz or better, 1GB RAM, 5GB free HD space
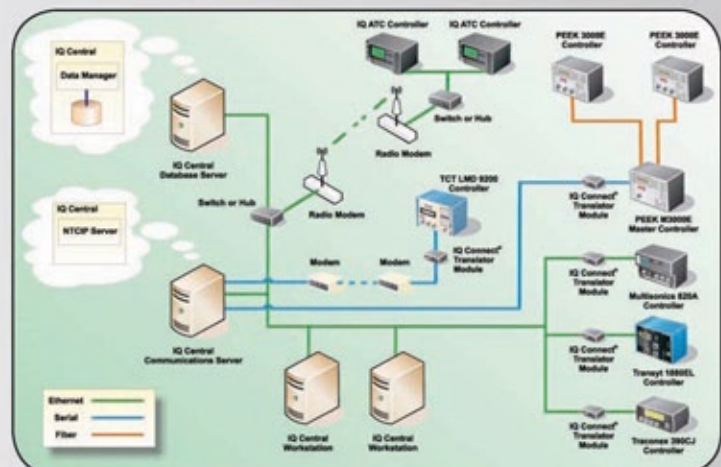
Network Architecture
IQ Central supports a variety of network technologies, between the clients and the server, and between the PCs and the field hardware, using the Windows DCOM communications protocol:

» TCP/IP

» Office LAN/WANs

» VPN

» Dial-up

A Simple IQ Central Installation

A Complex IQ Central Installation

Database

IQ Central stores device configurations and retrieved data in a central database that can be on the same server as the communications hub, or on a separate database server. IQ Central can be used with these database platforms:

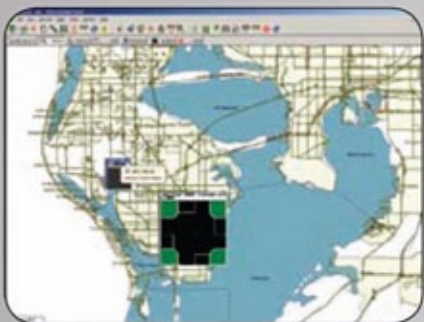» Microsoft Access 2003

» Microsoft SQL Server 2005

Mapping

IQ Central can be ordered in one of two mapping variants: IQ Central BMP or IQ Central with GIS Mapping.

Bitmapped Maps support

» Image files can be imported in these formats: BMP, GIF, JPG, and PNG

» Multiple map files can be linked together via clickable hotspots

» Devices can be configured to appear over one or several of the map background views

GIS Maps support

» Multiple shape files support

» Continuous, interactive zoom and pan

» Customizable layers and layer groups

» User-defined layer coloring, label selection, icon selection, label coloring, line/outline coloring and styles

» User-defined layer and data appearance based on map zoom level

Reporting

Pre-Configured

» Devices (filtered or un-filtered)

» Connections (filtered or un-filtered)

» Device Types

» Current Users

» Historical User Activity

» Device Messages

» Groups

» Active Alarms

» Active Alarms by Device

» Alarm History Report

» Device Event Logs – Simple or Detailed

» Local Volume Log

» MOE Log

Customizable

» All items in the IQ Central database are readily available for inclusion into user-defined custom reports

» User defined queries and report formatting based on Microsoft Access tools

Alarm Monitoring

IQ Central has a highly-adaptable alarm monitoring system, with the following advanced features:

» Global status bar alarm indicators

» Optional alarm indicators: pop-up messages, system sounds, user-defined alarm sounds, status bar icons, customized alarm messages

» Alarms can be defined by individual device, device type, user-defined groups of devices, or system-wide

» Three levels of alarm severity, each with their own display and alarm indication options

» Dockable alarm status list tool

» Filtered alarm history tool and alarm history reporting

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