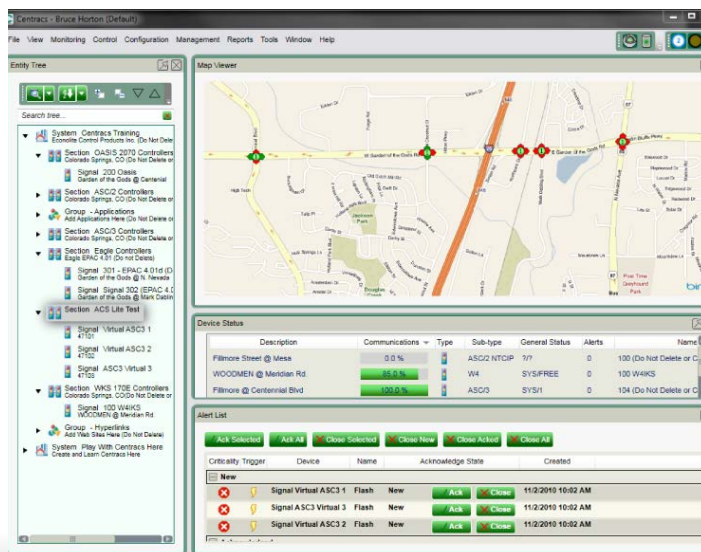# CENTRACS®

The flexible and scalable Centracs design also provides agencies with feature-rich options that best meet evolving transportation agency needs.
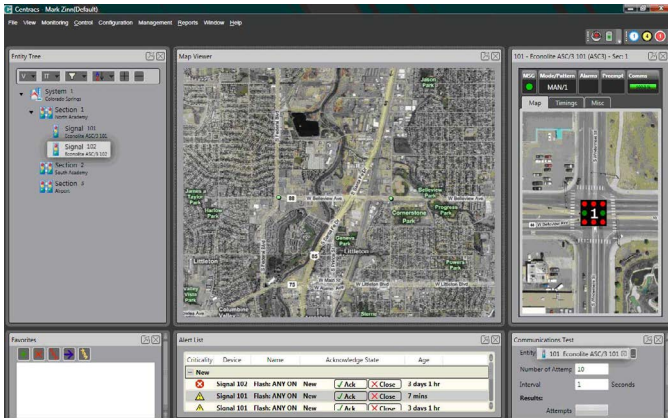
About Centracs

Transportation agencies, now more than ever, are looking for more efficient and cost effective solutions to manage traffic. Econolite offers the Centracs Advanced Transportation Management System (ATMS) as a valuable component of an effective ITS solution to easily address current and future traffic management challenges. Centracs provides an integrated platform for traffic signal control, ITS field device monitoring and control, information management, graphical data display, advanced traffic algorithms, and much more. Centracs is a flexible, user friendly and cost-effective system, enabling agencies to realize significant mobility benefits from its ATMS investment. The flexible and scalable Centracs design also provides agencies with feature-rich options that best meet evolving transportation agency needs.

At A Glance

- Intuitive user interface
- Designed for scalability and efficiency
- Intuitive Intersection graphics tools
- Interactive GIS based system maps
- Flexible device hierarchy, groupings and jurisdictions
- User definable, programmable alert escalations
- There are many module options allowing the system to be customized to meet the needs of most agencies

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Graphical User Interface and "Containers"

Modern Graphical User Interface (GUI) design is an integral part of Centracs. The intuitive GUI provides a short system learning curve, helping new users to immediately become productive while allowing experienced users to leverage the full power of Centracs' advanced features. Centracs offers an extensive and flexible suite of tools, encouraging users to establish individual workflows and environments for increased efficiency.

User versatility is made possible by the Centracs user interface, which utilizes powerful "Container" technology. Containers assist the user in managing the various maps, status, and control screens by enabling the user to drag-and-drop open windows into containers.

Interactive GIS Based Maps

The modern GIS map technology and rendering tools behind Centracs map interfaces make the map a truly convenient tool for managing and monitoring field devices. Simple mouse gestures are used to pan and zoom, while the Centracs Container technology allows users to customize, display and store multiple maps. Agencies can select from a variety of commercial or government GIS data sources including their own GIS databases. The local intersection map editor in Centracs is easy to use allowing users to add fully functioning intersection displays in a matter of minutes.

Centracs takes care of the positioning and sizing of contained windows, leaving the user free to focus on more important tasks. When a user exits Centracs, the entire layout is remembered and then restored on the next login. Additionally, all system configuration actions are performed through the GUI - no more need to edit configuration text files or registry entries.

Scaleable Architecture

Centracs implements a distributed layer architecture providing scalability and expandability. The "Core" or application server manages the system scheduler, traffic control algorithms, field device time management, alert generation, and more. Communication or "Comm Servers" perform the communications to field devices. The entire system can reside on a single computer or it can be spread across multiple computers. This allows Centracs to efficiently manage a small agency's needs on a single, inexpensive computer, or to scale to a large agency managing thousands of devices by distributing the processing across multiple computers.

Powerful Monitoring Tools and Reports

The true value of a modern ATMS system depends on the tools provided to monitor and manage the system. Centracs offers a wide range of reports and real-time monitors for nearly every aspect of the system. Real-time detector monitors, Time-Space and Split Monitors, coordination, Traffic Responsive, communication status, system performance monitors and alert monitors allow the various users of the system to track those aspects of the system that are most important. Whether the user is a Traffic Engineer, a TMC manager, a System Administrator, or a signal shop manager, Centracs provides the monitoring and reporting tools for the job.

Communications and Device Support

Robust, dependable communication to field devices is a key to a successful ATMS system and is a critical component of Centracs. Most communications media is supported, including fiber optics, twisted-pair, leased lines, and wireless. Protocol support includes: TCP/IP, UDP/IP, RS232 serial, ACT, PMPP, STMP, and SNMP. Traffic signal device support includes: Econolite's NTCIP-based Cobalt, ASC/2, ASC/2S, and ASC/3 (1000, 2100, or Rack Mount) NEMA TS1/TS2 controllers, 2070 (L or LN) controllers running ASC/2070, ASC/3 2070, or Oasis firmware, or controllers running EPAC version 4.01D,170-type controllers running certain versions of Wapiti W4IKS firmware, and NTCIP 1202 compliant controllers.

Centracs Maintenance Management System (MMS) (optional)

Centracs MMS is a simple to use GIS-based asset management and maintenance system. It allows ITS and signal maintenance organizations to track assets in real-time through the products' entire life cycle. Offering both workstation and mobile device interfaces, it supports preventative maintenance planning and execution along with trouble ticket dispatch and work-order scheduling. Centracs MMS is available as an optional module to Centracs, or as stand-alone system.

Centracs DCMS (Data Collection Management System) (optional)

Centracs DCMS turns new or existing detection systems into virtual count stations that gather and distribute traffic data without interruption, providing the accurate information needed for faster incident response, real-time changes to traffic signal timing, or anticipate special event traffic conditions.

Travel Time Module (optional)

Teaming with TrafficCast, Econolite now offers travel time displays and reports for agencies using BlueTOAD devices for "origin and destination" travel time data. Now real-time travel time data is displayed as colored roadway segments allowing users to quickly see where traffic is flowing well and where there are problems. Simple mouse pop-ups provide even more detail to the traffic operator.

Centracs Adaptive Module (optional)

Centracs Adaptive is an arterial-based adaptive control module. Centracs Adaptive uses the Centracs native interface, simplifying the creation and management of adaptive intersection groups or zones. As a bonus, while the Centracs Adaptive algorithms adjust only splits and offsets, cycle length adjustments can be achieved by coupling our adaptive software with Centracs Traffic Responsive techniques. Working directly with Econolite's ASC/3 controller software and avoiding adding undesirable hardware at the cabinet, Centracs also allows the creation of multiple zones that can easily be managed using the Centracs Time-of-Day scheduler. The power of Centracs Adaptive provides a cost effective means of achieving real and measurable improvements in traffic flows without the cost of adding new servers, hardware, and by using existing controller coordination plans and existing communications channels.

Advanced Measures of Effectiveness (MOE) Module (optional)

The Centracs MOE module was developed in conjunction with Purdue University. These reports use high density detector data collected 10 times per second from ASC/3 controllers to offer users a unique set of tools for understanding the factors influencing coordination and the effectiveness of timing at the intersection.

Advanced CCTV Module (optional)

The Centracs CCTV module provides seamlessly integrated management of digital video across IP networks.. This enables quick configuration and immediate deployment that supports multiple camera types and makers. Video can be transmitted over existing wired and wireless IP networks, including DSL (VDSL), fiber optic, Wi-Fi, etc.

Dynamic Message Sign (DMS) Management (optional)

The Centracs DMS module provides users the direct and instantaneous control to update and display valuable traveler information messages. By providing timely traffic condition or incident messages, Centracs DMS can help provide congestion mitigation and increase roadway safety.

Server-to-Server Module (optional)

The Centracs Server-to-Server option provides a unique interface allowing agencies to achieve unparalleled benefits through cooperative operations and system management. Adjoining Centracs-managed cities can seamlessly share data and manage arterial traffic across agency boundaries finally realizing and exceeding the promises of Center-to-Center communications. Centracs Server-to-Server also allows agencies to participate in cross-jurisdictional management and monitoring of neighboring agency intersections.

Centracs Optional Modules

° Centracs MMS
° Centracs DCMS
° Centracs Travel Time
° Centracs Adaptive
° Centracs MOE
° Centracs CCTV
° Centracs DMS
° Centracs Server-to-Server

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