



Description

Transportation agencies, now, more than ever, are looking to more effective and efficient means of traffic management in the form of an intelligent transportation system (ITS). Econolite offers the *Centracs* Advanced Transportation Management System (ATMS) as a valuable ATMS component to an ITS solution, helping agencies overcome transportation resource and budget reductions while providing added traffic management capabilities. *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 ATMS, enabling agencies to realize significant mobility benefits from its investment. The flexible and scalable *Centracs* design also provides agencies with feature-rich options that best meet evolving transportation agency needs.

Graphical User Interface and “Containers”

Modern Graphical User Interface (GUI) design, including Microsoft's[®] latest Windows[®] Presentation Foundation framework, 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. *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.

Features

- Intuitive user interface
- Designed for scalability and efficiency
- Easy device configuration
- Intuitive Intersection graphics tools
- Interactive GIS based System maps
- Flexible device hierarchy, groupings and jurisdictions
- User definable, programmable alert escalations
- User Interactive, GIS GIS-based mapping
- Traffic Responsive, Section, and Coordination Monitoring
- NEMA & 170/2070 support in one system
- Robust system scheduler
- User definable roles and privilege settings
- ACS *Lite* Traffic Adaptive Module (optional)
- Advanced CCTV Module (optional)
- Server-to-Server Module (optional)
- Advanced MOE reports (optional)

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. "Device Managers" isolate specific device knowledge into separate applications to provide efficiency and to improve code maintainability. 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.

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 allow 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.

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 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 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, Siemens EPAC/SePAC controllers running EPAC version 4.01D, 170-type controllers running certain versions of Wapiti W4IKS firmware, and NTCIP 1202 compliant controllers.

ACS Lite Module (optional)

ACS Lite is an arterial-based adaptive control module that uses the FHWA ACS Lite signal timing optimization algorithms. *Centracs ACS Lite* support uses the *Centracs* native interface, simplifying the creation and management of ACS Lite intersection groups or zones. As a bonus, while *ACS Lite* only adjusts splits and offsets, Cycle length adjustments can be achieved by coupling *ACS Lite* with *Centracs* Traffic Responsive techniques. *Centracs* also allows the creation of multiple *ACS Lite* zones that can easily be managed using the *Centracs* Time-of-Day scheduler. The power of *ACS Lite* 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 communications channels.

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.

Advanced CCTV Module (optional)

The *Centracs* CCTV module is a high-speed, high-reliability and large system-type distribution Enterprise-Class Internet Protocol-based (IP) video surveillance solution that provides seamless 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.

Aegis ITS

Aegis ITS, an Econolite Group company, focuses on systems engineering and integration, software development and installation services for the ITS industry. This includes transportation project management, system optimization, construction of supporting infrastructure, and field asset integration. *Centracs'* modular architecture is designed to easily configure, monitor, and control field assets. As a result, Aegis ITS can provide transportation agencies with engineering support services to quickly and seamlessly integrate new traffic control and transportation entities (signal controllers, CCTV cameras, or other ITS components) to the system.

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3360 E. La Palma, Anaheim, CA 92806-2856
Tel: (714) 630-3700 • Fax: (714) 630-6349
E-mail: sales@econolite.com
38302E1008-6



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