

Achieving ITS Objectives with Traffic Controllers, Signals, & Cabinets





All About Controllers

Traffic signal controllers are key components to any Intelligent Transportation System (ITS). The importance of controllers is undeniable, especially when motorists and pedestrians alike approach a non-controlled intersection during heavy traffic conditions. Operating on the front lines of signalized intersections for many years, Econolite and Safetran's state-of-the-art controllers are backed by a long history of innovation, including the first electromechanical fixed-time controller, the first digital-actuated controller, the first microprocessor-based controller, and the first National Electrical Manufacturers Association (NEMA) TS2 controller.

All About Signals & Cabinets

Often the first interactions that motorists, pedestrians, and bicyclists have with ITS take place at signalized intersections – where the signals and cabinets represent the front lines of signalized roadways. Econolite Group offers an extensive, high quality line of traffic signals and cabinets, including our NEMA TS1 and TS2 cabinets, hybrid cabinets, and our line of Caltrans- and NYDOT-specified 170/2070 (33x) cabinets.

Econolite Group also leads the way in ultra-bright LED (Light Emitting Diode) technology's used in traffic signal applications. More visible than traditional incandescent bulbs, LED signals increase overall safety for all roadway users. In addition, since LEDs are longer lasting and require less energy than their incandescent counterparts, significant budgetary savings are realized.

ASC/3 Series

Leading-Edge Traffic Control Capabilities with Low Cost of Ownership

The ASC/3 series is the Econolite Group's latest offering of Advanced System Controllers, building upon a long history of proven software and hardware designs, and the unique feature set of the popular ASC/2 Series of controllers.

ASC/3 (NEMA)

Utilizing the latest electronics technologies, the ASC/3 is reliable, easy to maintain, and interchangeable with older TS1 and TS2 controllers, while fully complying with NEMA TS2 specifications. All firmware is stored in Flash memory for quick and easy software updates in the field without interrupting intersection operation or changing hardware – designed to be the traffic controller platform for current and future traffic management environments.

ASC/3 RackMount (RM)

The ASC/3 RM is a rack-mount hardware design that serves as the traffic control platform for a variety of expanded standards-based traffic management environments. This is accomplished through the use of the Caltrans C1 platform (33x type cabinet compatibility) and National Transportation Communications for ITS Protocol (NTCIP) compliance.



2070 Series

Standards-Based Hardware and the Power of Econolite Group Software

The ATC2070 Series of controllers are designed to meet the widest variety of Advanced Transportation Controller specifications. This design enables the ATC2070 to be easily configured to fit Caltrans 2070, 170, 170E, and NEMA TS1 and TS2 Type-1 and Type-2 applications. The ATC2070 hardware meets or exceeds industry standard traffic controller specifications, and the software base is supported through open architecture and a standard OS-9 multi-tasking operating system. This may be overlaid with Econolite's ASC/3-2070 software application or any industry available 2070 software, meeting current ATC specifications.



170E Controller

Cost-Effective Controller for Multiple Applications

The Model 170E Microcomputer is part of the Econolite Group's successful family of microcomputers and complies with all applicable Caltrans requirements. The model 170E incorporates the latest concepts in design for operation in hostile environments. The Model 170E has been designed to manage a number of traffic applications, from two-phase intersection control to computerized, networked systems. In addition, with the implementation of various software packages, the Model 170E can be used for ramp-metering control, matrix sign control, sprinkler control, pump control, and changeable lane control.



Controller Software

ASC/3-2070 Software

Expanding the Capabilities of 2070 Controllers

The ASC/3-2070 Software is Econolite Group's latest Advanced System Controller Software package. ASC/3-2070 Software is compliant with NEMA TS2 and NTCIP standards, and is compatible with all of our existing systems. The ASC/3-2070 controller software fully supports the model 2070's open architecture, as well as its standard OS-9 multitasking real-time operating system. The software is easily loaded using a standard PC or laptop via the 2070's serial or Ethernet port.

ASC/3 SIL (Software in Loop)

Faster-Than-Real-Time Simulation and Testing

The ASC/3 SIL (Software in the Loop) version of the software has been specifically configured to operate as a virtual controller within the PTV, VISSIM traffic modeling environment. This allows full ASC/3 controller functionality during simulation runs under VISSIM. The ASC/3 SIL is also able to run at 10 times normal speed during the simulation run, greatly reducing the time to test a scenario under VISSIM.



ASC/2M-1000

Designed as a powerful on-street arterial system master, the ASC/2M-1000 commands up to 24 traffic controllers via telemetry interconnect. It retrieves event, alarm, and diagnostic data from each attached local controller. The arterial plan can be based on manual command, external input, Time-of-Day (TOD), or Traffic Responsive Plan (TRP). Controllers interconnected with the ASC/2M can be any mix of older and current Econolite models, as well as 2070 controllers running our ASC/3-2070 firmware.



Transit Signal Priority

Econolite Group's Transit Signal Priority (TSP) software improves transit system performance with minimal impact on traffic system coordination.

The TSP algorithm continually monitors for priority input and evaluates the coordination plan, determining the best way to cycle the controller for maximum efficiency.



Signals

Econolite Group manufactures and offers a wide range of vehicle and pedestrian signals that meet or exceed applicable industry specifications. Offering 8-inch and 12-inch vehicle signals in aluminum or polycarbonate, combined with our selection of LED components, the options can meet virtually any transportation agency's traffic signal and green initiative need. Econolite Group also provides many varieties of pedestrian signals to meet nearly any intersection requirement, including ultra-bright LED applications.



Cabinets

NEMA Cabinets

Econolite Group's line of NEMA traffic control cabinets are designed and manufactured from high-quality, 5052-H32 recyclable aluminum for rigid pole, base, or pedestal mounting – zero flex and completely weather proof. We also accommodate a specified painted finish with a minimum 2 mm thickness powder coating process for extreme durability.

170/2070 Cabinets

Econolite Group's 33x Series of modular traffic control cabinets are designed and manufactured to meet the needs of the 170/2070 traffic controller standard, providing versatile, weatherproof, and secure cabinet solutions for controlling multiple combinations of intersection signal switches and phases.

Hybrid Cabinets

The intelligent line of cabinets are built to Caltrans 33x specifications and feature Electronic Industries Alliance (EIA) 19-inch racks, as well as front and rear doors for increased versatility and ease of configuration for varying intersection applications. This hybrid configuration enables agencies to transition to the modern serial-based technology of TS2 series controllers while maintaining the familiarity of the 170 design.



The Econolite Group continues to be at the forefront of the ITS revolution, enabling the global deployment and implementation of smart mobility strategies.

Our focus has always been to provide customers with the best possible ITS solution. Our mission, brand promise, and breadth of products reflect our unwavering commitment to provide customers with the solutions that increase mobility and enhance quality of life.

The Econolite Group of companies; Econolite, Econolite Canada, Safetran, California Chassis, and Aegis ITS combine unparalleled traffic industry experience with software, hardware, and systems engineering capabilities to provide one of the broadest portfolios of ITS solutions.



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