

# SWARCO McCain OMNI eX<sup>®</sup>

INTERSECTION CONTROL SOFTWARE



McCain Omni eX Intersection Control Software is a modern, standards-compliant program for ATC traffic controllers. Capable of operating Model 2070 and NEMA-based ATC platforms and interfacing with any style cabinet. McCain Omni eX Intersection Control Software provides a single solution for any infrastructure.

This solution easily integrates with SWARCO McCain, Inc.'s central software, McCain Transparency<sup>®</sup> Traffic Management System (TMS), or any other NTCIP-compliant central systems.



## KEY BENEFITS

- Supports a fully adaptive environment out of the box using the Critical Intersection Control (CIC) objects
- Assign inputs and outputs (I/O) to accommodate any type of standard or custom cabinet
- Program user database via the front-panel LCD and keypad UI, NTCIP via serial or Ethernet ports, transfer to USB drives, or webserver
- Ensure accuracy and consistency with built-in data validation
- Capture high-resolution data, including measures of effectiveness (MOE) and detector data logging, that can be stored locally via USB or to a central management system
- Update traffic controllers securely and intelligently with the Omni Intelligent Installer

## PRODUCT DESCRIPTION

McCain Omni eX Intersection Control Software is a progressive software that includes exciting new features and benefits that increase security, efficiency, and ease of use, while saving technicians time. The addition of the exclusive McCain Omni eX Intelligent Installer allows traffic controllers to be updated securely and intelligently, by automatically searching for and performing necessary updates to the software package.

McCain Omni eX Intersection Control Software dramatically improves the security, quality, performance, and reliability of updated Management Information Bases (MIBs) with the implementation of source-code, source-control, and source build server for continuous integration testing.

Fully compliant with Purdue High Resolution Data Enumerations<sup>1</sup> and NTCIP, McCain Omni eX Intersection Control Software promotes interoperability and interchangeability between manufactures, providing users with a choice and protects their investments.

# McCain OMNI eX<sup>®</sup> INTERSECTION CONTROL SOFTWARE

## STANDARD FEATURES

### Phases

- 16 volume/density vehicle phases
- 16 pedestrian phases
- 4 rings with flexible phase assignments and sequences
- 32-channel supported
- Automatic barrier calculation based on compatible phases
- Exclusive pedestrian-phase operation
- Alternate timing for special vehicles, bicycles or pedestrians
- Advance and delayed walk operation
- Texas diamond operation
- 4 unique sets of phase timing and options selectable by pattern

### Overlaps

- 16 vehicle overlaps
- 16 pedestrian overlaps
- Negative (excluded) vehicle and pedestrian phases
- Delayed start of green
- Flashing yellow or red arrow overlaps
- Detector call phases and locking
- 4 unique sets of overlap configurations selectable by pattern

### Logs

- Extensive event log for management and diagnostic purposes
- Cycle-based measures of effectiveness (MOE) 1000 events
- Detector volume, occupancy and speed (VOS) 1000 events
- Dual-detector speed traps 1000 events

### Event Logging

- Controller log: Operation, Detector, Communication, Access, Command, Preempt, Transit Priority
- 300 events in each section

### NTCIP Logs

- Global Reporting conformance group for user defined event logging
- High-resolution logging

### Detection

- 128 local detectors
- 32 system detectors
- Single or speed trap calculations Volume/occupancy configurable per detector
- Delay and extend timing
- Alternate passage, minimum green and pedestrian timing detection
- Detector fail diagnostics monitoring configurable by time-of-day, by detector
- Support video detection using NEMA SDLC or ATC SDLC

### Preemption

- Fully NTCIP 1202 compliant (mandatory and optional objects)
- NTCIP MIB and block objects for vendor-specific parameters
- 8 preemption sequences
- Configure sequences for railroad or emergency vehicle operation
- Define priority and linking
- Configure overlap enable/disable during all preempt intervals
- Flashing and limited service options
- User-assignable status options (active or dwell)
- Supports NTCIP preempt control state for remote preemption

### Transit Priority

- Estimated time of arrival - Intelligent phase time adjustment
- 16 priority strategies in 4 sets, selectable by pattern
- Options to support any type of vehicle detection
- Supports NTCIP object for remote TSP
- Configurable headway and preempt lockout timers
- Queue jumping
- Supports user-configurable special logic and advanced operations

### Communications

- Supports all industry standard communications
- Web browser support includes security support
- Connected vehicle SPaT interface
- Fully NTCIP compliant communications
- Data validation during download process
- Supports HTTPS:// protocol
- Time synchronization via WWV, GPS, NMEA or NTP
- Peer-to-Peer sharing of I/O between intersections

### Coordination

- 250 free or coordinated patterns
- Selectable permissive modes
- Fixed or floating force off selection
- Reference cycle to beginning or end of green
- Mode selection done by split table
- Change virtually all operational parameters by pattern
- 16 phase sequence selection by pattern
- Texas Diamond supports 4 and 3-phase and separate modes
- Hierarchical control phase reservice operation

### Cabinet Inputs and Outputs

- Supports all cabinet types
- Individually assignable input and output functions (I/O mapping)
- Internal multi-input Boolean logic gates with delay, extend and latch, and flashing output features
- Alarm inputs (16)
- Special functions (16)
- External pattern selection
- Pulsing preempt and transit priority input discrimination

<sup>1</sup>March 2019

SWARCO reserves the right to make changes at any time in order to supply the best product possible.  
©SWARCO McCain, Inc. Updated 06/17/2022