

2070E Controller

Cabinets

Controllers

Signals

Signs

Software

Specialty



Overview

The 2070E Controller is an exciting addition to McCain's traffic controller product offering; an advanced, next-generation version of the Caltrans type controllers. Designed in full compliance with the 2009 Caltrans Transportation Electrical Equipment Specifications (TEES), the 2070E is interchangeable with standard 170 controllers. This allows end users to upgrade existing intersections to a modern high-performance platform without replacing cabinet hardware. The 2070E is an advanced, ruggedized, multi-tasking field processor and communications system that is easily configurable for a variety of traffic management applications.

Benefits

- The controller's multitasking operating system supports a variety of applications
- Easily upgrades current intersection hardware
- Open architecture insures compatibility with off-the-shelf products
- OS-9 real-time operating system is compatible with standard software modules from different vendors
- Interchangeable with standard 170 controllers without the need to replace cabinet hardware

Product Description

The primary design function of the McCain 2070E is to control traffic intersections, but can be used for a multitude of applications. Based on the software control package utilized, the control applications can expand to include: ramp metering, variable message signs, sprinklers, pumps, and changeable lane control.

The 2070E modular design allows various configurations based on the desired application.

The controller's OS-9 real-time operating system affords a robust, flexible, and expandable platform that is compatible with multi-vendor application control software. McCain offers a variety of compatible software programs that integrate the 2070E into an overall Intelligent Transportation System (ITS).

2070E Controller

Standard Features

Operating system

- Microware OS-9 real-time operating system (RTOS)

Modules (standard, included)

- 2070-1E CPU Module
- 2070-2E Field I/O Module
- 2070-3B LCD/Front Panel Module
- 2070-4A Power Supply

Microprocessors

- CPU Module: Freescale MC68EN360, 32 Bit, 24.576 MHz microprocessor
- I/O Module: Freescale microprocessor, running at 24 MHz

Memory

- 8MB Flash memory
- 32MB PSRAM
- 2MB non-volatile SRAM

Backup real-time clock (RTC)

Applicable standards

- Meets or exceeds Caltrans TEES 2009 standards

Interfaces

Communication interfaces

- SDLC ports (2)
- ACIA ports (5)
- 10/100 Mb Ethernet (4), 4 LEDs
- Datakey removable storage device, 8Mbits, (blue color)

Front panel interface

- Display: 8 lines x 40 characters
- Keyboards: 3 x 4 navigation and 4 x 4 data entry keypads
- C50J connector

Cabinet interfaces

- Rear connectors C1S, C11S, and C12S

Software

Compatible with McCain's 2033 intersection control, 2045 arterial master control, and 2042 ramp metering control software. Also compatible with any 2070E compliant third party software. (See separate data sheets for details on McCain's software control programs).

General Specifications

Dimensions:	19" W x 7" H x 12" D (rounded to the nearest inch)
Form Factor:	EIA rack mount compatible
Power:	95 VAC to 135 VAC, 60 Hz (± 3 Hz) +5.0 VDC 1.0 A 10.0 A +12.0 VDC Serial 0.1 A 0.5 A -12.0 VDC Serial 0.1 A 0.5 A +12.0 VDC ISO 0.1 A 1.0 A
Environment:	Operating Temperature: -37°C to +74°C Humidity: 0 to 95% (non-condensing)
Weight:	12 lbs (based on final module selection)

Options

- McCain control software
- Available modules
 - 2070-2B field I/O module for ITS (SP5) / NEMA (SP3) cabinet applications
 - 2070-3A large 4 x 40 character display
 - 2070-4A-220 international voltage: 190VAC to 253VAC, 50 Hz (± 3 Hz)
 - 2070-6A dual 1200 baud modem
 - 2070-6B dual 9600 baud modem
 - 2070-7A dual RS232 serial ports
 - 2070-7B dual RS485 serial ports
 - 2070-8 NEMA adapter

To learn more about
McCain's Integrated Traffic
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