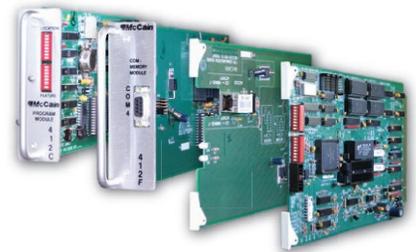


SWARCO

McCain 170 CONTROLLER MODULES



The McCain 170 Controller Modules expand the performance of McCain's line of 170 controllers. Through a variety of module combinations, McCain's 170 controllers can be configured to support a variety of advanced applications. Designed in full compliance with Caltrans Transportation Electrical Equipment Specifications (TEES), the 170 modules can easily be interchanged in the field.



KEY BENEFITS

- Easily upgrades current hardware
- Compatibility with SWARCO McCain's family of 170 controllers
- Rugged and reliable modules
- Modern, efficient designs
- Quickly and easily complete field installations

PRODUCT DESCRIPTION

McCain 170 Controller Modules add versatility and performance to McCain's family of 170 controllers. Based on the module(s) and software control package utilized, control applications can include: intersection control, ramp metering, variable message signs, sprinklers, pumps, and changeable lane control.

Permitted by the modular design of 170 controllers, McCain modules facilitate matching the hardware configuration to your individual requirements.

McCain offers a variety of 170 modules that can easily upgrade your existing equipment to meet your overall Intelligent Transportation System (ITS) goals without the need to purchase new controllers.

McCain 170 CONTROLLER MODULES



Typical illustration of module insertion

CPU MODULE

Industry standard replacement for existing 6802 based CPU boards, CPU modules enhance memory and computing power and extend the controller's lifespan.

68HC11 CPU Board:	CPU Module, 68HC11F1 Microprocessor, 32KB or 128KB EPROM, 32 KB Non-volatile SRAM
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PROM MODULES

Modules facilitate greater memory for program storage allowing controllers to run more advanced applications. Modules utilize non-volatile RAM with an on-chip battery and power supervisory circuit. The 412C PROM module is built per Caltrans TEES specifications. The 412F is an enhanced design that can accept a 128K PROM. It makes the laptop interface communication port (C40) easily accessible on the front panel in addition to its normal location.

412C PROM:	Jumper-selectable configurations of SRAM, EPROM, and non-volatile RAM, 2 banks of switches on front panel, Real-Time Clock Adjuster (RTCA)
412F PROM:	Used in lieu of 412A, 412B, or 412D, switch selectable between 6802 and HC11 CPUs

COMMUNICATION MODULES

Ethernet module provides network connectability promoting more advanced, modern communications media.

Ethernet Module:	Model 400 modem footprint, direct IP addressing, auto-sensing 10 Base-T or 100 Base-T
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GENERAL SPECIFICATIONS

Form Factor:	170 Standard
Circuit Board Material:	.063", double-sided, FR4, solder masked, with plated through holes, gold-plated finger contacts, conformal coated
Environment:	Operating temperature: -37° C to +74° C Humidity: 0 to 95% (non-condensing)

¹Dimensions rounded to the nearest inch