

# 2070 CONTROLLER MODULES

CPU Modules  
I/O Modules  
GPS Time Sources  
Front Panel Displays  
Power Supplies  
NEMA Adapter  
Chassis



CABINETS

CONTROLLERS

DETECTION

PARKING

SIGNALS

SIGNS

SOFTWARE

SPECIALTY

## Overview

McCain manufactures a variety of 2070 Controller Modules in full compliance the California Department of Transportation (Caltrans) Transportation Electrical Equipment Specifications (TEES). By combining these modules, customers can easily configure model 2070 controllers to meet their specific needs.

## Benefits

- Easily upgrades current intersection hardware
- Rugged and reliable modules
- Modern, efficient designs
- Modular design for a variety of configuration options

## Product Description

McCain 2070 Controller Modules, based on the module(s) and software control package utilized, control applications that include: intersection control, ramp metering, variable message signs, sprinklers, pumps, and changeable lane control.

Permitted by the modular design of 2070 controllers, McCain modules facilitate matching the hardware configuration to your individual requirements.

McCain offers a variety of 2070 modules that can easily upgrade your existing equipment to meet your overall Intelligent Transportation System (ITS) goals without the need to purchase new cabinets.

# 2070 Controller Modules

## CPU Modules

CPU modules contain the controller's operating system, microprocessor, memory, and essential computing devices.

- 2070 - 1B TEES 2002, OS-9 RTOS, 8MB PSRAM, 8MB flash memory, 2MB non-volatile SRAM, up to 5 SDLC ports, up to 7 ACIA ports, 10MBPS Ethernet port
- 2070 - 1E TEES 2009, OS-9 RTOS, 32MB PSRAM, 8MB flash memory, 2MB non-volatile SRAM, up to 5 SDLC ports, up to 7 ACIA ports, 4 10/100MBPS Ethernet ports
- 2070 - ATC 400 MH Core Speed, Linux OS, 128MB DDR RAM, 16MB flash memory, 2MB non-volatile SRAM, up to 5 SDLC ports, up to 7 ACIA ports, 4 10/100MBPS Ethernet ports, 2 USB ports
- 2070 - 1C TEES 2009, Linux OS, 256MB DDR Ram, 16MB NOR flash memory, 256MB NAND flash memory, 2MB non-volatile SRAM, up to 5 SDLC ports, up to 7 ACIA ports, 3 10/100MBPS Ethernet ports, 1 USB port

## I/O Modules

I/O modules provide the physical interface between the controllers and the field equipment.

- 2070 - 2A Field I/O Caltrans 170/ 2070 cabinets, TEES 2002
- 2070 - 2B Field I/O NEMA TS 1/TS 2 Type 2 (with 2070-8) Field I/O ITS
- 2070 - 2E Field I/O Caltrans 170/ 2070 cabinets, TEES 2009
- 2070 - 2N Field I/O NEMA TS 2 Type 1

## GPS Modules

GPS time source modules provide accurate time-of-day.

- 2070 - 7G GPS module for 2070 controllers



2070-7G GPS Module

## Front Panel Displays

Front panels provide the physical user interface to monitor and program controllers. The backlit LCD screen displays text and can be adjusted by a contrast knob.

- 2070 - 3A Large font LCD panel module: 4 lines x 40 characters, 3 x 4 navigation keypad, 4 x 4 data entry keypad
- 2070 - 3B Small font LCD panel module: 8 lines x 40 characters, 3 x 4 navigation keypad, 4 x 4 data entry keypad

## Power Supply Modules

Power supply modules provide voltage requirements as needed by other modules. AC line and EMI suppression circuitry is included.

- 2070 - 4A Power supply module 10 A
- 2070 - 4B Power supply module 3.5 A

## Communication Modules

Communications modules provide the interface between the controller and the central system software.

- 2070 - 6A Dual 1200 baud modem (GDI)
- 2070 - 6B Dual 9600 baud modem (GDI)
- 2070 - 7A Dual RS232 serial ports
- 2070 - 7B Dual RS485 serial ports

## NEMA Adapter

Adapters transform standard model 2070 controllers into NEMA compliant controllers.

- 2070 - 8 NEMA adaptor (with 2070-2B)

## Chassis

Chassis house all modules to create a self-contained unit

- 2070 chassis with serial motherboard
- Cover plate for 2070 card slot, 1x wide
- Cover plate for 2070 card slot, 2x wide

## General Specifications

- Form Factor: 2070 Standard
- Circuit Board .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)