



## 170 ATC-12 CPU Board

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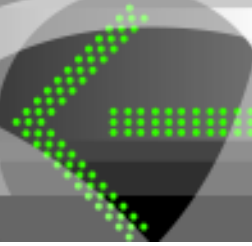
For the last 30 years, 170 controllers have been integral to the infrastructure of successful traffic management systems. As technology has changed, McCain Incorporated's 170 has evolved, allowing users to improve and upgrade their systems gradually.

McCain Incorporated is proud to introduce the 170 ATC-12 CPU Board, with increased memory capacity, rapid communication speed, and the ability to integrate the newest communications protocols. The ATC-12 CPU board creates a simple and economical method for users to easily update existing equipment, allowing for a direct CPU replacement, and enabling current equipment to function for the next 10 to 15 years, as technologies continue to advance.

The ATC-12 CPU Board also allows for the 170E controller front panel to be replaced with a more user friendly LCD Menu Driven Display.

McCain Incorporated's ATC-12 CPU board is the first to in the industry to effectively respond to hostile environment demands, with a built-in on board temperature sensor, which will allow its users to monitor extreme climate conditions. With increased functionality, the innovative design of the ATC-12 CPU board creates an upgrade path for users requiring ATC computing power in a 170E controller.

This revolutionary new design is based on the Freescale 16 bit HCS12X processor with a built in XGATE co-processors, which boosts overall performance to greater than 60 MIPS, (10 times greater than a standard 2070) and uses less than .6 watts. The ATC- 12 CPU board features a 1MB serial data flash memory for data logging as well as analog and timer inputs, and a super-cap backed up real time clock (RTC) with .01 second resolution and an on-board temperature sensor accurate to 2°C over the full temperature range.



## 170 ATC-12 CPU Board

### **Additional Board Features:**

### **Product Features and Advantages:**

- Combined processing power of more than 60 MIPS (x10 greater than a 2070)
  - Coprocessor off-loads heavy workloads from main processor
  - Major cost savings in software development, as 95% of 170 code is reusable
  - "Green" CPU uses less than .6 Watts at full power (.5 Watt typical)
  - Low power CPU allows use in 170ATC and 170E controllers
  - Overall performance greater than 60 MIPS, and uses less than .6 watts.
  - 1MB serial data flash memory for data logging as well as analog and timer inputs
  - Super-cap backed up real time clock (RTC) with .01 second resolution and an on-board temperature sensor accurate to 2°C over the full temperature range
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- LCD front panel interface
  - Temperature sensor
  - 2 analog inputs
  - 2 timer inputs
  - 1MB serial data flash nonvolatile memory
  - Accessible test points
  - Microprocessor controlled power-up/down timing
  - Fast start up allows use with standard CMU's
  - -37°C to +74°C temperature range
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- 32KB of on chip RAM
  - 512KB of on chip Flash
  - 6 asynchronous serial ports
  - 2 synchronous (SPI) serial ports
  - 1 SPI port for external interfaces
  - Ethernet device server (optional)
  - 80 MIPS coprocessor
  - RTC with .01 second resolution
  - Socketed serial EEPROM up to 32KB