

K.1 - Math Coprocessor Installation

The math coprocessor can be added to 80C186 CPU (PiC900 or PiC90) or 80C186EC (PiC9XX) modules to support additional arithmetic, logarithmic, exponential, trigonometric, and floating point mathematical operations.

You will be installing the math coprocessor in one of three ways depending on which of the following you have:

1. A PiC900 CPU module
2. A PiC9XX CPU module
3. A PiC90 CSM/CPU module

The procedure covers installing the coprocessor directly on the PiC900 CPU, PiC9XX CPU, or the PiC90 CSM/CPU module.

IMPORTANT

With a PiC900, the math coprocessor works on the version of the CPU module which has a factory installed oscillator on it. (See Figure K-1 for its location.) Some earlier versions do not have this oscillator.

If your CPU does not have an oscillator installed, return it to the factory for an upgrade before installing the math coprocessor.

1. Procedure for installing the math coprocessor on the CPU or CSM/CPU module

1. Follow standard precautions before handling any electronics components.

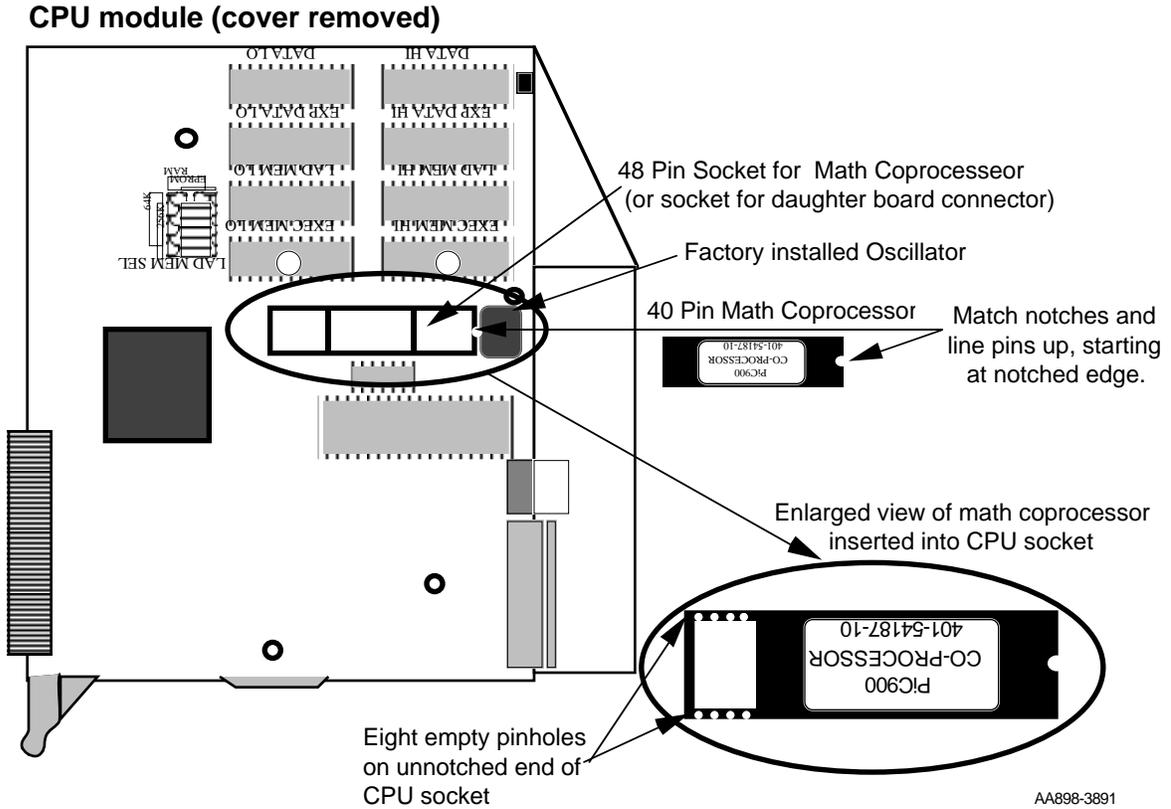
Lay the module on a static-free surface, label side up. Ground yourself using a properly grounded wrist strap before you open the module.

2. Press the plastic tabs at the top and bottom of the module toward each other and lift off the module cover.
3. The math coprocessor should be positioned in the module according to the illustration in Figure K-1 for a PiC900, in Figure K-2 for a PiC9XX, or in Figure K-3 for a PiC90.

The math coprocessor is shipped in a socket for easy installation. The math coprocessor, the socket, and the module socket are each notched. All notches should be on the same end.

NOTE: With the PiC900, the math coprocessor has 40 pins and the module socket has 48 pinholes. Line pins up beginning on the notched end of the module socket and press in place. When the math coprocessor is inserted, there should be eight empty pinholes on the unnotched end of the module socket as shown in the enlarged area of Figure K-1.

Figure K-1. Installing the Math Coprocessor on the PiC900 CPU



IMPORTANT

Check the following:

- The math coprocessor is oriented correctly with all notches on the same end.
- The pins are inserted from the notched end leaving eight empty pinholes on the unnotched end on the PiC900 CPU.

If the math coprocessor is installed backwards or in the wrong pinholes, it may be damaged or destroyed when power is turned on to the system.

Math Coprocessor Installation

Figure K-2. Installing the Math Coprocessor on the PiC9XX CPU

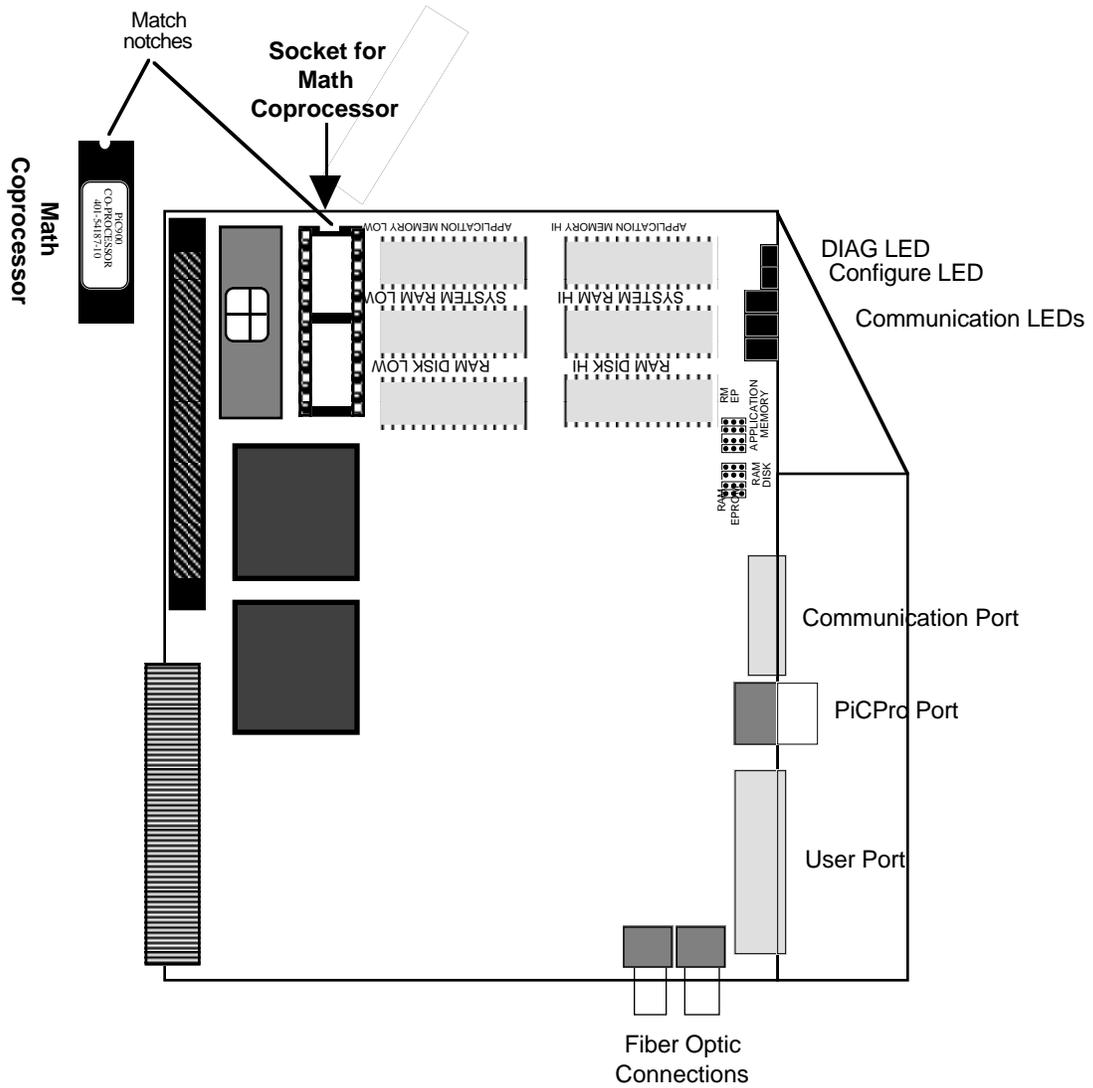
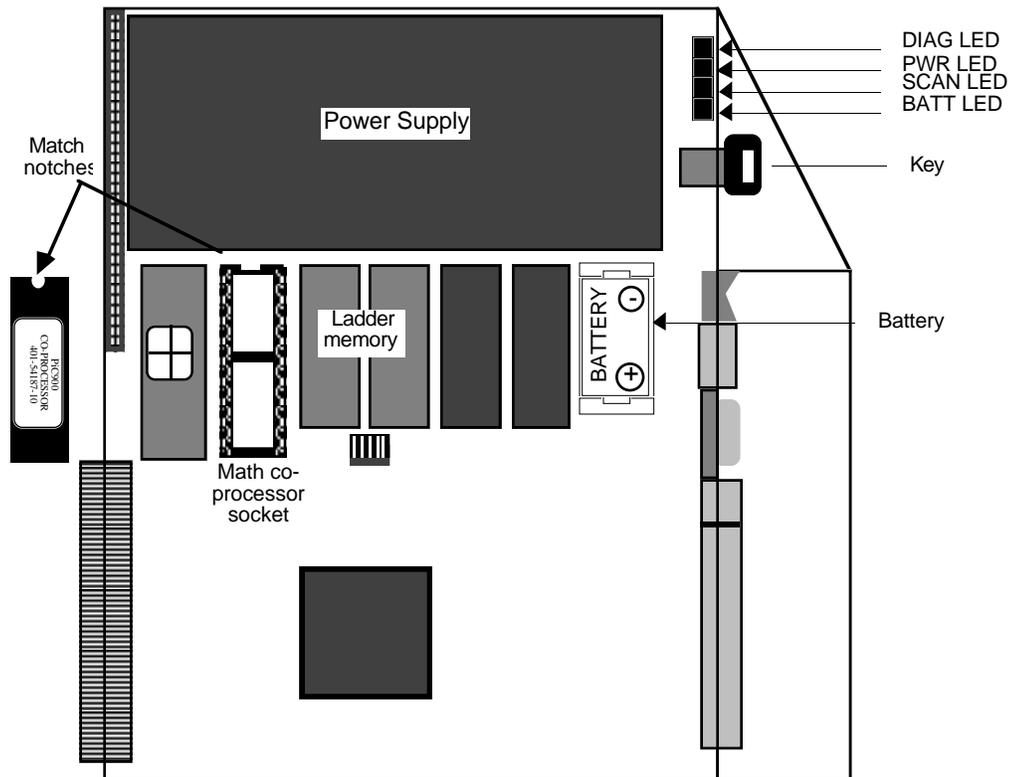


Figure K-3. Installing the Math Coprocessor on the PiC90 CSM/CPU



4. Replace the module cover. Insert the module in the rack. Turn the key switch to Stop. Turn on power. Using PiCPro, download application module (see PiC900 Software Manual) and turn key switch to Run.

CAUTION

Follow the power on sequence as defined above. If not followed, the PiC900 may malfunction.

NOTES