



# Adding System Memory to 1747-0C Series Open Controllers

## Before You Begin

The open controller does not ship with system memory (DRAM or SDRAM) installed. You will need to add system memory before you can use your open controller.

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**IMPORTANT**

The open controller will not function without system memory, either DRAM or SDRAM, depending on your open controller model.

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This publication will explain how to:

- select system memory for your open controller
- install system memory in an open controller CPU

## Handling the Memory Component

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**ATTENTION**

Electrostatic discharge (ESD) might be present whenever you handle the memory. ESD can cause internal circuit damage that might not be apparent during installation or initial use. Wear a grounding wriststrap while handling the memory.

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Take these precautions to guard against ESD damage:

- Before handling the memory, wear a grounding wriststrap and touch a grounding object to discharge any built-up static charge.
- Avoid touching the connector pins on the memory.
- When not in use, store the memory in the anti-static packaging in which it was shipped.

## Selecting System Memory for your Open Controller

<b>If you have this open controller:</b>	<b>Then you will need:</b>
1747-OCE (5x86, 100 MHz)	DRAM; one memory stick per CPU
1747-OCF (Pentium, 266 MHz)	SDRAM; one memory stick per CPU

### Memory specifications

When purchasing memory for your open controller, make sure that it meets the following specifications:

	<b>DRAM<sup>1</sup> (for 1747-OCE)</b>	<b>SDRAM (for 1747-OCF)</b>
access time	70 nanoseconds or faster	8 or 10 nanoseconds
parity	real	non-parity
buffered	N/A	unbuffered
size	up to 128 Mbyte	up to 128 Mbyte
connector	72-pin, gold-plated, SIMM	144-pin, SO-DIMM
type	fast page mode or EDO	66 MHz or PC100
voltage	5.0 volt	3.3 volt

<sup>1</sup>Must meet low-profile form-factor specification:  
1.25" max. from top of gold fingers to top of the component;  
4.25" max. length (side to side).

## Approved products

The table below lists approved vendors and part numbers for DRAM and SDRAM. These products have been tested and approved for use with the open controller. Use of the products will ensure that open controller agency certifications remain valid.

### DRAM (for 1747-OCE)

Vendor	Part number	Description
H.co. Computer Products, Inc. (www.h-co.com) 800-726-2477, x131	HRA-1747-OCE-16	16 Mbyte
	HRA-1747-OCE-32	32 Mbyte
	HRA-1747-OCE-128	128 Mbyte

### SDRAM (for 1747-OCF)

Vendor	Part number	Description
Crucial Technology (www.crucial.com) 800-336-8896	CT4M64S4W8E	32 Mbyte 8 ns access time (PC100)
	CT8M64S4W8E	64 Mbyte 8 ns access time (PC100)
	CT16M64S6W8E	128 Mbyte 8 ns access time (PC100)
	CT4M64S4W10	32 Mbyte 10 ns access time (66 MHz)
	CT8M64S4W10	64 Mbyte 10 ns access time (66 MHz)
	CT16M64S4W10	128 Mbyte 10 ns access time (66 MHz)

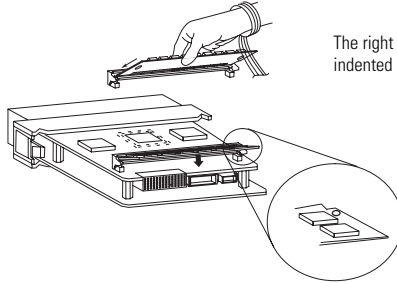
# Installing System Memory

## IMPORTANT

Install the system memory inside the open controller CPU **before** you install the open controller CPU in the chassis.

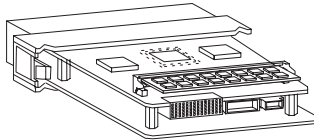
Follow these steps to install DRAM or SDRAM in your open controller. The illustrations show DRAM being installed in a 1747-OCE open controller.

1. Position the memory in the open slot on the open controller CPU. There are clips that fit in the open circles on the DRAM or SDRAM.



The right side of the DRAM or SDRAM is indented (keyed) so that it fits in the slot.

2. Snap the memory tightly into place.



## Additional Documentation

For additional information about using the system memory in an open controller system, see the Open Controller User Manual, publication 1747-6.16, available at The Automation Bookstore ([www.theautomationbookstore.com](http://www.theautomationbookstore.com)).

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