



Open Controller System Quick Start

Before You Begin

Use this document as a guide to installing and powering-up your open controller system. You should already be familiar with the open controller system components. See the documentation references for detailed information.

Tools that you need

- small Phillips-head screwdriver
- small flat-head screwdriver
- grounding wriststrap

Important: Installation instructions ship with each open controller component. If you want the Open Controller CPU Module User Manual or a complete set of open controller documentation, you must purchase the documentation set, catalog number 1747-OCDOC1.

Handling the open controller system components



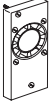





ATTENTION: Electrostatic discharge (ESD) might be present whenever you handle the components. ESD can cause internal circuit damage that might not be apparent during installation or initial use. Wear a grounding wriststrap while handling the components.

Take these precautions to guard against ESD damage:

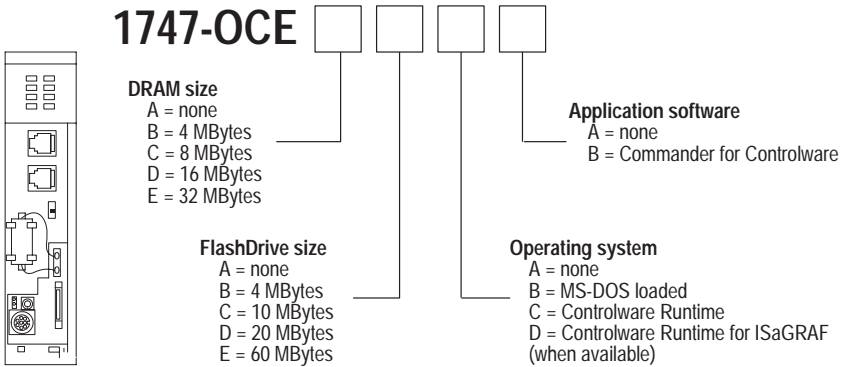
- Before handling the components, wear a grounding wriststrap and touch a grounding object to discharge any built-up static charge.
- Avoid touching connector pins on the components.
- If a component is not in use, store it in the anti-static packaging in which it was shipped.

What ships with an open controller CPU module

This component ships with the open controller CPU module:		And has this catalog number:
battery (this is the same battery that ships with SLC processors)		1747-BA
FlashDrive ribbon cable		a spare cable is included with 1747-OCSDCK
chassis fan		1747-OCFAN1
watchdog contact kit (4 pins and a 2-pin connector)		none
LED mask		none
LED cover (the cover is installed upside-down on the CPU so you can remove it to install your own LED mask)		none

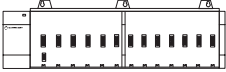
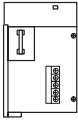
The open controller CPU module also comes with a diagnostic/utility disk, spare FlashDrive screws, and spare fan connectors.

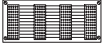

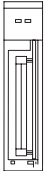
You can order the open controller CPU module with or without DRAM (system memory), mass storage (FlashDrive™), and software options.







Available open controller system components

Start with an open controller CPU module and add these components, some of which are optional.

System component:	Description:
chassis 	4 slots 1746-A4
	7 slots 1746-A7
	10 slots 1746-A10
	13 slots 1746-A13
	You need a series B or greater chassis if you plan to use a PCI expansion bus.
power supply 	1746-P1, -P2, -P3, -P4, or -P5

System component:	Description:		
PCI expansion bus <i>optional</i>		2 slots 1747-OCPCI2 3 slots 1747-OCPCI3 4 slots 1747-OCPCI4 5 slots 1747-OCPCI5 6 slots 1747-OCPCI6	
	Only required if you install any optional open controller modules (see below).		
	The 1747-OCPCI5, -OCPCI6 require BIOS version 1.03 or later and only fit in the 7-slot and 13-slot 1746 chassis.		
	internally-mounted 1747-OCIDE25 2.5" IDE drive		
	IDE interface module <i>optional</i>		PC Card IDE-compatible 1747-OCIDE1 ATA memory devices (flash or rotating media)
		Important: The specifications of commercially-obtained PC Cards or 2.5" drives require you to derate the overall system shock, vibration, temperature, and humidity specifications to that of the drive.	
PCMCIA interface module <i>optional</i>		alone 1747-OCPCM1	
	with SystemSoft™ 1747-OCPCM2 card and socket services		
Important: The specifications of commercially-obtained PC Cards might require you to derate the overall system specifications.			

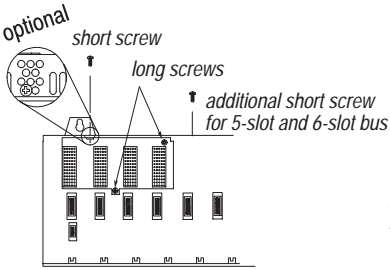
System component:	Description:
A-B DH+/DH-485/RIO communication interface module <i>optional</i>	 1 channel 1747-OCKTX 2 channels 1747-OCKTXD
video interface module <i>optional</i>	 1747-OCVGA1
FlashDrive mass storage <i>optional</i>	 4Mbytes 1747-OCSD4 10Mbytes 1747-OCSD10 20Mbytes 1747-OCSD20 60Mbytes 1747-OCSD60 If you ordered a pre-configured open controller CPU module, the FlashDrive is installed. The FlashDrive is optional because you can use an IDE interface module as the native IDE drive.
system memory SIMM (DRAM)	 4Mbytes 1747-OCDR4 8Mbytes 1747-OCDR8 16Mbytes 1747-OCDR16 32Mbytes 1747-OCDR32 If you ordered a pre-configured open controller CPU module, the system memory is installed

System component:	Description:
parallel port adapter cable <i>optional</i>	1747-OCP252
serial port adapter cables (two cables) <i>optional</i>	1747-OCS92
serial port boot cable <i>optional</i>	1747-OCSBC 9-pin, null modem serial cable
FlashDrive cable kit (includes jumper) <i>optional</i>	1747-OCSDCK
open controller documentation set <i>optional</i>	1747-OCDOC1 The set contains one copy of each available open controller document and a disk with AMIBIOS documentation

1 Prepare the chassis

Task:

Install the PCI expansion bus
(1747-OCPC1x)



1746 chassis, series B only

Reference:

PCI Expansion Bus Installation Instructions
publication 1747-5.16

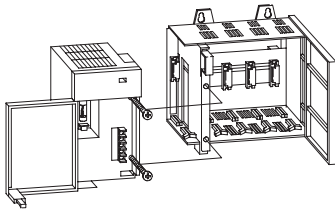
Steps

1. Remove the 2 screws from the 1746 series B backplane that line up with the holes on the bus
2. Attach the PCI expansion bus to the 1746 backplane with 3 screws (2 long, 1 short)

If you use the open controller CPU module stand-alone in the chassis, you don't need a PCI expansion bus. Before you install any open controller option modules, you must install the PCI expansion bus.

Ground the chassis and install the power supply

(chassis 1746-A4, -A7, -A10, -A13)
(power supply 1746-P1, -P2, -P3, -P4, -P5)

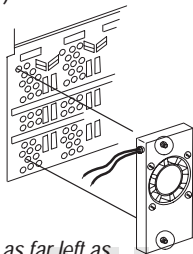


SLC 500 Power Supplies
Installation Instructions
publication 1746-5.1

Steps

1. Slide the power supply into the card guide on the left side of the chassis
2. Secure the power supply with 2 screws
3. Place the power supply jumper to match the input voltage
4. Connect line power to the power supply
5. Ground the chassis

Install the chassis fan

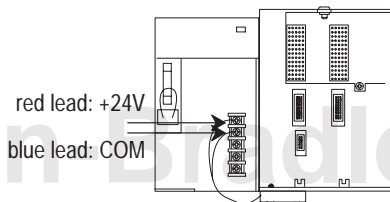
(1747-OCFAN1)


Attach the fan as far left as possible to avoid damaging the FlashDrive ribbon cable.

Chassis Fan Installation Instructions
publication 1747-5.23

Steps

1. Snap the fan onto the bottom of the 1746 I/O chassis, as far left as possible, underneath the CPU module
2. Connect the fan to the power supply



2 Prepare the open controller CPU module

Task:

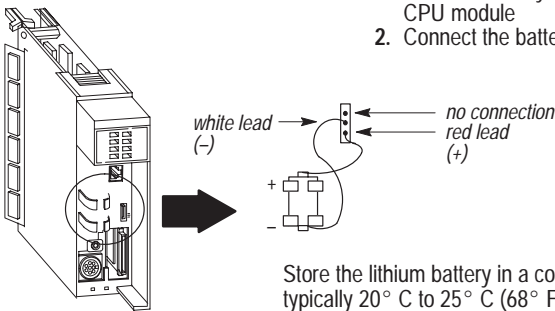
Reference:

Install the battery (1747-BA)

SLC 500 Modular Hardware Style
Installation and Operation Manual
publication 1747-6.2

Steps

1. Slide the battery into the holder on the CPU module
2. Connect the battery wires



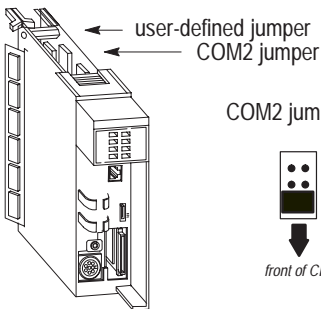
Store the lithium battery in a cool, dry environment, typically 20° C to 25° C (68° F to 77° F) and 40% to 60% relative humidity. Store the battery in the original container, away from flammable materials.

Set the jumpers

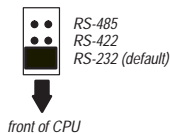
Open Controller User Manual
publication 1746-6.16

Steps

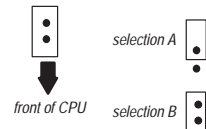
1. Set the jumper for the serial protocol for COM2
2. Set the jumper for the user-defined characteristics



COM2 jumper settings



user-defined jumper settings (selection is read by your application)

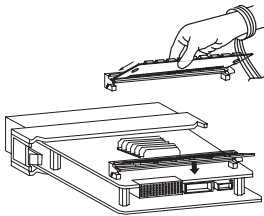


3 Install memory in the open controller CPU module

Task:

Reference:

Install system memory (1747-OCDR.xx)



System Memory Installation Instructions
publication 1747-5.22

Steps

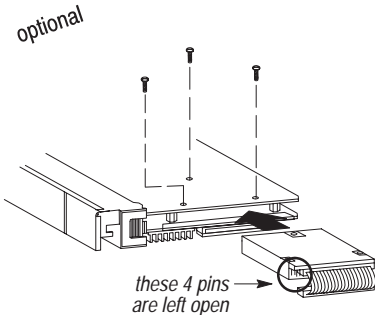
1. Position the DRAM on the CPU
2. Snap the DRAM tightly into place

If you have a preconfigured open controller CPU module, this might already be installed.

If you use commercially-available DRAM, it must have:

- 72 gold-plated pins
- real parity
- 70 nanosecond access time

Install the FlashDrive (1747-OCSD.xx)



FlashDrive Installation Instructions
publication 1747-5.17

Steps

1. Attach the ribbon cable to the FlashDrive
2. Insert the FlashDrive into the CPU module
3. Attach the FlashDrive to the CPU module with the 3 screws
4. Attach the other end of the ribbon cable to the CPU module

If the FlashDrive doesn't already have an operating system loaded on it, see the FlashDrive Installation Instructions for methods of loading software. You might want to load software before installing the FlashDrive.

If you have a preconfigured open controller CPU module, this might already be installed.

4 Install the CPU module and any optional modules

Task:

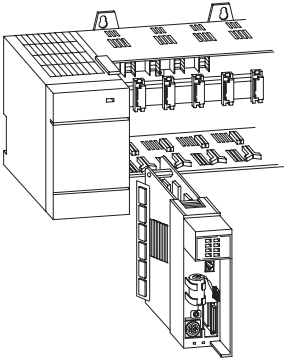
Install the open controller CPU module
(1747-OCE.xxxx)

Reference:

Open Controller CPU Module User Manual
publication 1747-6.16

Steps

1. Slide the CPU module in the first slot (far left) of a 1746 chassis



Install any optional modules

- video interface (1747-OCVGA1)
- PCMCIA interface (1747-OCPCM1, -OCPCM2)
- IDE interface (1747-OCIDE1, -OCIDE25)
- A-B communication interface (1747-OCKTX, -OCKTXD)

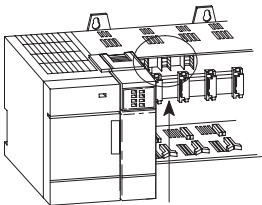
Video Interface Module Installation Instructions
publication 1747-5.15

PCMCIA Interface Module Installation Instructions
publication 1747-5.13

IDE Interface Module Installation Instructions
(publication 1747-5.29 or 1747-5.30)

A-B Communication Interface Module
Installation Instructions
publication 1747-5.14

optional



Install all option modules in
slots on the PCI expansion bus.

Steps

1. Prepare the module
2. Slide the module in any PCI slot, other than the first slot (far left)
3. Make any necessary connections to the option module

You must have already installed a PCI expansion bus with enough slots for the number of option modules you want to install.

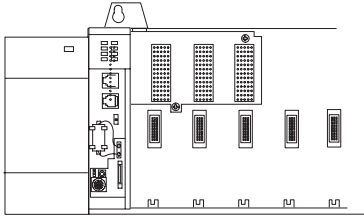
5 Power up the open controller system

Choose a method:

Reference:

Boot from a bootable FlashDrive

Open Controller CPU Module User Manual
publication 1747-6.16

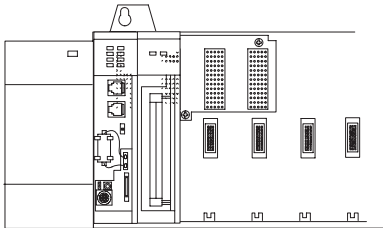


The operating system is already loaded on the FlashDrive

OR

Use a bootable PC Card in the PCMCIA interface module

Open Controller CPU Module User Manual
publication 1747-6.16



See the Open Controller CPU Module User Manual for required BIOS settings



bootable, ATA-compatible PC card

continued on next page

Allen-Bradley M

5 Power up the open controller system

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Choose a method:

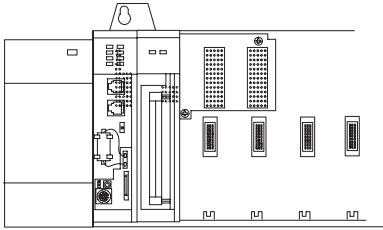
Reference:

OR

Use a bootable, IDE-compatible ATA memory device or 2.5" IDE hard drive in the IDE interface module

Open Controller CPU Module User Manual publication 1747-6.16

IDE Interface Module Installation Instructions publications 1747-5.29 and 1747-5.30

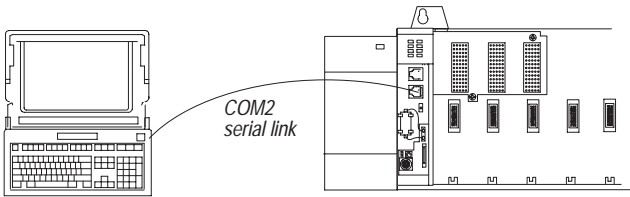


See the Open Controller CPU Module User Manual or the IDE Interface Module Installation Instructions for required BIOS settings

OR

Use a bootable floppy disk in a remote PC connected through COM2

Open Controller CPU Module User Manual publication 1747-6.16



Run HOSTSVR on the remote PC (HOSTSVR comes on the open controller diagnostic utility disk)

See the Open Controller CPU Module User Manual for required BIOS settings

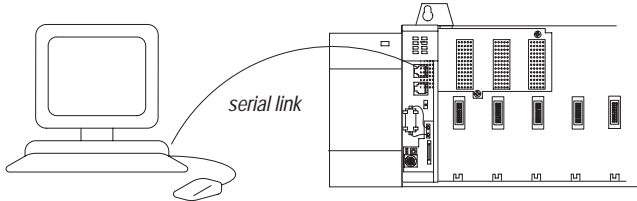
6 Load software on the open controller system

Choose a method:

Use DOS INTERLNK through COM1 or COM2

Reference:

Open Controller CPU Module User Manual publication 1747-6.16
DOS documentation



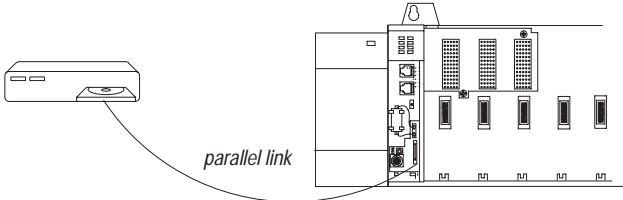
Run *INTERSVR* on the remote PC

The INTERLNK device statement must be in CONFIG.SYS of both the remote PC and the open controller

OR

Copy from a parallel port floppy drive

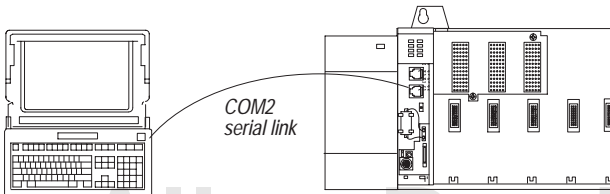
Open Controller CPU Module User Manual publication 1747-6.16
Floppy drive documentation



OR

Copy from a floppy disk in a remote PC through COM2

Open Controller CPU Module User Manual publication 1747-6.16



Run *HOSTSVR* on the remote PC
The open controller will only have access to drive A: on the remote PC

See the Open Controller CPU Module User Manual for required BIOS settings

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1747-10.3 May 1997

6 Load software on the open controller system

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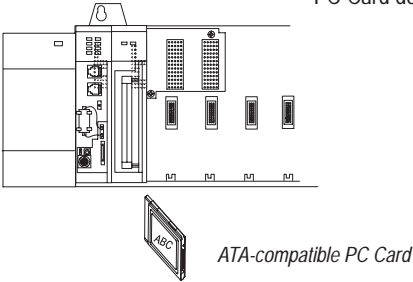
Choose a method:

Reference:

OR

Copy from a PC Card in the PCMCIA interface module

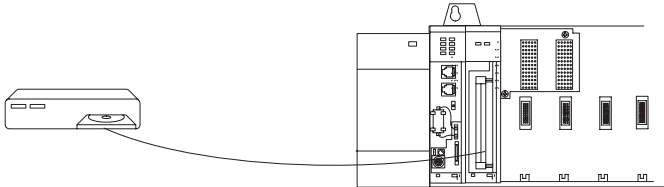
Open Controller CPU Module User Manual
publication 1747-6.16
PC Card documentation



OR

Copy from an external IDE device connected to an IDE interface module

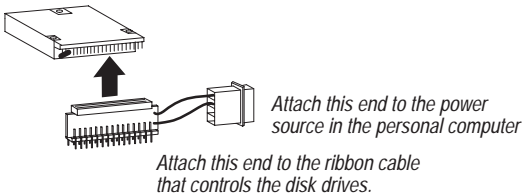
Open Controller CPU Module User Manual
publication 1747-6.16
IDE Interface Module Installation Instructions
publication 1747-5.29 and 1747-5.30
Drive documentation



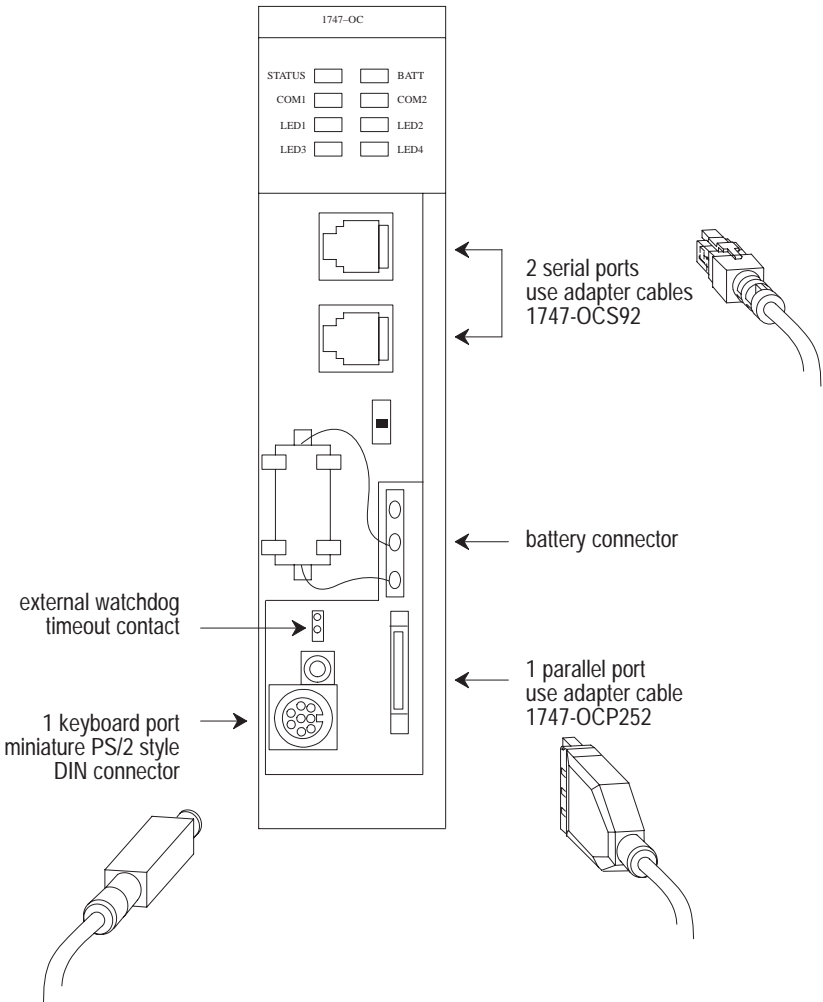
OR

Install the FlashDrive within another PC through an IDE connection

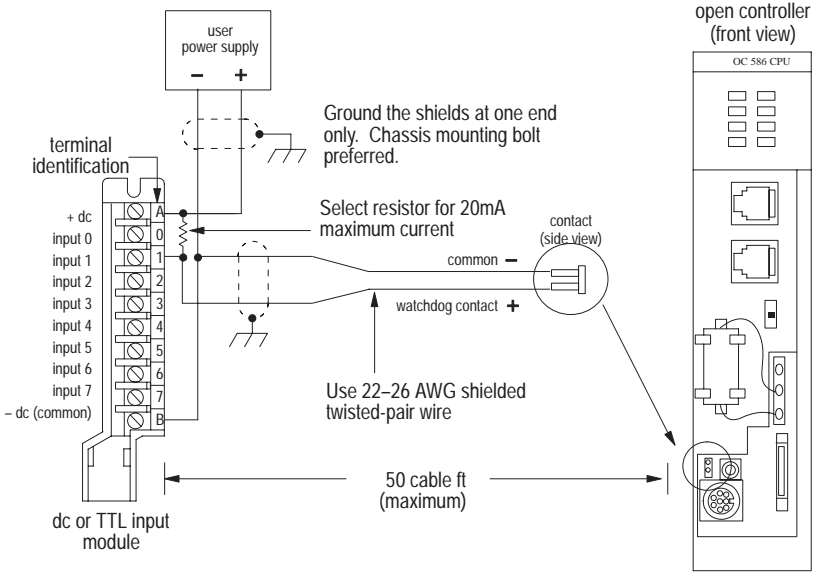
FlashDrive Installation Instructions
publication 1747-5.17



7 Make connections to the open controller CPU module



8 Connect the external watchdog timeout contact



FlashDrive is a trademark of Sandisk.
 MS-DOS is a trademark of Microsoft.
 Controlware is a trademark of Controlware Technologies Corporation.
 SystemSoft is a trademark of SystemSoft Corporation.



Worldwide representation.

