



## *Installation Instructions*

# **1747 Open Controller Video Interface Module (Catalog Number 1747-OCVGA1)**

### **Before You Begin**

The video interface module supports VGA™/SVGA monitors for open controller applications that require an operator interface or video display. You can install only one video interface per open controller chassis.

**Important:** Before you install the video interface, you must have already installed a PCI expansion bus and an open controller CPU in the chassis.

### **What this package contains**

- one 1747-OCVGA1 video module
- three disks with video drivers, documentation, and diagnostic utilities for: DOS, Windows™ 3.1, Windows 95

Windows NT 4.0 uses its own VGA driver (select the Cirrus compatible display adapter) to recognize the video interface module. You don't have to load a video driver for Windows NT 4.0.

### **What you need**

- 1746 series B I/O chassis with a 1747-OCPCIx expansion bus and 1747OC-xxxxx open controller CPU already installed
- commercially-available VGA/SVGA monitor and cable, maximum length 16 ft. (4.88 m), to attach to the video module
- grounding wriststrap

## Handling the module

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

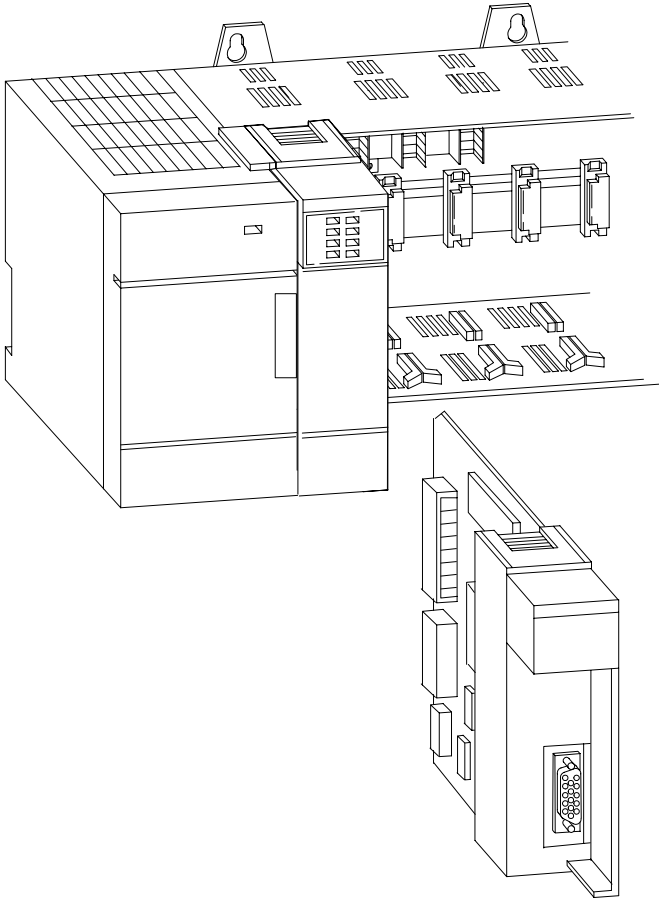
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Take these precautions to guard against ESD damage:

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

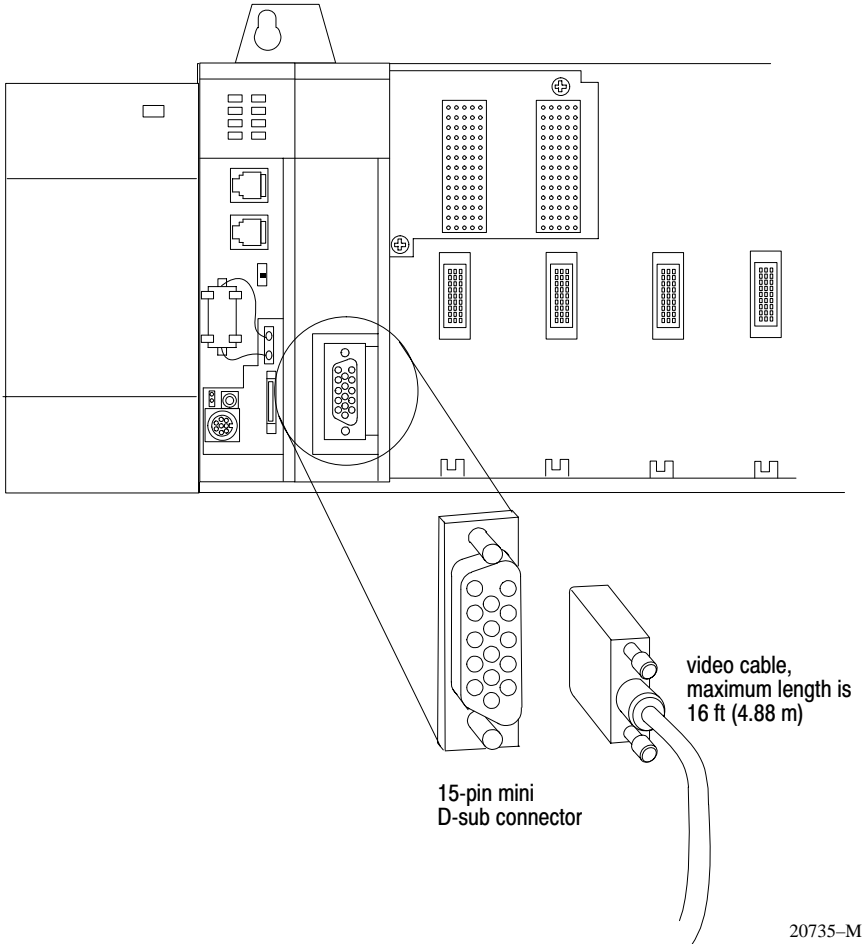
## Installing the Video Module

1. Turn off power to the open controller chassis.
2. Slide the video module in any slot of the PCI expansion bus, other than the first slot (far left). The video module is keyed for PCI slot 2 or greater. The open controller CPU must be in the first slot.



20687-M

### 3. Attach the video cable for your monitor.



20735-M

## Selecting a Video Driver

The video module supports standard VGA/SVGA modes. You can use standard video drivers, but to take full advantage of the memory and video resolutions of the video module, install one of the following video drivers onto the open controller FlashDrive™ after the operating system has been loaded.

<b>If you are using this operating system:</b>	<b>Use the video driver on this disk:</b>	<b>See page:</b>
DOS	disk 1	<a href="#">6</a>
Windows 3.x	disk 2	<a href="#">6</a>
Windows 95	disk 3	<a href="#">7</a>
Windows NT	NT disks and CDROM	<a href="#">1</a>

The video module supports these resolutions:

- 640 x 480 pixels non-interlaced
- 800 x 600 pixels non-interlaced
- 1024 x 768 pixels non-interlaced
- 1280 x 1204 pixels interlaced

The DOS disk also includes user documentation for the video module (a Microsoft® Word file) and a diagnostic utility. The following instructions summarize installing the drivers.

Before installing a video driver, you should have the documentation for your monitor. If your monitor is not one of the available choices for the video driver, you have to enter custom options for your monitor. The monitor documentation should have the resolution and refresh rate specifications you need.

### **Installing and using the DOS video driver**

The standard video drivers the come with DOS are sufficient for the video module. **Load the DOS driver only if your application requires an alternate video mode under DOS.**

1. Run `install.exe`
2. When prompted, select Cirrus Logic GD543X Utilities.  
(Don't select any of the the other options.)
3. When prompted, run `\vgautil\zclmode.exe`
4. Run `\vgautil\clmode.exe` to select a video resolution

If you select a video resolution that your monitor does not support, reboot and run `clmode /?`. This displays several resolutions you can choose. Run `clmode` with the appropriate option to select a resolution that your monitor supports.

### **Installing and using the Windows 3.x video driver**

1. Run `install.exe` from within Windows.
2. Select the WinMode Utility icon to run the application.
3. Select the monitor you have and resolution you want.

If your brand monitor is not listed, you can select Other Brand. Make sure to correctly specify the resolutions and refresh rates of your monitor. Don't select options that exceed the specifications of your monitor.

If you select a resolution that your monitor does not support:

1. Reboot to DOS (don't start Windows).
2. Change to the Windows directory.
3. At the DOS prompt, run `setup.exe` and select VGA for the display type.

## Installing and using the Windows 95 video driver

1. Access the Control Panel and select Display.
2. Select the Settings tab and then select the Change Display Type button.
3. Click on the Change button next to the Adapter Type section and select Cirrus for the adapter type. Then select Have Disk to load the video driver.
4. Select the Cirrus Logic 5436 PCI device.
5. After you install the video driver, you can select Change Display to select monitor types and video resolutions. Make sure to correctly specify the resolutions and refresh rates of your monitor. Don't select options that exceed the specifications of your monitor.

If you select a resolution that your monitor does not support,

1. Reboot and press F8 once the reboot process passes the CMOS setup.
2. Select option 3 Safe Mode and restart.
3. Access the Control Panel and change the display type to options that your monitor supports.

## Additional Documentation

The following documents are available for additional information about using the video module in an open controller system:

<b>This book:</b>	<b>Has this publication number:</b>
Open Controller CPU Module User Manual	1747-6.16
Open Controller PCI Expansion Bus Installation Instructions	1747-5.16
Open Controller System Overview	1747-2.22
Video Module User Manual	on the video driver disk

## Environmental Specifications

Characteristic:	Values/Ranges:
slot temperature	
operating	<b>with chassis fan</b> 0° to 60° C (32 to 140° F)
storage	-40° to 85° C (-40 to 185° F)
relative humidity	5% to 95% noncondensing
vibration	10 to 500 Hz 2.0 G maximum peak acceleration .012 in (peak-to-peak) displacement
shock	
operating	30G peak for 11ms
storage	50G peak for 11ms
weight	6.0 oz (170.1 g)
power dissipation	0.25 A @ 5V dc
agency certification	UL A191 identified CE for all applicable directives CSA Class 1, Division 2, Groups A, B, C, D, Temp Code T5

## European Union Directive Compliance

If this product is installed within the European Union or EEA regions and has the CE mark, the following regulations apply.

### EMC directive

This apparatus is tested to meet Council Directive 89/336 Electromagnetic Compatibility (EMC) using a technical construction file and the following standards, in whole or in part:

- EN 50081-2 EMC – Generic Emission Standard, Part 2 – Industrial Environment
- EN 50082-2 EMC – Generic Immunity Standard, Part 2 – Industrial Environment

The product described in this manual is intended for use in an industrial environment.





## Low voltage directive



This apparatus is also designed to meet Council Directive 73/23 Low Voltage, by applying the safety requirements of EN 61131–2 Programmable Controllers, Part 2 – Equipment Requirements and Tests.



For specific information that the above norm requires, see the appropriate sections in this manual, as well as the following Allen-Bradley publications:

- Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1
- Automation Systems Catalog, publication B111

## CSA Hazardous Location Approval

CSA Hazardous Location Approval	Approbation d'utilisation dans des emplacements dangereux par la CSA
<p>CSA certifies products for general use as well as for use in hazardous locations. <b>Actual CSA certification is indicated by the product label</b> as shown below, and not by statements in any user documentation.</p>	<p>La CSA certifie les produits d'utilisation générale aussi bien que ceux qui s'utilisent dans des emplacements dangereux. <b>La certification CSA en vigueur est indiquée par l'étiquette du produit</b> et non par des affirmations dans la documentation à l'usage des utilisateurs.</p>
<p>Example of the CSA certification product label</p> 	<p>Exemple d'étiquette de certification d'un produit par la CSA</p> 

<p><b>CSA Hazardous Location Approval</b></p>	<p><b>Approbation d'utilisation dans des emplacements dangereux par la CSA</b></p>
<p>To comply with CSA certification for use in hazardous locations, the following information becomes a part of the product literature for CSA-certified Allen-Bradley industrial control products.</p> <ul style="list-style-type: none"> <li>• This equipment is suitable for use in Class I, Division 2, Groups A, B, C, D, or non-hazardous locations only.</li> <li>• The products having the appropriate CSA markings (that is, Class I Division 2, Groups A, B, C, D), are certified for use in other equipment where the suitability of combination (that is, application or use) is determined by the CSA or the local inspection office having jurisdiction.</li> </ul>	<p>Pour satisfaire à la certification de la CSA dans des endroits dangereux, les informations suivantes font partie intégrante de la documentation des produits industriels de contrôle Allen-Bradley certifiés par la CSA.</p> <ul style="list-style-type: none"> <li>• Cet équipement convient à l'utilisation dans des emplacements de Classe 1, Division 2, Groupes A, B, C, D, ou ne convient qu'à l'utilisation dans des endroits non dangereux.</li> <li>• Les produits portant le marquage approprié de la CSA (c'est à dire, Classe 1, Division 2, Groupes A, B, C, D) sont certifiés à l'utilisation pour d'autres équipements où la convenance de combinaison (application ou utilisation) est déterminée par la CSA ou le bureau local d'inspection qualifié.</li> </ul>
<p><b>Important:</b> Due to the modular nature of a PLC control system, the product with the highest temperature code rating determines the overall temperature code rating of a PLC control system in a Class I, Division 2 location. The temperature code rating is marked on the product label as shown.</p>	<p><b>Important:</b> Par suite de la nature modulaire du système de contrôle PLC), le produit ayant le taux le plus élevé de température détermine le taux d'ensemble du code de température du système de contrôle d'un PLC dans un emplacement de Classe 1, Division 2. Le taux du code de température est indiqué sur l'étiquette du produit.</p>
<p>Temperature code rating</p> <div style="display: flex; align-items: center;">  <div style="text-align: center;"> <p>CL 1 DIV 2 GP A,B,C,D TEMP</p> <div style="background-color: black; width: 60px; height: 20px; margin: 0 auto;"></div> </div> <div style="margin-left: 20px;"> <p>← Look for temperature code rating here</p> </div> </div>	<p>Taux du code de température</p> <div style="display: flex; align-items: center;">  <div style="text-align: center;"> <p>CL 1 DIV 2 GP A,B,C,D TEMP</p> <div style="background-color: black; width: 60px; height: 20px; margin: 0 auto;"></div> </div> <div style="margin-left: 20px;"> <p>← Le taux du code de température est indiqué ici</p> </div> </div>

CSA Hazardous Location Approval	Approbation d'utilisation dans des emplacements dangereux par la CSA
<p>The following warnings apply to products having CSA certification for use in hazardous locations.</p>	<p>Les avertissements suivants s'appliquent aux produits ayant la certification CSA pour leur utilisation dans des emplacements dangereux.</p>
<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;">  </div> <div> <p><b>ATTENTION:</b> Explosion hazard —</p> <ul style="list-style-type: none"> <li>• Substitution of components may impair suitability for Class I, Division 2.</li> <li>• Do not replace components unless power has been switched off or the area is known to be non-hazardous.</li> <li>• Do not disconnect equipment unless power has been switched off or the area is known to be non-hazardous.</li> <li>• Do not disconnect connectors unless power has been switched off or the area is known to be non-hazardous. Secure any user-supplied connectors that mate to external circuits on an Allen-Bradley product using screws, sliding latches, threaded connectors, or other means such that any connection can withstand a 15 Newton (3.4 lb.) separating force applied for a minimum of one minute.</li> </ul> </div> </div>	<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;">  </div> <div> <p><b>AVERTISSEMENT:</b> Risque d'explosion —</p> <ul style="list-style-type: none"> <li>• La substitution de composants peut rendre ce matériel inacceptable pour les emplacements de Classe I, Division 2.</li> <li>• Couper le courant ou s'assurer que l'emplacement est désigné non dangereux avant de remplacer les composants.</li> <li>• Avant de débrancher l'équipement, couper le courant ou s'assurer que l'emplacement est désigné non dangereux.</li> <li>• Avant de débrancher les connecteurs, couper le courant ou s'assurer que l'emplacement est reconnu non dangereux. Attacher tous connecteurs fournis par l'utilisateur et reliés aux circuits externes d'un appareil Allen-Bradley à l'aide de vis, loquets coulissants, connecteurs filetés ou autres moyens permettant aux connexions de résister à une force de séparation de 15 newtons (3,4 lb. - 1,5 kg) appliquée pendant au moins une minute.</li> </ul> </div> </div>

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 Microsoft and Windows are trademarks of Microsoft  
 FlashDrive is a trademark of SanDisk



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