

**CrossFire™ 8600/8730  
Series Switch Manager  
for Windows and  
HP OpenView for Windows**

DOC-6960/1.3

**Guide to Operations**

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Series Switch Manager  
for  
Windows and HP OpenView for Windows  
Guide to Operations**

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## Preface

The CrossFire 8600/8730 Manager is a network management application that runs under Microsoft Windows 95 or Microsoft Windows NT. It can be used both as a stand-alone application or in integration with HP OpenView for Windows.

The Switch Manager is used to monitor and configure the following Olico switches:

- CrossFire 8600 Token-Ring Switch
- CrossFire 8601 Token-Ring Desktop Switch
- CrossFire 8602 Token-Ring Workgroup Switch
- CrossFire 8605 Token-Ring Fiber Switch
- CrossFire 8730 Fast Ethernet Translation Switch

These switches are together referred to as the “CrossFire 8600 Series and 8730 Switches”.

This guide describes how to install the CrossFire 8600/8730 Manager on your management PC and how to get started. It also describes how to manage switches using OpenView.

This guide is intended for network administrators responsible for the operation of a local area network. The reader is assumed to be acquainted with the CrossFire 8600 Series and 8730 Switches and, optionally, with HP OpenView for Windows.

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## Related Publications

- *HP OpenView for Windows Workgroup Node Manager User's Guide*
- *CrossFire 8600/8605 Token-Ring Switches Guide to Operations*  
(Olicom document DOC-6951)
- *CrossFire 8601/8602 Token-Ring Switches Guide to Operations*  
(Olicom document DOC-6978)
- *CrossFire 8730 Fast Ethernet Translation Switch Installation Guide*  
(Olicom document DOC-7046)
- *CrossFire 8730 Fast Ethernet Translation Switch Reference Guide*  
(Olicom document DOC-7047)

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## Summary of Contents

Following is a short description of the content of the chapters and appendixes in this publication:

**Chapter 1, “Introduction”** introduces the CrossFire 8600/8730 Manager, lists the package contents, provides system requirements for running the Switch Manager, and explains the document conventions used in this guide.

**Chapter 2, “Installation”** explains how to install the CrossFire 8600/8730 Manager, describes the changes that are made to your system, explains trap definitions, and explains how to remove the Switch Manager from your system.

**Chapter 3, “Setting up a Switch for SNMP Management”** describes how to set up a switch for SNMP management.

**Chapter 4, “Managing CrossFire 8600 Series and 8730 Switches in OpenView”** explains how to build the OpenView map, how the Switch Manager polls the network for switch status, and how the Switch Window from the HP OpenView map works.

**Chapter 5, “Stand-alone Operation”** describes stand-alone operation of the Switch Manager.

**Chapter 6, “Switch Manager Operation”** explains where to get help for the Switch Manager application.

**Chapter A, “List of Abbreviations”** contains a list of the abbreviations used in this publication.



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# 1. Introduction

The CrossFire 8600/8730 Series Switch Manager for Windows and for HP OpenView for Windows is a network management application that enables a network administrator to configure and monitor the Olicom CrossFire 8600 Series and 8730 Switches in an easy and user-friendly way through a graphical user interface.

The Switch Manager can be used as a stand-alone application or together with HP OpenView for Windows. When used with HP OpenView for Windows, the Switch Manager uses OpenView's integrated alarm and status reporting mechanisms to inform the operator of the current status of the managed switches.

The communication between the Switch Manager and the managed switches is based on Simple Network Management Protocol (SNMP) version 1, running on top of IP/UDP.

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## Package Contents

The CrossFire 8600/8730 Series Switch Manager is delivered along with your switch. Look for the following items in the switch package:

- The CrossFire 8600/8730 Series Switch Manager software contained on the CD-ROM delivered with your switch
- *CrossFire 8600/8730 Series Switch Manager for Windows and HP OpenView for Windows—Guide to Operations* (this document)
- A release note with information about specific versions and last minute information that was not included in this guide.

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## System Requirements

The CrossFire 8600/8730 Series Switch Manager requires Microsoft Windows 95 (or later) or Microsoft Windows NT 4.0 (or later). For OpenView integration, HP OpenView for Windows version D.01.02 or later is required.

The Switch Manager requires 1.5 MB to 3 MB disk space, depending on the version. The Switch Manager may require an additional 1.4 MB of disk space for shared system files, that will be installed if they are not already present on your system.

The Switch Manager can be viewed in standard VGA resolution (640 x 480) with 16 colors. However, a display resolution of at least 800 x 600 pixels and 256 colors is recommended.

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## Document Conventions

**Helvetica bold** indicates commands you must enter. Type the commands exactly as they appear.

HELVETICA NARROW indicates keystrokes you must enter.

**Menus, options and command buttons** are indicated with bold.

Square brackets [ ] indicate an optional entry.

Angle brackets < > indicate text to be substituted.

The letter “h” following a number indicates hexadecimal notation.

The □ symbol indicates the end of a chapter.



## 2. Installation

The CrossFire 8600/8730 Manager is installed by the following procedure:

1. Start Windows.
2. Insert the installation CD in the CD drive.
3. Run the Switch Manager SETUP.EXE on the CD.
4. Follow the instructions on the screen.

The setup program will prompt whether you want the Switch Manager to be integrated with HP OpenView. If you choose this option, HP OpenView version D.01.02 or later must already be installed on your PC. In addition, you must point out the OpenView directory, in case the setup program is unable to locate it.

The Switch Manager can still be run in stand-alone mode if you choose OpenView integration. The setup program creates a shortcut to the Switch Manager in Window's Start Menu that lets you run the Switch Manager in stand-alone mode.

The CD contains a MIBs directory where the product specific MIBs can be found. In order to use these with OpenView's MIB browser, copy the MIB files to OpenView's MIBs directory. In Table 1 there is a list of suggested MIB files to copy.

MIB Name	Description
OC8600.MIB	CrossFire 8600 product MIB
DTRC.MIB	IEEE 802.5r DTR Concentrator MIB
DTRMAC.MIB	IEEE 802.5r DTR MAC MIB
VTP.MIB	Proprietary Virtual Trunking Protocol MIB
OC-832X.MIB	ATM Uplink product MIB
CF-865X.MIB	HSTR product MIB
CF-8660.MIB	TS product MIB

**Table 1. Product Specific MIB Files**

The standard RFC-based MIBs supported by the CrossFire 8600 Series and 8730 Switches are not included on the setup disks. These MIBs can be found on the switch product CD, in your OpenView MIBS directory or on the Internet.

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## Removing the Switch Manager

The setup program creates a log of installed components so that the Switch Manager can be removed from your system using the standard Windows procedure. To remove the Switch Manager, follow these steps:

1. Open the Control Panel in Windows.
2. Double-click the **Add/Remove Programs** icon.
3. Select **Olicom OC-8600/8730 Switch Manager** in the list box.
4. Click the **Add/Remove...** button and click **Yes** to confirm that you want to remove the CrossFire 8600/8730 Manager.

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## OpenView Installation Notes

If you want to browse the CrossFire 8600 Series and 8730 Switch supported MIBs using OpenView's MIB browser, you must first compile the MIBs of interest into OpenView's MIB database. Please refer to your OpenView documentation to see how this is done.

When the Switch Manager has been successfully installed and integrated with your HP OpenView environment, it will from now on automatically be started by OpenView during the OpenView startup process.

When you choose OpenView integration, the installed components are placed under your OpenView directory as described below, assuming that your OpenView directory is C:\OV.

Component	Target Directory
Switch Manager files	C:\OV\OLICOM\TS86MOV
Trap Manager file	C:\OV\TRAPMGR\ OLICOM.TDF

**Table 2. Component Locations**

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## Deactivation

If, at a later time, you do not want the Switch Manager to be started by OpenView, it can be deactivated by removing the **ts86mov=** entry in OVWIN.INI. The OVWIN.INI file is located in your OpenView directory.

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## Loading Trap Definitions in OpenView

When the Switch Manager has been installed under OpenView, a file called OLICOM.TDF has been copied to OpenView' TRAPMGR subdirectory. This file contains trap definitions for Olicom devices. These trap definitions instruct OpenView's Trap Manager how to handle traps originating from an Olicom device; they also define the event messages that will be inserted in OpenView's alarm log when a trap occurs.

Load the trap definitions into OpenView as follows:

1. Start HP OpenView.
2. From the **Monitor** menu, select **Customize Traps**.
3. In the **Customize Trap Alarms** dialog, click the **Load Trap** button.
4. Open the OLICOM.TDF file and select the first Olicom OC-8600 Switchentry.
5. Click the **OK** button.
6. Repeat step 4 and 5 for the remaining Olicom OC-8600 Switch entries.

Once these trap definitions have been loaded, an incoming trap from a CrossFire 8600 Series or 8730 Switch will result in an event message in OpenView's alarm log. This event message will describe the trap.

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## Additional Changes in OVWIN.INI

A few changes in the [OpenViewSNMP] section in OpenView's initialization file, OVWIN.INI, may be required. First of all, make sure that the **SNMPNetIp** entry is set to *Yes*; this will enable the IP protocol.

To enable reception of SNMP traps in OpenView, the **SNMPNoTraps** entry must be set to *No*.

The changes in OVWIN.INI mentioned here have to be done manually by means of a text editor, such as Window's Notepad.





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## 3. Setting up a Switch for SNMP Management

Before a switch can be managed by the Switch Manager, or any other SNMP-based management application, it must be set up for SNMP management. This requires the following parameters to be configured in the switch:

### IP Address

The switch must be assigned an IP address for the VLAN to which the Switch Manager PC belongs. Since IP addresses are assigned per VLAN, a switch may have several IP addresses (one per VLAN). Subnet Address and Default Gateway must also be configured as necessary.

### SNMP Community

The read and write community names used by the Switch Manager must be configured in the switch. The default community names used by the Switch Manager in stand-alone mode is *public* for read requests and *private* for write requests. When the Switch Manager is launched from OpenView, the community names used by the Switch Manager are defined by OpenView.

Note that community names are case sensitive.

### Trap Destination

The IP address of the OpenView PC should be added to the SNMP trap receiver table of the switch in order to have traps sent to HP OpenView. You can use any trap community name you like.

The initial configurations listed above can be done via a console attached to the serial port of the switch.





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## 4. Managing CrossFire 8600 Series and 8730 Switches in OpenView

At this stage it is assumed that the CrossFire 8600/8730 Series Switch Manager has been installed on the management PC, that the switches to be managed are set up as explained in Chapter 3, and that there is connectivity between the management PC and the managed switches.

To test the IP connectivity between the management PC and a switch you can use the Ping utility, included in most TCP/IP stacks.

This chapter describes how to start monitoring and configuring CrossFire 8600 Series and 8730 Switches in HP OpenView.

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### Building the OpenView Map

When the Switch Manager has been installed, a new component representing a CrossFire 8600 Series or 8730 Switch has been added to OpenView's list of available network components. This component is identified by the symbol shown in Figure 1.



**Figure 1. CrossFire 8600 Series and 8730 Switch Symbol**

When an OpenView map is being manually built, the CrossFire 8600 Series and 8730 Switch symbol must be used to represent switches to be managed.

Use OpenView's **Describe** dialog to enter a label and IP address of the switch associated with each switch symbol.

If the OpenView map is created automatically by auto-discovery, the discovered CrossFire 8600 Series and 8730 Switches will automatically be represented by the CrossFire 8600 Series and 8730 Switch symbol.

When the map is completed, you must save it to disk. This will trigger the Switch Manager to scan the map for all instances of the CrossFire 8600 Series and 8730 Switch components and query OpenView for their IP address and label.

If you make changes to any CrossFire 8600 Series or 8730 Switch component in the map, such as changing its IP address, these changes will not be registered by the Switch Manager until the map is saved.

When a new map is loaded from disk, this will also trigger the Switch Manager to scan the map for all instances of the CrossFire 8600 Series or 8730 Switch components and query OpenView for their addresses and labels.

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## Status Polling and Status Indication

When the Switch Manager has scanned the map for all occurrences of CrossFire 8600 Series and 8730 Switches, it starts polling the status of each switch in the map. The poll interval is configured in the **Settings** dialog under the **File** menu in the Switch Manager. The default is one minute.

When the status of a switch has been polled, the Switch Manager updates the status color of the corresponding symbol in the map and updates the alarm state of the polled switch. Likewise, when OpenView receives a trap from a switch, the status color and alarm state of the corresponding switch object in the OpenView map is updated according to the predefined severity level of the trap.

The alarms and traps pertaining to a switch are explained in the Switch Manager's online help.

When you have created a map in OpenView containing CrossFire 8600 Series and 8730 Switches, and saved the map to disk, the status color of each switch symbol in the map will successively be updated by the Switch Manager.

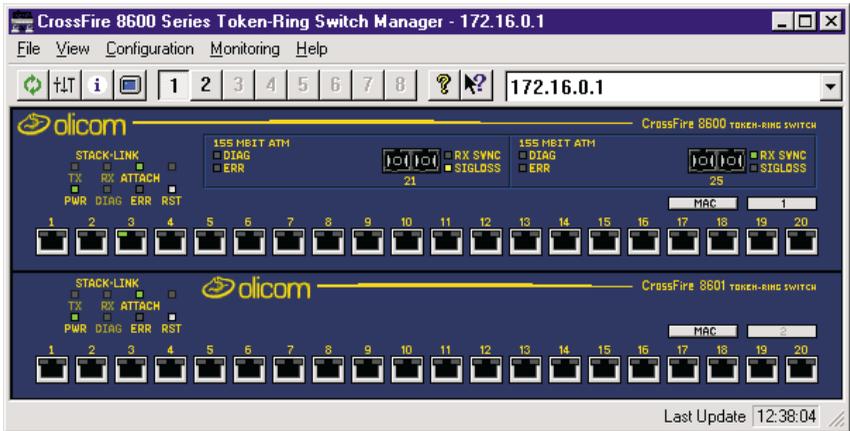
Those switches that respond to the Switch Manager's status polls will be marked as being in normal state (green) in the map, provided that the switch status is *OK*. Switches that do not respond to the Switch Manager's status polls will be marked as being in alarm state, and the alarm text `SNMP request timeout` will be generated in the OpenView alarm log.

If a switch is placed in the *SNMP request timeout* alarm state, and this is contrary to what you expect, start your troubleshooting by verifying the IP address specified for the switch in OpenView. Secondly, check that the switch is set up as explained in Chapter 3.

The Switch Manager periodically polls each switch to update the dynamic front panel indicators, alarm status, and other basic status information.

## The Switch Window

By double-clicking a CrossFire 8600 Series and 8730 Switch symbol in the OpenView map, you invoke a switch window associated with the selected switch. This is provided that the switch responds to SNMP requests; otherwise the Switch Manager will refuse to open the switch window. Figure 2 shows an example of a switch window for a stack consisting of two switches.



**Figure 2. Switch Window**

The title bar of the switch window shows the IP address of the switch and the label assigned to the switch in OpenView, if any.

The menu bar contains five pull-down menus: **File**, **View**, **Configuration**, **Monitoring** and **Help**, giving access to various configuration and monitoring options and online help.

Below the menu bar is a dockable toolbar from which you can invoke the Switch Manager **Settings** dialog, force an immediate update of the front panel, invoke the **About** dialog and context sensitive help. The buttons labelled 1 through 8 are used to select the active switch. Only buttons that correspond to switches that are present in the stack are enabled for selection.

Below the toolbar is a detailed picture of the front panel of each switch unit in the stack. Up to eight switches may be present in a stack. On each front panel there are several *hot spots* that act like push buttons; each of these will invoke a dialog with which you can inspect and/or configure the associated switch parameters. When the cursor is positioned over a hot spot, it will change from an arrow to a hand symbol.

The available front panel operations are explained in the online help. The state of (most of) the LEDs on the front panel are updated after each status poll. Also, the type of the expansion modules that are plugged into the switch stack is updated after each status poll.

The status bar in the bottom of the window is used to display the system name of the switch, error messages, and a short help text during menu selection.

The system name is the default message. Also, the time of the last successful status poll is displayed.



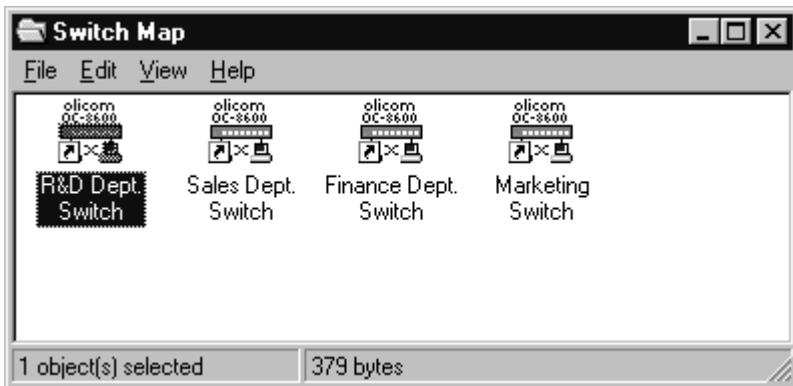
## 5. Stand-alone Operation

During installation of the Switch Manager, a shortcut is added to Window's Start Menu that allows you to run the Switch Manager in stand-alone mode (the Switch Manager runs independently of HP OpenView for Windows).

When you run the Switch Manager in stand-alone mode for the first time, you must configure a switch IP address and SNMP communities to use. These settings are configured in the **Settings** dialog which can be accessed from the **File** menu and from the toolbar in the Switch Window. The settings are stored in an initialization file. The default initialization file name is TS86MGR.INI, and the default location is in the same directory as the Switch Manager executable file, called TS86MGR.EXE. You can force the Switch Manager to use an alternative initialization file by specifying the full path and name of the initialization file as a command line parameter to the Switch Manager.

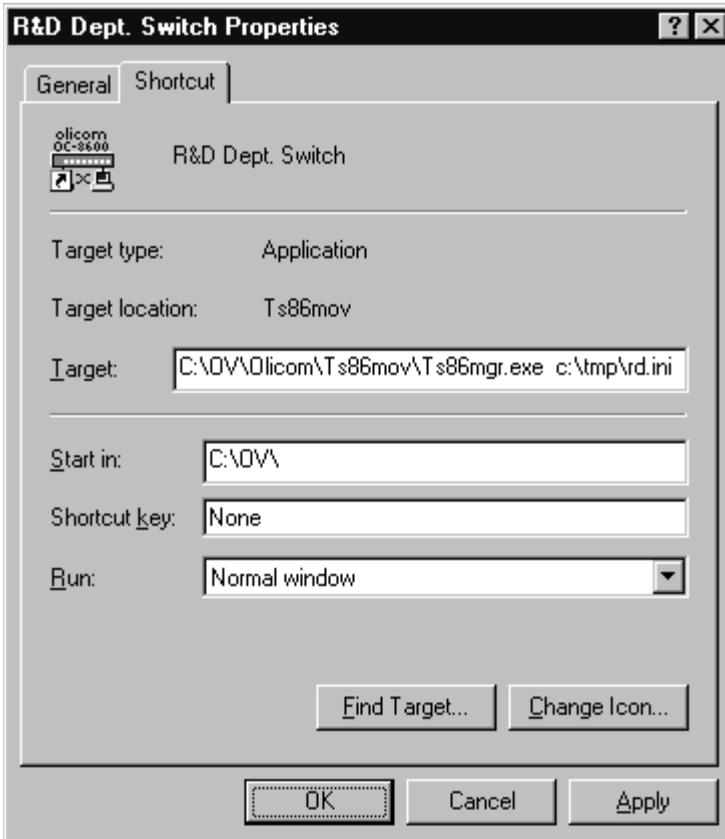
If you use the Switch Manager in stand-alone mode to manage several switches, you should specify an individual initialization file for each switch. Otherwise you cannot maintain individual settings for each switch, such as its IP address.

One way to do this is to create a new folder in Windows and add shortcuts to your switches to this folder. An example of a folder containing shortcuts to four switches is shown in Figure 3 below.



**Figure 3. Folder with Switch Shortcuts**

Each shortcut points to the Switch Manager executable file TS86MGR.EXE and specifies an initialization file for the switch to match as a command line parameter. Figure 4 shows an example of the property sheet for a switch shortcut in Windows 95



**Figure 4. Switch Shortcut Properties Example**

If OpenView integration was chosen during installation, the shortcut must specify the OpenView directory as the working directory (the **Start in:** field in the shortcut properties dialog). Failure to do so will result in an error message informing you that a required .DLL file, WSNMP32.DLL, was not found.

If you did not choose OpenView integration during installation, specify the working directory to be the directory where the Switch Manager executable TS86MGR.EXE is placed (the target directory you chose during installation).



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## 6. Switch Manager Operation

See the online help for further information on how to operate the CrossFire 8600/8730 Series Switch Manager.





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## Appendix A. List of Abbreviations

<b>ATM</b>	Asynchronous Transfer Mode
<b>BOOTP</b>	Bootstrap Protocol
<b>DTR</b>	Dedicated Token Ring
<b>HP</b>	Hewlett-Packard
<b>HSTR</b>	High-Speed Token-Ring
<b>IP</b>	Internet Protocol
<b>LAN</b>	Local Area Network
<b>LED</b>	Light Emitting Diode
<b>MAC</b>	Media Access Control
<b>MIB</b>	Management Information Base
<b>RFC</b>	Request for Comments
<b>SNMP</b>	Simple Network Management Protocol
<b>TCP</b>	Transmission Control Protocol
<b>TFTP</b>	Trivial File Transfer Protocol
<b>TS</b>	Translational Switching
<b>UDP</b>	User Datagram Protocol
<b>VLAN</b>	Virtual LAN





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