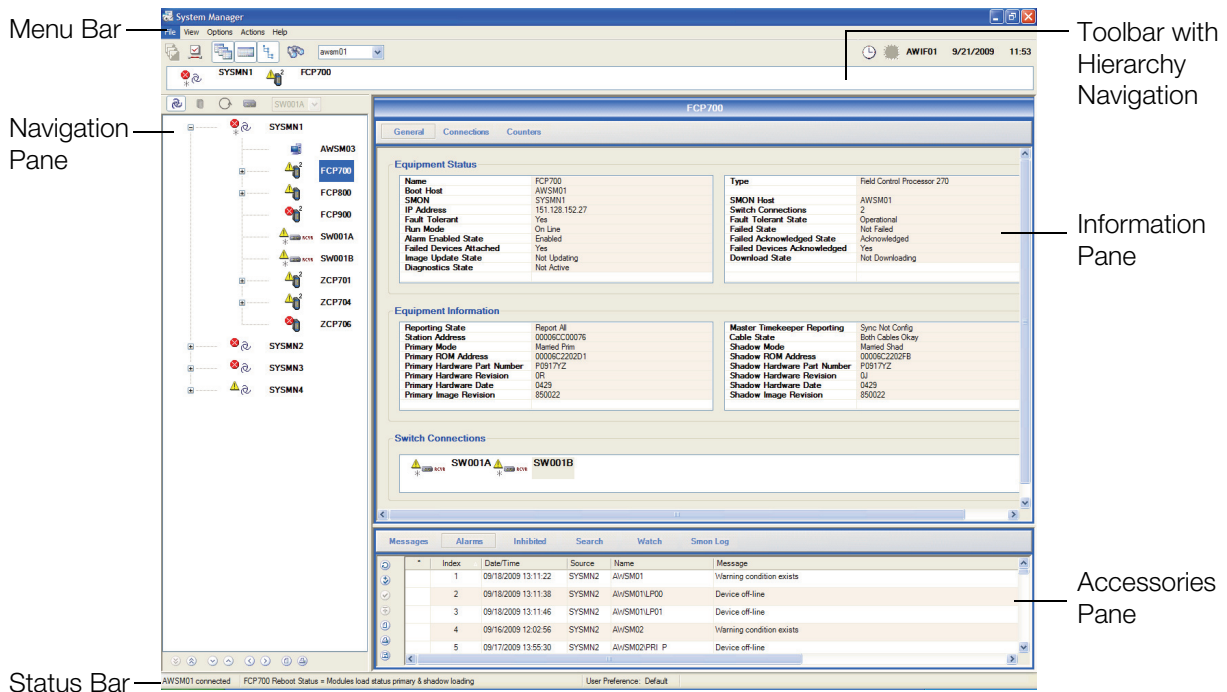


I/A Series® System Manager Software



The I/A Series® System Manager displays polled or on-demand status information in an intuitive manner to provide I/A Series system users with the ability to monitor system health and performance as well as perform operational changes, checkpoint control stations and execute diagnostics.

FEATURES

I/A Series System Manager software provides:

- ▶ Comprehensive system monitoring
- ▶ Intuitive, easy to navigate display structure
- ▶ Updated equipment information for all components
- ▶ Communication status and performance counters
- ▶ Capability to print or save displayed information
- ▶ Equipment change actions and logging
- ▶ System alarm and event summaries
- ▶ Configurable Watch List
- ▶ On-line Help facility.

OVERVIEW

The I/A Series System Manager provides a comprehensive display subsystem for monitoring the status of all system components including control processors, 100 Series and 200 Series Fieldbus modules, Fieldbus Communications Modules, network hardware and cables, workstations, peripherals, and field instrumentation. System

Manager software is designed for ease of navigation in providing both static and dynamic system status information. It consists of three major display areas or panes to convey appropriate information quickly and efficiently. These panes are:

- ▶ Navigation Pane
- ▶ Information Pane
- ▶ Accessories Pane.

CLIENT/SERVER ARCHITECTURE

The I/A Series System Manager application is a client/server architecture that enables multiple System Manager clients hosted by AW workstations to access several System Manager servers that each gather information from multiple System Monitor

Domains. This client/server architecture is depicted in Figure 1. In this example client software is installed on three workstations: AWST03, AWST22, and AWST23. Each of these can connect to System Manager services running on either AWST02 or AWST22 servers. The connected service interacts with the two configured system monitors: SMON01 and SMON22. The system monitors in turn provide information about the stations and connected equipment in their respective domains. Note that the System Manager clients can access any service instance on the network and that the service can reside on a workstation that hosts a system monitor or on one that does not.

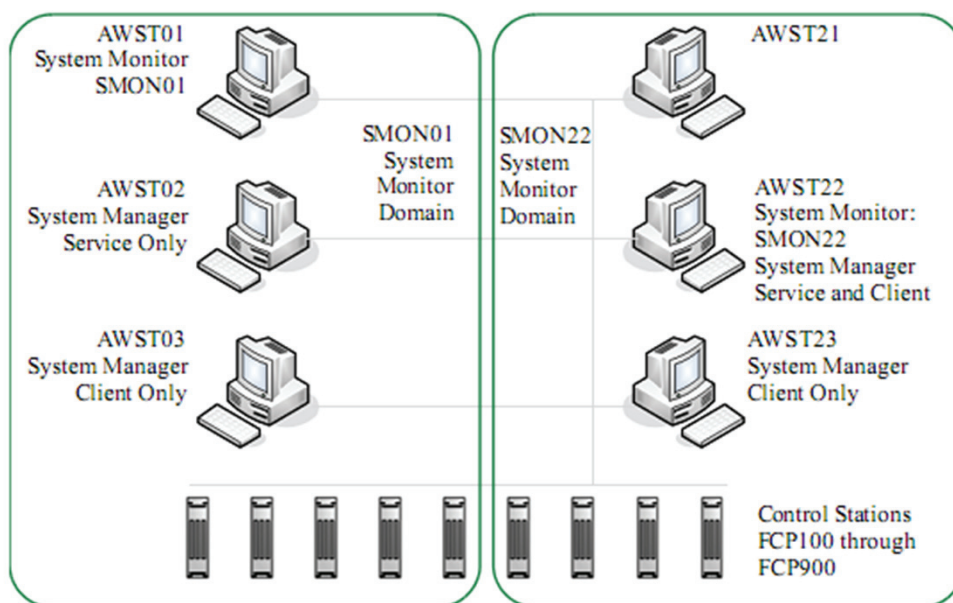


Figure 1. Client/Server Architecture

NAVIGATION PANE

The Navigation Pane provides a hierarchy of system equipment that is presented in one of four views:

- ▶ System Monitor domains
- ▶ ATS modules
- ▶ LAN Interface modules
- ▶ MESH Network Switches.

In the System Monitor view (Figure 2), you can expand each system monitor in the Navigation pane to display the stations and switches in its domain.

The next level reveals all the stations. The third level shows the equipment attached to that station.

The ATS view (Figure 2) displays all configured ATS

modules configured in 'LI' mode. The next level reveals all the stations. The third level shows the equipment attached to that station.

The LAN Interface (LI) View (Figure 3) displays all configured LAN Interface modules. At the next level, LI view reveals all the stations residing in a particular node. When no LIs are configured on the IA network, the LI button on the navigation tool bar and LI view will be disabled.

The Switch view (Figure 3) shows the selected switch and all the stations and switches connected to it. The next level shows the equipment attached to that station.

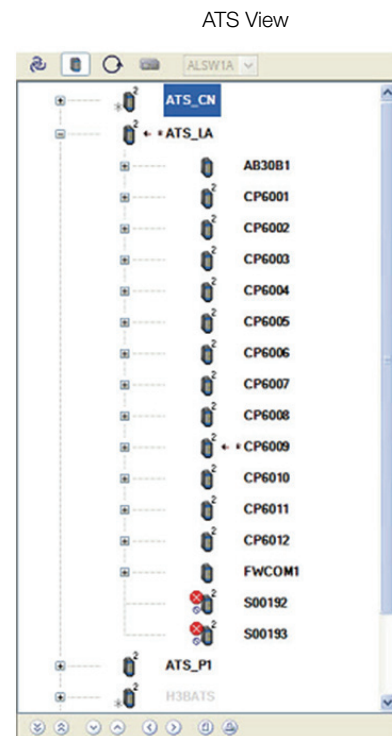
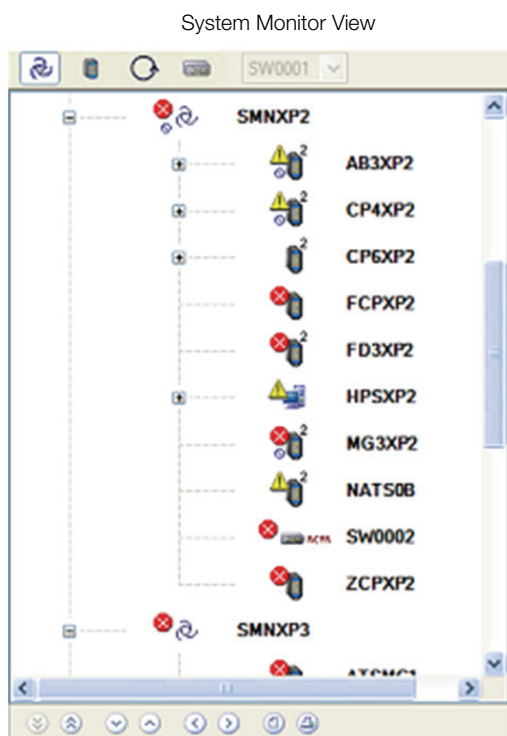


Figure 2. Navigation Pane - System Monitor View and ATS View

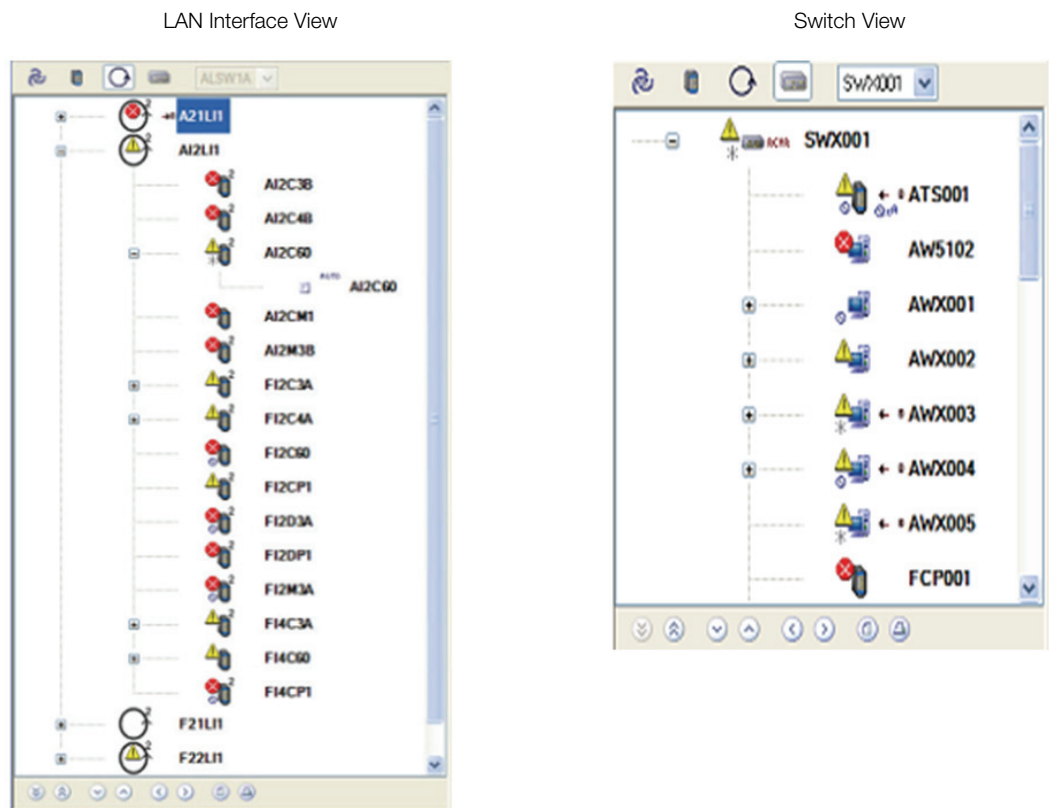


Figure 3. Navigation Pane - LAN Interface (LI) View and Switch View

The Controller hierarchy in the Navigation tree is shown in Figure 4.

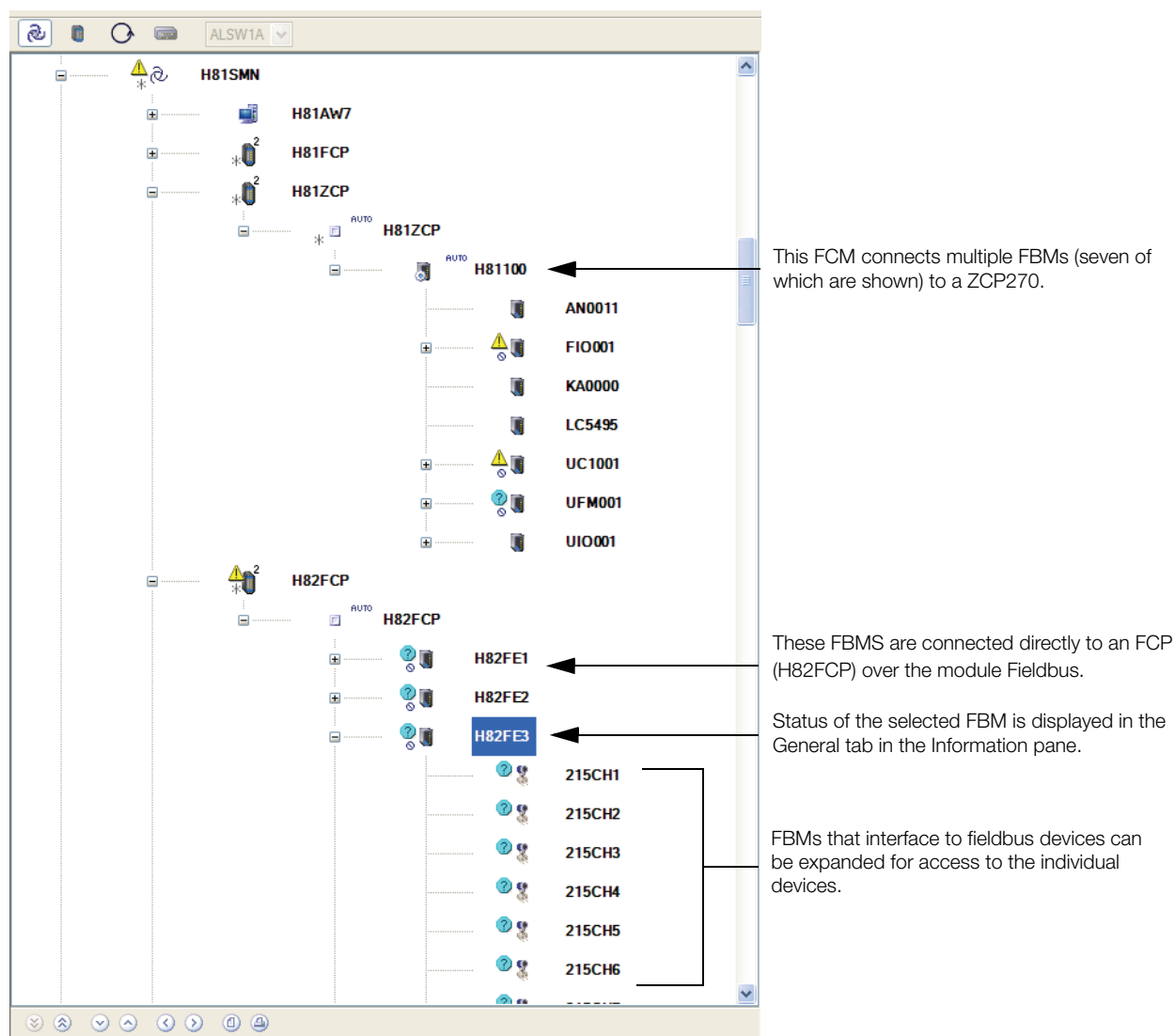


Figure 4. Controller Hierarchy in Navigation Tree

Control stations are depicted in the Navigation pane by the  icon displayed on the second level of the View. When the station is a fault-tolerant control processor, redundant Address Translation Station (ATS) or fault-tolerant LAN Interface module, a 2 is attached to the upper right corner of the icon.

When a ZCP/CP60 controller is used, the Fieldbus Control Module or FCM is depicted in the Navigation pane by the  icon attached to the hosting ZCP270/CP60. The single icon is used to represent both redundant FCM pairs and a single non-redundant module.

Fieldbus Modules or FBMs are depicted in the Navigation pane by the  icon attached either to the Primary ECB (Primary FBM) of a control station or to an FCM. The same icon is used for both redundant and non-redundant FBMs.

Certain FBMs can be expanded in the Navigation pane to show a second level of the attached intelligent field devices, represented by the  icon. These FBMs include modules that support various fieldbus standards such as HART™, PROFIBUS-DP™, and FOUNDATION™ fieldbus. The second-level items can be selected to view device status and equipment information, and to perform equipment change actions.

Field Device System Integrator (FDSI) type FBM modules integrate Tricon™ and Trident™ safety devices using the Triconex System Access

Application (TSAA) protocol. System Manager provides views of the status and information for a Triconex device attached to an FDSI FBM by launching the TRICON Main Chassis Diagnostics Display in FoxView. System Manager also provides status and information on other smart devices interfaced through FBMs including FoxGuard ACM, SCADA RTUs and various third Party PLC subsystems.

The Navigation Tree will enable FOUNDATION fieldbus devices, HART devices and devices attached to the universal FBM247 to be labeled with up to twelve character names.

System Manager considers serial, parallel and USB printers as peripherals. However, the network printers are considered as separate objects on the same hierarchical level as workstations.

Status Indicators

The I/A Series System Manager indicates equipment status by placing symbols next to the related equipment icon. This is used in the Navigation pane and in the Accessories pane’s Search Tab.

See the following table for examples.

Symbol	Example	Condition
		The question mark on a blue background indicates the equipment is off-line or not ready.
		The warning symbol indicates that there is at least one failed peripheral attached to the workstation module.
		The X on a red background indicates that the workstation has failed.
		The question mark on a gray background indicates that the status of the workstation is unknown. There is no status response from the System Monitor.
		The workstation is operating normally when there are no symbols attached to the equipment icon.

INFORMATION PANE

The Information Pane provides detailed information about a single hardware component of the system. Due to the large amounts of both static and dynamic data for some components, the information is grouped in tabs that make it easier to locate key information for the problem at hand. The primary tabs consist of the General Tab containing configuration and equipment information, the communication Counters Tab containing communications counter data and the Connections Tab which depicts the network switch's station connections. Information displays are tailored to the the selected system component.

General Tab

The General Tab view, shown in Figure 5, provides status, configuration details, performance and diagnostic data for the selected equipment. At one glance, users can determine key information on a station or device allowing for quick action if necessary.

FCP700

General

Connections

Counters

Equipment Status

Name	FCP700
Boot Host	AWSM01
SMON	SYSMN1
IP Address	151.128.152.27
Fault Tolerant	Yes
Run Mode	On Line
Alarming State	Enabled
Failed Devices Attached	Yes
Image Update State	Not Updating
Diagnostics State	Not Active

Type	Field Control Processor 270
SMON Host	AWSM01
Switch Connections	2
Fault Tolerant State	Operational
Failed State	Not Failed
Failed Acknowledged State	Acknowledged
Failed Devices Acknowledged	Yes
Download State	Not Downloading

Equipment Information

Reporting State	Report All
Station Address	00006CC00076
Primary Mode	Married Prim
Primary ROM Address	00006C2202D1
Primary Hardware Part Number	P0917YZ
Primary Hardware Revision	0R
Primary Hardware Date	0429
Primary Image Revision	84_D13

Master Timekeeper Reporting	Sync Not Config
Cable State	Both Cables Okay
Shadow Mode	Married Shad
Shadow ROM Address	00006C2202FB
Shadow Hardware Part Number	P0917YZ
Shadow Hardware Revision	0J
Shadow Hardware Date	0429
Shadow Image Revision	84_D13

Switch Connections

 SW001B

 SW001A

Figure 5. Information Pane - General Tab

Counters Tab

The Counters View (Figure 6) contains the network counter categories for the selected station. The counters are organized by communications layer and allow the user to analyze overall communications activity for a station. In addition, this display supports

user actions on counters such as read, reset and add to Watch List.

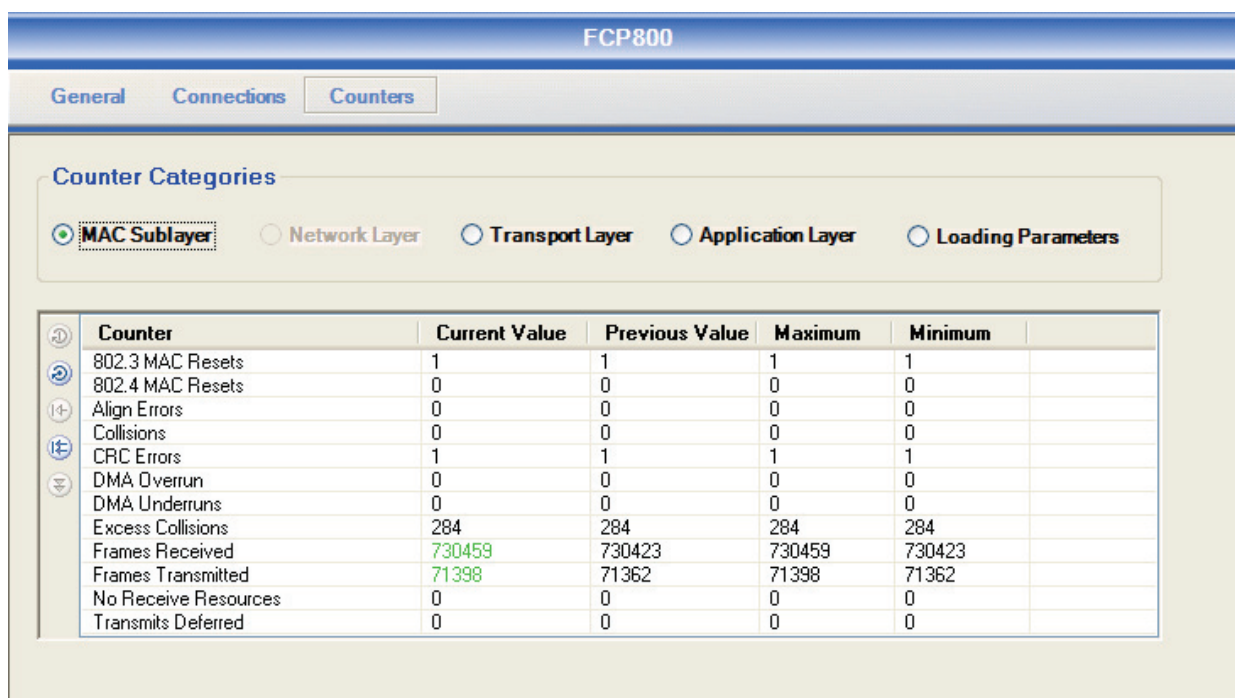


Figure 6. Information Pane - Counters Tab

ACCESSORIES PANE

The Accessories Pane can be accessed by the user to quickly display specific system information that assists in identifying the current system status. Types of information include:

- ▶ System Equipment Messages/Events
- ▶ System Equipment Alarms
- ▶ Equipment with Alarms Inhibited
- ▶ Search for specific type of equipment
- ▶ Watch List to group selected counters for monitoring and review

User actions are also available to acknowledge alarms, inhibit, refresh message panes and print or save to a file.

The Alarms tab in the Accessories Pane is shown in Figure 7.

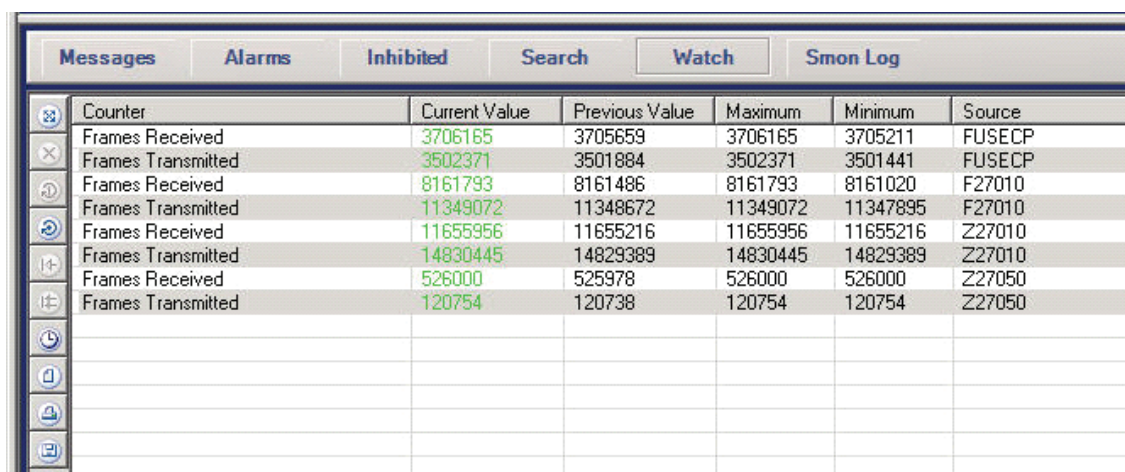
Messages	Alarms	Inhibited	Search	Watch	Smon Log
*	Index	Date/Time	Source	Name	Message
	1	06/28/2006 16:36:49	SYSMN2	AWSM05	Station off-line
	2	06/29/2006 15:10:42	SYSMN1	AWSM03	Warning condition exists
	3	06/29/2006 15:10:42	SYSMN1	AWSM03 PRI P	Device off-line
	4	06/29/2006 15:10:42	SYSMN1	AWSM03 AKP 1	Device off-line
	5	06/29/2006 15:10:47	SYSMN1	FCP701	Cable A failure
	6	06/29/2006 15:10:25	SYSMN1	FCP702	Station off-line
	7	06/29/2006 15:10:47	SYSMN1	SW001A	Warning condition exists
	8	06/29/2006 15:10:48	SYSMN1	SW001A P05	Device off-line
	9	06/29/2006 15:10:48	SYSMN1	SW001A P06	Device off-line
	10	06/29/2006 15:10:48	SYSMN1	SW001A P07	Device off-line
	11	06/29/2006 15:10:48	SYSMN1	SW001A P12	Device off-line
	12	06/29/2006 15:10:48	SYSMN1	SW001A P17	Device off-line

Figure 7. Accessories Pane - Alarms Page

Watch Tab

The Watch tab in the Accessories Pane allows users to monitor up to 25 counters for different types of equipment. The counters are selected from the Counters tabs for the equipment to be monitored.

The Watch tab is shown in Figure 8.



Counter	Current Value	Previous Value	Maximum	Minimum	Source
Frames Received	3706165	3705659	3706165	3705211	FUSECP
Frames Transmitted	3502371	3501884	3502371	3501441	FUSECP
Frames Received	8161793	8161486	8161793	8161020	F27010
Frames Transmitted	11349072	11348672	11349072	11347895	F27010
Frames Received	11655956	11655216	11655956	11655216	Z27010
Frames Transmitted	14830445	14829389	14830445	14829389	Z27010
Frames Received	526000	525978	526000	526000	Z27050
Frames Transmitted	120754	120738	120754	120754	Z27050

Figure 8. Accessories Pane - Watch Tab

ON-LINE HELP

An on-line help feature is available which explains all functionality within the I/A Series System Manager in detail. The help is context-sensitive, depending on what section of the System Manager is currently selected.

In addition, a “tool tips” feature appears when the cursor hovers over a selection field.

A Legend key is provided to identify the equipment icons and the status symbols, as shown in Figure 9.

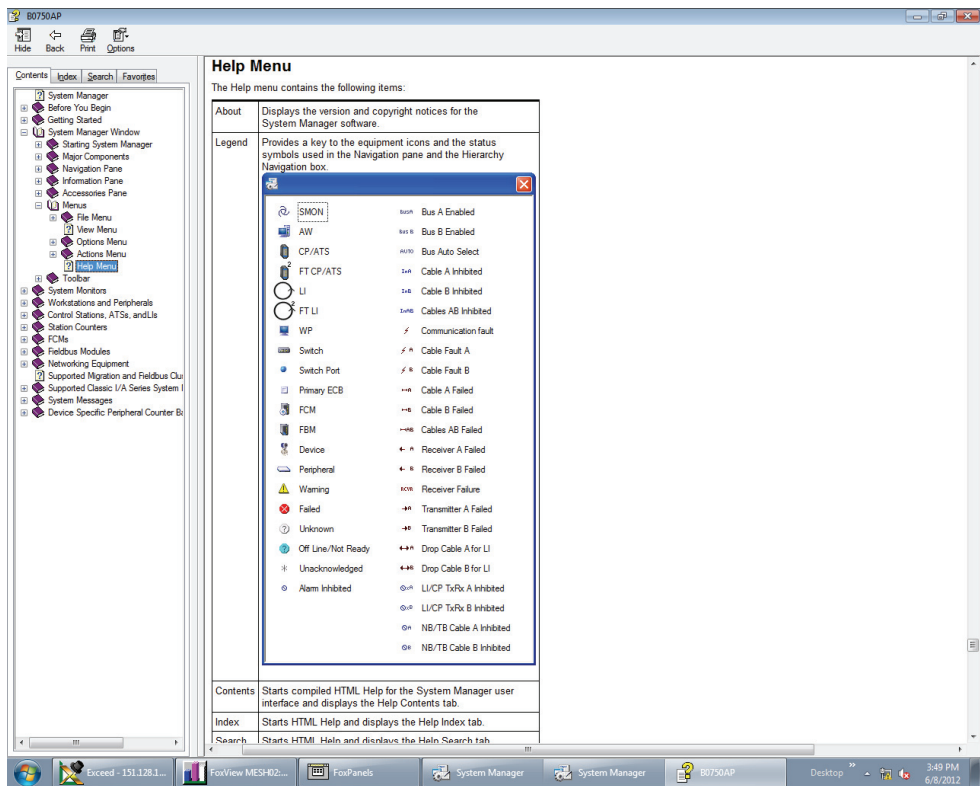


Figure 9. On-Line Help - Legend Page

SPECIFICATIONS

The I/A Series System Manager runs on the following platforms as part of I/A Series V8.8

- ▶ Windows Server® 2008
- ▶ Windows 7®

The I/A Series System Manager runs on the following platforms as part of I/A Series V8.7 software:

- ▶ Windows® Server 2003
- ▶ Windows® XP