

AG Communication Systems

A Subsidiary of

Lucent Technologies

Bell Labs Innovations



SuperLine™ Access System

Troubleshooting

Release 3.0 (R3.0)



SD-100300-TSGP

363-225-103

Issue 2

July 1999

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Notice

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Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Ordering Information

The AG Communication Systems order number for this IP is SD-100300-TSGP.

The Lucent Technologies order number for this IP is 363-225-103.

Support Telephone Numbers

Information Product Support Number

Refer to **How to comment** in the About this information product section of this IP.

Technical Support Telephone Number

Refer to **Technical support** in the About this information product section of this IP.



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About this information product

Purpose	The <i>SuperLine™ Access System Troubleshooting</i> information product describes how to troubleshoot error conditions that may be encountered in a <i>SuperLine Access System</i> .
Reason for reissue	This product is reissued to reflect new DS0 derived line mapping values and the addition of a figure to the DS0 channel assignments for EM telephony configurations appendix.
Intended audience	This document contains information for Telephone company (Telco) personnel who are responsible for administering a <i>SuperLine Access System</i> , derived or baseband lines supported by a <i>SuperLine Access System</i> , and <i>SuperLine Integrated Access Devices</i> at the customer premises.

Assumptions made by this information product

This information product makes the following assumptions about the *SuperLine* environment:

- The *SuperLine* Access Shelf has been turned up by following the guidelines in the *SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance* information product.
- The DS1 spans have been installed according to the appropriate guidelines.
- *SuperLine* Integrated Access Devices have been installed according to the instructions in the *SuperLine Integrated Access Device Installation Instructions*.
- The *SuperLine* Element Manager has been installed correctly and is working.
- The *SuperLine* Access Shelf and its associated switch has been turned up and is providing service to customers.

This information product does not provide information on the installation or initial setup of a *SuperLine* Access System. For such information, refer to the *SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance* information product.

***SuperLine* Element Manager versions**

With this release of the *SuperLine* Access System, an additional version of the *SuperLine* Element Manager called the *SuperLine* Multi-Element Manager is available. The information provided by both the *SuperLine* Element Manager and the *SuperLine* Multi-Element Manager is identical, however. This document uses the generic name, *SuperLine* Element Manager, to refer to both versions.

Adapter versus *SuperLine* Integrated Access Device

In order to maintain consistency with the user interface of the *SuperLine* Element Manager, this document uses the term *adapter* to refer to the *SuperLine* Integrated Access Device.

Systems supported

The information in this IP is valid for Release 3.0 (R3.0) of the *SuperLine* Access System.

Safety labels

Admonishments (DANGER, WARNING, and CAUTION statements) tell customers that the actions they are about to perform may harm them or the equipment. Following are three types of admonishments in the order of priority.



DANGER Electric shock

Danger indicates the presence of a hazard that will cause death or severe personal injury if the hazard is not avoided.



WARNING

Warning indicates the presence of a hazard that can cause death or severe personal injury if the hazard is not avoided.



CAUTION

Caution indicates the presence of a hazard that will or can cause minor personal injury or property damage if the hazard is not avoided.

Electrostatic discharge (ESD)

Considerations to avoid ESD damage.



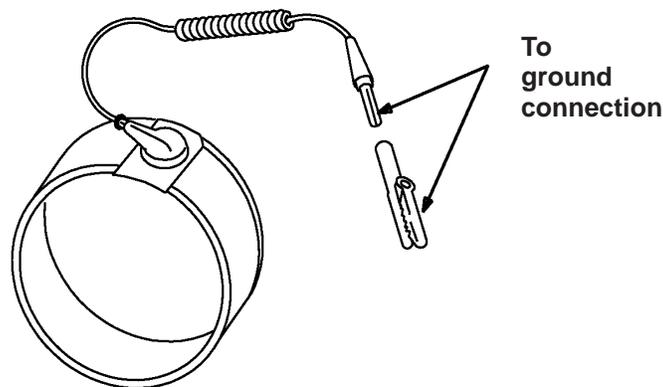
WARNING

Industry experience has shown that all integrated circuit packs can be damaged by static electricity that builds up on work surfaces and personnel. The static charges are produced by various charging effects of movement and contact with other objects. Dry air allows greater static contact charges to accumulate. Higher potentials are measured in areas with low relative humidity, but potentials high enough to cause damage can occur anywhere.

Observe the following list of precautions when handling circuit packs to prevent damage by electrostatic discharge.

- Assume all circuit packs contain solid state electronic components that can be damaged by ESD.
- When handling circuit packs (storing, inserting, removing, etc.) or when working on the backplane, always wear a grounded wrist strap or wear a heel strap and stand on a grounded, static-dissipating floor mat. If a static-dissipating floor mat is used, be sure that it is clean to ensure a good discharge path.
- Handle all circuit packs by the faceplate or latch and by the top and bottom outermost edges. Never touch the components, conductors, or connector pins.
- Observe warning labels on bags and cartons. Whenever possible, do not remove circuit packs from antistatic packaging until ready to insert them into slots.
- Open, if possible, all circuit packs at a static-safe work position, using properly grounded wrist straps and static-dissipating table mats. If a static-dissipating table mat is used be sure that it is clean to ensure a good discharge path.
- Always store and transport circuit packs in static-safe packaging. Shielding is not required unless specified.
- Keep all static-generating materials such as food wrappers, plastics, and foam packaging away from all circuit packs. On removal from the bay, immediately put circuit packs into static-safe packages.
- Whenever possible, maintain relative humidity above 20 percent.

To reduce the possibility of ESD damage, shelves are equipped with grounding jacks to enable personnel to ground themselves using wrist straps with a minimum resistance of 250 k Ω while handling circuit packs or working on a shelf/shelves. Connect the wrist straps to the jacks. When grounding jacks are not available, use an alligator clip adapter to connect to the bay frame ground.



How to use this information product

This document uses a structured writing format to help you find information easily and quickly. Major topics appear at the top of the page, with subtopics labeled in bold print in the left column. The text or figure in the right column describes the subtopic.

The document also contains special navigation aids such as:

- Typographical conventions
- Symbols to alert you to safety precautions and important information
- Special conventions to indicate tables and figures

Important: This guide is published as both an electronic document in HTML format and as a paper document. To accommodate both media, this document uses several navigation aids that may not be familiar to you. For example, in typical manuals, a List of Figures or List of Tables helps guide you to graphics or summary information. These traditionally provided Lists do NOT appear in this guide. Instead, the Index entries Tables, Figures, and Procedures show where these items are located.

Conventions used

The following typographical conventions help you navigate through the document.

Convention	Description
Bold print, first letter capitalized	Represents a reference to a topic, a menu option you must select, or a button you must select.
<i>Italicized Print</i>	Indicates the title of a published document.
ALL CAPITAL LETTERS	Emphasizes the text.
	□ Identifies the end of a topic.
<u>Underlined Bold Print</u>	Indicates text that is a Hypertext Markup Language (HTML) hyperlink.

Related documentation

The complete *SuperLine* Access System documentation set consists of the following information products:

Document Name	Vendor
<i>SuperLine™ Access System Applications and Engineering, Release 3.0, SD-100300-SAEP</i>	AG Communication Systems
<i>SuperLine Access System Applications and Engineering, Release 3.0, 363-225-101</i>	Lucent Technologies
<i>SuperLine Access System Element Manager User's Guide, Release 3.0, SD-110300-EMUP</i>	AG Communication Systems
<i>SuperLine Access System Element Manager User's Guide, Release 3.0, 363-225-104</i>	Lucent Technologies

<i>SuperLine Access System Release Notes, Release 3.0, SD-100300-SRNP</i>	AG Communication Systems
<i>SuperLine Access System, Release Notes, Release 3.0, 363-225-102</i>	Lucent Technologies
<i>SuperLine Access System SuperLine Access Shelf Installation, Operations, and Maintenance, Release 3.0, SD-100300-IOMP</i>	AG Communication Systems
<i>SuperLine Access System, SuperLine Access Shelf Installation, Operations, and Maintenance, Release 3.0, 363-225-105</i>	Lucent Technologies
<i>SuperLine Access System Troubleshooting, Release 3.0, SD-100300-TSGP</i>	AG Communication Systems
<i>SuperLine Access System, Troubleshooting, Release 3.0, 363-225-103</i>	Lucent Technologies
<i>SuperLine Integrated Access Device Model 6512-A2 Installation Instructions</i>	Paradyne Corporation (This document is provided with each <i>SuperLine</i> IAD.)
<i>Model 6035 Phone Filter Installation Instructions</i>	Paradyne Corporation (This document is provided with each <i>SuperLine</i> IAD, and is included in the CPE filter package.)

Related training

The following training provides additional information about the *SuperLine* Access System.

AG Communication Systems

For information on related training, contact your AG Communication Systems sales representative.

Lucent Technologies

The National Product Training Center in Altamonte Springs, Florida, provides management courses for planning, engineering, and ordering as well as training for telecommunications technicians in installation, operations, and maintenance. Suitcasing of these courses may be available. Consult your Local Lucent Technologies Account Executive for more information or reservations. Enroll in a course using one of the following methods.

- 1-888-LUCENT8 (1-888-582-3688). Call the training coordinator for your company to get information on these and other training courses available, on schedules, fees, and registration. If your company does not have an assigned training coordinator, call this toll-free number [1-888-LUCENT8 (1-888-582-3688)] Monday through Friday, 7:30 a.m. to 5:30 p.m. EST. Use this number to order a product training catalog, get more information about a course, find out about new courses, or to register for a class. However, in Canada, please call 1-800-221-1647.

When you call 1-888-LUCENT8, select Option 2 (press 2 one time on a touchtone phone) for Lucent Technologies product training.

- COMCATS. You may also use a computer and modem to log into the online catalog, computerized catalog system (COMCATS). Set your terminal options to the following values.
 - 300/1200/2400 baud rate
 - Full duplex
 - Space parity
 - 7 data bits
 - 1 stop bit

dial:	1-800-662-0662 or 614-764-5566
login:	comcats
password:	at&tcat

If you have trouble accessing COMCATS, call 1-888-LUCENT8 and ask to speak with the COMCATS Administrator.

Technical support **AG Communication Systems**

AG Communication Systems provides customer assistance for the *SuperLine* Access System including, but not limited to, troubleshooting assistance, technical consultation, operational problem consultation, procedural advice, and emergency recovery assistance from a qualified system support professional.

If you have technical information questions, contact the AG Communication Systems Customer Support Center (CSC) at 1-888-888-AGCS (1-888-888-2427) or by electronic mail at superlinehelp@agcs.com.

If you need help with installing or operating *SuperLine* EM or Multi-EM, contact the CSC.

If you need help to resolve problems with *SuperLine* IADs, refer to the information contained in this manual or the *SuperLine Integrated Access Device Model 6512-A2 Installation Instructions* document provided by Paradyne Corporation, a partner in *SuperLine* development.

For more information about the *SuperLine* Access System, contact your AG Communication Systems technical sales staff or visit our Web site at www.agcs.com (from outside the United States: www.agcs.com.us).

Lucent Technologies Regional Technical Assistance Center (RTAC)

Lucent Technologies provides customer assistance for the *SuperLine* Access System including, but not limited to, troubleshooting assistance, technical consultation, operational problem consultation, procedural advice, and emergency recovery assistance from a qualified system support professional from the Regional Technical Assistance Center (RTAC).

- 1-800-225-RTAC (1-800-225-7822). Service is provided from the RTAC at 1-800-225-RTAC (1-800-225-7822). This telephone number is monitored 24 hours a day, 7 days a week. During regular business hours, your call will be answered by your local regional RTAC. Outside normal business hours, all calls will be answered at a centralized technical assistance center where service-affecting problems will be dispatched immediately to your local RTAC. All other problems will be referred to your local RTAC on the next regular business day.

How to comment **AG Communication Systems**

To provide feedback or comments, send electronic mail to the Customer Support Center at superlinehelp@agcs.com, or contact your sales representative.

How to order AG Communication Systems

To order copies of documents, send or call in an order.

Mail Order	Telephone Order (Monday through Friday)
AG Communication Systems ATTN: Order Fulfillment P.O. Box 52179 Phoenix, AZ 85027	Within USA: 1-623-581-4263 7:30 a.m. to 4:00 p.m. MST FAX: 1-623-582-7840

Lucent Technologies

To order copies of documents and/or to request placement on the standing order list, send or call in an order.

Customer	Mail Order	Telephone Order (Monday through Friday)
Commercial Customers a.	Lucent Technologies Customer Information Center ATTN: Order Entry Center 2855 N. Franklin Road P.O. Box 19901 Indianapolis, IN 46219	Within USA: 1-888-LUCENT8 or 1-888-582-3688 7:30 a.m. to 6:30 p.m. EST From Canada: 1-800-255-1242 Worldwide: 1-317-322-6416 FAX: 1-317-322-6699
RBOC/BOC	Process through your Company documentation coordinator.	
a. For commercial customers, a check, money order, purchase order number, or charge card number is required with all orders. Make checks payable to Lucent Technologies. Lucent Technologies entities should use Form IND 1-80.80 FA, available through the Customer Information Center.		





1 Beginning the troubleshooting process

Overview

Introduction This chapter will lead you through the process of troubleshooting a malfunctioning AG Communication Systems *SuperLine*™ Access System.

In this chapter This chapter covers the following topics.

Topic	Page
Clearing <i>SuperLine</i> Access System alarms	1-2
Narrowing major alarm conditions	1-6
Narrowing minor alarm conditions	1-8
Narrowing customer-reported problems	1-11



Clearing *SuperLine* Access System alarms

Overview When you are confronted with a *SuperLine* Access System alarm condition, follow the steps listed in the following table to route yourself to the appropriate solution.



WARNING

Electric shock and equipment damage hazard. To avoid personal injury or damage to the equipment, before you remove a FETH, VDS1, or POWR card from the SuperLine Access Shelf, ensure that the power switch on the POWR card is in the off position. Follow all precautions for working with live power, such as using insulating blankets or tools.



CAUTION

VDS1, FETH and POWR cards are NOT hot-swappable. Replacing or reseating a VDS1, FETH or POWR card requires you to shut down the SuperLine Access Shelf which, in turn, will interrupt service for up to 96 subscribers.

Step	Condition or action						
1	<p>Have you received a call from a subscriber reporting problems with <i>SuperLine</i> service?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>go to Narrowing subscriber-reported problems, on page 1-11</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to Narrowing subscriber-reported problems , on page 1-11	NO	continue to the next step.
IF ...	THEN ...						
YES	go to Narrowing subscriber-reported problems , on page 1-11						
NO	continue to the next step.						
2	Gather your copy of the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual and proceed to the <i>SuperLine</i> Access Shelf.						

Step	Condition or action						
3	<p>Are no indicator light emitting diodes (LEDs) on the <i>SuperLine</i> Access Shelf lighted at all or is the fail LED on the <i>SuperLine</i> Access Shelf POWR card lighted?</p> <table border="1" data-bbox="716 354 1490 525"> <thead> <tr> <th data-bbox="716 354 911 401">IF ...</th> <th data-bbox="911 354 1490 401">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="716 401 911 478">YES</td> <td data-bbox="911 401 1490 478">go to topic No SuperLine Access Shelf power or POWR card fail LED lighted, on page 2-2</td> </tr> <tr> <td data-bbox="716 478 911 525">NO</td> <td data-bbox="911 478 1490 525">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic No SuperLine Access Shelf power or POWR card fail LED lighted , on page 2-2	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic No SuperLine Access Shelf power or POWR card fail LED lighted , on page 2-2						
NO	continue to the next step.						
4	<p>Are both the major and the minor alarm LEDs on the <i>SuperLine</i> Access Shelf lighted simultaneously?</p> <table border="1" data-bbox="716 646 1490 816"> <thead> <tr> <th data-bbox="716 646 911 693">IF ...</th> <th data-bbox="911 646 1490 693">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="716 693 911 770">YES</td> <td data-bbox="911 693 1490 770">go to topic Major and minor alarm LEDs lighted simultaneously, on page 2-5.</td> </tr> <tr> <td data-bbox="716 770 911 816">NO</td> <td data-bbox="911 770 1490 816">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic Major and minor alarm LEDs lighted simultaneously , on page 2-5.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic Major and minor alarm LEDs lighted simultaneously , on page 2-5.						
NO	continue to the next step.						
5	<p>Is the fail LED on the VDS1 card lighted?</p> <table border="1" data-bbox="716 905 1490 1041"> <thead> <tr> <th data-bbox="716 905 911 951">IF ...</th> <th data-bbox="911 905 1490 951">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="716 951 911 997">YES</td> <td data-bbox="911 951 1490 997">continue to the next step.</td> </tr> <tr> <td data-bbox="716 997 911 1041">NO</td> <td data-bbox="911 997 1490 1041">go to step 13.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	continue to the next step.	NO	go to step 13.
IF ...	THEN ...						
YES	continue to the next step.						
NO	go to step 13.						
6	Turn the <i>SuperLine</i> Access Shelf power off.						
7	<p>Remove and reseat the VDS1 and the FETH cards.</p> <p>Important: A FETH card problem can sometimes cause problems with a VDS1 card and vice versa. Therefore it is expedient to reseat both cards whenever a problem with either one is suspected.</p>						
8	Restore power to the <i>SuperLine</i> Access Shelf.						
9	Wait up to 5 minutes for the <i>SuperLine</i> Access Shelf to complete its initialization process.						
10	<p>Is the VDS1 fail LED extinguished?</p> <table border="1" data-bbox="716 1455 1490 1591"> <thead> <tr> <th data-bbox="716 1455 911 1501">IF ...</th> <th data-bbox="911 1455 1490 1501">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="716 1501 911 1547">YES</td> <td data-bbox="911 1501 1490 1547">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="716 1547 911 1591">NO</td> <td data-bbox="911 1547 1490 1591">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
11	Remove and replace the VDS1 card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.						

Step	Condition or action						
12	<p>Is the VDS1 fail LED extinguished?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>go to step 14.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	go to step 14.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	go to step 14.						
13	<p>Is the fail LED on the FETH card lighted?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>continue to the next step.</td> </tr> <tr> <td>NO</td> <td>go to step 21.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	continue to the next step.	NO	go to step 21.
IF ...	THEN ...						
YES	continue to the next step.						
NO	go to step 21.						
14	Turn the <i>SuperLine</i> Access Shelf power off.						
15	<p>Remove and reseat the VDS1 and the FETH cards.</p> <p>Important: A FETH card problem can sometimes cause problems with a VDS1 card and vice versa. Therefore it is expedient to reseat both cards whenever a problem with either one is suspected.</p>						
16	Restore power to the <i>SuperLine</i> Access Shelf.						
17	Wait up to 5 minutes for the <i>SuperLine</i> Access Shelf to complete its initialization process.						
18	<p>Is the <i>SuperLine</i> Access Shelf restored to service?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
19	Remove and replace the FETH card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.						
20	<p>Is the <i>SuperLine</i> Access Shelf restored to service?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
21	Start an instance of the <i>SuperLine</i> Element Manager, open a session to the platform displaying the alarm and continue to the next step.						

Step	Condition or action						
22	<p data-bbox="696 254 1406 317">Is the status tab window of the <i>SuperLine</i> Element Manager displaying a major alarm?</p> <table border="1" data-bbox="716 323 1490 491"> <thead> <tr> <th data-bbox="716 323 911 365">IF ...</th> <th data-bbox="911 323 1490 365">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="716 365 911 443">YES</td> <td data-bbox="911 365 1490 443">go to topic Narrowing major alarm conditions, on page 1-6.</td> </tr> <tr> <td data-bbox="716 443 911 491">NO</td> <td data-bbox="911 443 1490 491">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic Narrowing major alarm conditions , on page 1-6.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic Narrowing major alarm conditions , on page 1-6.						
NO	continue to the next step.						
23	<p data-bbox="696 543 1406 606">Is the status tab window of the <i>SuperLine</i> Element Manager displaying a minor alarm?</p> <table border="1" data-bbox="716 613 1490 781"> <thead> <tr> <th data-bbox="716 613 911 655">IF ...</th> <th data-bbox="911 613 1490 655">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="716 655 911 732">YES</td> <td data-bbox="911 655 1490 732">go to topic Narrowing minor alarm conditions, on page 1-8.</td> </tr> <tr> <td data-bbox="716 732 911 781">NO</td> <td data-bbox="911 732 1490 781">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic Narrowing minor alarm conditions , on page 1-8.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic Narrowing minor alarm conditions , on page 1-8.						
NO	continue to the next step.						
24	<p data-bbox="696 833 1455 961">If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com.</p>						



Narrowing major alarm conditions

Overview In order to narrow the scope of a *SuperLine* Access Shelf major alarm condition, refer to the status tab window of the *SuperLine* Element Manager and note any other alarms in addition to the major alarm. Next, refer to the following table, locate the additional alarm indication and follow the indicated troubleshooting procedure.

Important: In the context of this manual, a major alarm condition refers not only to a situation in which the major alarm LED is lighted at the *SuperLine* Element Manager or on a *SuperLine* Access Shelf, but also any condition which may cause a loss of service for a subscriber.

Step	Condition or action						
1	<p>Are one or more DS1 L LEDs red?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>go to topic One or more DS1 L LEDs red, on page 2-7.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic One or more DS1 L LEDs red , on page 2-7.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic One or more DS1 L LEDs red , on page 2-7.						
NO	continue to the next step.						
2	<p>Are both the EOC-Pri and EOC-Sec icons red?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>go to topic EOC-Pri and EOC-Sec icons red, on page 2-10.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic EOC-Pri and EOC-Sec icons red , on page 2-10.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic EOC-Pri and EOC-Sec icons red , on page 2-10.						
NO	continue to the next step.						
3	<p>Are both the TMC-Pri and TMC-Sec icons red?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>go to topic TMC-Pri and TMC-Sec icons red, on page 2-12.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic TMC-Pri and TMC-Sec icons red , on page 2-12.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic TMC-Pri and TMC-Sec icons red , on page 2-12.						
NO	continue to the next step.						
4	<p>Is the Temp icon red?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>go to topic Temp icon red, on page 2-14.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic Temp icon red , on page 2-14.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic Temp icon red , on page 2-14.						
NO	continue to the next step.						

Step	Condition or action						
5	<p data-bbox="699 254 971 285">Is the Battery icon red?</p> <table border="1" data-bbox="716 291 1490 428"> <thead> <tr> <th data-bbox="716 291 911 338">IF ...</th> <th data-bbox="911 291 1490 338">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="716 338 911 384">YES</td> <td data-bbox="911 338 1490 384">go to topic Battery icon red, on page 2-16.</td> </tr> <tr> <td data-bbox="716 384 911 428">NO</td> <td data-bbox="911 384 1490 428">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic Battery icon red , on page 2-16.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic Battery icon red , on page 2-16.						
NO	continue to the next step.						
6	<p data-bbox="699 485 943 516">Is the Fuse icon red?</p> <table border="1" data-bbox="716 522 1490 659"> <thead> <tr> <th data-bbox="716 522 911 569">IF ...</th> <th data-bbox="911 522 1490 569">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="716 569 911 615">YES</td> <td data-bbox="911 569 1490 615">go to topic Fuse icon red, on page 2-17.</td> </tr> <tr> <td data-bbox="716 615 911 659">NO</td> <td data-bbox="911 615 1490 659">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic Fuse icon red , on page 2-17.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic Fuse icon red , on page 2-17.						
NO	continue to the next step.						
7	<p data-bbox="699 716 1195 747">Are either the Misc 1 or Misc 2 icons red?</p> <table border="1" data-bbox="716 753 1490 911"> <thead> <tr> <th data-bbox="716 753 911 800">IF ...</th> <th data-bbox="911 753 1490 800">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="716 800 911 873">YES</td> <td data-bbox="911 800 1490 873">go to topic Misc 1 or Misc 2 icons red, on page 2-18.</td> </tr> <tr> <td data-bbox="716 873 911 911">NO</td> <td data-bbox="911 873 1490 911">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic Misc 1 or Misc 2 icons red , on page 2-18.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic Misc 1 or Misc 2 icons red , on page 2-18.						
NO	continue to the next step.						
8	<p data-bbox="699 968 987 999">Is the Pwr Maj icon red?</p> <table border="1" data-bbox="716 1005 1490 1142"> <thead> <tr> <th data-bbox="716 1005 911 1052">IF ...</th> <th data-bbox="911 1005 1490 1052">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="716 1052 911 1098">YES</td> <td data-bbox="911 1052 1490 1098">go to topic Pwr Maj icon red, on page 2-19.</td> </tr> <tr> <td data-bbox="716 1098 911 1142">NO</td> <td data-bbox="911 1098 1490 1142">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic Pwr Maj icon red , on page 2-19.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic Pwr Maj icon red , on page 2-19.						
NO	continue to the next step.						
9	<p data-bbox="699 1199 1455 1325">If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com.</p>						

□

Narrowing minor alarm conditions

Overview In order to narrow the scope of a *SuperLine* Access Shelf minor alarm condition, refer to the status tab window of the *SuperLine* Element Manager and note any other alarms in addition to the minor alarm. Next, refer to the table below, locate the additional alarm indication and follow the indicated troubleshooting procedure.

Important: In the context of this manual, a minor alarm condition refers not only to a situation in which the minor alarm LED is lighted at the *SuperLine* Element Manager or on the *SuperLine* Access Shelf, but also any condition which, while not affecting customer service, affects the general reliability of the *SuperLine* Access System.

Step	Condition or action						
1	<p>Is the Power icon yellow?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>go to topic Power card icon yellow, on page 3-2.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic Power card icon yellow , on page 3-2.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic Power card icon yellow , on page 3-2.						
NO	continue to the next step.						
2	<p>Is the VDS1 icon yellow?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>go to topic VDS1 icon yellow, on page 3-4.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic VDS1 icon yellow , on page 3-4.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic VDS1 icon yellow , on page 3-4.						
NO	continue to the next step.						
3	<p>Are one or more DS1 R LEDs yellow?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>go to topic One or more DS1 R LEDs yellow, on page 3-6.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic One or more DS1 R LEDs yellow , on page 3-6.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic One or more DS1 R LEDs yellow , on page 3-6.						
NO	continue to the next step.						
4	<p>Is the DS1 L LED red and the DS1 R LED yellow?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>go to topic DS1 L LED red; DS1 R LED yellow, on page 3-8.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic DS1 L LED red; DS1 R LED yellow , on page 3-8.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic DS1 L LED red; DS1 R LED yellow , on page 3-8.						
NO	continue to the next step.						

Step	Condition or action						
5	<p>Is the FETH icon yellow?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>go to topic FETH icon yellow, on page 3-9.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic FETH icon yellow , on page 3-9.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic FETH icon yellow , on page 3-9.						
NO	continue to the next step.						
6	<p>Are all or multiple QV8 icons red?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>go to topic All or multiple QV8 icons red, on page 3-11.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic All or multiple QV8 icons red , on page 3-11.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic All or multiple QV8 icons red , on page 3-11.						
NO	continue to the next step.						
7	<p>Is a single QV8 icon red?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>go to topic Single QV8 icon red, on page 3-14.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic Single QV8 icon red , on page 3-14.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic Single QV8 icon red , on page 3-14.						
NO	continue to the next step.						
8	<p>Is either the EOC-Pri or the EOC-Sec icon red?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>go to topic EOC-Pri or EOC-Sec icon red, on page 3-16.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic EOC-Pri or EOC-Sec icon red , on page 3-16.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic EOC-Pri or EOC-Sec icon red , on page 3-16.						
NO	continue to the next step.						
9	<p>Is either the TMC-Pri or the TMC-Sec icon red?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>go to topic TMC-Pri or TMC-Sec icon red, on page 3-18.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic TMC-Pri or TMC-Sec icon red , on page 3-18.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic TMC-Pri or TMC-Sec icon red , on page 3-18.						
NO	continue to the next step.						

Step	Condition or action						
10	Is the Door alarm icon red? <table border="1" data-bbox="621 296 1395 464"> <thead> <tr> <th data-bbox="621 296 813 338">IF ...</th> <th data-bbox="813 296 1395 338">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="621 338 813 415">YES</td> <td data-bbox="813 338 1395 415">go to topic Door alarm icon red, on page 3-20.</td> </tr> <tr> <td data-bbox="621 415 813 464">NO</td> <td data-bbox="813 415 1395 464">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic Door alarm icon red , on page 3-20.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic Door alarm icon red , on page 3-20.						
NO	continue to the next step.						
11	Is the Pwr Min icon red? <table border="1" data-bbox="621 558 1395 695"> <thead> <tr> <th data-bbox="621 558 813 600">IF ...</th> <th data-bbox="813 558 1395 600">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="621 600 813 642">YES</td> <td data-bbox="813 600 1395 642">go to topic Pwr Min icon red, on page 3-23.</td> </tr> <tr> <td data-bbox="621 642 813 695">NO</td> <td data-bbox="813 642 1395 695">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic Pwr Min icon red , on page 3-23.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic Pwr Min icon red , on page 3-23.						
NO	continue to the next step.						
12	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						

□

Narrowing customer-reported problems

Overview In order to narrow the scope of a subscriber-reported adapter problem, gather diagnostic information from the subscriber related to the state of the *SuperLine* Integrated Access Device (IAD) and derived line service. Next, refer to the table below, locate the additional alarm indication, and follow the indicated troubleshooting procedure.

Important: In order to facilitate your diagnosis, you may want to attach a spare *SuperLine* Integrated Access Device to the subscriber's baseband phone line and note any problem indications you see before continuing.

Step	Condition or action	
1	Is the <i>SuperLine</i> IAD PWR indicator lighted?	
	IF ...	THEN ...
	YES	continue to the next step.
	NO	go to topic IAD PWR indicator not lighted , on page 4-3.
2	Are all indicators on the <i>SuperLine</i> IAD lighted?	
	IF ...	THEN ...
	YES	go to topic All IAD indicators remain lighted , on page 4-4.
	NO	continue to the next step.
3	Are the ALM and TST indicators on the <i>SuperLine</i> IAD lighted?	
	IF ...	THEN ...
	YES	go to topic IAD ALM and TST indicators lighted , on page 4-5.
	NO	continue to the next step.
4	Is the ALM indicator on the <i>SuperLine</i> IAD lighted?	
	IF ...	THEN ...
	YES	go to topic IAD ALM indicator remains lighted , on page 4-6.
	NO	continue to the next step.

Step	Condition or action						
5	<p>Does the TST indicator on the <i>SuperLine</i> IAD blink or remain lighted?</p> <table border="1" data-bbox="623 323 1396 491"> <thead> <tr> <th data-bbox="623 323 815 365">IF ...</th> <th data-bbox="815 323 1396 365">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="623 365 815 443">YES</td> <td data-bbox="815 365 1396 443">go to topic IAD TST indicator blinks or remains lighted, on page 4-7.</td> </tr> <tr> <td data-bbox="623 443 815 491">NO</td> <td data-bbox="815 443 1396 491">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic IAD TST indicator blinks or remains lighted , on page 4-7.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic IAD TST indicator blinks or remains lighted , on page 4-7.						
NO	continue to the next step.						
6	<p>Is the LINE indicator on the <i>SuperLine</i> IAD lighted?</p> <table border="1" data-bbox="623 581 1396 749"> <thead> <tr> <th data-bbox="623 581 815 623">IF ...</th> <th data-bbox="815 581 1396 623">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="623 623 815 672">YES</td> <td data-bbox="815 623 1396 672">continue to the next step.</td> </tr> <tr> <td data-bbox="623 672 815 749">NO</td> <td data-bbox="815 672 1396 749">go to topic IAD LINE indicator not lighted, on page 4-8.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	continue to the next step.	NO	go to topic IAD LINE indicator not lighted , on page 4-8.
IF ...	THEN ...						
YES	continue to the next step.						
NO	go to topic IAD LINE indicator not lighted , on page 4-8.						
7	<p>Is the LINE indicator lighted on the <i>SuperLine</i> IAD, but the subscriber reports that there are no derived lines?</p> <table border="1" data-bbox="623 871 1396 1039"> <thead> <tr> <th data-bbox="623 871 815 913">IF ...</th> <th data-bbox="815 871 1396 913">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="623 913 815 991">YES</td> <td data-bbox="815 913 1396 991">go to topic IAD LINE indicator lighted; no derived lines, on page 4-10.</td> </tr> <tr> <td data-bbox="623 991 815 1039">NO</td> <td data-bbox="815 991 1396 1039">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic IAD LINE indicator lighted; no derived lines , on page 4-10.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic IAD LINE indicator lighted; no derived lines , on page 4-10.						
NO	continue to the next step.						
8	<p>Is the LINE indicator lighted on the <i>SuperLine</i> IAD, but the subscriber reports that there is only one derived line?</p> <table border="1" data-bbox="623 1161 1396 1329"> <thead> <tr> <th data-bbox="623 1161 815 1203">IF ...</th> <th data-bbox="815 1161 1396 1203">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="623 1203 815 1281">YES</td> <td data-bbox="815 1203 1396 1281">go to topic IAD LINE indicator lighted; no dialtone on PHONE 1/2 or 2, on page 4-12.</td> </tr> <tr> <td data-bbox="623 1281 815 1329">NO</td> <td data-bbox="815 1281 1396 1329">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic IAD LINE indicator lighted; no dialtone on PHONE 1/2 or 2 , on page 4-12.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic IAD LINE indicator lighted; no dialtone on PHONE 1/2 or 2 , on page 4-12.						
NO	continue to the next step.						
9	<p>Is there a dialtone but no ringing from PHONE 1/2 or 2?</p> <table border="1" data-bbox="623 1421 1396 1589"> <thead> <tr> <th data-bbox="623 1421 815 1463">IF ...</th> <th data-bbox="815 1421 1396 1463">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="623 1463 815 1541">YES</td> <td data-bbox="815 1463 1396 1541">go to topic Dialtone but no ringing from PHONE 1/2 or 2, on page 4-14.</td> </tr> <tr> <td data-bbox="623 1541 815 1589">NO</td> <td data-bbox="815 1541 1396 1589">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic Dialtone but no ringing from PHONE 1/2 or 2 , on page 4-14.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic Dialtone but no ringing from PHONE 1/2 or 2 , on page 4-14.						
NO	continue to the next step.						

Step	Condition or action						
10	<p data-bbox="695 254 1370 285">Does the customer detect distortion on PHONE 1/2 or 2?</p> <table border="1" data-bbox="716 296 1490 457"> <thead> <tr> <th data-bbox="716 296 911 338">IF ...</th> <th data-bbox="911 296 1490 338">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="716 338 911 411">YES</td> <td data-bbox="911 338 1490 411">go to topic Distortion on PHONE 1/2 or 2, on page 4-15.</td> </tr> <tr> <td data-bbox="716 411 911 457">NO</td> <td data-bbox="911 411 1490 457">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic Distortion on PHONE 1/2 or 2 , on page 4-15.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic Distortion on PHONE 1/2 or 2 , on page 4-15.						
NO	continue to the next step.						
11	<p data-bbox="695 516 1479 579">Does the subscriber report a fast busy signal on one of the derived lines?</p> <table border="1" data-bbox="716 590 1490 751"> <thead> <tr> <th data-bbox="716 590 911 632">IF ...</th> <th data-bbox="911 590 1490 632">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="716 632 911 705">YES</td> <td data-bbox="911 632 1490 705">go to topic Fast busy signal on a derived line, on page 4-16.</td> </tr> <tr> <td data-bbox="716 705 911 751">NO</td> <td data-bbox="911 705 1490 751">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic Fast busy signal on a derived line , on page 4-16.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic Fast busy signal on a derived line , on page 4-16.						
NO	continue to the next step.						
12	<p data-bbox="695 804 1398 867">Does the subscriber report that there is no dialtone from the baseband voice line?</p> <table border="1" data-bbox="716 877 1490 1039"> <thead> <tr> <th data-bbox="716 877 911 919">IF ...</th> <th data-bbox="911 877 1490 919">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="716 919 911 993">YES</td> <td data-bbox="911 919 1490 993">go to topic No dialtone from baseband voice line, on page 4-17.</td> </tr> <tr> <td data-bbox="716 993 911 1039">NO</td> <td data-bbox="911 993 1490 1039">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic No dialtone from baseband voice line , on page 4-17.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic No dialtone from baseband voice line , on page 4-17.						
NO	continue to the next step.						
13	<p data-bbox="695 1092 1451 1155">Does the subscriber report that there is a dialtone but no ringing from the baseband voice line?</p> <table border="1" data-bbox="716 1165 1490 1327"> <thead> <tr> <th data-bbox="716 1165 911 1207">IF ...</th> <th data-bbox="911 1165 1490 1207">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="716 1207 911 1281">YES</td> <td data-bbox="911 1207 1490 1281">go to topic Dialtone but no ringing from baseband voice line, on page 4-19.</td> </tr> <tr> <td data-bbox="716 1281 911 1327">NO</td> <td data-bbox="911 1281 1490 1327">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic Dialtone but no ringing from baseband voice line , on page 4-19.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic Dialtone but no ringing from baseband voice line , on page 4-19.						
NO	continue to the next step.						
14	<p data-bbox="695 1379 1479 1442">Does the subscriber report that there is no data throughput and the ETHERNET indicator is not lighted?</p> <table border="1" data-bbox="716 1453 1490 1654"> <thead> <tr> <th data-bbox="716 1453 911 1495">IF ...</th> <th data-bbox="911 1453 1490 1495">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="716 1495 911 1612">YES</td> <td data-bbox="911 1495 1490 1612">go to topic No data throughput; IAD ETHERNET indicator not lighted, on page 4-20.</td> </tr> <tr> <td data-bbox="716 1612 911 1654">NO</td> <td data-bbox="911 1612 1490 1654">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic No data throughput; IAD ETHERNET indicator not lighted , on page 4-20.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic No data throughput; IAD ETHERNET indicator not lighted , on page 4-20.						
NO	continue to the next step.						

Step	Condition or action						
15	<p data-bbox="600 254 1382 317">Does the subscriber report that there is no data throughput and the ETHERNET indicator is lighted?</p> <table border="1" data-bbox="621 323 1398 491"> <thead> <tr> <th data-bbox="621 323 816 369">IF ...</th> <th data-bbox="816 323 1398 369">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="621 369 816 443">YES</td> <td data-bbox="816 369 1398 443">go to topic No data throughput; IAD ETHERNET indicator lighted, on page 4-22</td> </tr> <tr> <td data-bbox="621 443 816 491">NO</td> <td data-bbox="816 443 1398 491">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic No data throughput; IAD ETHERNET indicator lighted , on page 4-22	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic No data throughput; IAD ETHERNET indicator lighted , on page 4-22						
NO	continue to the next step.						
16	<p data-bbox="600 548 1333 575">Does the subscriber report that the ethernet throughput varies?</p> <table border="1" data-bbox="621 581 1398 749"> <thead> <tr> <th data-bbox="621 581 816 627">IF ...</th> <th data-bbox="816 581 1398 627">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="621 627 816 701">YES</td> <td data-bbox="816 627 1398 701">go to topic Ethernet throughput varies, on page 4-23.</td> </tr> <tr> <td data-bbox="621 701 816 749">NO</td> <td data-bbox="816 701 1398 749">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to topic Ethernet throughput varies , on page 4-23.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to topic Ethernet throughput varies , on page 4-23.						
NO	continue to the next step.						
17	<p data-bbox="600 806 1357 932">If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com.</p>						





2 Troubleshooting major alarms

Overview

Introduction This chapter describes troubleshooting procedures for various major alarm conditions on the AG Communication Systems *SuperLine*™ Access System.

In this chapter With the exception of the first two alarm indications which can only be viewed at the *SuperLine* Access Shelf, the alarm indications listed in the following table are the secondary alarm indications that you may see in *addition* to the major alarm light emitting diode (LED) on the Status tab screen of the *SuperLine* Element Manager

Topic	Page
No shelf power on POWR card fail LED lighted	2-2
Major and minor alarm LEDs lighted simultaneously	2-5
One or more DS1 L LEDs red	2-7
EOC-Pri and EOC-Sec icons red	2-10
TMC-Pri and TMC-Sec icons red	2-12
Temp icon red	2-14
Battery icon red	2-16
Fuse icon red	2-17
Misc 1 or Misc 2 icons red	2-18
Pwr Maj icon red	2-19



No shelf power or POWR card fail LED lighted

Overview The procedures in this section attempt to restore power to the *SuperLine* Access Shelf. Once power has been restored to the *SuperLine* Access Shelf, return to [Clearing SuperLine Access System alarms](#) to troubleshoot any other problems.

Corrective actions Follow the procedures listed in the following table in order until the alarm condition is cleared.
Important: The error conditions described here are only visible at the *SuperLine* Access Shelf.



WARNING

Electric shock and equipment damage hazard. To avoid personal injury or damage to the equipment, before you remove a FETH, VDS1, or POWR card from the SuperLine Access Shelf, ensure that the power switch on the POWR card is in the off position. Follow all precautions for working with live power, such as using insulating blankets or tools.



CAUTION

VDS1, FETH and POWR cards are NOT hot-swappable. Replacing or reseating a VDS1, FETH or POWR card requires you to shut down the SuperLine Access Shelf which, in turn, will interrupt service for up to 96 subscribers.

Step	Condition or action						
1	Is the SuperLine Access Shelf connected to a -48 VDC, CO-filtered power source, and is the POWR card power switch in the on position?						
	<table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>go to step 4.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to step 4.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to step 4.						
NO	continue to the next step.						

Step	Condition or action						
2	Check the <i>SuperLine</i> Access Shelf power connections and make sure the POWR card's power switch is in the on position.						
3	Is the <i>SuperLine</i> Access Shelf power restored? <table border="1" data-bbox="719 369 1490 684"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>do one of the following: <ul style="list-style-type: none"> • If no additional alarm conditions exist, STOP. You have completed this procedure. • If additional alarm conditions exist, return to Clearing <i>SuperLine</i> Access System alarms. </td> </tr> <tr> <td>NO</td> <td>continue to step 5.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	do one of the following: <ul style="list-style-type: none"> • If no additional alarm conditions exist, STOP. You have completed this procedure. • If additional alarm conditions exist, return to Clearing <i>SuperLine</i> Access System alarms. 	NO	continue to step 5.
IF ...	THEN ...						
YES	do one of the following: <ul style="list-style-type: none"> • If no additional alarm conditions exist, STOP. You have completed this procedure. • If additional alarm conditions exist, return to Clearing <i>SuperLine</i> Access System alarms. 						
NO	continue to step 5.						
4	Is the <i>SuperLine</i> Access Shelf POWR card fail light emitting diode (LED) lighted? <table border="1" data-bbox="719 810 1490 947"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>continue to the next step.</td> </tr> <tr> <td>NO</td> <td>go to step 12.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	continue to the next step.	NO	go to step 12.
IF ...	THEN ...						
YES	continue to the next step.						
NO	go to step 12.						
5	Turn the <i>SuperLine</i> Access Shelf power off.						
6	Remove and reseal the POWR card.						
7	Restore power to the <i>SuperLine</i> Access Shelf.						
8	Wait up to 5 minutes for the <i>SuperLine</i> Access Shelf to complete its initialization process.						
9	Is the <i>SuperLine</i> Access Shelf power restored? <table border="1" data-bbox="719 1251 1490 1566"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>do one of the following: <ul style="list-style-type: none"> • If no additional alarm conditions exist, STOP. You have completed this procedure • If additional alarm conditions exist, return to Clearing <i>SuperLine</i> Access System alarms. </td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	do one of the following: <ul style="list-style-type: none"> • If no additional alarm conditions exist, STOP. You have completed this procedure • If additional alarm conditions exist, return to Clearing <i>SuperLine</i> Access System alarms. 	NO	continue to the next step.
IF ...	THEN ...						
YES	do one of the following: <ul style="list-style-type: none"> • If no additional alarm conditions exist, STOP. You have completed this procedure • If additional alarm conditions exist, return to Clearing <i>SuperLine</i> Access System alarms. 						
NO	continue to the next step.						
10	Remove and replace the POWR card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.						

Step	Condition or action						
11	<p data-bbox="602 254 1154 285">Is the <i>SuperLine</i> Access Shelf power restored?</p> <table border="1" data-bbox="623 291 1398 611"> <thead> <tr> <th data-bbox="623 291 818 338">IF ...</th> <th data-bbox="818 291 1398 338">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="623 338 818 564">YES</td> <td data-bbox="818 338 1398 564"> <p data-bbox="842 344 1130 375">do one of the following:</p> <ul data-bbox="842 386 1386 554" style="list-style-type: none"> <li data-bbox="842 386 1386 449">• If no additional alarm conditions exist, STOP. You have completed this procedure. <li data-bbox="842 459 1386 554">• If additional alarm conditions exist, return to Clearing <i>SuperLine</i> Access System alarms. </td> </tr> <tr> <td data-bbox="623 564 818 611">NO</td> <td data-bbox="818 564 1398 611">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	<p data-bbox="842 344 1130 375">do one of the following:</p> <ul data-bbox="842 386 1386 554" style="list-style-type: none"> <li data-bbox="842 386 1386 449">• If no additional alarm conditions exist, STOP. You have completed this procedure. <li data-bbox="842 459 1386 554">• If additional alarm conditions exist, return to Clearing <i>SuperLine</i> Access System alarms. 	NO	continue to the next step.
IF ...	THEN ...						
YES	<p data-bbox="842 344 1130 375">do one of the following:</p> <ul data-bbox="842 386 1386 554" style="list-style-type: none"> <li data-bbox="842 386 1386 449">• If no additional alarm conditions exist, STOP. You have completed this procedure. <li data-bbox="842 459 1386 554">• If additional alarm conditions exist, return to Clearing <i>SuperLine</i> Access System alarms. 						
NO	continue to the next step.						
12	<p data-bbox="602 663 1362 785">If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com.</p>						



Major and minor alarm LEDs lighted simultaneously

Corrective actions Follow the procedures listed in the following table in order until the alarm condition is cleared.

Important: The error conditions described here are only visible at the *SuperLine* Access Shelf.



WARNING

Electric shock and equipment damage hazard. To avoid personal injury or damage to the equipment, before you remove a FETH, VDS1, or POWR card from the SuperLine Access Shelf, ensure that the power switch on the POWR card is in the off position. Follow all precautions for working with live power, such as using insulating blankets or tools.



CAUTION

VDS1, FETH and POWR cards are NOT hot-swappable. Replacing or reseating a VDS1, FETH or POWR card requires you to shut down the SuperLine Access Shelf which, in turn, will interrupt service for up to 96 subscribers.

Step	Condition or action						
1	If you see both the major and minor alarm LEDs lighted simultaneously on the <i>SuperLine</i> Access Shelf, make sure that the <i>SuperLine</i> Access Shelf has completed initializing. You should wait up to 5 minutes for the <i>SuperLine</i> Access Shelf to complete its initialization process.						
2	Is the alarm condition cleared? <table border="1" data-bbox="717 1480 1490 1619"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
3	Turn the <i>SuperLine</i> Access Shelf power off.						
4	Remove and reseat the VDS1, and FETH cards. <u>Important</u> : A FETH card problem can sometimes cause problems with a VDS1 card and vice versa. Therefore it is expedient to reseat both cards whenever a problem with either one is suspected.						

Step	Condition or action						
5	Restore power to the <i>SuperLine</i> Access Shelf.						
6	Wait up to 5 minutes for the <i>SuperLine</i> Access Shelf to complete its initialization process.						
7	Is the alarm condition cleared? <table border="1" data-bbox="625 415 1396 552"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
8	Remove and replace the VDS1 card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.						
9	Is the alarm condition cleared? <table border="1" data-bbox="625 751 1396 888"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
10	Remove and replace the FETH card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.						
11	Is the alarm condition cleared? <table border="1" data-bbox="625 1087 1396 1224"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
12	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						

□

One or more DS1 L LEDs red

Corrective actions Follow the procedures listed in the following table in order until the alarm condition is cleared.



WARNING

Electric shock and equipment damage hazard. To avoid personal injury or damage to the equipment, before you remove a FETH, VDS1, or POWR card from the SuperLine Access Shelf, ensure that the power switch on the POWR card is in the off position. Follow all precautions for working with live power, such as using insulating blankets or tools.



CAUTION

VDS1, FETH and POWR cards are NOT hot-swappable. Replacing or reseating a VDS1, FETH or POWR card requires you to shut down the SuperLine Access Shelf which, in turn, will interrupt service for up to 96 subscribers.

Step	Condition or action						
1	<p>Does the <i>SuperLine</i> Element Manager Telephony tab screen as well as event log entries indicate an <i>Incoming LOS</i>?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>go to step 7.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to step 7.	NO	continue to the next step.
IF ...	THEN ...						
YES	go to step 7.						
NO	continue to the next step.						
2	<p>Does the <i>SuperLine</i> Element Manager Telephony tab screen as well as event log entries indicate <i>Detected AIS</i>?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>continue to the next step.</td> </tr> <tr> <td>NO</td> <td>go to step 4.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	continue to the next step.	NO	go to step 4.
IF ...	THEN ...						
YES	continue to the next step.						
NO	go to step 4.						
3	<p>Check the central office (CO) switch to make sure no devices have failed. If any devices have failed, replace them according to the instructions for your particular switch type.</p>						

Step	Condition or action						
4	<p>Does the <i>SuperLine</i> Element Manager Telephony tab screen as well as event log entries indicate an <i>Incoming LOF</i>?</p> <table border="1" data-bbox="623 323 1395 464"> <thead> <tr> <th data-bbox="623 323 815 365">IF ...</th> <th data-bbox="815 323 1395 365">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="623 365 815 407">YES</td> <td data-bbox="815 365 1395 407">go to step 5.</td> </tr> <tr> <td data-bbox="623 407 815 464">NO</td> <td data-bbox="815 407 1395 464">go to step 18.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	go to step 5.	NO	go to step 18.
IF ...	THEN ...						
YES	go to step 5.						
NO	go to step 18.						
5	<p>Check the <i>SuperLine</i> Element Manager Telephony tab screen and make sure that the enabled telephony type (TR-008, TR-303 or DDI) is compatible with your central office (CO) switch.</p>						
6	<p>Is the alarm condition cleared?</p> <table border="1" data-bbox="623 659 1395 800"> <thead> <tr> <th data-bbox="623 659 815 701">IF ...</th> <th data-bbox="815 659 1395 701">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="623 701 815 743">YES</td> <td data-bbox="815 701 1395 743">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="623 743 815 800">NO</td> <td data-bbox="815 743 1395 800">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
7	<p>At the DSX panel, loopback the alarmed DS1s towards the <i>SuperLine</i> Access Shelf.</p>						
8	<p>After waiting at least 2 minutes, is the alarm condition cleared?</p> <table border="1" data-bbox="623 961 1395 1234"> <thead> <tr> <th data-bbox="623 961 815 1003">IF ...</th> <th data-bbox="815 961 1395 1003">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="623 1003 815 1192">YES</td> <td data-bbox="815 1003 1395 1192">STOP. The problem exists with your switching equipment. Release the DS1 loopback and contact a switch troubleshooting expert or consult the documentation for troubleshooting procedures for your particular type of switch.</td> </tr> <tr> <td data-bbox="623 1192 815 1234">NO</td> <td data-bbox="815 1192 1395 1234">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. The problem exists with your switching equipment. Release the DS1 loopback and contact a switch troubleshooting expert or consult the documentation for troubleshooting procedures for your particular type of switch.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. The problem exists with your switching equipment. Release the DS1 loopback and contact a switch troubleshooting expert or consult the documentation for troubleshooting procedures for your particular type of switch.						
NO	continue to the next step.						
9	<p>Turn the <i>SuperLine</i> Access Shelf power off.</p>						
10	<p>Remove and reseat the VDS1 and the POWR cards.</p>						
11	<p>Restore power to the <i>SuperLine</i> Access Shelf.</p>						
12	<p>Wait up to 5 minutes for the <i>SuperLine</i> Access Shelf to complete its initialization process.</p>						

Step	Condition or action						
13	Is the alarm condition cleared? <table border="1" data-bbox="716 291 1490 428"> <thead> <tr> <th data-bbox="716 291 911 336">IF ...</th> <th data-bbox="911 291 1490 336">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="716 336 911 380">YES</td> <td data-bbox="911 336 1490 380">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="716 380 911 428">NO</td> <td data-bbox="911 380 1490 428">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
14	Remove and replace the VDS1 card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.						
15	Is the alarm condition cleared? <table border="1" data-bbox="716 632 1490 768"> <thead> <tr> <th data-bbox="716 632 911 676">IF ...</th> <th data-bbox="911 632 1490 676">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="716 676 911 720">YES</td> <td data-bbox="911 676 1490 720">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="716 720 911 768">NO</td> <td data-bbox="911 720 1490 768">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
16	Remove and replace the POWR card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.						
17	Is the alarm condition cleared? <table border="1" data-bbox="716 972 1490 1108"> <thead> <tr> <th data-bbox="716 972 911 1016">IF ...</th> <th data-bbox="911 972 1490 1016">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="716 1016 911 1060">YES</td> <td data-bbox="911 1016 1490 1060">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="716 1060 911 1108">NO</td> <td data-bbox="911 1060 1490 1108">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
18	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com.						



EOC-Pri and EOC-Sec icons red

Additional symptoms Event log

Event log entries report that both embedded operations channels (EOCs) have failed.

Corrective actions Follow the procedures listed in the following table in order until the alarm condition is cleared.

Step	Condition or action						
1	At the DSX panel, loopback the alarmed DS1s towards the <i>SuperLine</i> Access Shelf.						
2	After waiting at least 2 minutes, is the alarm condition cleared? <table border="1" data-bbox="625 814 1396 1113"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. The problem exists with your switching equipment. Release the DS1 loopback and contact a switch troubleshooting expert or consult the documentation for troubleshooting procedures for your particular type of switch.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. The problem exists with your switching equipment. Release the DS1 loopback and contact a switch troubleshooting expert or consult the documentation for troubleshooting procedures for your particular type of switch.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. The problem exists with your switching equipment. Release the DS1 loopback and contact a switch troubleshooting expert or consult the documentation for troubleshooting procedures for your particular type of switch.						
NO	continue to the next step.						
3	Turn the <i>SuperLine</i> Access Shelf power off.						
4	Remove and reseat the VDS1 and the FETH cards. <u>Important:</u> A FETH card problem can sometimes cause problems with a VDS1 card and vice versa. Therefore it is expedient to reseat both cards whenever a problem with either one is suspected.						
5	Restore power to the <i>SuperLine</i> Access Shelf.						
6	Wait up to 5 minutes for the <i>SuperLine</i> Access Shelf to complete its initialization process.						
7	Is the alarm condition cleared? <table border="1" data-bbox="625 1522 1396 1663"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
8	Remove and replace the VDS1 card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.						

Step	Condition or action						
9	Is the alarm condition cleared? <table border="1" data-bbox="719 296 1490 432"> <thead> <tr> <th data-bbox="719 296 911 338">IF ...</th> <th data-bbox="911 296 1490 338">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="719 338 911 380">YES</td> <td data-bbox="911 338 1490 380">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="719 380 911 432">NO</td> <td data-bbox="911 380 1490 432">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
10	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						



TMC-Pri and TMC-Sec icons red

Additional symptoms Event log

Event log entries report that both timeslot management channel (TMC) datalinks have failed.

Corrective actions Follow the procedures listed in the following table in order until the alarm condition is cleared.

Step	Condition or action						
1	At the DSX panel, loopback the alarmed DS1s towards the <i>SuperLine</i> Access Shelf.						
2	After waiting at least 2 minutes, is the alarm condition cleared? <table border="1" data-bbox="625 814 1396 1113"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. The problem exists with your switching equipment. Release the DS1 loopback and contact a switch troubleshooting expert or consult the documentation for troubleshooting procedures for your particular type of switch.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. The problem exists with your switching equipment. Release the DS1 loopback and contact a switch troubleshooting expert or consult the documentation for troubleshooting procedures for your particular type of switch.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. The problem exists with your switching equipment. Release the DS1 loopback and contact a switch troubleshooting expert or consult the documentation for troubleshooting procedures for your particular type of switch.						
NO	continue to the next step.						
3	Turn the <i>SuperLine</i> Access Shelf power off.						
4	Remove and reseat the VDS1 and the FETH cards. <u>Important:</u> A FETH card problem can sometimes cause problems with a VDS1 card and vice versa. Therefore it is expedient to reseat both cards whenever a problem with either one is suspected.						
5	Restore power to the <i>SuperLine</i> Access Shelf.						
6	Wait up to 5 minutes for the <i>SuperLine</i> Access Shelf to complete its initialization process.						
7	Is the alarm condition cleared? <table border="1" data-bbox="625 1528 1396 1663"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
8	Remove and replace the VDS1 card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.						

Step	Condition or action						
9	Is the alarm condition cleared? <table border="1" data-bbox="719 296 1490 432"> <thead> <tr> <th data-bbox="719 296 911 338">IF ...</th> <th data-bbox="911 296 1490 338">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="719 338 911 380">YES</td> <td data-bbox="911 338 1490 380">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="719 380 911 432">NO</td> <td data-bbox="911 380 1490 432">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
10	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						



Temp icon red

Additional symptoms System tab

The System tab indicates that the *SuperLine* Access Shelf temperature is NOT within the displayed upper and lower limits.

Event log

Event log entries report a major alarm.

Corrective actions

Follow the procedures listed in the following table in order until the alarm condition is cleared.



WARNING

Electric shock and equipment damage hazard. To avoid personal injury or damage to the equipment, before you remove a FETH, VDS1, or POWR card from the SuperLine Access Shelf, ensure that the power switch on the POWR card is in the off position. Follow all precautions for working with live power, such as using insulating blankets or tools.



CAUTION

VDS1, FETH and POWR cards are NOT hot-swappable. Replacing or reseating a VDS1, FETH or POWR card requires you to shut down the SuperLine Access Shelf which, in turn, will interrupt service for up to 96 subscribers.

Step	Condition or action						
1	Click the Temp button in the Element Manager Status tab screen or look at the temperature information in the System tab.						
2	Is the temperature greater than 68°C/154°F? <table border="1" data-bbox="625 1623 1396 1761"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>continue to the next step</td> </tr> <tr> <td>NO</td> <td>go to step 5.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	continue to the next step	NO	go to step 5.
IF ...	THEN ...						
YES	continue to the next step						
NO	go to step 5.						
3	Take any necessary steps to reduce the ambient temperature at the <i>SuperLine</i> Access Shelf.						

Step	Condition or action						
4	<p>Is the alarm condition cleared?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table> <p><u>Important:</u> The Element Manager will not clear the Temp alarm until the <i>SuperLine</i> Access Shelf temperature drops below 63°C/145°F.</p>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
5	Remove and replace the POWR card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.						
6	<p>Is the alarm condition cleared?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
7	Remove and replace the VDS1 card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.						
8	<p>Is the alarm condition cleared?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
9	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						

□

Battery icon red

Corrective actions Follow the procedures listed in the following table in order until the alarm condition is cleared.

Step	Condition or action						
1	Check the cabling connection between the battery and the POWR card. Fix any damaged connections or cabling.						
2	Is the alarm condition cleared? <table border="1" data-bbox="623 640 1395 779"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
3	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com.						

□

Fuse icon red

Additional symptoms

Event log

Event log entries report a major alarm condition.

Corrective actions

Follow the procedures listed in the following table in order until the alarm condition is cleared.



WARNING

Electric shock and equipment damage hazard. To avoid personal injury or damage to the equipment, before you remove a FETH, VDS1, or POWR card from the SuperLine Access Shelf, ensure that the power switch on the POWR card is in the off position. Follow all precautions for working with live power, such as using insulating blankets or tools.



CAUTION

VDS1, FETH and POWR cards are NOT hot-swappable. Replacing or reseating a VDS1, FETH or POWR card requires you to shut down the SuperLine Access Shelf which, in turn, will interrupt service for up to 96 subscribers.

Step	Condition or action						
1	Remove and replace the POWR card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.						
2	Is the alarm condition cleared? <table border="1" data-bbox="717 1482 1490 1619"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
3	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						

□

Misc 1 or Misc 2 icons red

Additional symptoms Event log

Event log entries report a major alarm condition.

Corrective actions

The Misc 1 and Misc 2 terminals allow Telco personnel to connect external devices to the *SuperLine* Access Shelf that trigger an alarm when a problem condition exists. The exact nature of the alarm is determined by the type of monitoring equipment installed.

Follow the procedures listed in the following table in order until the alarm condition is cleared.

Step	Condition or action						
1	Take appropriate actions to clear the condition that triggered the alarm.						
2	Is the alarm condition cleared? <table border="1" data-bbox="625 940 1396 1077"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
3	Check the cable connection between the monitoring device and the POWR card. Correct any problems found.						
4	Is the alarm condition cleared? <table border="1" data-bbox="625 1245 1396 1381"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
5	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						



Pwr Maj icon red

Additional symptoms Event log

Event log entries report a major power alarm condition.

Corrective actions

The Pwr Maj terminal allows Telco personnel to connect external devices to the *SuperLine* Access Shelf that trigger an alarm when a major power problem occurs. The exact nature of the alarm is determined by the type of monitoring equipment installed.

Follow the procedures listed in the following table in order until the alarm condition is cleared.

Step	Condition or action						
1	Take appropriate actions to clear the condition that triggered the alarm.						
2	Is the alarm condition cleared? <table border="1" data-bbox="717 936 1490 1075"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
3	Check the cable connection between the monitoring device and the POWR card. Correct any problems found.						
4	Is the alarm condition cleared? <table border="1" data-bbox="717 1243 1490 1381"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
5	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						





3 Troubleshooting minor alarms

Overview

Introduction This chapter describes troubleshooting procedures for various minor alarm conditions on the AG Communication Systems *SuperLine*™ Access System.

In this chapter Listed below are the secondary alarm indications that you may see in *addition* to the minor alarm light emitting diode (LED) on the Status tab screen of the *SuperLine* Element Manager.

Topic	Page
Power card icon yellow	3-2
VDS1 icon yellow	3-4
One or more DS1 R LEDs yellow	3-6
DS1 L LED red; DS1 R LED yellow	3-8
FETH icon yellow	3-9
All or multiple QV8 icons red	3-11
Single QV8 icon red	3-14
EOC-Pri or EOC-Sec icon red	3-16
TMC-Pri or TMC-Sec icon red	3-18
Door alarm icon red	3-20
Pwr Min icon red	3-23

□

Power card icon yellow

Additional symptoms

Inventory tab

The Inventory tab displays the status of the POWR card as *Warning* and its type as *Unknown*.

Event log

The Event log reports a minor alarm involving the POWR card.

Corrective actions

Follow the procedures listed in the following table in order until the alarm condition is cleared.



WARNING

Electric shock and equipment damage hazard. To avoid personal injury or damage to the equipment, before you remove a FETH, VDS1, or POWR card from the SuperLine Access Shelf, ensure that the power switch on the POWR card is in the off position. Follow all precautions for working with live power, such as using insulating blankets or tools.



CAUTION

VDS1, FETH and POWR cards are NOT hot-swappable. Replacing or reseating a VDS1, FETH or POWR card requires you to shut down the SuperLine Access Shelf which, in turn, will interrupt service for up to 96 subscribers.

Step	Condition or action
1	Remove and replace the POWR card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.

Step	Condition or action						
2	Is the alarm condition cleared? <table border="1" data-bbox="719 296 1490 432"> <thead> <tr> <th data-bbox="719 296 914 338">IF ...</th> <th data-bbox="914 296 1490 338">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="719 338 914 384">YES</td> <td data-bbox="914 338 1490 384">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="719 384 914 432">NO</td> <td data-bbox="914 384 1490 432">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
3	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						



VDS1 icon yellow

Additional symptoms

Inventory tab

The Inventory tab shows the VDS1 card status as *Warning* and its type as *Unknown*.

Event log

Event log entries flagged in yellow report a problem with the VDS1 card or the *SuperLine* Access Shelf.

Corrective actions

Follow the procedures listed in the following table in order until the alarm condition is cleared.



WARNING

Electric shock and equipment damage hazard. To avoid personal injury or damage to the equipment, before you remove a FETH, VDS1, or POWR card from the SuperLine Access Shelf, ensure that the power switch on the POWR card is in the off position. Follow all precautions for working with live power, such as using insulating blankets or tools.



CAUTION

VDS1, FETH and POWR cards are NOT hot-swappable. Replacing or reseating a VDS1, FETH or POWR card requires you to shut down the SuperLine Access Shelf which, in turn, will interrupt service for up to 96 subscribers.

Step	Condition or action
1	Turn the <i>SuperLine</i> Access Shelf power off.
2	Remove and reseat the VDS1 card.
3	Restore power to the <i>SuperLine</i> Access Shelf.
4	Wait up to 5 minutes for the <i>SuperLine</i> Access Shelf to complete its initialization process.

Step	Condition or action						
5	Is the alarm condition cleared? <table border="1" data-bbox="719 296 1490 432"> <thead> <tr> <th data-bbox="719 296 911 338">IF ...</th> <th data-bbox="911 296 1490 338">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="719 338 911 380">YES</td> <td data-bbox="911 338 1490 380">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="719 380 911 432">NO</td> <td data-bbox="911 380 1490 432">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
6	Remove and replace the VDS1 card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.						
7	Is the alarm condition cleared? <table border="1" data-bbox="719 632 1490 768"> <thead> <tr> <th data-bbox="719 632 911 674">IF ...</th> <th data-bbox="911 632 1490 674">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="719 674 911 716">YES</td> <td data-bbox="911 674 1490 716">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="719 716 911 768">NO</td> <td data-bbox="911 716 1490 768">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
8	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						

□

One or more DS1 R LEDs yellow

Additional symptoms **Telephony tab**

The Telephony tab reports *Received Yellow*.

Event log

Event log entries flagged in yellow report a problem with the affected DS1s.

Corrective actions Follow the procedures listed in the following table in order until the alarm condition is cleared.



WARNING

Electric shock and equipment damage hazard. To avoid personal injury or damage to the equipment, before you remove a FETH, VDS1, or POWR card from the SuperLine Access Shelf, ensure that the power switch on the POWR card is in the off position. Follow all precautions for working with live power, such as using insulating blankets or tools.



CAUTION

VDS1, FETH and POWR cards are NOT hot-swappable. Replacing or reseating a VDS1, FETH or POWR card requires you to shut down the SuperLine Access Shelf which, in turn, will interrupt service for up to 96 subscribers.

Step	Condition or action
1	At the DSX panel, loopback the alarmed DS1s towards the <i>SuperLine</i> Access Shelf.

Step	Condition or action						
2	After waiting at least 2 minutes, is the alarm condition cleared? <table border="1" data-bbox="719 291 1490 590"> <thead> <tr> <th data-bbox="719 291 911 338">IF ...</th> <th data-bbox="911 291 1490 338">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="719 338 911 546">YES</td> <td data-bbox="911 338 1490 546">STOP. The problem exists with your switching equipment. Release the DS1 loopback and contact a switch troubleshooting expert or consult the documentation for troubleshooting procedures for your particular type of switch.</td> </tr> <tr> <td data-bbox="719 546 911 590">NO</td> <td data-bbox="911 546 1490 590">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. The problem exists with your switching equipment. Release the DS1 loopback and contact a switch troubleshooting expert or consult the documentation for troubleshooting procedures for your particular type of switch.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. The problem exists with your switching equipment. Release the DS1 loopback and contact a switch troubleshooting expert or consult the documentation for troubleshooting procedures for your particular type of switch.						
NO	continue to the next step.						
3	Turn the <i>SuperLine</i> Access Shelf power off.						
4	Remove and reseat the VDS1 card.						
5	Restore power to the <i>SuperLine</i> Access Shelf.						
6	Wait up to 5 minutes for the <i>SuperLine</i> Access Shelf to complete its initialization process.						
7	Is the alarm condition cleared? <table border="1" data-bbox="719 896 1490 1033"> <thead> <tr> <th data-bbox="719 896 911 942">IF ...</th> <th data-bbox="911 896 1490 942">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="719 942 911 989">YES</td> <td data-bbox="911 942 1490 989">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="719 989 911 1033">NO</td> <td data-bbox="911 989 1490 1033">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
8	Remove and replace the VDS1 card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.						
9	Is the alarm condition cleared? <table border="1" data-bbox="719 1236 1490 1373"> <thead> <tr> <th data-bbox="719 1236 911 1283">IF ...</th> <th data-bbox="911 1236 1490 1283">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="719 1283 911 1329">YES</td> <td data-bbox="911 1283 1490 1329">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="719 1329 911 1373">NO</td> <td data-bbox="911 1329 1490 1373">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
10	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						



DS1 L LED red; DS1 R LED yellow

Additional symptoms Event log

The event log reports *Loopback*.

Corrective actions

This is a normal indication that a Telco technician is performing a loopback test. It does not indicate a failure condition.

Follow the procedures listed in the following table in order until the alarm condition is cleared.

Step	Condition or action						
1	Release the DS1 loopback.						
2	Is the alarm condition cleared? <table border="1" data-bbox="623 837 1395 976"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
3	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						

□

FETH icon yellow

Additional symptoms Inventory tab

The Inventory tab shows the FETH card status as *Warning* and its type as *Unknown*.

Event log

Event log entries flagged in yellow report a problem with the FETH card.

Corrective actions

Follow the procedures listed in the following table in order until the alarm condition is cleared.



WARNING

Electric shock and equipment damage hazard. To avoid personal injury or damage to the equipment, before you remove a FETH, VDS1, or POWR card from the SuperLine Access Shelf, ensure that the power switch on the POWR card is in the off position. Follow all precautions for working with live power, such as using insulating blankets or tools.



CAUTION

VDS1, FETH and POWR cards are NOT hot-swappable. Replacing or reseating a VDS1, FETH or POWR card requires you to shut down the SuperLine Access Shelf which, in turn, will interrupt service for up to 96 subscribers.

Step	Condition or action
1	Turn the <i>SuperLine</i> Access Shelf power off.
2	Remove and reseat the VDS1 and FETH cards. <u>Important:</u> A FETH card problem can sometimes cause problems with a VDS1 card and vice versa. Therefore it is expedient to reseat both cards whenever a problem with either one is suspected.
3	Restore power to the <i>SuperLine</i> Access Shelf.
4	Wait up to 5 minutes for the <i>SuperLine</i> Access Shelf to complete its initialization process.

Step	Condition or action						
5	Is the alarm condition cleared? <table border="1" data-bbox="623 291 1396 428"> <thead> <tr> <th data-bbox="623 291 818 336">IF ...</th> <th data-bbox="818 291 1396 336">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="623 336 818 380">YES</td> <td data-bbox="818 336 1396 380">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="623 380 818 428">NO</td> <td data-bbox="818 380 1396 428">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
6	Remove and replace the FETH card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.						
7	Is the alarm condition cleared? <table border="1" data-bbox="623 632 1396 768"> <thead> <tr> <th data-bbox="623 632 818 676">IF ...</th> <th data-bbox="818 632 1396 676">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="623 676 818 720">YES</td> <td data-bbox="818 676 1396 720">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="623 720 818 768">NO</td> <td data-bbox="818 720 1396 768">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
8	Remove and replace the VDS1 card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.						
9	Is the alarm condition cleared? <table border="1" data-bbox="623 972 1396 1108"> <thead> <tr> <th data-bbox="623 972 818 1016">IF ...</th> <th data-bbox="818 972 1396 1016">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="623 1016 818 1060">YES</td> <td data-bbox="818 1016 1396 1060">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="623 1060 818 1108">NO</td> <td data-bbox="818 1060 1396 1108">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
10	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						

□

All or multiple QV8 icons red

Additional symptoms Inventory tab

The Inventory tab displays the status of QV8 cards as *Failed*.

Adapters tab

The Adapters tab shows the derived lines associated with the QV8 cards as *Failed*.

Event log

Event log entries *may* report a line card failure.

Corrective actions

Follow the procedures listed in the following table in order until the alarm condition is cleared.



WARNING

Electric shock and equipment damage hazard. To avoid personal injury or damage to the equipment, before you remove a FETH, VDS1, or POWR card from the SuperLine Access Shelf, ensure that the power switch on the POWR card is in the off position. Follow all precautions for working with live power, such as using insulating blankets or tools.



CAUTION

VDS1, FETH and POWR cards are NOT hot-swappable. Replacing or reseating a VDS1, FETH or POWR card requires you to shut down the SuperLine Access Shelf which, in turn, will interrupt service for up to 96 subscribers.



CAUTION

Reseating or replacing a QV8 card will interrupt service for up to eight subscribers.

Step	Condition or action						
1	Remove and reseat the first alarmed QV8 card.						
2	<p>After a waiting period of at least 2 minutes, is the alarm condition cleared?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
3	Continue reseating any alarmed QV8 cards one after another. After you reseat each card, wait two minutes to see if the alarm condition is cleared. If the alarm condition is not cleared and you have reseeded all the QV8 cards, continue to the next step.						
4	Remove and replace the first alarmed QV8 card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.						
5	<p>After a waiting period of at least 2 minutes, is the alarm condition cleared?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
6	Continue replacing the rest of the alarmed QV8 cards one after another as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual. After you replace each card, wait two minutes to see if the alarm condition is cleared. Once you have replaced all the alarmed QV8 cards, continue to the next step.						
7	<p>Is the alarm condition cleared?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
8	Turn the <i>SuperLine Access Shelf</i> power off.						
9	<p>Remove and reseat the VDS1 and the FETH cards.</p> <p>Important: A FETH card problem can sometimes cause problems with a VDS1 card and vice versa. Therefore it is expedient to reseat both cards whenever a problem with either one is suspected.</p>						
10	Restore power to the <i>SuperLine Access Shelf</i> .						
11	Wait up to 5 minutes for the <i>SuperLine Access Shelf</i> to complete its initialization process.						

Step	Condition or action						
12	Is the alarm condition cleared? <table border="1" data-bbox="719 291 1490 428"> <thead> <tr> <th data-bbox="719 291 911 336">IF ...</th> <th data-bbox="911 291 1490 336">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="719 336 911 380">YES</td> <td data-bbox="911 336 1490 380">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="719 380 911 428">NO</td> <td data-bbox="911 380 1490 428">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
13	Remove and replace the VDS1 card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.						
14	Is the alarm condition cleared? <table border="1" data-bbox="719 632 1490 768"> <thead> <tr> <th data-bbox="719 632 911 676">IF ...</th> <th data-bbox="911 632 1490 676">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="719 676 911 720">YES</td> <td data-bbox="911 676 1490 720">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="719 720 911 768">NO</td> <td data-bbox="911 720 1490 768">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
15	Remove and replace the FETH card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.						
16	Is the alarm condition cleared? <table border="1" data-bbox="719 972 1490 1108"> <thead> <tr> <th data-bbox="719 972 911 1016">IF ...</th> <th data-bbox="911 972 1490 1016">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="719 1016 911 1060">YES</td> <td data-bbox="911 1016 1490 1060">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="719 1060 911 1108">NO</td> <td data-bbox="911 1060 1490 1108">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
17	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						

□

Single QV8 icon red

Additional symptoms **Inventory tab**

The Inventory tab displays the status of the affected QV8 card as *Failed*.

Adapters tab

The Adapters tab shows the derived lines associated with the affected QV8 card as *Failed*.

Event log

Event log entries report a problem with a circuit pack.

Corrective actions

Follow the procedures listed in the following table in order until the alarm condition is cleared.



CAUTION

Reseating or replacing a QV8 card will interrupt service for up to eight subscribers.

Step	Condition or action						
1	Remove and reseat the affected QV8 card.						
2	After a waiting period of at least 2 minutes, is the alarm condition cleared? <table border="1" data-bbox="630 1325 1403 1463"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
3	Remove and replace the affected QV8 card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.						

Step	Condition or action						
4	<p data-bbox="708 258 1487 317">After a waiting period of at least 2 minutes, is the alarm condition cleared?</p> <table border="1" data-bbox="727 327 1500 464"> <thead> <tr> <th data-bbox="727 327 922 369">IF ...</th> <th data-bbox="922 327 1500 369">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="727 369 922 411">YES</td> <td data-bbox="922 369 1500 411">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="727 411 922 464">NO</td> <td data-bbox="922 411 1500 464">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
5	<p data-bbox="708 516 1468 644">If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com.</p>						



EOC-Pri or EOC-Sec icon red

Additional symptoms Event log

The Event log reports an embedded operations channel (EOC) failure.

Corrective actions Follow the procedures listed in the following table in order until the alarm condition is cleared.



WARNING

Electric shock and equipment damage hazard. To avoid personal injury or damage to the equipment, before you remove a FETH, VDS1, or POWR card from the SuperLine Access Shelf, ensure that the power switch on the POWR card is in the off position. Follow all precautions for working with live power, such as using insulating blankets or tools.



CAUTION

VDS1, FETH and POWR cards are NOT hot-swappable. Replacing or reseating a VDS1, FETH or POWR card requires you to shut down the SuperLine Access Shelf which, in turn, will interrupt service for up to 96 subscribers.

Step	Condition or action						
1	Check the <i>SuperLine</i> Element Manager Telephony tab screen and make sure the TR-303 telephony type is compatible with your central office (CO) switch.						
2	Verify that the line build-out is correct.						
3	Is the alarm condition cleared? <table border="1" data-bbox="625 1528 1396 1669"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
4	At the DSX panel, loopback the alarmed DS1s towards the <i>SuperLine</i> Access Shelf.						

Step	Condition or action						
5	<p>After waiting at least 2 minutes, is the alarm condition cleared?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. The problem exists with your switching equipment. Release the DS1 loopback and contact a switch troubleshooting expert or consult the documentation for troubleshooting procedures for your particular type of switch.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. The problem exists with your switching equipment. Release the DS1 loopback and contact a switch troubleshooting expert or consult the documentation for troubleshooting procedures for your particular type of switch.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. The problem exists with your switching equipment. Release the DS1 loopback and contact a switch troubleshooting expert or consult the documentation for troubleshooting procedures for your particular type of switch.						
NO	continue to the next step.						
6	Turn the <i>SuperLine</i> Access Shelf power off.						
7	Remove and reseal the VDS1 card.						
8	Restore power to the <i>SuperLine</i> Access Shelf.						
9	Wait up to 5 minutes for the <i>SuperLine</i> Access Shelf to complete its initialization process.						
10	<p>Is the alarm condition cleared?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
11	Remove and replace the VDS1 card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.						
12	<p>Is the alarm condition cleared?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
13	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						

□

TMC-Pri or TMC-Sec icon red

Additional symptoms Event log

The Event log reports an timeslot management channel (TMC) failure.

Corrective actions Follow the procedures listed in the following table in order until the alarm condition is cleared.



WARNING

Electric shock and equipment damage hazard. To avoid personal injury or damage to the equipment, before you remove a FETH, VDS1, or POWR card from the SuperLine Access Shelf, ensure that the power switch on the POWR card is in the off position. Follow all precautions for working with live power, such as using insulating blankets or tools.



CAUTION

VDS1, FETH and POWR cards are NOT hot-swappable. Replacing or reseating a VDS1, FETH or POWR card requires you to shut down the SuperLine Access Shelf which, in turn, will interrupt service for up to 96 subscribers.

Step	Condition or action						
1	Check the <i>SuperLine</i> Element Manager Telephony tab screen and make sure the TR-303 telephony type is compatible with your central office (CO) switch.						
2	Verify that the line build-out is correct.						
3	Is the alarm condition cleared? <table border="1" data-bbox="625 1528 1396 1669"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
4	At the DSX panel, loopback the alarmed DS1s towards the <i>SuperLine</i> Access Shelf.						

Step	Condition or action						
5	<p>After waiting at least 2 minutes, is the alarm condition cleared?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. The problem exists with your switching equipment. Release the DS1 loopback and contact a switch troubleshooting expert or consult the documentation for troubleshooting procedures for your particular type of switch.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. The problem exists with your switching equipment. Release the DS1 loopback and contact a switch troubleshooting expert or consult the documentation for troubleshooting procedures for your particular type of switch.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. The problem exists with your switching equipment. Release the DS1 loopback and contact a switch troubleshooting expert or consult the documentation for troubleshooting procedures for your particular type of switch.						
NO	continue to the next step.						
6	Turn the <i>SuperLine</i> Access Shelf power off.						
7	Remove and reseal the VDS1 card.						
8	Restore power to the <i>SuperLine</i> Access Shelf.						
9	Wait up to 5 minutes for the <i>SuperLine</i> Access Shelf to complete its initialization process.						
10	<p>Is the alarm condition cleared?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
11	Remove and replace the VDS1 card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.						
12	<p>Is the alarm condition cleared?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
13	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						

□

Door alarm icon red

Overview The door alarm will only be reported if the *SuperLine* Access Shelf is enclosed in an optional cabinet.

Corrective actions Follow the procedures listed in the following table in order until the alarm condition is cleared.



WARNING

Electric shock and equipment damage hazard. To avoid personal injury or damage to the equipment, before you remove a FETH, VDS1, or POWR card from the SuperLine Access Shelf, ensure that the power switch on the POWR card is in the off position. Follow all precautions for working with live power, such as using insulating blankets or tools.



CAUTION

VDS1, FETH and POWR cards are NOT hot-swappable. Replacing or reseating a VDS1, FETH or POWR card requires you to shut down the SuperLine Access Shelf which, in turn, will interrupt service for up to 96 subscribers.

Step	Condition or action						
1	Examine the <i>SuperLine</i> Access Shelf cabinet.						
2	If the door on the <i>SuperLine</i> Access Shelf is open, close it.						
3	Is the alarm condition cleared? <table border="1" data-bbox="620 1432 1395 1570"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
4	Open and close the door several times in quick succession. Such an action may serve to clear the switch that detects the state of the door.						

Step	Condition or action						
5	<p>Is the alarm condition cleared?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
6	Check the door sensor and replace it if necessary.						
7	<p>Is the alarm condition cleared?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
8	Check the connection between the door sensor and the POWR card. Repair or replace the connection if necessary.						
9	<p>Is the alarm condition cleared?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
10	Turn the <i>SuperLine</i> Access Shelf power off.						
11	Remove and reseal the POWR card.						
12	Restore power to the <i>SuperLine</i> Access Shelf.						
13	Wait up to 5 minutes for the <i>SuperLine</i> Access Shelf to complete its initialization process.						
14	<p>Is the alarm condition cleared?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
15	Remove and replace the POWR card as described in the <i>SuperLine Access System SuperLine Shelf Installation, Operations, and Maintenance</i> manual.						

Step	Condition or action						
16	Is the alarm condition cleared? <table border="1" data-bbox="623 291 1396 428"> <thead> <tr> <th data-bbox="623 291 815 336">IF . . .</th> <th data-bbox="815 291 1396 336">THEN . . .</th> </tr> </thead> <tbody> <tr> <td data-bbox="623 336 815 380">YES</td> <td data-bbox="815 336 1396 380">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="623 380 815 428">NO</td> <td data-bbox="815 380 1396 428">continue to the next step.</td> </tr> </tbody> </table>	IF . . .	THEN . . .	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF . . .	THEN . . .						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
17	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						

□

Pwr Min icon red

Additional symptoms **Event log**

Event log entries report a minor power alarm condition.

Corrective actions

The Pwr Min terminal allows Telco personnel to connect external devices to the *SuperLine* Access Shelf that trigger an alarm when a minor power problem occurs. The exact nature of the alarm is determined by the type of monitoring equipment installed.

Follow the procedures listed in the following table in order until the alarm condition is cleared.

Step	Condition or action						
1	Take appropriate actions to clear the condition that triggered the alarm.						
2	Is the alarm condition cleared? <table border="1" style="width: 100%;"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
3	Check the cable connection between the monitoring device and the POWR card. Correct any problems found.						
4	Is the alarm condition cleared? <table border="1" style="width: 100%;"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
5	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						





4 Subscriber-reported problems

Overview

Introduction This chapter describes the various problems a subscriber might encounter with the AG Communication Systems *SuperLine*[™] service in general and the *SuperLine* Integrated Access Device (IAD) in particular.

In this chapter This chapter covers the following topics.

Topic	Page
IAD PWR indicator not lighted	4-3
All IAD indicators remain lighted	4-4
IAD ALM and TST indicators lighted	4-5
IAD ALM indicator remains lighted	4-6
IAD TST indicator remains lighted	4-7
IAD LINE indicator not lighted	4-8
IAD LINE indicator lighted; no derived lines	4-10
IAD LINE indicator lighted; no dialtone on PHONE 1/2 or 2	4-12
Dialtone but no ringing from PHONE 1/2 or 2	4-14
Distortion on PHONE 1/2 or 2	4-15
Fast busy signal on a derived line	4-16
No dialtone from baseband voice line	4-17
Dialtone but no ringing from baseband voice line	4-19
No data throughput; IAD ETHERNET indicator not lighted	4-20

Topic	Page
No data throughput; IAD ETHERNET indicator lighted	4-22
Ethernet throughput varies	4-23



IAD PWR indicator not lighted

Corrective actions Follow the procedures listed in the following table in order until the alarm condition is cleared.

Step	Condition or action						
1	Instruct the subscriber to make sure that the <i>SuperLine</i> IAD alternating current (AC) transformer is plugged into a live outlet and that the AC transformer is also plugged into the <i>SuperLine</i> IAD.						
2	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="719 674 1490 810"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
3	Ask the subscriber to plug the <i>SuperLine</i> IAD ac transformer into a different wall outlet. If the <i>SuperLine</i> IAD works when plugged into that outlet, the first outlet may be defective or switched off.						
4	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="719 1014 1490 1150"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
5	Send out a replacement <i>SuperLine</i> IAD.						
6	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="719 1287 1490 1423"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
7	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						

□

All IAD indicators remain lighted

Corrective actions Follow the procedures listed in the following table in order until the alarm condition is cleared.

Step	Condition or action						
1	Instruct the subscriber to cycle power to the <i>SuperLine</i> IAD and wait up to 5 minutes for initialization to complete.						
2	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="625 640 1396 777"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
3	Send out a replacement <i>SuperLine</i> IAD.						
4	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="625 913 1396 1050"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
5	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						



IAD ALM and TST indicators lighted

Additional symptoms *SuperLine IAD*

- The PWR indicator is lighted.
- The LINE indicator may be lighted.
- The ETHERNET indicator may be lighted.

Corrective actions

This condition indicates that the Network Service Provider (NSP) has initiated a test or upgrade of the *SuperLine* Integrated Access Device. The duration of this condition may vary and can persist for a few minutes. During this time, baseband voice services will be available, but *SuperLine* services will not.

Step	Condition or action						
1	If the condition has continued for longer than 10 minutes, instruct the subscriber to cycle power to the <i>SuperLine</i> IAD and wait up to 5 minutes for initialization to complete.						
2	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="719 953 1490 1094"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
3	Send out a replacement <i>SuperLine</i> IAD.						
4	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="719 1230 1490 1371"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
5	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						

□

IAD ALM indicator remains lighted

Additional symptoms *SuperLine IAD*

- The PWR indicator is lighted.
- The ETHERNET indicator may be lighted.

Corrective actions Follow the procedures listed in the following table in order until the alarm condition is cleared.

Step	Condition or action						
1	Instruct the subscriber to cycle power to the <i>SuperLine</i> IAD and wait up to 5 minutes for initialization to complete.						
2	Is <i>SuperLine</i> service restored? <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
3	Send out a replacement <i>SuperLine</i> IAD.						
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IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
5	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						



IAD TST indicator blinks or remains lighted

Additional symptoms *SuperLine IAD*

- The PWR indicator is lighted.
- The LINE indicator may be lighted.
- The ETHERNET indicator may be lighted.
- The ALM indicator is not lighted.

Corrective actions Follow the procedures listed in the following table in order until the alarm condition is cleared.

Step	Condition or action						
1	Instruct the subscriber to cycle power to the <i>SuperLine IAD</i> and wait up to 5 minutes for initialization to complete.						
2	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="717 892 1490 1031"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
3	Send out a replacement <i>SuperLine IAD</i> .						
4	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="717 1167 1490 1306"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
5	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						

□

IAD LINE indicator not lighted

Additional symptoms *SuperLine IAD*

- The PWR indicator is lighted.
- The ETHERNET indicator may be lighted.

Corrective actions Follow the procedures listed in the following table in order until the alarm condition is cleared.

Step	Condition or action						
1	Connect a standard telephone to the baseband phone line, without a SuperLine Adapter, using the stand-alone Customer Premises Equipment Filter (CPEF).						
2	Is the line in service? <table border="1" data-bbox="623 837 1395 1008"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>continue to the next step.</td> </tr> <tr> <td>NO</td> <td>STOP. The problem is with the baseband line, not with the <i>SuperLine</i> Access System.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	continue to the next step.	NO	STOP. The problem is with the baseband line, not with the <i>SuperLine</i> Access System.
IF ...	THEN ...						
YES	continue to the next step.						
NO	STOP. The problem is with the baseband line, not with the <i>SuperLine</i> Access System.						
3	Check a <i>SuperLine</i> Element Manager monitoring the <i>SuperLine</i> Access Shelf that is providing service to the subscriber. Clear any alarms you find using the instructions contained in this manual.						
4	Is the alarm condition cleared or are no <i>SuperLine</i> Access Shelf alarms discovered? <table border="1" data-bbox="623 1241 1395 1377"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
5	Ask the subscriber to verify that the phone cable connected to the LINE jack is securely installed at both ends.						
6	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="623 1545 1395 1682"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
7	Instruct the subscriber to switch the phone cable with a cable that is known to be functioning correctly.						

Step	Condition or action						
8	<p>Is <i>SuperLine</i> service restored?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
9	Instruct the subscriber to cycle power to the <i>SuperLine</i> IAD and wait up to 5 minutes for initialization to complete.						
10	<p>Is <i>SuperLine</i> service restored?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
11	Send out a replacement <i>SuperLine</i> IAD.						
12	<p>Is <i>SuperLine</i> service restored?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
13	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						

□

IAD LINE indicator lighted; no derived lines

Additional symptoms *SuperLine IAD*

The PWR indicator is lighted.

The ETHERNET indicator may be lighted.

Element Manager: Adapters tab

The Adapters tab screen indicates that there is insufficient bandwidth to support two derived lines.

Element Manager: Event log

Event log entries may indicate a problem with derived lines, DS1s, or the QV8 card.

Corrective actions Follow the procedures listed in the following table in order until the alarm condition is cleared.

Step	Condition or action						
1	Check a <i>SuperLine</i> Element Manager monitoring the <i>SuperLine</i> Access Shelf that is providing service to the subscriber. Clear any alarms you find using the instructions contained in this manual.						
2	Is <i>SuperLine</i> service restored or are no <i>SuperLine</i> Access Shelf alarms discovered? <table border="1" data-bbox="623 1243 1395 1381"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
3	Check the adapter rate information on the Element Manager Adapters tab. If the trained adapter rate is greater than or equal to 320 Kbps, the problem involves CO equipment. If the trained adapter rate is less than 320 Kbps the trouble may be noise caused by improper or defective adapter cabling. Correct any problems found.						
4	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="623 1680 1395 1818"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						

Step	Condition or action						
5	Verify that the Directory Numbers are in service for the missing derived lines. Take any necessary corrective actions.						
6	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="721 369 1490 506"> <thead> <tr> <th data-bbox="721 369 911 415">IF ...</th> <th data-bbox="911 369 1490 415">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="721 415 911 462">YES</td> <td data-bbox="911 415 1490 462">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="721 462 911 506">NO</td> <td data-bbox="911 462 1490 506">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
7	Instruct the subscriber to cycle power to the <i>SuperLine</i> IAD and wait up to 5 minutes for initialization to complete.						
8	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="721 676 1490 812"> <thead> <tr> <th data-bbox="721 676 911 722">IF ...</th> <th data-bbox="911 676 1490 722">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="721 722 911 768">YES</td> <td data-bbox="911 722 1490 768">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="721 768 911 812">NO</td> <td data-bbox="911 768 1490 812">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
9	Send out a replacement <i>SuperLine</i> IAD.						
10	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="721 949 1490 1085"> <thead> <tr> <th data-bbox="721 949 911 995">IF ...</th> <th data-bbox="911 949 1490 995">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="721 995 911 1041">YES</td> <td data-bbox="911 995 1490 1041">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="721 1041 911 1085">NO</td> <td data-bbox="911 1041 1490 1085">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
11	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com.						



IAD LINE indicator lighted; no dialtone on PHONE 1/2 or 2

Additional symptoms *SuperLine IAD*

The PWR indicator is lighted.

The ETHERNET indicator may be lighted.

Element Manager: Adapters tab

The Adapters tab indicates that available bandwidth can support only one derived line instead of two. For additional information about bandwidth, refer to the *SuperLine Access System Applications and Engineering* manual.

Element Manager: Event log

Event log entries may indicate a problem with the *SuperLine* Integrated Access Device or the QV8 card.

Corrective actions Follow the procedures listed in the following table in order until the alarm condition is cleared.

Step	Condition or action						
1	Check the adapter rate information on the Element Manager Adapters tab. If the trained adapter rate is greater than or equal to 320 Kbps, the problem involves CO equipment. If the trained adapter rate is less than 320 Kbps the trouble may be noise caused by improper or defective adapter cabling. Correct any problems found.						
2	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="625 1346 1395 1482"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
3	Verify that the Directory Numbers are equipped and in service for the missing derived line. Take any necessary corrective actions.						
4	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="625 1652 1395 1789"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						

Step	Condition or action						
5	Instruct the subscriber to cycle power to the <i>SuperLine</i> IAD and wait up to 5 minutes for initialization to complete.						
6	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="719 369 1490 506"> <thead> <tr> <th data-bbox="719 369 911 415">IF ...</th> <th data-bbox="911 369 1490 415">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="719 415 911 462">YES</td> <td data-bbox="911 415 1490 462">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="719 462 911 506">NO</td> <td data-bbox="911 462 1490 506">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
7	Send out a replacement <i>SuperLine</i> IAD.						
8	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="719 646 1490 783"> <thead> <tr> <th data-bbox="719 646 911 693">IF ...</th> <th data-bbox="911 646 1490 693">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="719 693 911 739">YES</td> <td data-bbox="911 693 1490 739">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="719 739 911 783">NO</td> <td data-bbox="911 739 1490 783">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
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9	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						

□

Dialtone but no ringing from PHONE 1/2 or 2

Corrective actions Follow the procedures listed in the following table in order until the alarm condition is cleared.

Step	Condition or action						
1	Have the subscriber verify that the total ringer equivalency number (REN) of all of the devices connected to the PHONE 1/2 or PHONE 2 jack does not exceed three. If the REN does exceed three, disconnect enough devices to lower it. <u>Important:</u> REN is specified on a label on the phone, FAX machine, or modem.						
2	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="625 781 1396 919"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
3	Instruct the subscriber to cycle power to the <i>SuperLine</i> IAD and wait up to 5 minutes for initialization to complete.						
4	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="625 1087 1396 1226"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
5	Send out a replacement <i>SuperLine</i> IAD.						
6	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="625 1360 1396 1499"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
7	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com.						

□

Distortion on PHONE 1/2 or 2

- Additional symptoms**
- Modems or FAX machines connected to the PHONE 1/2 or PHONE 2 jacks do not operate reliably.

Corrective actions Follow the procedures listed in the following table in order until the alarm condition is cleared.

Step	Condition or action						
1	Have the subscriber verify that the total ringer equivalency number (REN) of all of the devices connected to the PHONE 1/2 or PHONE 2 jack does not exceed three. If the REN does exceed three, disconnect enough devices to lower it. <u>Important:</u> REN is specified on a label on the phone, FAX machine, or modem.						
2	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="719 884 1490 1022"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
3	Instruct the subscriber to cycle power to the <i>SuperLine</i> IAD and wait up to 5 minutes for initialization to complete.						
4	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="719 1190 1490 1329"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
5	Send out a replacement <i>SuperLine</i> IAD.						
6	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="719 1465 1490 1604"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
7	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						

□

Fast busy signal on a derived line

Corrective actions Refer to the troubleshooting procedures for [IAD LINE indicator lighted; no derived lines](#), on page 4-10.



No dialtone from baseband voice line

Corrective actions Follow the procedures listed in the following table in order until the alarm condition is cleared.

Step	Condition or action						
1	Have the subscriber unplug the <i>SuperLine</i> Integrated Access Device from the wall connector and plug in a standard phone, using the stand-alone Customer Premises Equipment Filter (CPEF). Place a call to the subscriber's baseband phone line.						
2	Does the call to the baseband phone line complete successfully? <table border="1" data-bbox="719 705 1490 873"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>send out a replacement <i>SuperLine</i> Integrated Access Device.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	send out a replacement <i>SuperLine</i> Integrated Access Device.	NO	continue to the next step.
IF ...	THEN ...						
YES	send out a replacement <i>SuperLine</i> Integrated Access Device.						
NO	continue to the next step.						
3	Perform verification on the line. To do so, follow the instructions for line verification provided in the documentation for the type of telephone switch installed at the CO.						
4	Is <i>SuperLine</i> service restored or are no CO switch problems discovered? <table border="1" data-bbox="719 1106 1490 1245"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
5	Verify and correct any cabling problems to the subscriber premises. Follow the loop qualification guidelines described in the <i>SuperLine Access System Applications and Engineering</i> manual.						
6	Is <i>SuperLine</i> service restored or are no cabling problems discovered? <table border="1" data-bbox="719 1476 1490 1614"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
7	Check wiring at the subscriber premises and correct any wiring problems.						

Step	Condition or action						
8	Is <i>SuperLine</i> service restored? <table border="1" data-bbox="623 291 1396 428"> <thead> <tr> <th data-bbox="623 291 818 336">IF ...</th> <th data-bbox="818 291 1396 336">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="623 336 818 380">YES</td> <td data-bbox="818 336 1396 380">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="623 380 818 428">NO</td> <td data-bbox="818 380 1396 428">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
9	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						

□

Dialtone but no ringing from baseband voice line

Corrective actions Follow the procedures listed in the following table in order until the alarm condition is cleared.

Step	Condition or action						
1	Have the subscriber verify that the total REN of all of the devices connected to the baseband voice jack does not exceed five. If the REN does exceed five, disconnect enough devices to lower it. <u>Important:</u> REN is normally specified on a label on the phone, FAX machine or modem.						
2	Is the alarm condition cleared? <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
3	Perform diagnostic testing on the line. To do so, follow the instructions for line testing provided in the documentation for the type of telephone switch installed at the CO.						
4	Is <i>SuperLine</i> service restored or are no CO switch problems discovered? <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
5	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						

□

No data throughput; IAD ETHERNET indicator not lighted

Additional symptoms *SuperLine IAD*

The PWR indicator is lighted and the LINE indicator may be lighted.

Corrective actions Follow the procedures listed in the following table in order until the alarm condition is cleared.

Step	Condition or action						
1	<p>Verify that the subscriber's computer is connected with an appropriate cable to the <i>SuperLine</i> IAD ethernet port. There are two types of ethernet cable that can be used:</p> <ul style="list-style-type: none"> • When connecting an ethernet hub to the <i>SuperLine</i> Integrated Access Device ethernet port, use a straight through ethernet cable. • When connecting a computer directly to the <i>SuperLine</i> Integrated Access Device ethernet port, use a cross-over ethernet cable. <p>Correct any cabling problems found.</p>						
2	<p>Is the alarm condition cleared?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
3	<p>Instruct the subscriber to cycle power to the <i>SuperLine</i> IAD and wait up to 5 minutes for initialization to complete.</p>						
4	<p>Is the alarm condition cleared?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
5	<p>Send out a replacement <i>SuperLine</i> IAD.</p>						

Step	Condition or action						
6	Is the alarm condition cleared? <table border="1" data-bbox="727 296 1500 432"> <thead> <tr> <th data-bbox="727 296 922 338">IF ...</th> <th data-bbox="922 296 1500 338">THEN ...</th> </tr> </thead> <tbody> <tr> <td data-bbox="727 338 922 380">YES</td> <td data-bbox="922 338 1500 380">STOP. You have completed this procedure.</td> </tr> <tr> <td data-bbox="727 380 922 432">NO</td> <td data-bbox="922 380 1500 432">continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
7	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com.						

□

No data throughput; IAD ETHERNET indicator lighted

Additional symptoms

Adapter:

The PWR indicator is lighted.

The LINE indicator is lighted.

Corrective actions

Follow the procedures listed in the following table in order until the alarm condition is cleared.

Step	Condition or action						
1	Have the subscriber contact the person responsible for network administration. It is likely that this problem is caused by misconfigured networking software on the customer's computer.						
2	Is the alarm condition cleared? <table border="1" data-bbox="631 863 1401 1003"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
3	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com.						

□

Ethernet throughput varies

Corrective actions Follow the procedures listed in the following table in order until the alarm condition is cleared.

Step	Condition or action						
1	<p>Does the loss of ethernet throughput coincide with the use of derived lines?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. This is not an error condition. To ensure quality voice lines, the ETHERNET port gives up bandwidth when derived lines are in use.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. This is not an error condition. To ensure quality voice lines, the ETHERNET port gives up bandwidth when derived lines are in use.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. This is not an error condition. To ensure quality voice lines, the ETHERNET port gives up bandwidth when derived lines are in use.						
NO	continue to the next step.						
2	Have the subscriber check with a network administrator to make sure the problem is not related to a misconfiguration of the subscriber's networking software.						
3	<p>Does the ethernet throughput improve?</p> <table border="1"> <thead> <tr> <th>IF ...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>STOP. You have completed this procedure.</td> </tr> <tr> <td>NO</td> <td>continue to the next step.</td> </tr> </tbody> </table>	IF ...	THEN ...	YES	STOP. You have completed this procedure.	NO	continue to the next step.
IF ...	THEN ...						
YES	STOP. You have completed this procedure.						
NO	continue to the next step.						
4	If none of the previous actions corrects the problem, contact AG Communication Systems customer support by telephone at 1-888-888-AGCS (2427) or at the following e-mail address: superlinehelp@agcs.com .						

□



Appendix A: Alarm reporting and alarm strings

Overview

Alarm reporting Light emitting diodes (LEDs) on the front panel of the AG Communication Systems *SuperLine*™ Access Shelf circuit cards indicate the status of each individual card. During normal power-up and initialization, LEDs turn red. After power-up and initialization, the LEDs light only when a fail conditions exists or the shelf reinitializes. The exception is the green system power-on LED on the POWR card, which lights when *SuperLine* Access Shelf power is present.

The telephony type used by the *SuperLine* Access Shelf determines how alarm information is reported:

- If the telephony type is TR-303:
 - LEDs indicate alarms.
 - The *SuperLine* Element Manager communicates alarm information over simple network management protocol (SNMP).
 - TR-303 EOC data links connected to the switch transmit alarm data.
- If the telephony type is TR-008 Mode 1:
 - LEDs indicate alarms.
 - The *SuperLine* Element Manager communicates alarm information over SNMP.
 - TR-008 SLC 96 data link sends Major, Minor, and power or miscellaneous alarm information to the switch.
- If the telephony type is DDI or the derived lines carry data traffic only:
 - LEDs indicate alarms.
 - The *SuperLine* Element Manager communicates alarm information over SNMP.
 - No switch alarm interface is present.

TR-303 alarm strings

The following list describes TR-303 alarms, their severity, their origin or entity, and the alarm text strings. The embedded operations channel (EOC) interface reports these alarms to the switch, which then determines how the site processes the alarm strings.

- Free Running is a Major alarm.
 - Alarm origin/entity: Network Element
 - Alarm string: SysFreeRunning

Important: This alarm is not reported over the EOC interface because DS1s carrying the data links are not in service.

- Circuit Pack Fail is a Major or Minor alarm. (QV8 failure is always a Minor alarm.)
 - Alarm origin/entity: QV8, VDS1, FETH, POWR
 - Alarm string: CPFail
- Circuit Pack Incompatible is a Major alarm for the FETH, VDS1, or POWR cards and a Minor alarm for the QV8.
 - Alarm origin/entity: QV8, VDS1, FETH, POWR
 - Alarm string: CPIncompatible
- DS1 Loss of Frame is a Major alarm.
 - Alarm origin/entity: DS1 #1 – DS1 #4
 - Alarm string: DS1LOF
- DS1 Loss of Signal is a Major alarm.
 - Alarm origin/entity: DS1 #1 – DS1 #4
 - Alarm string: DS1LOS
- DS1 Yellow is a Minor alarm.
 - Alarm origin/entity: DS1 #1 – DS1 #4
 - Alarm string: DS1Yellow
- DS1 AIS is a Major alarm.
 - Alarm origin/entity: DS1 #1 – DS1 #4
 - Alarm string: DS1AIS
- DS1 Loopback is a Minor alarm.
 - Alarm origin/entity: DS1 #1 – DS1 #4
 - Alarm string: DS1Loopback
- TR-303 Datalink Failure is a Minor alarm if one link fails or a major alarm if both links fail.
 - Alarm origin/entity: EOC1, EOC2, TMC1, TMC2
 - Alarm string: TR303DatalinkFail

- Temperature Alarm is a Major alarm.
 - Alarm origin/entity: Network Element
 - Alarm string: TemperatureAlarm
- (External) Major Power is a Major alarm.
 - Alarm origin/entity: Network Element
 - Alarm string: PowerMajor
- (External) Minor Power is a Minor alarm.
 - Alarm origin/entity: Network Element
 - Alarm string: PowerMinor
- Power Battery Discharge is a Major alarm.
 - Alarm origin/entity: Network Element
 - Alarm string: BatteryDischarging
- Power Fuse is a Major alarm.
 - Alarm origin/entity: Network Element
 - Alarm string: Fuse
- Miscellaneous 1 Alarm is a Major alarm.
 - Alarm origin/entity: Network Element
 - Alarm string: Misc1Alarm
- Miscellaneous 2 Alarm is a Major alarm.
 - Alarm origin/entity: Network Element
 - Alarm string: Misc2Alarm
- Power Out of Tolerance is a Major alarm.
 - Alarm origin/entity: POWR card
 - Alarm string: PowerOutOfTolerance
- Door Opened is a Minor alarm.
 - Alarm origin/entity: Network Element
 - Alarm string: DoorOpened

TR-008 Mode 1 alarm strings

The following alarms at the shelf send different types of alarm information on the SLC 96 data link, depending on the alarm's origin:

- Circuit Pack Fail alarm:
 - If the origin is the VDS1 or FETH card, a Major alarm is sent.
 - If the origin is the POWR card, a Pwr/Misc alarm is sent.
 - If the origin is the QV8 card, a Minor alarm is sent.
- Circuit Pack Incompatible alarm:
 - If the origin is the VDS1, FETH, or POWR card, a Major alarm is sent.
 - If the origin is the QV8 card, a Minor alarm is sent.
- DS1 Loss of Signal, DS1 Loss of Frame, or AIS alarms always originate on DS1 #1 – DS1 #4. They always send a Major alarm.
- The DS1 Yellow Detected alarm always originates on DS1 #1 – DS1 #4 and always sends a Minor alarm.
- The DS1 Loopback alarm always originates on DS1 #1 – DS1 #4 and always sends a Minor alarm.
- The Temperature Alarm alarm originates with a Network Element and always sends Major and Pwr/Misc alarms.
- The (External) Power Major alarm originates with a Network Element and always sends Major and Pwr/Misc alarms.
- The (External) Power Minor alarm originates with a Network Element and always sends Minor and Pwr/Misc alarms.
- The Power Battery Discharge alarm originates with a Network Element and always sends Major and Pwr/Misc alarms.
- The Power Fuse alarm originates with a Network Element and always sends Major and Pwr/Misc alarms.
- The Miscellaneous 1 alarm originates with a Network Element and always sends Minor and Pwr/Misc alarms.
- The Miscellaneous 2 alarm originates with a Network Element and always sends Minor and Pwr/Misc alarms.
- The Power Out of Tolerance alarm originates with a Network Element and always sends Major and Pwr/Misc alarms.
- The Door Opened alarm originates with a Network Element and always sends Minor and Pwr/Misc alarms.

□



Appendix B: DS0 channel assignments for EM telephony configurations

Introduction Important: You can set the telephony type for the *SuperLine*™ Access Shelf using the Telephony tab screen of the *SuperLine* Element Manager application. Refer to the *SuperLine Access System Element Manager User's Guide* for more information.

In TR-008 Mode 1 and DDI telephony modes, each derived phone line is mapped to a specific DS0—a channel within a DS1. In the TR-008 Mode 1 and DDI modes, the relationship between a derived phone line and a DS0 never varies. In TR-303 telephony mode, however, each derived phone line is mapped dynamically to a DS0 by the central office (CO) sending a message over the Timeslot Management Channel (TMC).

How to read the tables Five telephony configurations are supported by the *SuperLine* Element Manager in the TR-008 Mode 1 and DDI telephony modes. They are as follows:

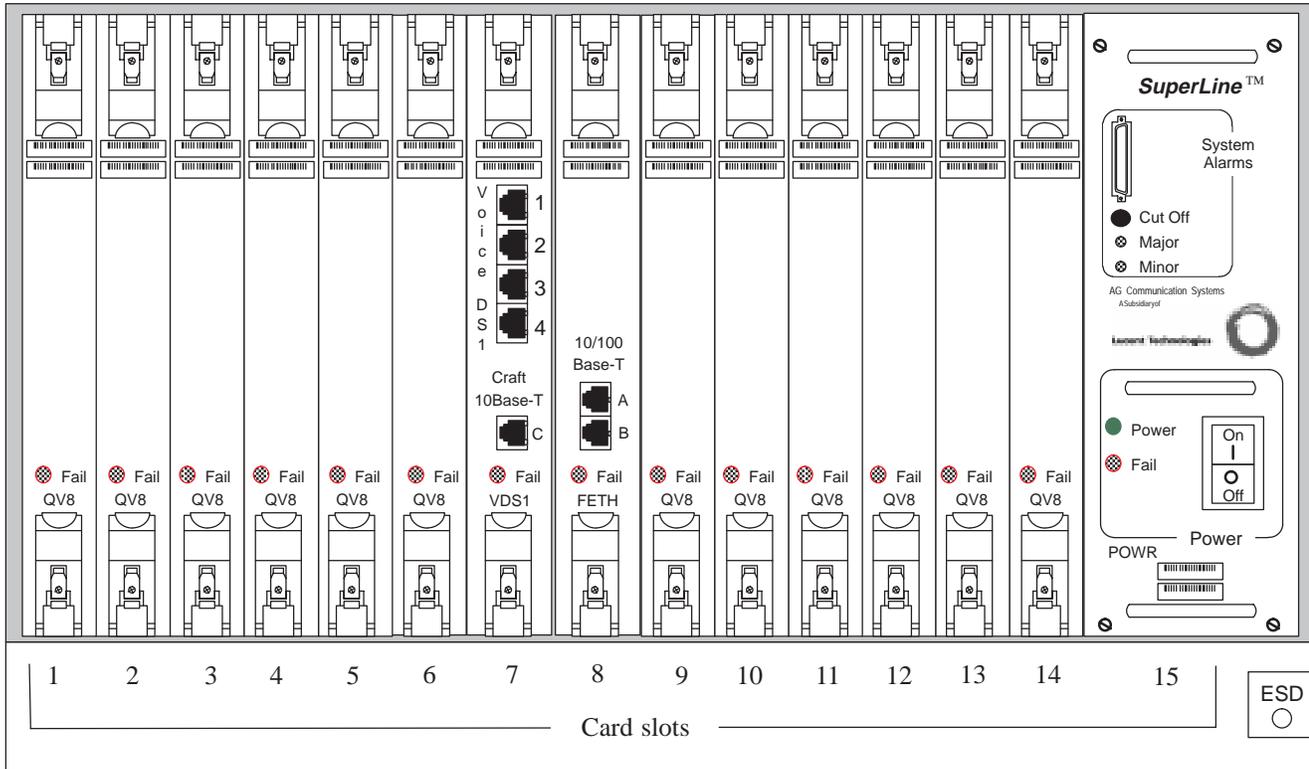
- 2 on Ports 1–4
- 2 on Slots 1–6
- 2, 1, 0 Repeated
- 1 on Slots 1–6, 2 on 9–11
- 1 on all Ports

The following tables list the DS0 derived line mapping for both TR-008 Mode 1 and DDI telephony. In columns DS1-1 through DS1-4, the first number refers to the QV8 card slot number; the second number to the QV8 circuit number; and the third number to the derived line number.

Example: On DS0 channel 3 for TR-008 Mode 1 telephony type, the mapping for DS1-1 is 1–1–2, meaning QV8 card slot 1, QV8 circuit 1, and derived line 2.

QV8 cards in a fully equipped SuperLine Access Shelf

The following figure shows a fully equipped *SuperLine* Access Shelf. The 12 QV8 cards are positioned in card slots 1–6 and 9–14. Other cards in the shelf are the VDS1 card in card slot 7, the FETH card in card slot 8, and the POWR card in card slot 15.



2 on Ports 1–4

In the Telephony tab screen of the *SuperLine* Element Manager, you can select this configuration from the **Derived Lines/Loop** drop-down list box as **2 on Ports 1–4**. When that option is selected, two derived lines are placed on ports 1 through 4 on all QV8 cards. Ports 5–8 have no derived lines available but can be used for data traffic and baseband telephony.

The following table lists the DS0 derived line mapping for both TR-008 Mode 1 and DDI telephony types in the format card slot number–circuit number–derived line number.

DS1-1	DS1-2	DS1-3	DS1-4	DS0 channels for TR-008 Mode 1	DS0 channels for DDI
1-1-1	4-1-1	9-1-1	12-1-1	1	1
1-1-2	4-1-2	9-1-2	12-1-2	3	2
1-2-1	4-2-1	9-2-1	12-2-1	5	3
1-2-2	4-2-2	9-2-2	12-2-2	7	4
1-3-1	4-3-1	9-3-1	12-3-1	9	5
1-3-2	4-3-2	9-3-2	12-3-2	11	6
1-4-1	4-4-1	9-4-1	12-4-1	13	7
1-4-2	4-4-2	9-4-2	12-4-2	15	8
2-1-1	5-1-1	10-1-1	13-1-1	17	9
2-1-2	5-1-2	10-1-2	13-1-2	19	10
2-2-1	5-2-1	10-2-1	13-2-1	21	11
2-2-2	5-2-2	10-2-2	13-2-2	23	12
2-3-1	5-3-1	10-3-1	13-3-1	2	13
2-3-2	5-3-2	10-3-2	13-3-2	4	14
2-4-1	5-4-1	10-4-1	13-4-1	6	15
2-4-2	5-4-2	10-4-2	13-4-2	8	16
3-1-1	6-1-1	11-1-1	14-1-1	10	17
3-1-2	6-1-2	11-1-2	14-1-2	12	18
3-2-1	6-2-1	11-2-1	14-2-1	14	19
3-2-2	6-2-2	11-2-2	14-2-2	16	20
3-3-1	6-3-1	11-3-1	14-3-1	18	21
3-3-2	6-3-2	11-3-2	14-3-2	20	22
3-4-1	6-4-1	11-4-1	14-4-1	22	23
3-4-2	6-4-2	11-4-2	14-4-2	24	24

2 on Slots 1–6

In the Telephony tab screen of the *SuperLine* Element Manager, you can select this configuration from the **Derived Lines/Loop** drop-down list box as **2 on Slots 1–6**. When that option is selected, two derived lines are placed on all ports found on the QV8 cards in card slots 1 through 6. QV8 cards in any other card slot have no derived lines available but can be used for data traffic and baseband telephony.

The following table lists the DS0 derived line mapping for both TR-008 Mode 1 and DDI telephony types in the format card slot number–circuit number–derived line number.

DS1-1	DS1-2	DS1-3	DS1-4	DS0 channels for TR-008 Mode 1	DS0 channels for DDI
1-1-1	2-5-1	4-1-1	5-5-1	1	1
1-1-2	2-5-2	4-1-2	5-5-2	3	2
1-2-1	2-6-1	4-2-1	5-6-1	5	3
1-2-2	2-6-2	4-2-2	5-6-2	7	4
1-3-1	2-7-1	4-3-1	5-7-1	9	5
1-3-2	2-7-2	4-3-2	5-7-2	11	6
1-4-1	2-8-1	4-4-1	5-8-1	13	7
1-4-2	2-8-2	4-4-2	5-8-2	15	8
1-5-1	3-1-1	4-5-1	6-1-1	17	9
1-5-2	3-1-2	4-5-2	6-1-2	19	10
1-6-1	3-2-1	4-6-1	6-2-1	21	11
1-6-2	3-2-2	4-6-2	6-2-2	23	12
1-7-1	3-3-1	4-7-1	6-3-1	2	13
1-7-2	3-3-2	4-7-2	6-3-2	4	14
1-8-1	3-4-1	4-8-1	6-4-1	6	15
1-8-2	3-4-2	4-8-2	6-4-2	8	16
2-1-1	3-5-1	5-1-1	6-5-1	10	17
2-1-2	3-5-2	5-1-2	6-5-2	12	18
2-2-1	3-6-1	5-2-1	6-6-1	14	19
2-2-2	3-6-2	5-2-2	6-6-2	16	20
2-3-1	3-7-1	5-3-1	6-7-1	18	21
2-3-2	3-7-2	5-3-2	6-7-2	20	22
2-4-1	3-8-1	5-4-1	6-8-1	22	23
2-4-2	3-8-2	5-4-2	6-8-2	24	24

2, 1, 0 Repeated

In the Telephony tab screen of the *SuperLine* Element Manager, you can select this configuration from the **Derived Lines/Loop** drop-down list box as **2, 1, 0 Repeated**. When that option is selected, two derived lines are placed on QV8 cards in card slots 1, 4, 9, and 12. One derived line is placed on QV8 cards in slots 2, 5, 10, and 13. No derived lines are placed on QV8 cards in slots 3, 6, 11, and 14, but those lines can be used for data traffic and baseband telephony.

The following table lists the DS0 derived line mapping for both TR-008 Mode 1 and DDI telephony types in the format card slot number–circuit number–derived line number.

DS1-1	DS1-2	DS1-3	DS1-4	DS0 channels for TR-008 Mode 1	DS0 channels for DDI
1-1-1	4-1-1	9-1-1	12-1-1	1	1
1-1-2	4-1-2	9-1-2	12-1-2	3	2
1-2-1	4-2-1	9-2-1	12-2-1	5	3
1-2-2	4-2-2	9-2-2	12-2-2	7	4
1-3-1	4-3-1	9-3-1	12-3-1	9	5
1-3-2	4-3-2	9-3-2	12-3-2	11	6
1-4-1	4-4-1	9-4-1	12-4-1	13	7
1-4-2	4-4-2	9-4-2	12-4-2	15	8
1-5-1	4-5-1	9-5-1	12-5-1	17	9
1-5-2	4-5-2	9-5-2	12-5-2	19	10
1-6-1	4-6-1	9-6-1	12-6-1	21	11
1-6-2	4-6-2	9-6-2	12-6-2	23	12
1-7-1	4-7-1	9-7-1	12-7-1	2	13
1-7-2	4-7-2	9-7-2	12-7-2	4	14
1-8-1	4-8-1	9-8-1	12-8-1	6	15
1-8-2	4-8-2	9-8-2	12-8-2	8	16
2-1-1	5-1-1	10-1-1	13-1-1	10	17
2-2-1	5-2-1	10-2-1	13-2-1	12	18
2-3-1	5-3-1	10-3-1	13-3-1	14	19
2-4-1	5-4-1	10-4-1	13-4-1	16	20
2-5-1	5-5-1	10-5-1	13-5-1	18	21
2-6-1	5-6-1	10-6-1	13-6-1	20	22
2-7-1	5-7-1	10-7-1	13-7-1	22	23
2-8-1	5-8-1	10-8-1	13-8-1	24	24

1 on Slots 1–6, 2 on 9–11

In the Telephony tab screen of the *SuperLine* Element Manager, you can select this configuration from the **Derived Lines/Loop** drop-down list box as **1 on Slots 1–6, 2 on 9–11**. When that option is selected, one derived line is placed on QV8 cards in card slots 1 through 6, and two derived lines are placed on QV8 cards in card slots 9 through 11. QV8 cards in card slots 12–14 have no derived lines but can be used for data traffic and baseband telephony.

The following table lists the DS0 derived line mapping for both TR-008 Mode 1 and DDI telephony types in the format card slot number–circuit number–derived line number.

DS1-1	DS1-2	DS1-3	DS1-4	DS0 channels for TR-008 Mode 1	DS0 channels for DDI
1-1-1	4-1-1	9-1-1	10-5-1	1	1
1-2-1	4-2-1	9-1-2	10-5-2	3	2
1-3-1	4-3-1	9-2-1	10-6-1	5	3
1-4-1	4-4-1	9-2-2	10-6-2	7	4
1-5-1	4-5-1	9-3-1	10-7-1	9	5
1-6-1	4-6-1	9-3-2	10-7-2	11	6
1-7-1	4-7-1	9-4-1	10-8-1	13	7
1-8-1	4-8-1	9-4-2	10-8-2	15	8
2-1-1	5-1-1	9-5-1	11-1-1	17	9
2-2-1	5-2-1	9-5-2	11-1-2	19	10
2-3-1	5-3-1	9-6-1	11-2-1	21	11
2-4-1	5-4-1	9-6-2	11-2-2	23	12
2-5-1	5-5-1	9-7-1	11-3-1	2	13
2-6-1	5-6-1	9-7-2	11-3-2	4	14
2-7-1	5-7-1	9-8-1	11-4-1	6	15
2-8-1	5-8-1	9-8-2	11-4-2	8	16
3-1-1	6-1-1	10-1-1	11-5-1	10	17
3-2-1	6-2-1	10-1-2	11-5-2	12	18
3-3-1	6-3-1	10-2-1	11-6-1	14	19
3-4-1	6-4-1	10-2-2	11-6-2	16	20
3-5-1	6-5-1	10-3-1	11-7-1	18	21
3-6-1	6-6-1	10-3-2	11-7-2	20	22
3-7-1	6-7-1	10-4-1	11-8-1	22	23
3-8-1	6-8-1	10-4-2	11-8-2	24	24

1 on all Ports

In the Telephony tab screen of the *SuperLine* Element Manager, you can select this configuration from the **Derived Lines/Loop** drop-down list box as **1 on all Ports**. When that option is selected, one derived line is placed on every port on every QV8 card.

The following table lists the DS0 derived line mapping for both TR-008 Mode 1 and DDI telephony in the format card slot number–circuit number–derived line number.

DS1-1	DS1-2	DS1-3	DS1-4	DS0 channels for TR-008 Mode 1	DS0 channels for DDI
1-1-1	4-1-1	9-1-1	12-1-1	1	1
1-2-1	4-2-1	9-2-1	12-2-1	3	2
1-3-1	4-3-1	9-3-1	12-3-1	5	3
1-4-1	4-4-1	9-4-1	12-4-1	7	4
1-5-1	4-5-1	9-5-1	12-5-1	9	5
1-6-1	4-6-1	9-6-1	12-6-1	11	6
1-7-1	4-7-1	9-7-1	12-7-1	13	7
1-8-1	4-8-1	9-8-1	12-8-1	15	8
2-1-1	5-1-1	10-1-1	13-1-1	17	9
2-2-1	5-2-1	10-2-1	13-2-1	19	10
2-3-1	5-3-1	10-3-1	13-3-1	21	11
2-4-1	5-4-1	10-4-1	13-4-1	23	12
2-5-1	5-5-1	10-5-1	13-5-1	2	13
2-6-1	5-6-1	10-6-1	13-6-1	4	14
2-7-1	5-7-1	10-7-1	13-7-1	6	15
2-8-1	5-8-1	10-8-1	13-8-1	8	16
3-1-1	6-1-1	11-1-1	14-1-1	10	17
3-2-1	6-2-1	11-2-1	14-2-1	12	18
3-3-1	6-3-1	11-3-1	14-3-1	14	19
3-4-1	6-4-1	11-4-1	14-4-1	16	20
3-5-1	6-5-1	11-5-1	14-5-1	18	21
3-6-1	6-6-1	11-6-1	14-6-1	20	22
3-7-1	6-7-1	11-7-1	14-7-1	22	23
3-8-1	6-8-1	11-8-1	14-8-1	24	24

□



Glossary

10Base-T

An Ethernet Local Area Network (LAN) that operates on shielded twisted-pair (STP) or Category 5 UTP cable. Runs at 10 Mbps.

100Base-T

An Ethernet Local Area Network (LAN) that operates on shielded twisted-pair (STP) or Category 5 UTP cable. Runs at 100 Mbps.

A AC

Alternating Current

AIS

Alarm Indication Signal

B Baseband voice line

A telephone line that supports standard telephone service only over the baseband voice band, plus all standard telephony services.

C Circuit pack

A printed circuit board with microprocessors, transistors, and other electronics components that slides into the AG Communication Systems *SuperLine*™ Access Shelf. Circuit packs include the POWR card, the QV8 line card, the FETH, and the VDS1 cards.

CO

Central Office

CPEF

Customer Premises Equipment Filter

CSC

Customer Support Center at AG Communication Systems

D DDI

Direct Digital Interface

Derived voice line

A standard 64 Kbps μ -law voice offering, supporting normal telephony services such as Caller ID, special ringing, message waiting, V.34 and V.90 modems, and so on. From the subscriber's perspective, a derived voice looks and behaves like standard telephony service.

DN

Directory Number

DS0

Digital Signal, Level 0. DS0 is equal to one voice conversation digitized under PCM. Twenty-four DS0s (24 x 64 Kbps) equal one DS1.

DS1

Digital Signal, Level 1. DS1 is 1.544 Mbps.

DSX

Digital Signal Cross-Connect; Digital Signal Cross-Connection .

E Element Manager (EM)

A software application for personal computers that enables Telco personnel to configure, administer, and monitor *SuperLine* Access Systems.

EOC

Embedded Operations Channel

ESD

Electrostatic Discharge

Ethernet

A network topology that supports high-speed data communication among systems. A widely used standard for LANs.

Event log

A record of alarms and other events on the *SuperLine* Access System. *SuperLine* Element Manager records events in an individual event log for each *SuperLine* Access Shelf with which it has an open session, and records events on all *SuperLine* shelves in a global event log. Multi-Element Manager uses Hewlett-Packard OpenView® Network Node Manager's event log to record such events.

F FETH

Fast Ethernet card for the *SuperLine* Access Shelf.

Free run

A condition in which the *SuperLine* Access Shelf's first two DS1s are no longer synchronized with the network clock. This condition causes all shelf DS1s to become disconnected

I **IP**
Internet Protocol

Kbps
Kilobits per second (1,000 bits per second). A data transfer rate

L **LAN**
Local Area Network

LED
Light-Emitting Diode

Line build-out
Distance between a *SuperLine* Access System and the local digital switch

LOF
Loss of Frame

LOS
Loss of Service

M **Multi-Element Manager (Multi-EM)**

A software application from Lucent Technologies and AG Communication Systems that provides a graphical user interface for monitoring and administering *SuperLine* Access Shelves and their equipment. Multi-EM is a version of *SuperLine* Element Manager that is integrated with OpenView Network Node Manager.

N **NIC**
Network Interface Card

NSP
Network service provider

O **OOS**
Out of service

P **PC**
Personal Computer
POOT
Power Out of Tolerance

Q **QV8**
Quadrature Amplitude Modulation Voice 8 card for the *SuperLine* Access Shelf. Supports up to eight baseband telephone lines and an additional sixteen derived lines.

R **REN**
Ringer equivalency number

S **SLC 96**
Subscriber Loop Carrier 96
SPFC
SuperLine POTS Filter Card
SPFM
SuperLine POTS Filter Module

STP
Shielded Twisted Pair

***SuperLine* Shelf**

A module that houses *SuperLine* line cards (QV8), VDS1, FETH, and POWR cards and the SPFM assembly.

***SuperLine* Access System**

AG Communication Systems product that enables a single standard copper, twisted-pair customer telephone connection to support multiple lines carrying either voice or data traffic.

***SuperLine* Element Manager (SuperLine EM)**

A software application from Lucent Technologies and AG Communication Systems that provides a graphical user interface for monitoring and administering *SuperLine* Shelves and their equipment.

***SuperLine* Integrated Access Device (IAD)**

A modem that makes *SuperLine* service possible at the customer premises.

T TCP/IP

Transmission Control Protocol/Internet Protocol. The dominant protocol suite used on the World Wide Web. TCP allows a process on one machine to send data to a process on another machine using the IP.

Telco

Telephone company

TMC

Timeslot Management Channel

TR-008 Mode 1

Protocol that defines an interface between a CO switch and a remote terminal to handle all call processing and operational functions. Developed by Telcordia Technologies Inc. (formerly Bellcore).

TR-303

Protocol that defines an interface between a CO switch and a remote terminal to handle all call processing and operational functions. Developed by Telcordia Technologies Inc. (formerly Bellcore).

U UTP

Unshielded Twisted Pair

V VDS1

Voice Digital Signal 1 card for the *SuperLine* Access Shelf.





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