

ATM Line Cards Models 8955, 8965, 8968, 8975, and 8985 Installation Instructions

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ATM Line Cards

The Models 8955, 8965, 8968, 8975, and 8985 Asynchronous Transfer Mode (ATM) Line Cards are circuit boards mounted in an 8620 or 8820 Broadband Loop Carrier (BLC), used to transport ATM cells at high speeds over a single twisted-pair connection or, optionally, two twisted-pair connections (8985 only). They must be used in conjunction with a Shelf Concentration and Processing (SCP) card, which is used to configure and monitor the line cards.

- Model 8955 supports ReachDSL® 2.2 concurrent with POTS.
- Models 8965-B2 and 8968 support Asymmetric Digital Subscriber Line (ADSL), ADSL2, and ADSL2+ concurrent with POTS. The Model 8965 has 24 DSL ports and the Model 8968 has 48 ports.
- Model 8975 supports ReachDSL+, providing ADSL or ReachDSL 2.2 on a port-by-port basis depending on the capabilities of the line and endpoint.
- Model 8985-B2 supports 2-wire and 4-wire Single-pair High-speed Digital Subscriber Line (SHDSL).

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Product Documentation Online

Complete documentation for this product is available at www.paradyne.com.
Select *Support* → *Technical Manuals*.

Document Number	Document Title
6050-A2-GZ40	<i>Hotwire Central Office Universal POTS Splitter, Models 6050 and 7020, Installation Instructions</i>
6390-A2-GN10	<i>Hotwire ReachDSL Modem, Model 6390 with Inline Phone Filter, Installation Instructions</i>
8400-A2-GB20	<i>Shelf Concentration and Processing (SCP) Card with ATM Uplink User's Guide</i>
8400-A2-GB21	<i>Shelf Concentration and Processing (SCP) Card with IP Uplink User's Guide</i>
8400-A2-GZ40	<i>Shelf Concentration and Processing (SCP) Card Installation Instructions</i>
8620-A2-GN20	<i>8620 Broadband Loop Carrier Installation Guide</i>
8820-A2-GN20	<i>8820 Broadband Loop Carrier Installation Guide</i>
8900-A2-GB20	<i>ATM Line Cards, Models 8955, 8965, 8968, 8975, and 8985, User's Guide</i>
8900-A2-GZ41	<i>8820 Front Cable Management Bracket Installation Instructions</i>

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Installation Overview

Before installing the ATM line card, verify:

- That you have obtained the applicable cables; refer to [Cables You Need](#).
- That the 8620 or 8820 Broadband Loop Carrier (BLC) is installed and power is supplied to the chassis.

Installation of the ATM line card consists of:

- Installing the card in the BLC.
- Connecting to a Main Distribution Frame (MDF).
- Connecting to the uplink.
- Configuring your unit using the web interface. Refer to the SCP card's online Help and the [ATM Line Cards, Models 8955, 8965, 8968, 8975, and 8985, User's Guide](#) for detailed configuration procedures.

Be sure to register your warranty at www.paradyne.com/warranty.

Cables You Need

The following standard cables are used with this product:

- **For the DSL network connection:** Plug-ended Telco 50-pin cable for connection from the BLC rear connector to the MDF or other demarcation point. Refer to the appropriate BLC Installation Guide and, if applicable, the documentation that came with your POTS splitter for more information.

For Model 8968 cards, two cables are required.

- **For the uplink:** Refer to the [Shelf Concentration and Processing \(SCP\) Card with ATM Uplink User's Guide](#) or [Shelf Concentration and Processing \(SCP\) Card with IP Uplink User's Guide](#) for cable specification information.

For more information refer to *Connector Pin Assignments* in the [ATM Line Cards, Models 8955, 8965, 8968, 8975, and 8985, User's Guide](#).

Installing the Cards in a BLC

HANDLING PRECAUTIONS FOR STATIC-SENSITIVE DEVICES



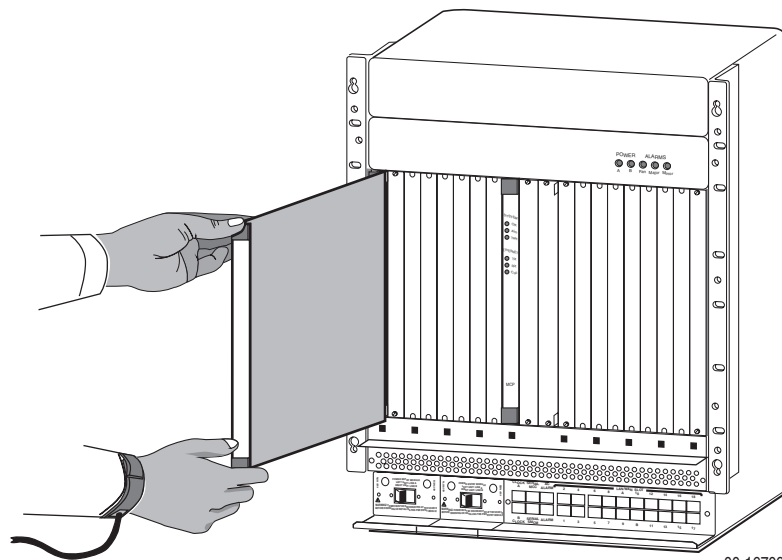
This product is designed to protect sensitive components from damage due to electrostatic discharge (ESD) during normal operation. When performing installation procedures, however, take proper static control precautions to prevent damage to equipment. If you are not sure of the proper static control precautions, contact your nearest sales or service representative.

An ATM line card can be installed in, removed from, and replaced in a BLC without disrupting service to the other cards in the chassis.

Procedure

To install the ATM line card:

1. Determine in which slot the unit will be installed. Verify that cards in adjacent slots have been fastened.
2. Remove the filler plate from the installation slot and store for possible later use.
3. Holding the line card with the component side facing up (8620 BLC) or facing right (8820 BLC), insert it into the card guides.



00-16709

CAUTION:

Do not force the unit into the slot. This could damage the backplane connectors. If the card does not seat properly, remove the card and reinstall it. If it still does not seat properly, call your service representative.

-
- Slide the unit into the slot until the power and network connectors seat firmly in the mating connectors on the backplane.

The unit performs a power-on self-test. All of the LEDs turn ON and OFF briefly. When the self-test is completed successfully, the SYSTEM OK LED begins to pulse.

If the LED is not pulsing, notify your service representative.

- Secure the unit by fastening the screws at each end of the faceplate.

Connecting to the ATM or IP Network

The connection to the ATM or IP network is made through the Shelf Concentration and Processing (SCP) card in the BLC. Depending on the model, the SCP card supports an OC3/STM1, E1 IMA, DS1 IMA, or Gigabit Ethernet uplink. See the [Shelf Concentration and Processing \(SCP\) Card Installation Instructions](#) for more information.

Connecting 24-Port Models to an MDF or POTS Splitter

You can connect 24-port ATM line cards to an MDF or other demarcation point through the BLC. Do not connect the Model 8985 to a POTS splitter. Refer to the appropriate BLC Installation Guide for more information.

Refer to *Connector Pin Assignments* in the [ATM Line Cards, Models 8955, 8965, 8968, 8975, and 8985, User's Guide](#) for pinouts of the BLC ports.

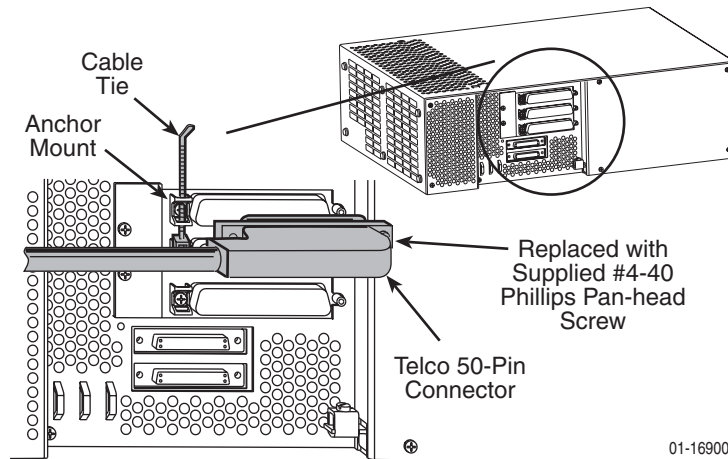
Fastening the Cable with Cable Ties

► Procedure

To fasten the Telco connector to the chassis using the provided cable ties:

- Replace the longer captive screw on the cable connector with the #4-40 Phillips pan-head screw shipped in a plastic bag with the BLC.
- Locate the connector on the back of the chassis that corresponds with the slot where you installed the line card. Connectors are labeled 2 and 3 on the 8620 chassis, and 1–18 on the 8820 chassis.
- Plug the Telco 50-pin cable into the appropriate connector.
- Thread the provided cable tie through the anchor mount on the end of the connector where the cable will lie. Tighten the cable tie around the connector and cut off any excess.

- Secure the other end of the Telco 50-pin cable by tightening the captive pan-head screw.



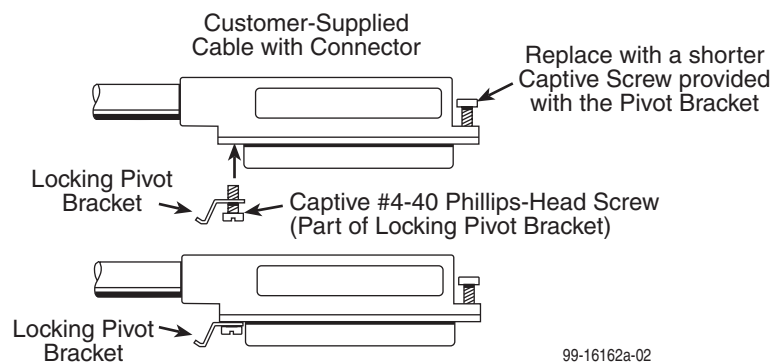
- If a ferrite choke is supplied with your line card, clamp it around the cable as close as possible to the chassis. If it fits loosely around the cable, fasten it with a cable tie.

Fastening a Cable with Locking Pivot Brackets

► Procedure

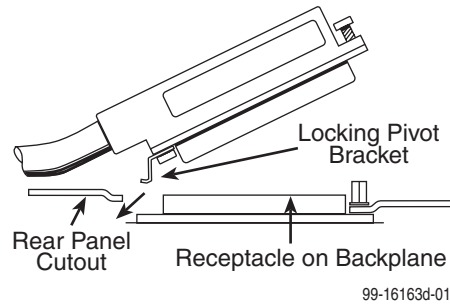
To fasten a Telco connector to the chassis with locking pivot brackets:

- Replace the longer captive screw on the cable connector with the #4-40 Phillips pan-head screw shipped in a plastic bag with the BLC.
- Install the locking pivot bracket onto the cable end of the connector using the captive screw, as illustrated below.

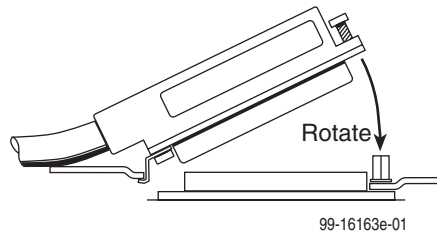


- Locate the connector on the back of the chassis that corresponds with the slot where you installed the line card. Connectors are labeled 2 and 3 on the 8620 chassis, and 1–18 on the 8820 chassis.

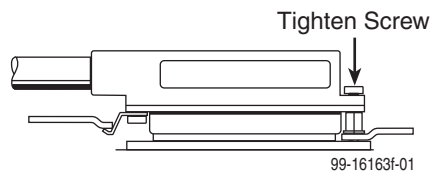
4. Insert the bottom edge of the locking pivot bracket inside the lower edge of the rear panel cutout next to that connector.



5. Align the two connectors.
6. Rotate the connector until it is fully seated.



7. Tighten the captive screw on the top of the cable's connector.



8. If a ferrite choke is supplied with your line card, clamp it around the cable as close as possible to the chassis. If it fits loosely around the cable, fasten it with a cable tie.

Connecting a 24-Port Card to the MDF

► Procedure

To connect the BLC containing the card to an MDF:

1. Connect the cable to the chassis as described in [Fastening the Cable with Cable Ties](#) on page 6 or [Fastening a Cable with Locking Pivot Brackets](#) on page 7.
2. Dress the cable to the side the connector is nearest.
3. *For a Model 8955, 8965, 8975, or 8985 with no POTS service:*
 - Attach the other end of the cable to the appropriate MDF or demarcation point. A converter may be necessary for terminating the other end of the cable on a punchdown block before cross-connecting to an MDF.

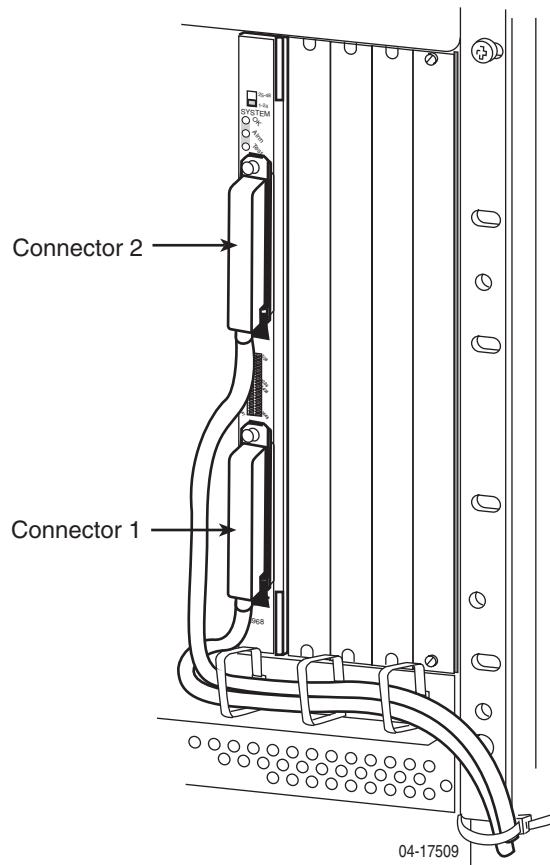
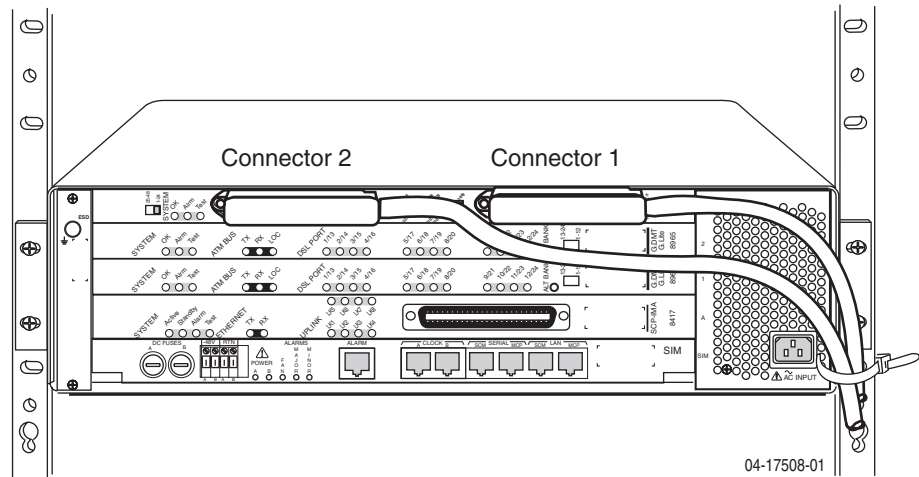
For a Model 8955, 8965, or 8975 using an ADSL POTS splitter:

- Attach the other end of the cable to the XDSL interface of the Corning Cable Systems ADSL POTS Splitter Rack-Mount Shelf or the Hotwire 6050 Central Office Universal POTS Splitter. Refer to the document that came with the POTS splitter for the additional connections.

Connecting 48-Port Models to an MDF or POTS Splitter

Connect a 48-port ATM line card such as the Model 8968 to an MDF or other demarcation point using the connectors on the faceplate of the card.

- Connect a cable to the bottom (8820) or right (8620) connector on the card's faceplate for DSL ports 1–24.
- Connect a cable to the top (8820) or left (8620) connector on the card's faceplate for DSL ports 25–48.

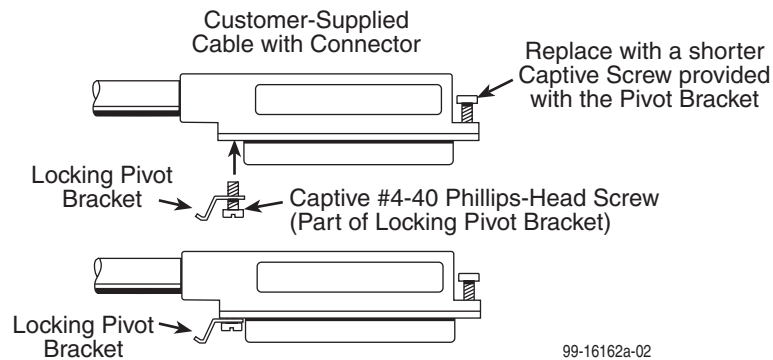


Refer to *Connector Pin Assignments* in the [ATM Line Cards, Models 8955, 8965, 8968, 8975, and 8985, User's Guide](#) for pinouts of the line card connectors.

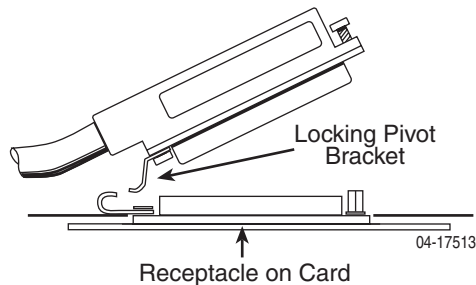
► Procedure

To connect each receptacle of a 48-port line card to an MDF or POTS splitter:

1. Replace the longer captive screw on your cable connector with the #4-40 Phillips pan-head screw shipped in a plastic bag with the BLC.
2. Install the locking pivot bracket onto the cable end of the connector using the captive screw, as illustrated below.

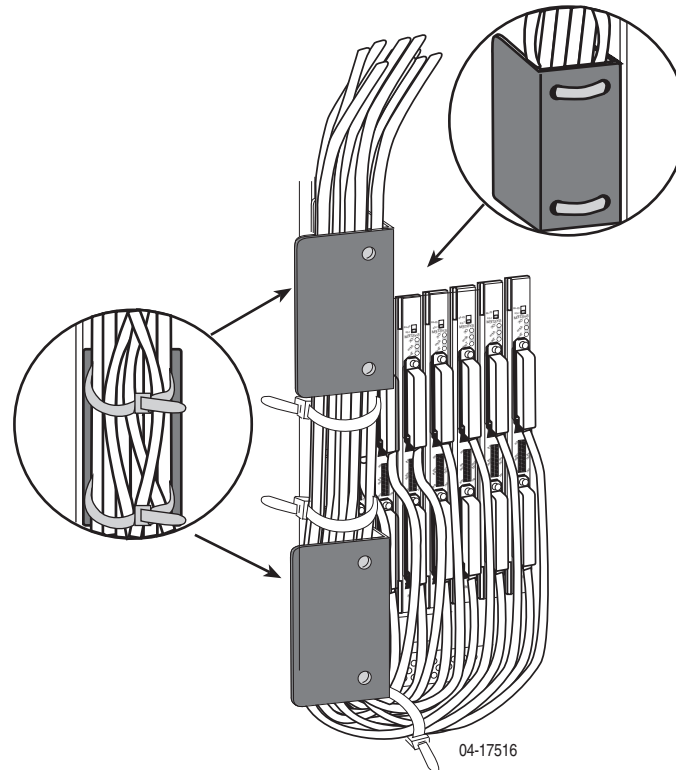


3. Insert the bottom edge of the locking pivot bracket into the hook next to the receptacle.



4. Align the two connectors and press the cable connector onto the receptacle.
5. Tighten the captive screw on the top of the cable's connector.
6. Dress the cables toward the nearest rail and fix them with cable ties. Optionally, use front cable management brackets (feature number 8900-F1-001) to hold and direct the cables, as shown below. See the [8820](#)

Front Cable Management Bracket Installation Instructions (document number 8900-A2-GZ41) for more information.

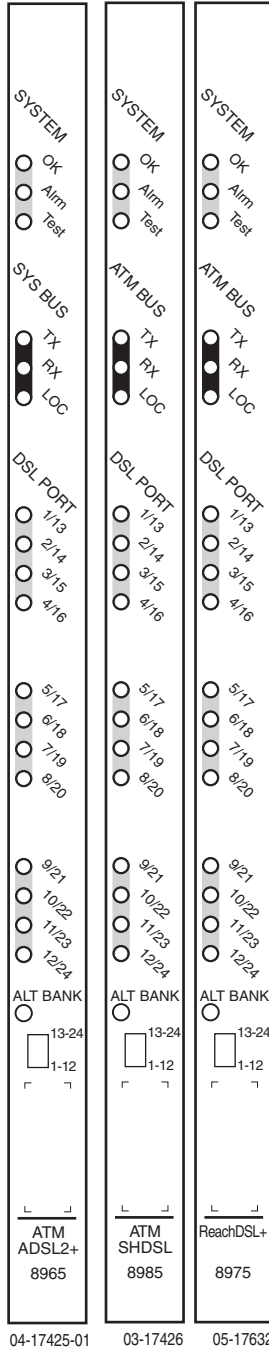


7. If ferrite chokes are supplied with your line card, clamp them around the cables as close as possible to the card. If they fit loosely around the cables, fasten them with cable ties.
8. For a card without POTS service, attach the other ends of the cables to the appropriate MDF or demarcation point. A converter may be necessary for terminating the other end of the cables on a punchdown block before cross-connecting to an MDF.

For a card with POTS service, attach the other ends of the cable to the XDSL interface of the Corning Cable Systems ADSL POTS Splitter Rack-Mount Shelf or the 6050 Central Office Universal POTS Splitter. Refer to the document that came with the POTS splitter for the additional connections.

Front Panel LEDs (Models 8955, 8965, 8975, and 8985)

The following table describes the meaning and states of the LEDs on the front panel of the Model 8955, 8965, 8975, and 8985 line cards. The LEDs of the Models 8955, 8975, and 8985 have similar labeling and meaning.

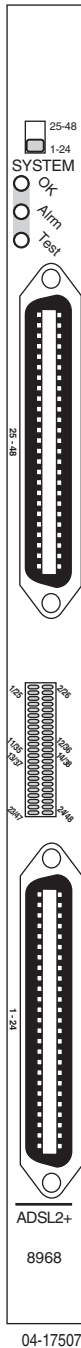


Type	LED	LED is . . . *	Indicating . . .
SYSTEM	OK	Green, On	Card failure. System processing functions have stopped.
		Off	No power to card.
		Green, Pulsing Green, Fast Blinking	Card functioning normally. Firmware download needed.
SYSTEM	Alarm	Amber, On	Alarm is present on the card. ATM interface is not being detected.
		Off	Normal operation, no alarms.
SYSTEM	Test	Amber, On	Test in progress.
		Off	Normal operation, no tests.
		Amber, Fast Blinking	Self-test is in progress.
ATM BUS or SYS BUS	TX	Off	Inactive.
		Green, Fast Blinking	Cells are being transmitted.
	RX	Off	Inactive, link down.
ATM BUS or SYS BUS	RX	Green, Fast Blinking	Cells are being received.
		LOC	Amber, On
ATM BUS or SYS BUS	LOC	Off	Normal operation.
		DSL PORT	1/13–12/24
DSL PORT	1/13–12/24	Off	Port is disabled.
		Green, Slow Blinking	Port is in test, or is down.
		Green, Fast Blinking	Port is training.
ALT BANK	1-12	Off	The ports not currently displayed by the port status LEDs are functioning normally or are disabled.
		Amber, Fast Blinking	One of the ports not currently being displayed by the port status LEDs is down, in test, or in training mode.

* Pulsing: LED turns off momentarily once per second.
 Slow Blinking: LED turns on momentarily once per second.
 Fast Blinking: LED turns off and on in equal duration 4 times per second.

Front Panel LEDs (Model 8968)

The following table describes the meaning and states of the LEDs on the front panel of the Model 8968 line card. The card has 24 LEDs to show the state of DSL ports. Depending on the setting of the switch on the face of the card, the LEDs reflect the state of ports 1–24 or 25–48.



Type	LED	LED is . . . *	Indicating . . .
SYSTEM	OK	Green, On	Card failure. System processing functions have stopped.
		Off	No power to card.
		Green, Pulsing Green, Fast Blinking	Card functioning normally. Firmware download needed.
SYSTEM	Alarm	Amber, On	Alarm is present on the card. ATM interface is not being detected.
		Off	Normal operation, no alarms.
SYSTEM	Test	Amber, On	Test in progress.
		Off	Normal operation, no tests.
		Amber, Fast Blinking	Self-test is in progress.
DSL PORT	1/25–24/48	Green, On	Good signal, unit is trained.
		Off	Port is disabled.
		Green, Slow Blinking	Port is in test, or is down.
		Green, Fast Blinking	Port is training.

* Pulsing: LED turns off momentarily once per second.

Slow Blinking: LED turns on momentarily once per second.

Fast Blinking: LED turns off and on in equal duration 4 times per second.

Logging In to the BLC

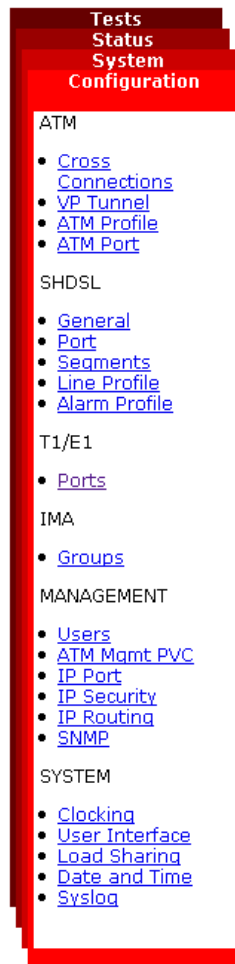
To access the web interface:

► Procedure

1. Open your web browser. (Internet Explorer Version 6 or above is recommended.)
2. Type `http://` and the IP address of the SCP card into the Address field of your browser window. The default IP address is 10.10.10.10:



3. A login window appears. Enter the User ID and Password, and click on OK. The web interface screen appears.
4. Click on the Configuration menu tab. The configuration screens listed depend on the types of line cards and SCP card installed in the chassis.



Configuration

The following table shows the web interface Configuration screens most likely to require modification, along with some fields found on each screen. Refer to the online Help for more information.

Models 8955 and 8975	Models 8965 and 8968	Model 8985
<p>DSL</p> <ul style="list-style-type: none"> ■ Line Profile <ul style="list-style-type: none"> – Latency – Max Rate – Min Rate – Max Additional Noise Margin – Min Noise Margin – Target Noise Margin – Rate Adaptive Mode ■ General <ul style="list-style-type: none"> – Spectrum Management ■ Port <ul style="list-style-type: none"> – Line Circuit Name – Line Code – Line Profile Name – Alarm Profile Name – Max Tx Power – Far End Max Tx Power – POTS Detection Voltage – Status 	<p>DSL</p> <ul style="list-style-type: none"> ■ Line Profile <ul style="list-style-type: none"> – Latency – Max Rate – Min Rate – Max Additional Noise Margin – Min Noise Margin – Target Noise Margin – Rate Adaptive Mode ■ General <ul style="list-style-type: none"> – Spectrum Management ■ Port <ul style="list-style-type: none"> – Line Circuit Name – Line Code – Line Profile Name – Alarm Profile Name – ADSL2 PSD Profile – ADSL2+ PSD Profile – Power Management – Power Management Status Enabling – L0 and L2 Time – Status 	<p>SHDSL</p> <ul style="list-style-type: none"> ■ Line Profile <ul style="list-style-type: none"> – Profile Name – Max Rate – Min Rate – Annex – Remote Management – Reference Clock – Target Margin – Wire Pair ■ General <ul style="list-style-type: none"> – Spectrum Management – Spectrum Management Region ■ Port <ul style="list-style-type: none"> – Line Circuit Name – Line Profile Name – Span Alarm Profile Name – Equivalent Working Length – Status
<p>ATM</p> <ul style="list-style-type: none"> ■ Cross Connections <ul style="list-style-type: none"> – By Port – By Slot 	<p>ATM</p> <ul style="list-style-type: none"> ■ Cross Connections <ul style="list-style-type: none"> – By Port – By Slot 	<p>ATM</p> <ul style="list-style-type: none"> ■ Cross Connections <ul style="list-style-type: none"> – By Port – By Slot

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- **Telephone:** Call our automated system to receive current information by fax or to speak with a company representative.
 - Within the U.S.A., call 1-800-870-2221
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