

CONVERTEON™ Family AT-CV81S Media Converter Line Card

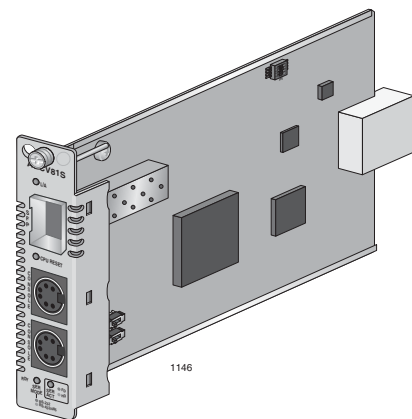
Installation Guide

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Overview

The AT-CV81S, see below, is a multi-protocol media converter that transports Asynchronous Serial Data (with Hardware Flow control, CTS/RTS) from a copper port, over a 100Base-FX fiber. It can be configured to support RS-232 or RS-422/485 serial data in Full duplex or Half duplex mode (available in future release).

The AT-CV81S line card can be installed in either the AT-CV5000, AT-CV1200, or AT-CV1000 chassis. This line card features one small form-factor pluggable (SFP) transceiver slot, one console port (8-pin Mini-DIN) and one serial port (9-pin Mini-DIN). The SFP slot can accommodate one SFP transceiver that operates at a fixed operating speed of 100 megabits per second (Mbps). The line card is hot-swappable into and out of the chassis.



Related Documents

This installation guide is an abbreviated version of the installation procedure. For details on the components, features, and functions of this product, refer to the following documents on our web site, www.alliedtelesis.com:

- ❑ *AT-CV5000 Media Converter Chassis Installation Guide*
PN 613-50580-00
- ❑ *AT-CV1000 Media Converter Chassis Installation Guide*
PN 613-50582-00
- ❑ *AT-CV1200 Media Converter Chassis Installation Guide*
PN 613-000331
- ❑ *Converteon™ Media Converter Line Cards Reference Guide*
PN 613-50581-00
- ❑ *AT-S70 Management Software User's Guide*
PN 613-50617-00

Package Contents

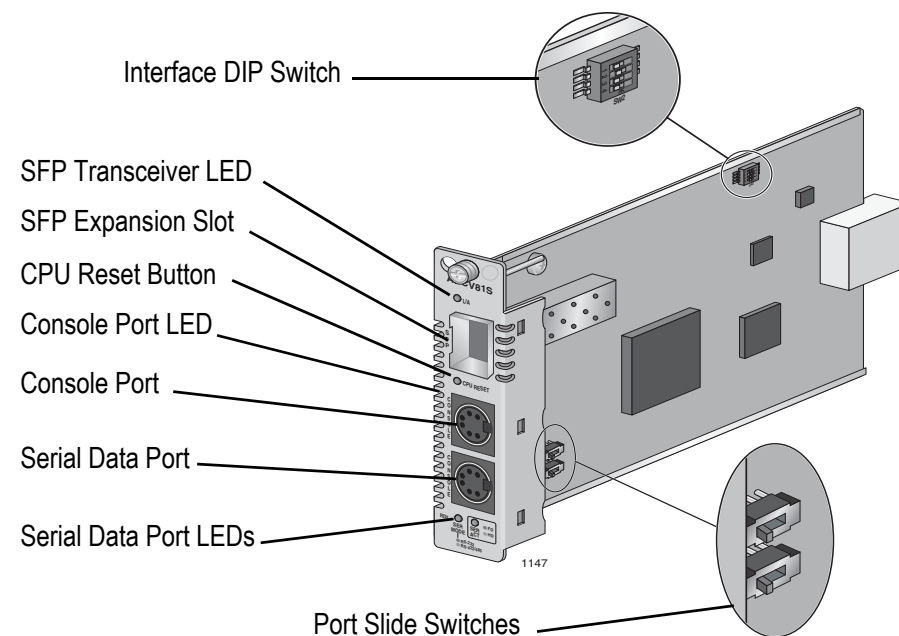
Make sure the following items are included in the shipping package. If any item is missing or damaged, contact your Allied Telesis sales representative for assistance.

- ❑ One AT-CV81S Line Card
- ❑ One serial cable and one management cable
- ❑ This Installation Guide and Warranty Card

AT-CV81S Line Card Components

The AT-CV81S line card features the following components:

- ❑ One 100Base-FX SFP slot (SFP transceiver sold separately)
- ❑ One RS-232 serial local console interface with 8-pin Mini-DIN connector
- ❑ One RS-232/422/485 full-duplex serial port with 9-pin Mini-DIN connector and port slide switches
- ❑ One push button for local CPU reset
- ❑ One DIP switch
- ❑ LEDs



Note

Local Console port and Half Duplex mode are not available in the current AT-S70 V1.5 software release.

Features

The serial port supports RS-232/422/485 serial data transport over fiber.

SFP Slot, Local Console Port, and Serial Port

The AT-CV81S line card features one 100Base-FX SFP slot, one RS-232 local console port, and one RS-232/422/485 serial port with slide switches.

The SFP slot will accept one SFP transceiver that operates at a fixed operating speed of 100 Mbps.



Laser

Class 1 laser product.



Laser

Do not stare into the laser beam.

LEDs

The following table lists the line card status and basic alarms LED's.

LED	Color	Description
RDY	Green	The line card has passed diagnostics.
	OFF	The line card has not passed diagnostics.
L/A	Green	The twisted pair port has established a valid link
	Blinking Green	The twisted pair port has detected TX/RX activity.
CONSOLE (applies to AT-CV5000 chassis only)	Green	The line card is managed from its local console.
	OFF	The line card is managed from the CPM module located in the rear of the chassis.
SER MODE	Green	The serial port is operating in RS-232 mode.
	Yellow	The serial port is operating in RS-422/485 mode.
SER ACT	Blinking Green	The serial data port has detected TX/RX activity in full-duplex mode.
	Blinking Yellow	The serial data port has detected TX/RX activity in half-duplex mode (available in future release).
	OFF	No activity detected on the serial data port.



DIP Switch

The AT-CV81S line card features the Interface DIP Switch as listed in the table below.

Operating Mode	DIP 1	DIP 2
Serial Port in RS-232 mode	OFF	X
Serial Port in RS-422/485 mode	ON	X
Manufacturing Default Settings (Default mode: RS-232 mode)	OFF	OFF

"X" means the DIP switch position could be either ON or OFF.
DIP Switch 2 is reserved for Half-duplex configuration in future release

Serial Data Port Slide Switches

The serial data port is assigned with two slide switches (SW3 & SW4). To support different serial protocol modes on a common straight data cable, these slide switches need to be configured per port basis as follows:

SW3	SW4	OPERATING MODE
L	L	RS-232
L	L	RS-485 (Half-Duplex)
L	R	Not Valid
R	L	Not Valid
R	R	RS-422
R	R	RS-485 (Full-Duplex)
L	L	Manufacturing Setting - RS-232 (Default)

L: Left, R: Right positions of the slide switch.

Installing an AT-CV81S Line Card

"X" means the DIP switch position could be either ON or OFF.

To install an AT-CV81S line card, perform the following procedure:

Caution
Before installing an AT-CV81S line card, refer to the appropriate *Converteon™ Series Chassis Installation Guide* and/or the *Converteon™ Media Converter Line Cards Reference Guide* for electrical safety and emission information.

Caution
Be sure to observe all standard electrostatic discharge (ESD) precautions, such as wearing an antistatic wrist strap, to avoid damaging the device. A line card can be damaged by static electricity.

1. Remove the Converteon™ line card from its shipping package and store the package in a safe place.
2. You must use the original package if you need to return the unit to Allied Telesis.
3. Select an empty line card slot in the Converteon™ chassis for the card.
4. Remove the AT-CV5PNL1 blank slot cover from the selected slot.
Keep the blank slot cover in a safe area in case you remove the line card. The blank slot covers are used to keep dust from getting into the chassis and maintain proper airflow, cooling, and ventilation throughout the chassis.
5. Locate the alignment guides in the chassis slot.
6. Align the back edge of the line card with the alignment guides located inside the slot. Avoid touching the line card components.
— For the AT-CV5000, align with the top and bottom alignment guides.
— For the AT-CV1000 and AT-CV1200, align with the left and right alignment guides.
7. Slide the line card until the front of the card is flushed with the front of the chassis.
8. Use a Phillips screwdriver to tighten the captive screws on the line card.

Note

Always tighten the captive screws to secure the line card to the chassis. This helps ensure that the connectors at the back of the line card are securely connected to the backplane.

Caution
When used in the AT-CV1200 chassis, make sure the ground lug is attached prior to operating the AT-CV81S line card. For grounding instruction, refer to the *AT-CV1200 Chassis Installation Guide*.

Technical Specifications


Physical, Environmental, and Electrical Rating

Dimensions (H x W x L)	.855" x 2.89" x 5.1" (2.2 cm x 7.3 cm x 13.0 cm)
Operating Temperature	0° C to 40° C (32° F to 104° F)
Storage Temperature	-25° C to 70° C (-13° F to 158° F)
Operating Relative Humidity	5% to 90% RH (non-condensing)
Storage Relative Humidity	5% to 95% RH (non-condensing)
Operating Altitude Range	Up to 3,048 m (10,000 ft)
MTBF (Telcordia Standards)	2,060,000 hrs
Power Consumption	3 watts
Pluggable Slot Type	SFP

Electrical Safety and Emission Statement

Standards: This product meets the following standards when installed in compliant host equipment.

U.S. Federal Communications Commission	
RADIATED ENERGY	Note: This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
	Note: Modifications or changes not expressly approved of by the manufacturer or the FCC, can void your right to operate this equipment.
Industry Canada	
	This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.
	Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Emission	FCC Class A, EN55022 Class A, VCCI Class A, C-TICK, CE
WARNING: 	In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.
Immunity	EN55024
Electrical Safety	UL60950-1 (cUL _{us}), EN60950-1 (TUV), CAN/CSA C22.2 No. 60950-1