



## AT-CV1KSS

### Convertreon™ Series Line Card

#### AT-CV1KSS

1000X to 1000X SFP media converter line card

#### Overview

The AT-CV1KSS Ethernet media converter line cards are designed to extend the distance of your Gigabit network by interconnecting LAN devices that are physically separated by large distances. The cards are compatible with a wide range of SFP modules, providing fiber connectivity over both multi-mode and single-mode fiber; at distances up to 80km, and copper connectivity up to 100m. Compliant with IEEE standards, these converters will inter-operate with other standards-based media converters, switches, interface cards etc.

#### Extend the Distance of Ethernet

The AT-CV1KSS has two 1000X SFP ports that can support both copper and fiber optic SFPs. Either of these ports can be populated with:

- Multi-mode fiber SFP module, capable of driving a maximum operating distance of 2km (1.24 miles).
- Single-mode, dual fiber SFP module, capable of driving a maximum operating distance of 80km (49.7 miles).
- Single-mode, single fiber SFP module, capable of driving a maximum operating distance of 10km (6.2 miles).
- Copper SFP module, capable of driving a maximum operating distance of 100 meters (328 feet) at 1Gbps speeds only.

#### Flexible Deployment

The AT-CV1KSS line cards can be installed in the complete range of Convertreon chassis, allowing them to be deployed in a stand-alone fashion (AT-CV1000), or in a multi-slot chassis (AT-CV5000). When deployed in a multi-slot chassis, the line cards can be unmanaged, or managed with the inclusion of at least one management card in the chassis. In unmanaged mode, the line cards can be easily configured using DIP switches, whereas in a managed chassis, all the configuration can be performed remotely.

Whatever the chassis, the line cards can be hot swapped providing the network manager with a mechanism to simply perform moves/adds/changes without having to power down other parts of the network.

#### MissingLink™ and Smart MissingLink™ (SML)

The MissingLink (ML) feature allows the ports on the media converter blade to pass the 'Link' status of their connections to each other. When the media converter detects a problem with one of the ports, such as the loss of connection to a node, it shuts down the connection to the other port, thus notifying the node that the connection has been lost. The Smart MissingLink (SML) feature provides the same function as MissingLink with one additional feature that when a link is lost on a port, the Link LED of the port which still has a valid connection to its end-node starts to blink. These features allow network administrators to quickly troubleshoot network problems.

#### Hassle Free Support

All Allied Telesis Ethernet media converter line cards offer free technical support, ensuring trouble-free installation.

#### Key Features

- Extends Gigabit Ethernet networks
- Support MissingLink and Smart MissingLink
- Supports fiber and copper SFP modules (1Gbps speed only)
- Transparent to IEEE 802.1Q VLAN packets
- System and port LEDs
- Managed or unmanaged operation
- Line card for all Convertreon series chassis'

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## Link Test, MissingLink and Smart MissingLink Functions

### Link Test

The link test is a fast and easy way for you to test the connections between the media converter ports and the end-nodes that are connected to the ports. If a network problem occurs, you can perform a link test to determine which port is experiencing a problem, and so be able to focus your troubleshooting efforts on the cable or end-node where the problem resides.

### MissingLink

The MissingLink feature enables the two ports on the media converter to pass the 'Link' status of their connections to each other. When the media converter detects a loss of connection to an end-node, the media converter shuts down the connection to the other port, thus notifying the end-node that the connection has been lost.

### Smart MissingLink

The Smart MissingLink feature performs exactly the same function as MissingLink with one additional feature. When a link is lost on a port, the LINK LED of the port which still has a valid connection to its end-node starts to blink. This allows you to quickly determine which port still has a valid connection (LINK LED blinking) and which port has lost its connection (LINK LED off).

## Technical Specifications

### Status Indicators

#### Status LEDs

##### System LEDs

LED	Color	Description
RDY	Green	The line card has passed diagnostics
	Off	The line card has not passed diagnostics
ML	Green	MissingLink mode is enabled
	Off	MissingLink mode is disabled
SML	Green	Smart MissingLink mode is enabled
	Off	Smart MissingLink mode is disabled

##### SFP Port LEDs (per port)

LED	Color	Description
LK	Green	Link established on the port
	Flashing	When Smart MissingLink is enabled, if a link has failed, this shows the port that still is correctly connected

	Off	No link established on the port
AT	Green	TX/RX activity detected on the port
	Off	No activity detected on the port

### DIP Switches

The AT-CVIKSS line card features only the Diagnostic Mode DIP switches.

The table below lists the positions of the DIP switches.

Operating Mode	DIP 1	DIP 2	DIP 3
Smart MissingLink (SML)	OFF	ON	X
MissingLink (ML)	ON	OFF	X
Link Test (default)	OFF	OFF	X
Manufacturing Default Settings	OFF	OFF	OFF

'x' means the DIP switch position could be either ON or OFF.

### Physical Specifications

Dimensions: 2.2cm x 7.3cm x 13cm  
(W x D x H) (.855" x 2.89" x 5.1")

Weight: 0.27 kg (0.60 lbs)

### Optical Characteristics

Dependent on the SFPs used. See datasheets for specific SFPs.

### Packet Size

Maximum packet size = Infinite - no frame buffer

### Power Characteristics

Power consumption 4.75W

### Environmental Specifications

Maximum operating temperature: 0°C to 40°C  
(32°F to 104°F)  
Maximum storage temperature: -25°C to 70°C  
(-13°F to 158°F)  
Operating and storage altitude: Up to 3,048 meters  
(10,000 feet)  
Relative humidity operating and storage: 5% to 95%  
(non-condensing)

Predicted MTBF (Telcordia SR332): 1,370,000 hrs

### Standards

EMI part 15:  
FCC class A, EN55022 class A, VCCI class A, C-Tick, CE

Immunity:  
EN55024

### Safety:

UL60950-1 (cULUS), EN60950-1 (TUV)

## Ordering Information

### AT-CVIKSS

Gigabit Ethernet Converteon media converter line card  
1000X SFP to 1000X SFP

## Associated Products

### AT-SPSX

1000SX (SC), 220m multi-mode Fiber Gigabit module

### AT-SPLX10

1000SX (SC), 10m single-mode Fiber Gigabit module

### AT-SPTX

1000T, 100m copper Gigabit module

### AT-CVI1000-xx

Single slot Converteon chassis

### AT-CVI1203-xx

Two slot Converteon chassis

### AT-CV5000-xx

18 slot, Converteon chassis

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