

AT-CV5000 Converteon™ Chassis



AT-CV5000

18 Slot Converteon™ Chassis

Overview

The AT-CV5000 is one of a family of metal chassis designed to house the range of Converteon™ media blades, from one to 18 blades. The AT-CV5000 is an eighteen blade chassis.

Power Options

The AT-CV5000 chassis is available in two options, one supporting AC power, the other - 48vDC. All the Converteon™ power supplies are hot-swappable and modular; installing 2 into a chassis provides redundancy should a single power supply fail. In an un-managed chassis, the status of each power is displayed via a LED indicator on the front panel, and via an LED on the power supply module at the rear. A fully loaded chassis can run continuously with only one power module fitted into the chassis. Power supply modules are:

- AT-PWR14 AC Power Module
- AT-PWR15 -48vDC Power Module

Redundancy

To further increase system reliability, the AT-CV5000 chassis is fitted with two hot-swappable fan modules. Both fan modules can be easily removed from the rear of the chassis, without interruption to the operation of the line cards. A fully loaded chassis can run continuously with only one fan module fitted into the chassis

- AT-CVFAN Fan module

Network Management

The AT-CV5000 chassis can operate in an unmanaged mode, by the installation of any number of media blades. Blades will be configured manually using DIP switches located on each blade. Alternatively, an SNMP management card can be installed into one of

the slots in the chassis, which will provide a network administrator with the ability to configure and monitor the status of the blades. Management can be achieved locally over RS232, or over the network by Telnet or SNMP.

If the blades support Ethernet in the First Mile (IEEE802.3ah), then the management module can also configure and monitor the status of a remote blade.

- AT-CM501 Management Card

Chassis Status

If the AT-CV5000 has a management card installed, then a network administrator can also check the status of the chassis, the status of the fans and the power supply modules. By ensuring the continued performance of all components in the chassis, the overall reliability of the network can be improved.

Protocol Agnostic

The AT-CV5000 chassis has been designed to be protocol, and speed agnostic. This allows network administrators to deploy the chassis in a wide range of network topologies in addition to only Ethernet based networks. Technologies supported by the chassis include Ethernet, Fast Ethernet, Gigabit, E1/T1 & Serial communications.

Future Expansion

The AT-CV5000 chassis has been designed with the future in mind, with the inclusion of a rear mounted expansion slot. In this slot can be fitted say, a switching module, which could convert the chassis from a media converter, to a multi-port switch, with each port having a modular interface.

Hassle Free Support

The Allied Telesyn AT-CV5000 Converteon™ chassis has a 2 year warranty and free technical support, ensuring trouble-free installation.

Key Features

- 18 Slot Media and Rate Converter chassis
- AC or -48vDC power supply options
- Single, or optional redundant power supplies
- Hot Swappable power supplies
- Hot Swappable Fan modules
- Support for unmanaged, or managed operation
- Requires only 2RU of rack space
- 19" and 23" rack mountable

AT-CV5000 | 18 Slot Converteon™ Chassis

TECHNICAL SPECIFICATIONS

Status Indicators

LED	State	Description
RDY (For future use)	Green	The module installed in the rear expansion slot has passed diagnostics and is ready.
	Off	The module installed in the rear expansion slot has failed diagnostics and is not ready, or is not installed.
MSTR (For future use)	Green	This AT-CV5000 chassis is acting as a Stacking Master (via a module installed in the rear expansion slot.)
	Off	This AT-CV5000 chassis is not a Stacking Master.
FLT (For future use)	Green	The module installed in the rear expansion slot has experienced fault condition, or is not installed.
	Off	The module installed in the rear expansion slot has reported no fault condition.
PS-A	Green	Power supply in slot A is operating normally.
	Off	Power supply in slot A is OFF, not present, or has failed.
PS-B	Green	Power supply in slot B is operating normally.
	Off	Power supply in slot B is OFF, not present, or has failed.
FAN-A	Green	Fan module in fan tray slot A is operating normally.
	Off	Fan module in fan tray slot A is OFF, not present, or has failed.
FAN-B	Green	Fan module in fan tray slot B is operating normally.
	Off	Fan module in fan tray slot B is OFF, not present, or has failed.

Connectors

The front panel features an RS232 (DB9) connector, which will be used to provide connectivity to a rear mounted expansion card in the future.

Physical Specifications

Dimensions: W x D x H
34.25cm x 44.05cm x 8.68cm
(13.49" x 17.35" x 3.42")

Weight: 6.12 kg (13.5 lbs)

Power Characteristics

AC Input Voltage:
90 ~ 240 VAC 47/63Hz
AC Input Current:
90-120 VAC (3.6A)
200-240 VAC (1.57A)

DC Input Voltage: -36 to -72V
DC Input Current: 8.7A Max

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:
5% to 90% (non-condensing)

Relative Humidity Storage:
5% to 95% (non-condensing)

Safety and Electromagnetic Emissions Certifications

EMI:
FCC Class A, EN55022 Class A, VCCI Class A, C-TICK, CE

Immunity:
EN55024

Safety:
UL60950 (CULUS), EN60950 (TUV), CSA22.2 No. 950

Quality and Reliability:
MTBF > 100,000 hrs.

Ordering Information

AT-CV5000-xx
18 slot chassis

Where xx =	
10	AT-PWR14 (AC) power module factory installed with US power cord
30	AT-PWR14 (AC) power module factory installed with US power cord
40	AT-PWR14 (AC) power module factory installed with US power cord
50	AT-PWR14 (AC) power module factory installed with US power cord
80	AT-PWR15 (-48VDC) power module factory installed

Associated Products

AT-PWR14
Optional AC Redundant Power module for AT-CV5000 chassis

AT-PWR15
Optional -48VDC Redundant Power module for AT-CV5000 chassis

AT-CVFAN
Replacement fan module for AT-CV5000 chassis

AT-CV5M01
SNMP Management module for AT-CV5000 chassis

AT-CV1000-xx
Single slot Converteon™ chassis

AT-CV1200-xx
Two slot Converteon™ chassis

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AT-CVI1000

Convertion™ Chassis

AT-CVI1000

1 slot Convertion™ Chassis

Overview

The AT-CVI1000 is one of a family of metal chassis designed to house the range of Convertion™ media blades, from one to 18 blades. The AT-CVI1000 is a single blade chassis.

Flexible Deployment

The AT-CVI1000 chassis can be installed on a desktop, by the addition of four rubber feet. Alternatively, it can be wall mounted, or under desk mounted by the addition of two small brackets being secured to the sides of the chassis. As the unit operates silently, it can be installed in any office or home environment.

Hassle Free Support

All Allied Telesyn AT-CVI1000 chassis have a limited lifetime warranty and free technical support, ensuring trouble-free installation.

Package Contents

- 1 x AT-CVI1000 Chassis
- 4 x Rubber feet for desktop mounting
- 2 x Wall mount brackets
- 2 x Screws (for wall mounting)
- 2 x Plastic Anchor clips (for wall mounting)
- 1 x Power Adapter
- 1 x IEC Power cord (Country specific)
- 1 x Installation Guide (on CD)
- 1 x Warranty Registration Card

TECHNICAL SPECIFICATIONS

Physical Specifications

Power Adapter Style – In line (IEC power inlet)
 Input Voltage = 10-240VAC 50/60Hz Auto-sensing
 Output Voltage = 12VDC @ 2A

Chassis

Nominal Input: 12VDC
 Input Current: 1.06A @ 12VDC

Environmental Specifications

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 Humidity: 5% to 90% non-condensing
 Storage Humidity: 5% to 95% non-condensing

Maximum Operating Altitude: 3,000 m (10,000 ft.)
 Maximum Storage Altitude: 4,000 m (13,100 ft.)

Quality and Reliability: MTBF > 100,000 hrs.

Safety and Electromagnetic Emissions Certifications

EMI:
 FCC Class A, EN55022 Class A, VCCI Class A, C-TICK, CE

Immunity:
 EN55024

Safety:
 UL60950-1 (CULUS), EN60950-1 (TUV)
 CAN/CSA C22.2 No. 60950-1

Key Features

- Single slot chassis for Convertion™ line card
- Standalone or Wall mountable
- Silent Operation
- External Power Supply

Ordering Information

AT-CVI1000-xx

Single slot Convertion™ chassis

Where xx =	10	US Power Adapter
	20	European Power Adapter
	30	UK Power Adapter
	40	Aus Power Adapter

Associated Products

AT-CVMCR
 Bracket allowing AT-CVI1000 to be installed in AT-MCR12 chassis

AT-CVI200-xx
 Two slot Convertion™ chassis

AT-CV5000-xx
 18 slot, Convertion™ chassis



AT-CVIKxx

Converteon™ Series Line Card

AT-CVIKxx

1000X to 1000X SFP Media Converter Line Card

Overview

The AT-CVIKXX Series Ethernet Media Converters include the following models:

- AT-CVIKSS

The AT-CVIKSS Series 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, adapter cards etc.

Extend the Distance of Ethernet

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

- Multi-mode fibre SFP module, capable of driving a maximum operating distance of 2km (1.24 miles).
- Single-mode, dual fibre SFP module, capable of driving a maximum operating distance of 80km (49.7 miles).
- Single-mode, single fibre 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-CVIKSS series of line cards can be installed in the complete range of Converteon™ chassis, allowing them to be deployed in a stand-alone fashion (AT-CVI000), 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, where as 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.

Missing Link™ & Smart Missing Link™ (SML)

The Missing Link™ (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 Missing Link™ (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 Telesyn Ethernet media converter line cards have a limited lifetime warranty and free technical support, ensuring trouble-free installation.

Key Features

- Extends Gigabit Ethernet networks
- Support MissingLink™ and Smart MissingLink™
- Supports Fiber and Copper SFP modules (1 Gbps speed only)
- Transparent to 802.1Q VLAN packets
- System and port LEDs
- Managed, or unmanaged operation
- Line card for all Converteon™ series chassis

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.

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).

Physical Specifications

Dimensions: W x D x H
.855" x 2.89" x 5.1"
(2.2 cm x 7.3 cm x 13.0cm)

Weight: 0.27 kg (0.60 lbs)

Optical Characteristics

Dependent on the SFPs used. See datasheets for specific SFPs

Packet Size

Maximum packet size = Infiniate - 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)

MTBF: 1,370,000hrs

Telcordia Issue 1 Method 1 Case 3

Operating Environment: Ground Bengin, Controlled

Operating Temperature: 30°C

Duty Cycle: 100%

Ordering Information

AT-CVIKSS

Gigabit Ethernet Converteon™ Media Converter Line Card
1000X SFP to 1000X SFP

Associated Products

AT-SPSX

1000SX (SC), 220m Multimode Fiber Gigabit Module

AT-SPLX10

1000SX (SC), 10m Singlemode Fiber Gigabit Module

AT-SPTX

1000T, 100m Copper Gigabit Module

AT-CV1000-xx

Single slot Converteon™ chassis

AT-CV1200-xx

Two slot Converteon™ chassis

AT-CV5000-xx

18 slot, Converteon™ chassis

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AT-CV5M01 Convertion™ Series Management Card

Overview

The AT-CV5M01 adds management configuration and monitoring capabilities to the Convertion™ range of media chassis. A chassis can be installed with any range of media blades, which can be used in an unmanaged mode. With the addition of a management card to the chassis, all the blades setup option can be configured via the management module, allowing a network administrator to change configuration remotely, and monitor the status of both the chassis and the links.

Management Modes

The AT-CV5M01 supports three management modes

- SNMP
- Telnet
- Local RS232

Both the local RS232 and the Telnet mode allow the user to monitor and manage a Convertion™ chassis using a menu driven, command line interface (CLI). When configured for SNMP, a network administrator can not only configure the chassis, but also receive network warnings relative to link failures, power supply failures and equipment being over temperature, etc.

Connection by an RS232 port is achieved by attaching a computer or terminal to the DB-9 connector on the front panel of the management card. Telnet and SNMP sessions connect via the 10/100BaseTX connection also located on the front panel.

In addition, each management card has 6 diagnostic LEDs to aid in troubleshooting.

IEEE 802.3ah (OAM) Remote Management

When deployed with any media blades that support IEEE 802.3ah 'Ethernet in the First Mile' such as the AT-CM202 and AT-CM2K0S modules, the AT-CV5M01 management card can also manage and monitor the remote blades connected only to the local chassis over fibre optics.

Hassle Free Support

All Allied Telesyn Ethernet media converter line cards have a limited lifetime warranty and free technical support, ensuring trouble-free installation.

Key Features

- Provides Management support to Convertion™ chassis
- SNMP, Telnet and Local RS232 support
- Event Logging
- Syslog support
- DHCP support
- 802.3ah Remote blade management

AT-CV5M01 | Converteon™ Series Management Card

Technical Specifications

Status Indicators

LED State Description

PWR	Green	The CPM card is receiving power.
	Off	The CPM card is not receiving power.
RDY	Green	The CPM card has passed diagnostics and is ready.
	Off	The CPM card has failed diagnostics and is not ready.
FLT	Red	The CPM card has experienced fault condition.
	Off	The CPM card has reported no fault condition.
LK	Green	Link established on the card Ethernet port.
	Off	No link established on the card Ethernet port.
AT	Flashing	TX/RX activity established on the card Ethernet port.
	Off	No activity established on the card Ethernet port.
FD	Green	The CPM card is operating in full-duplex mode.
	Off	The CPM card is operating in half-duplex mode.

Connectors

RS232	Female DB-9
	Baud Speed 1200 ~ 115200bps
Ethernet	10/100BaseT, Auto MDI/MDIX

Management Features

Management Interfaces

RS232 (Local Login):	Username & Password protected (Enable/Disable Local Login)
Telnet (Remote Login):	Username & Password protected (Enable/Disable Remote Login)
SNMP Managers:	Named SNMP Manager (Enable/Disable SNMP) (Up to 4 SNMP managers)

DHCP

DHCP Client (Enable/Disable)

System Warnings

Over Temperature warning
PSU failure warning
Fan failure warnings
Blade failure
Insert/Remove Power Supply
Insert/Remove Fan module
Insert/Remove blade

Operational Warnings

Link Up/Down

Event Logging

Time & Date stamp for all log entries
Internal Log
Syslog

Administration

Diagnostics
Firmware Upgrade (Management card)
Firmware Upgrade (Blade firmware)
Configure Missing LinkTM
Configure Smart Missing LinkTM
Configure Link Monitor
Configure 802.3ah OAM

Physical Specifications

Dimensions: .855 x 2.89 x 5.10 in (H x W x L)
22 x 73 x 130 mm
Weight: 0.60 lbs
0.27 kg

Package Contents

One AT-CV5M01 CPM Card
One DB-9 RS-232 Serial Cable
This Installation Guide
Warranty Card

Power Characteristics

Input Supply Voltage: 5V DC, 3.3 V DC
Maximum Input Current: 1.15 A (5V DC), 0.86 A (3.3V DC)
Power Consumption: 9.6 watts maximum

Environmental Specifications

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 3,048m (10,000ft)

Standards

Emission FCC Class A, EN55022 Class A, VCCI Class A, C-TICK, CE
Immunity EN55024
Electrical Safety UL60950 (UL/cULus), EN60950 (TUV), CSA22.2 No. 950

Ordering Information

AT-CV5M01
SNMP Management Module

Associated Products

AT-CV1000-XX
Single slot Converteon™ chassis

AT-CV1200-XX
Two slot Converteon™ chassis

AT-CV5000-XX
18 slot, Converteon™ chassis

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