

# Cisco PowerVu D9190 Conditional Access Manager

The Cisco PowerVu® D9190 Conditional Access Manager (PCAM) is one of the core components of the PowerVu next-generation system. The Cisco® D9190 is used for encrypting services with Cisco PowerVu Conditional Access (PCA), and is designed for use with the Cisco Digital Content Manager (DCM) to provide a functional replacement for the PowerVu D9140 Advanced Multiplexer.

For network monitoring and control, the Cisco D9190 (Figures 1 and 2) is integrated with Cisco PowerVu Network Centre (PNC).

**Figure 1.** Cisco PowerVu D9190 Conditional Access Manager



**Figure 2.** Cisco D9190 Rear Panel



## Chassis Overview

The D9190 chassis features dual-redundant and hot-swappable power supplies. It has the capacity to hold up to six modules. The chassis supports advanced internal common synchronization mechanisms that can be used to synchronize the various services being hosted. Dedicated management and auxiliary input ports are also provided for control system monitoring and communication. The PowerVu Conditional Access (CA) modules are field-replaceable to allow for fast service with minimum downtime. A contact-closure output is used to signal a major alarm to the control system when it is active.

## Cisco PCA

The PCA module is used to encrypt entitlement control message (ECM) and entitlement management message (EMM) traffic and to communicate with a DCM using various Simulcrypt protocols. The PCA module has four 1000BASE-T Ethernet ports, one of which is used to communicate with the DCM Multiplexer.

## Features

- PCA encryption
- Dual-redundant, hot-swappable power supplies
- Support for one PCA module
- PNC management support

- Support for up to 85 services
- Simulcrypt communications support

## Specifications

Table 1 lists specifications for the Cisco PowerVu D9190 Conditional Access Manager.

**Table 1.** Product Specifications

Feature	Description
<b>Conditional Access</b>	
<b>Brand</b>	PowerVu CA
<b>Crypto cycle</b>	>= 1 sec
<b>Services</b>	85
<b>Management</b>	
<b>Control system</b>	Integrated in PNC
<b>Inputs/Outputs</b>	
<b>Number of ports</b>	Port 1 is for Simulcrypt communications Ports 2, 3, and 4 are unused
<b>Type</b>	Eight-pin RJ-45, MDI
<b>Ethernet type</b>	100/1000BASE-T
<b>Format</b>	Simulcrypt protocols
<b>Environment and Physical</b>	
<b>Dimensions</b>	1.73 in. H x 21.42 in. W x 17.36 in. D (4.4 cm H x 54.4 cm W x 44.1 cm D) 1U high, 19 in. rack-mountable, stackable
<b>Operating temperature</b>	32° to 122°F (0° to 50°C)
<b>Storage temperature range</b>	14° to 158°F (-10° to 70°C)
<b>Weight</b>	20.2 lb (9.2 kg)
<b>Relative humidity</b>	0 to 95%, noncondensing
<b>Cooling</b>	Forced cooling with air inlets on front panel, air exit at rear
<b>Power Requirements</b>	
<b>Voltage range</b>	90 to 264 VAC input
<b>Line frequency</b>	47 to 63 Hz
<b>Consumption</b>	400W maximum (typical power consumption is 120W)
<b>Regulatory Compliance Standards</b>	
CFR 47, Part 15, Subpart B Class A Unintentional Radiators	
CISPR 22:2008-09	
EN 55022:2006 +A1:2007, Class A - Information Technology Equipment	
CISPR 24:1997 +A1:2001, +A2:2002	
EN 55024:1998 +A1:2001, +A2:2003 EMC Requirements - Information Technology Equipment - Immunity Characteristics	
IEC 61000-3-2:2005/EN 61000-3-2:2006 Harmonic Currents, Class A	
IEC 61000-3-3:2002/EN 61000-3-3:1995' +A1:2001, +A2:2005 Flicker	
Australia Radio Communications (Electromagnetic Compatibility) Standard 2008	
CAN/CSA-C22.2 No. 60950-1-07	
UL 60950-1 Ed. 2 Mar 27 2007	
IEC 60950-1-am1 ed2.0 (2009-12), including all country and regional differences currently in force	
EN 60950-1:2006+A1:2010	

## Ordering Information

Table 2 provides ordering information for the Cisco PowerVu D9190 Conditional Access Manager.

**Table 2.** Ordering Information

Chassis	Part Number
Chassis, D9190, 1RU (include 2AC power supply, software)	D9190-1RU
Chassis, D9190, 1RU, spare	CHAS-D9190-1RU=
<b>Hardware Modules</b>	
Module, D9190, PCA card	D9190-PCA-K9
Module, D9190, PCA card, spare	D9190-PCA-K9=
<b>Power Supply</b>	
PSU, D9036/D9190, AC, 400W, spare	D9036-PWR-400W-AC=
<b>Accessories</b>	
Kit, D9036/D9190, fan replacement, 1RU, spare	D9036-FAN-1RU=
Kit, D9036/D9190, air filter, 1RU, spare	D9036D9190-DUST=

## Service and Support

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## For More Information

To learn more about this product, contact your local account representative.

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