

Model D-PCG1000 PowerKEY CAS Gateway

The Model D-PCG1000 PowerKEY® Conditional Access System Gateway (PCG) performs real-time PowerKEY entitlement control message (ECM) generation and distribution. The PCG operates within the DVB® Simulcrypt headend reference model. The PCG acts as an Entitlement Control Message Generator (ECMG) that uses the standard ECMG-to-Simulcrypt Synchronizer (SCS) interface. Optionally, the PCG can also perform Event Information Scheduler (EIS) functions using the EIS-to-SCS interface.

By using these standard interfaces, the PCG can be integrated with headend equipment from multiple vendors. Using the PCG allows you to run PowerKEY Conditional Access along with other conditional access systems in a mixed environment.

The Digital Network Control System (DNCS) configures the PCG and manages sessions on the PCG in much the same way as on QAM devices. However, unlike the QAM devices, a single PCG device can provide ECM generation for 1000 digital broadcast sessions.

The PCG is a PC-based product (preloaded with Red Hat Linux OS.) A 1U rack-mounted PC is used, appropriate to a cable headend environment. Two Ethernet connections are available.

Figure 1. Model D-PCG1000 PowerKEY CAS Gateway (image may vary from actual product and specification)



Features

- Creates Integrated PowerKEY Conditional Access ECMs
- Complies with the Simulcrypt 3.0 Interface
- Supports 1000 Broadcast Sessions at a 4- to 15-second cryptocycle
- Reports all DVB ECMG-to-SCS and EIS-to-SCS errors using alarms to the DNCS. An alarm is generated if the SCS stops requesting new ECMs
- Contains two 10/100/1000BASE-T network interfaces for remote provisioning, control, status monitoring, and alarms

Figure 2. Model D-PCG1000 PowerKEY CAS Gateway Front Panel with Bezel Removed (image may vary from actual product and specification)



Table 1. Front Panel Features

Feature	Description
Power Button	On/Off button
Restart Switch	System restart
Video Connector	Monitor connection
Hard Drive Activity LED	Hard drive access indication
Diagnostic Indicators (4)	Four diagnostic indicators; display error codes during system startup* *For details about system diagnostics refer to the online document, <i>Dell™ PowerEdge™ R210 Systems Hardware Owner's Manual</i> , which is located at: http://support.dell.com/support/edocs/systems/per210/en/HOM/HTML/index.htm
System Status Indicator	Status indicator (blue light = normal operation; amber light = system needs attention)
System Identification Button	System ID light. Push to illuminate light on both front and rear panels
USB 2.0 Connectors (2)	Peripheral device connection
Optical Drive (optional)	Optional CD/DVD drive

Figure 3. Model D-PCG1000 PowerKEY CAS Gateway Back Panel (image may vary from actual product and specification)



Table 2. Back Panel Features

Feature	Description
Serial Port Connector	Serial I/O connection
Video Connector	Monitor connection
eSATA Connector	eSATA storage device connection
USB 2.0 Connectors (2)	Peripheral device connection
Ethernet Connectors (2)	Network connections: 1 = eth0 2 = eth1
System Status Indicator	Status indicator (blue light = normal operation; amber light = system needs attention)
System Identification Button	System ID light. Push to illuminate light on both front and rear panels
Power Connector	AC power cord connection

Product Specifications

Table 3. Product Specifications

Specification	Value
PowerKEY Specifications	
ECM Generation	Supports 1000 broadcast sessions at a 4- to 15-second cryptocycle
PowerKEY ECM/EMM Handling	As per PowerKEY Book 1 Specifications
MSK/ISK Decryption Rate	Up to 10 per second (RSA 1024-bit private operation)
Maximum Session Set-Up Rate	10 sessions/second
ECMG-to-SCS Interface	<ul style="list-style-type: none"> Per DVB Simulcrypt specification (ETSI TS 103 197: Digital Video Broadcasting, Headend implementation of DVB SimulCrypt) Multiple SCS connections allowed supporting distributed SCS and redundancy SCS IP address configurable using the DNCS
EIS to SCS Interface	Per DVS-278 specification (SCTE DVS/278: Head-end Implementation of OpenCAS)
PowerKEY Conditional Access System	Secures digital services using symmetric encryption algorithm for content protection and strong authentication and digital signature for entitlement delivery
Connector Specifications	
Ports (Back Panel)	<ul style="list-style-type: none"> Two 10/100/1000BASE-T network interfaces One Serial I/O port Two USB 2.0 ports One VGA video port One eSATA port
Electrical Specifications	
Powering	100 VAC to 240 VAC 50/60 Hz
Power Consumption	250 W
Electrostatic Shock	No damage from five discharges of 15 KV IEC electrostatic discharge model [150 Pico-Farad (pF) + 150 ohm] to all exposed connections
RF/EMI Emission	<ul style="list-style-type: none"> FCC part 15 sub part B class A EN50083-2
Environmental Specifications	
Temperature Range	50° to 95°F (10° to 35°C)
Cooling	Self-contained fans provide sufficient cooling to operate in a 19-in. (483 mm) rack without the need for a 1 RU spacer between units
Storage Temperature	40° to 149°F (-40° to +65°C)
Operating Humidity	20% to 80% non-condensing
Mechanical Specifications	
Dimensions (WxHxD)	<ul style="list-style-type: none"> One rack unit 17 in. x 1.68 in. x 15.5 in. (431 mm x 42.6 mm x 393.7 mm)

Ordering Information

Table 4. Ordering Information

Contact your Sales Representative for product availability in your area.

Description	Part Number
Model D-PCG1000 PowerKEY Conditional Access System Gateway (PCG)	4019240

Service and Support

Using the Cisco Lifecycle Services approach, Cisco and its partners provide a broad portfolio of end-to-end services and support that can help increase your network's business value and return on investment. This approach defines the minimum set of activities needed by technology and by network complexity to help you successfully deploy and operate Cisco technologies and optimize their performance throughout the lifecycle of your network.

For More Information

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

To subscribe to receive end-of-life/end-of-sale information, go to <http://www.cisco.com/cgi-bin/Support/FieldNoticeTool/field-notice>.



Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. A listing of Cisco's trademarks can be found at www.cisco.com/go/trademarks. DVB is a registered trademark of the DVB Project.

Other third party trademarks mentioned are the property of their respective owners.

The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1009R)

Specifications and product availability are subject to change without notice.

© 2007, 2011 Cisco and/or its affiliates. All rights reserved.

Cisco Systems, Inc.
800 722-2009 or 678 277-1120
www.cisco.com

Part Number 7011535 Rev B
January 2011