

EdgeAccess® Universal Chassis System

The EdgeAccess® Universal Chassis System (UCS) is a carrier class system accommodating a mix of fiber optic Modems, Multiplexers, LAN extension devices, WDMs, and Converters. Service Providers can offer multiple fiber optic based services with speeds of 1.544Mbps up to Gigabit, cost effectively from a commonly managed platform. Multiple low-speed and/or high-speed circuits can be run in parallel over a single fiber pair utilizing integrated WDM technology. Hot-swappable modules provide a variety of interface options and flexibility of service offerings, ease of troubleshooting, and reduced cost of ownership.



Key Features

- **Fully modular Carrier-Class Chassis System**
- **Fault Tolerant and Redundant**
- **Cost Effective - Low Entry Price**
- **Extensive Modularity for Flexibility and Reduced Cost of Ownership**
- **Up to 15 Hot-swappable Modules in One Chassis**

Chassis Model 1000

The UCS Model 1000 chassis provides facility and management functions for Canoga Perkins' new generation rackmount product lines: Modem, Multiplexer, LAN extension, WDM, and Converter modules.

The chassis' mechanical design accommodates up to 15 hot-swappable modules,

single or redundant power supplies, and up to four levels of optional management. Up to 8 chassis can be linked, resulting in a fully managed domain of up to 240 local and remote modules. The chassis backplane provides a common interface for all modules, allowing redundancy and interchangeability. Optical and electrical interfaces on all modules are also hot-swappable. Major and minor alarms from any module can be routed through the optional Chassis Interconnect Module to an external alert device.



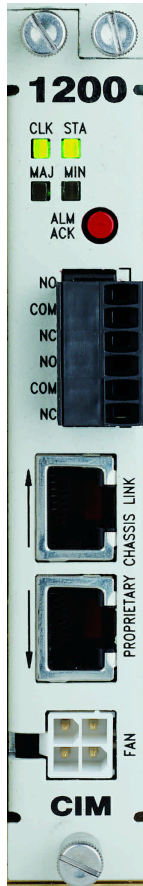
Up to 8 Chassis can be linked, providing central management for up to 240 local and remote modules with one IP address.



Chassis Interconnect Module

Model 1200

The Chassis Interconnect Module (CIM) collects information from all modules in the chassis and cascades up to eight chassis into one domain. Major and minor alarms are aggregated from all modules, the external fan tray, a power supply in the chassis, or from any chassis within a domain. These alarms are sent to relays on the front of the CIM for local audio and visual notification. The CIM also forwards all alarm and status information to the Domain Management Module (DMM) and provides a redundant clock for the management bus.



Key Features

- **Allows Cascading of up to Eight Chassis into One Alarm and Management Domain**
- **Collects Module, Fan, and Power Supply Alarm Status**
- **Aggregates Major and Minor Alarm Relays for Local Notification of Faults**
- **Provides a Redundant Clock to the Management Bus**
- **Provides Fan Tray Power and Monitoring**

Power Supply Options

The UCS can be ordered with several power supply options, guaranteeing redundancy of power. Both AC and DC power can be configured for the same chassis. The chart below describes the number of modules permitted with each type of power configuration.

AC Power Supply	DC Power Supply	Maximum Modules
0	1 or 2	15
1	0	14
1	1	13
2	0	12

UCS Management Options

Level 1: Directly attach to selected modules via EIA-232 terminal interface. This module and its remote mate can then be managed independently of the chassis.

Level 2: Adding a CIM to the chassis, which will aggregate major and minor alarms from all modules and the power supplies.

Level 3: Adding the DMM to the chassis. The DMM offers full VT100 Terminal or 10BASE-T/SNMP management of all aspects of the chassis, the modules within, and the associated remote devices.

Level 4: Redundant DMMs within a group of up to eight chassis.

Domain Management Module

Model 1500



The Domain Management Module (DMM) provides the network manager with a single IP addressable window into the operation, status and configuration of every module within the UCS domain. Most modules are accessible to the manager, including modules in other chassis that are linked via the CIM, as discussed previously. Supervisory and management actions can be remotely controlled via 10BASE-T interface, SNMP, as well as SLIP/PPP terminal connections.

Software upgrades for the DMM are obtainable via the Canoga Perkins Website, CD-ROM, or e-mail, and then archived in the DMM Software Librarian. The librarian stores, tracks and distributes the software revision to any or all modules.

Key Features

- Up to 8 Chassis and Up to 240 Local and Remote Modules Managed by a Single DMM (Domain Management Module)
- Canoga Perkins Side-Band Management Channel (SBMC) for Remote Unit Access
- 10BASE-T (RJ48) & Serial EIA-232 with DE-9 Interface (DTE or DCE) for Modem or Terminal Attachment
- SLIP, PPP, BOOTP, SNMP, Telnet
- Extensive Private MIB
- Two Telnet Sessions Supported
- Communicate Directly to Modules Through the DMM for Full Control of Entire System
- TFTP Download of Software Upgrades for DMM and Local/Remote Modules
- Software Module Libraries Allow Easy System Upgrades
- Simple Setup of Virtual Groups Allows for Commands & Upgrade on Groups of Modules

UCS Management Structure

DOMAIN THE FIRST MANAGEMENT ENTITY

The Domain is minimally comprised of a single UCS chassis, up to a maximum of 8 chassis physically tied together

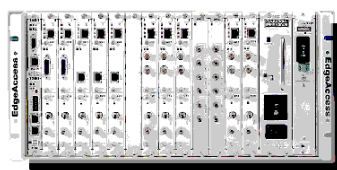


VIRTUAL GROUP THE SECOND MANAGEMENT ENTITY



The Virtual Group (VG) is a logical group of local and/or remote modules taken from any chassis, based on module type, customer, location, or other user definable classes

CHASSIS THE THIRD MANAGEMENT ENTITY



A group of up to 15 Modules

MODULE THE FORTH MANAGEMENT ENTITY

THE FORTH MANAGEMENT ENTITY

The Module consists of a main or remote module, as well as any Line Interface Modules (LIMs)



UCS Specifications

Chassis

Physical

Dimensions

8.75"H X 19"W X 11.75"D
(222 X 482 X 298mm)

Weight

12 lbs (5.5kg)

Power

AC power supply

150W
90 to 264VAC @ 2A Max. 50/60Hz input

DC power entry module

150W
-36 to -58VDC @ 4A Max. input

Operating Environment

Temperature

0-50°C with fan tray

Humidity

10 to 95% (non-condensing)

Chassis Interconnect Module

Physical

Dimensions

5.1"H X .9"W X 10.4"D
(130 X 23 X 264mm)

Weight

9 oz. (.25kg)

LEDs

- STA - Green** = Normal
- Amber** = Alarm relay latched
- Red** = Non-operational
- MAJ - Red** = Major alarm detected
- MIN - Amber** = Minor alarm detected
- CLK - Green** = Active clock source
- Red** = Clock source failed

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Switch

Reset Alarm Relay

Connectors

Alarm Relays

Major alarm
Normally Open/Closed
Minor alarm
Normally Open/Closed

Chassis Link

Proprietary 8-pin Modular

Fan

Fan Tray Connector Output
-48VDC, 400mA Max.

Domain Management Module

Physical

Dimensions 3.75"H X .9"W X 10.4"D
(95 X 23 X 264mm)

Weight 7 oz (.2kg)

LEDs

- STA - Green** = Normal
- Amber** = Blinking boot-up self-test
- Red** = Non operational
- ACT - Green** = Management activity
- LNK - Green** = Ethernet 10BASE-T link up
- Rx - Green** = Ethernet 10BASE-T receive activity

Switches

Terminal or Modem
MDX/MDI
Management Module Reset

Connectors

MDM/TRM - EIA-232, Modem/Terminal
MDX/MDI - 10BASE-T, Cross Over/Straight

Regulatory Compliance

UL 1950, CSA C22.2 No.950, IEC 60950
FCC Part 15 Class A, AS/NZS 3548
FCC Part 68, CTR 12, CTR 13, NTR 4, TS 016
NEBS Level 3



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