

EdgeAccess



**Universal Chassis System
UCS 1002
User Manual**



CAUTION!

This product may contain a laser diode operating at a wavelength of 1300 nm - 1600 nm. Use of optical instruments (e.g., collimating optics) with this product may increase eye hazard. Use of controls or adjustments, or performing procedures other than those specified herein may result in hazardous radiation exposure.

Under normal conditions, the radiation levels emitted by this product are under Class 1 limits in 21 CFR Chapter 1, Subchapter J.

ATTENCION!

Cet équipement peut avoir une diode laser émettant à des longueurs d'onde allant de 1300nm à 1600nm. L'utilisation d'instruments optiques (par exemple : un collimateur optique) avec cet équipement peut s'avérer dangereuse pour les yeux. Procéder à des contrôles, des ajustements ou toute procédure autre que celles décrites ci-après peut provoquer une exposition dangereuse à des radiations.

Sous des conditions normales, le niveau des radiations émises par cet équipement est en dessous des limites prescrites dans CFR21, chapitre 1, sous chapitre J.



NOTICE!

This device contains static sensitive components. It should be handled only with proper ElectroStatic Discharge (ESD) grounding procedures.

NOTE!

Cet équipement contient des composants sensibles aux décharges électro-statiques. Il doit absolument être manipulé en respectant les règles de mise à la terre afin de prévenir de telles décharges.

NOTICE

Canoga Perkins has prepared this users manual for use by customers and Canoga Perkins personnel as a guide for the proper installation, operation and/or maintenance of Canoga Perkins equipment. The drawings, specifications and information contained in this document are the property of Canoga Perkins and any unauthorized use or disclosure of such drawings, specifications and information is prohibited.

Canoga Perkins reserves the right to change or update the contents of this manual and to change the specifications of its products at any time without prior notification. Every effort has been made to keep the information in this document current and accurate as of the date of publication or revision. However, no guarantee is given or implied that the document is error free or that is accurate with regard to any specification.

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EdgeAccess®
Universal Chassis System
Model UCS 1002
User Manual

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website: <http://www.canoga.com>

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Chapter 1

Overview

The Model 1002 Universal Chassis System (UCS) Chassis houses and supplies power to Canoga Perkins modules that are 2U high. The UCS 1002 can be part of a managed domain of up to eight chassis; these can be a mix of UCS 1000 and UCS 1002. Figure 1 shows the UCS 1002 with these components:

- Chassis Interconnect Module (CIM), required in slot 0, provides alarm relays, connection to other chassis in the domain, and management through the chassis backplane; for details, see the *Model 1202 Chassis Interconnect Module User Manual*
- Domain Management Module (DMM), optional and recommended in slot 1, provides management for all chassis in the domain through a single IP addressable user interface screen; for details, see the *Model 1502 Domain Management Module User Manual* (or the *Model 1500 Domain Management Module User Manual* when the DMM is installed in the UCS 1000)
- Application modules, located in any slot from 1 through 14, such as fiber optic modems, multiplexers, or media converters
- Power Supply, can be one or two AC or DC supplies, or an AC supply and a DC supply; place the primary supply in slot 15 and the secondary supply in slot 14.



Figure 1. UCS 1002 Chassis

Power Supplies

You can use one or two AC and/or DC power supplies in the chassis; each power supply uses one slot. With one power supply, the chassis supports the CIM and up to 14 modules; with two power supplies, the chassis supports the CIM and up to 13 modules. For specifications for the power supplies, see Chapter 3.

An LED on each power supply lights green when the power is on. The chassis is a passive device that does not generate an alarm if the power fails. However, the CIM includes circuitry and alarm relay contacts that can route the alarm signal to an external device. The CIM forwards the power status to the DMM, which logs the power failure and sends an alarm trap; for details, see the user manuals for your CIM and DMM.

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Chapter 2

Installing and Setting Up the Chassis

This section describes how to set up and install the chassis.

Before setting up the chassis, make sure these items are available:

- Chassis with application modules; the CIM is required and the DMM is optional
- Power cables; 14 or 16 gauge wire for DC power
- Contact wires for the Alarm Relays (optional)

Caution: *Equipment intended only for installation in a RESTRICTED ACCESS LOCATION accessible only to electrically skilled persons and electrically instructed persons with the proper authorization.*

Follow these steps to install the chassis:

1. Plan the installation, considering these characteristics:
 - Place the chassis within 7 ft. (2.134 m) of the power source.
 - Plan to use one or more of these locations for the connection to Earth Ground:
 - The bonding lug on the rear of the chassis, near the bottom
 - The grounding prong on the AC power cord
 - The ground of the -48 VDC terminal strip
 - The mounting hardware for the rack, if the rack is tied to Earth Ground
 - Place the chassis adjacent to other Canoga Perkins or related equipment.
 - Allow room for the cable management bracket(s) that channel the cables, allowing slack in the cables and providing a surface for securing with a tie-wrap.
2. Unpack the chassis, cables, and modules, and inspect all parts for damage and compare them with the packing list. Set the packaging aside in case you need to return the equipment.
3. To connect or isolate the Signal and Chassis grounds, check the location of the lug installed between the backplane connectors for the power supplies, between slots 14 and 15. See Figure 2.

Caution: *To avoid breaking the shorting lug, screw it in only finger tight.*

- To isolate the signal and chassis grounds, screw the lug into the hole with the round pad, labeled "CH_GND/SIG_GND ISOLATED." This is the factory default.
- To connect the signal and chassis grounds, screw the lug into the hole with the square pad, labeled "CH_GND/SIG_GND CONNECTED."

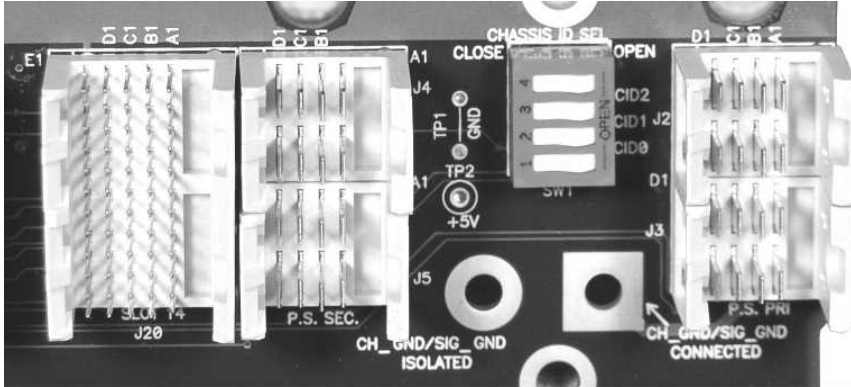


Figure 2. Chassis Backplane With CID Switch and Ground Options at Slots 14 and 15

4. Determine the number for this chassis within the domain, then locate the DIP switch inside the chassis on the backplane between the power supply connectors; see Figure 2. Check that the power is off, then use a non-conductive device to set the switches CID0, CID1, and CID2 according to the data in Table 1. The remaining switch is reserved.

Table 1. Chassis ID Switch Settings

Chassis ID Number	CID0	CID1	CID2
1	Closed	Closed	Closed
2	Open	Closed	Closed
3	Closed	Open	Closed
4	Open	Open	Closed
5	Closed	Closed	Open
6	Open	Closed	Open
7	Closed	Open	Open
8	Open	Open	Open

5. Plug the wire from Earth Ground into the lug on the back of the chassis; this connects the chassis to Earth Ground.
6. Mount the chassis in a standard 19-inch relay rack, in a 23-inch rack, or on a table top. The chassis ships with mounting brackets preconfigured for flush mounting in a standard 19-inch relay rack; you can reposition the brackets as needed.
 - For a 19-inch rack, position the chassis in the rack and secure the brackets to the rack with four screws. See Figure 1.
 - For a 23-inch rack, remove the mounting screws for the 19-inch mounting brackets and secure the optional 23-inch mounting bracket with the screws, then position the chassis in the rack and secure the brackets to the rack with screws.
 - For a tabletop, select a flat surface in a secure location, turn the chassis up-side-down and attach the self-adhesive feet near the four corners of the chassis, then turn the chassis right-side up and place it on the flat surface.

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7. Install the power supply(s). Always place the primary power supply in slot 15. If you have a secondary power supply, place it in slot 14. See Figure 1. To install the power supply(s), follow these steps:
 - a. Unplug the power cables or cord and turn the power switch off.
 - b. Insert the power supply firmly into its slot, then secure the screws.
 - For an AC supply, plug the power cord into the front panel, then plug the cord into the power source.

Caution: *To prevent damage to the power supply or power source, do not reverse polarity, and, if you use two DC power supplies, connect both DC sources to the same ground.*

- For a DC supply, loosen the screws for the GND and VDC terminals on the front panel, then slide the wires under the square washers, and tighten the screws. See Figure 1. Check the polarity and use an ohmmeter to verify that -48 VDC is not shorted to GND. Replace the shield over the terminals on the front panel and connect the power cables to the power source.

Note: *The connector for the ESD grounding strap on the front of each power supply connects to Earth ground through the chassis.*

8. Insert the CIM in slot 0 and tighten the captive screw; see Figure 1. For details about connecting the cables for the alarm relays or the chassis link in the domain, see the *Model 1202 Chassis Interconnect Module User Manual*.
9. If you have an optional DMM, insert it in an unused slot (slot 1 is recommended) and tighten the captive screw; see Figure 1.
10. Insert the remaining modules into the chassis; for details, see the user manual for each module.
11. Install a cover on each unused slot.
12. Turn on the chassis power supply(s). All LEDs on all modules light amber during the power-on sequence, then the PWR LED lights green.
13. To configure each module in the chassis, see the user manual for that module.

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Chapter 3

Specifications

Physical Specifications

Chassis dimensions	3.47" H x 17.39" W x 10.8 D" (88 mm x 442 mm x 274 mm)
Power supply dimensions	3.1" H x 1.6" W x 7.875" D (79 mm x 41 mm x 200 mm)
Chassis weight (unpopulated)	11.4 lbs. (5.17 kg)
Power supply weight	1102-2100, 1.50 lbs. (0.68 kg); 1102-2101, 1.34 lbs. (0.61 kg) 1112-2400 and 1112-2401, 0.66 lbs. (0.3 kg)

Power

Redundancy:	Optional (AC/AC, DC/DC or AC/DC)
AC power supply (auto ranging), Model 1102-2100:	Input: 120 W, 100/240 VAC, 1.25 A, 50 to 60 Hz Heat dissipation, max: 410 BTU/hr
AC power supply (auto ranging), Model 1102-2101:	Input: 150 W, 100/240 VAC, 1.5 A, 50 to 60 Hz Heat dissipation, max: 512 BTU/hr
DC power supply, Model 1112-2400:	Input: 100 W, -36 to -75 VDC, 3.0 A max Heat dissipation, max: 341 BTU/hr
DC power supply, Model 1112-2401:	Input: 135 W, -36 to -75 VDC, 4.0 A max Heat dissipation, max: 462 BTU/hr

Environment

Operating temperature:	0 to 50° C
Humidity:	10 to 95% (non-condensing)

Regulatory Compliance

- ETL, cETL (CAN/CSA-C22.2 No.60950/UL 60950)
- EN 60950
- EN 60825-1
- FCC Part 15B, Class A
- EN 55022
- EN 55024
- EN 61000-3-2, EN 61000-3-3
- R&TTE Directive (EN 300 386)
- C-Tick (AS/NZS 3548)
- NEBS Level 3
- CE Mark

Appendix A

Warranty

Limited Lifetime Warranty

Effective July 1, 2005 and After, Canoga Perkins warrants that, at the time of sale, and, for its lifetime, with certain exceptions noted below, every Canoga Perkins' labeled product purchased will be free from defects in material and workmanship for its lifetime, if properly installed and used in conformity to Canoga Perkins' published specifications. This warranty covers the original user only and is not transferable. For the purposes of this Warranty, "lifetime" is defined as the serviceable life of the product (a minimum of 5 years) or any longer period during which replacement spare parts are available. Subject to the conditions and limitations set forth below, Canoga Perkins will, at its option, either repair or replace any part of its product(s) that prove defective by reason of improper workmanship or materials. The warranty period for power supplies, fans and optics is five (5) years. Consumables such as filters are covered for one year. Software is warranted for 90 days. Hardened Media Converter (HS) products are covered for three (3) years.

This warranty does not cover any damage to products that have been subjected to lightning or other Acts of Nature, misuse, neglect, accident, damage, improper installation, or maintenance, including over-voltage failures caused by use outside of the product's specified rating, normal wear and tear of mechanical components, or alteration or repair by anyone other than Canoga Perkins or its authorized representative. If the user is unsure about the proper means of installing or using the equipment, contact Canoga Perkins' free technical support services. Customer must notify Canoga Perkins promptly in writing of any claim based on warranty. Canoga Perkins is not liable for, and does not cover under warranty, any costs associated with servicing and/or the installation of its products or for any inspection, packing or labor costs in connection with return of goods. In the event Canoga Perkins breaches its obligation of warranty, customer's sole and exclusive remedy is limited to replacement, repair, or credit of the purchase price, at Canoga Perkins' option. Under no circumstance will Canoga Perkins be liable for consequential or incidental damages or loss of profits.

Warranty Registration

To establish original ownership and to record purchase date, please complete the warranty on-line form on our product registration page. URL: www.canoga.com/warranty

Optional Service Programs

Canoga Perkins offers several optional Service Programs. Please call Canoga Perkins Sales Department (818-718-6300) or see our web site (www.canoga.com) for details.

CUSTOMER SERVICE DEPARTMENT REPAIR WARRANTY

Repairs performed by the Canoga Perkins Customer Service Department will be free from defects in material and workmanship for a period of ninety (90) DAYS from the date the repaired product is shipped, or until the expiration of the original factory warranty, whichever is longer.

Limitations

Canoga Perkins may at its sole discretion modify its Limited Warranty at any time and from time to time.

Other than those expressly stated herein, THERE ARE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, AND SPECIFICALLY EXCLUDED BUT NOT BY WAY OF LIMITATION, ARE THE IMPLIED WARRANTIES FOR FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY. IT IS UNDERSTOOD AND AGREED CANOGA PERKINS' LIABILITY WHETHER IN CONTRACT, IN TORT, UNDER ANY WARRANTY, IN NEGLIGENCE OR OTHERWISE SHALL NOT EXCEED THE AMOUNT OF THE PURCHASE PRICE PAID BY THE CUSTOMER AND UNDER NO CIRCUMSTANCES SHALL CANOGA PERKINS BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES. THE PRICE STATED FOR THE EQUIPMENT IS A CONSIDERATION IN LIMITING CANOGA PERKINS' LIABILITY. NO ACTION, REGARDLESS OF FORM, ARISING OUT OF THE TRANSACTIONS OF THIS AGREEMENT MAY BE BROUGHT BY CUSTOMER MORE THAN ONE YEAR AFTER THE CAUSE OF THE ACTION HAS ACCRUED. CANOGA PERKINS' MAXIMUM LIABILITY SHALL NOT EXCEED AND CUSTOMER'S REMEDY IS LIMITED TO EITHER (i) REPAIR OR REPLACEMENT OF THE DEFECTIVE PART OF PRODUCT, OR AT CANOGA PERKINS' OPTION (ii) RETURN OF THE PRODUCT AND REFUND OF THE PURCHASE PRICE, AND SUCH REMEDY SHALL BE CUSTOMER'S ENTIRE AND EXCLUSIVE REMEDY. AUTHORIZED RESELLERS ARE NOT AUTHORIZED TO EXTEND ANY DIFFERENT WARRANTY ON CANOGA PERKINS' BEHALF.

Return Policy

Customer must obtain an RMA (Return Material Authorization) number from the Canoga Perkins Customer Service Department before returning a product for service or repair.

Canoga Perkins' technical support department can be reached through any of the following means:

Telephone: 818-718-6300
Fax: 818-718-6312
E-Mail: fiber@canoga.com

If the warranty for a power supply, fan, optics, consumable or software has expired, customer must provide the Canoga Perkins Customer Service Representative with a Purchase Order to authorize the repair.

Send the defective product postage and insurance prepaid to the address provided to you by Canoga Perkins' technical support representative. Failure to properly protect the product during shipping may void this warranty. The return authorization number must be written on the outside of the carton to ensure its acceptance.

The customer must pay for the non-compliant product(s) return transportation costs to Canoga Perkins for evaluation of said product(s) for repair or replacement. Canoga Perkins will pay for the shipping of the repaired or replaced in-warranty product(s) back to the customer (any and all customs charges, tariffs, or/and taxes are the customer's responsibility).

Canoga Perkins reserves the right to charge for all testing and shipping incurred, if after testing, a return is classified as "No Problem Found."



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