

UNICOS[®] X Window System
Reference Manual

SR-2101 8.0

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The UNICOS operating system is derived from the UNIX System Laboratories, Inc. UNIX System V operating system. UNICOS is also based in part on the Fourth Berkeley Software Distribution (BSD) under license from The Regents of the University of California.

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New Features

The supported X Window system for UNICOS 8.0 is X11 Release 5; all references to X11R4 are removed. X11R5 features that Cray Research does not support include the following:

- X Window System server
- xinit and xmh clients
- Demo directories
- Example directories
- Shared memory extensions (xshm)
- Font server
- MIT PEX sample implementation
- XDM on UNICOS systems running MLS

Record of Revision

The date of printing or software version number is indicated in the footer. Changes in rewrites are noted by revision bars along the margin of the page.

Version	Description
6.0	November 1990. Original printing. This manual contains X Window System information for CRAY Y-MP, CRAY X-MP EA, CRAY X-MP, and CRAY-2 systems running the 6.0 release of the UNICOS operating system.
7.0	September 1992. Reprint with revision to support the UNICOS 7.0 release.
7.0	This restock incorporates the corrected pages from the <i>UNICOS 7.0 Publications Errata</i> , publication ER-2124 7.0, which reflect the grave accent printing problem.
8.0	November 1993. Rewrite to support the UNICOS 8.0 release.

This publication documents the X Window System running on all Cray Research, Inc. systems with UNICOS release 8.0.

The *UNICOS X Window System Reference Manual* provides programming information on X Window System features that are specific to Cray Research, Inc. (CRI) applications. Readers should have a working knowledge of the X Window System, and either the UNICOS or UNIX operating system.

Related publications

The following CRI manuals provide information about the UNICOS operating system:

- *CVT 2.0 Release Notice and System Installation Bulletin*, publication R0-5070 2.0
- *UNICOS Visual Interfaces User's Guide*, publication SG-3094
- *UNICOS User Commands Reference Manual*, publication SR-2011
- *UNICOS Administrator Commands Reference Manual*, publication SR-2022
- *X Window System Resources Ready Reference*, publication SQ-2123

The following manuals provide information about the X Window System (the list includes ordering information):

- *X Window System – C Library and Protocol Reference*, by Robert W. Scheifler, James Gettys, and Ron Newman. Digital Press, Digital Equipment Corporation, 12 Crosby Drive, Bedford, MA 01730, order no. EY-6737E-DP.

- *X Window System – C Library and Protocol Reference*, by Robert W. Scheifler, James Gettys, and Ron Newman and documentation for X11R3 (together as one package). MIT Software Center, Technology Licensing Office, Room E32–300, 77 Massachusetts Avenue, Cambridge, MA 02139, 1–617–258–8330.
- *Xlib Programming Manual for Version 11 and Xlib Reference Manual for Version 11* (two-volume set), by Adrian Nye. O’Reilly and Associates, Inc., 1988, 981 Chestnut Street, Newton, MA 02164, 1–800–338–NUTS, email address, uunet!ora!nuts.
- *X Window System in a Nutshell*, edited by Daniel Gilly and Tim O’Reilly. O’Reilly and Associates, Inc., 981 Chestnut Street, Newton, MA 02164, 1–800–338–NUTS, email address, uunet!ora!nuts.
- *X Window System User’s Guide for Version 11 (Volume 3)*, by Tim O’Reilly, Valerie Quercia, and Linda Lamb. O’Reilly and Associates, Inc., 1988, 981 Chestnut Street, Newton, MA 02164, 1–800–338–NUTS, email address, uunet!ora!nuts.
- *X Toolkit Intrinsic Programming Manual (Volume 4)*, by Adrian Nye and Tim O’Reilly. O’Reilly and Associates, Inc., 1990, 981 Chestnut Street, Newton, MA 02164, 1–800–338–NUTS, email address, uunet!ora!nuts.
- *X Toolkit Intrinsic Reference Manual (Volume 5)*, edited by Tim O’Reilly, introduction by Mark Langley. O’Reilly and Associates, Inc., 1990, 981 Chestnut Street, Newton, MA 02164, 1–800–338–NUTS, email address, uunet!ora!nuts.
- *Introduction to the X Window System*, by Oliver Jones. Prentice Hall Inc., P.O. Box 105361, Atlanta, GA 30348, 1–201–767–5937.

Conventions

The following conventions are used throughout this manual:

<u>Convention</u>	<u>Meaning</u>
Courier	This font denotes literal items such as commands, files, routines, path names, signals, messages, and programming language structures.
<i>italic</i>	This typeface denotes variable entries and words or concepts being defined.
Courier	This font denotes literal items that the user enters in screen drawings of interactive sessions. Output is shown in nonbold Courier font.
[]	Brackets enclose optional portions of a command line.
...	Ellipses indicate that a preceding command-line parameter can be repeated.
KEY	Indicates a key on the keyboard.

The following machine naming conventions are used throughout this manual:

<u>Term</u>	<u>Definition</u>
CRAY Y-MP systems	All configurations of CRAY Y-MP systems supported by UNICOS 8.0, including the M90 series (M92, M94, M98); C90 series (C916, C92A, C94, C94A, and C98); E series (2E, 4E, 8E, and 8I); EL series (including CRAY Y-MP EL, CRAY EL92, CRAY EL98, and FAST-J).
CRAY X-MP systems	All configurations of CRAY X-MP systems supported by UNICOS 8.0. This includes CRAY X-MP, CRAY X-MP EA, and X-MP EMA systems.
CRAY-2 systems	All configurations of CRAY-2 systems supported by UNICOS 8.0.

<u>Term</u>	<u>Definition</u>
Cray MPP systems	All configurations of the CRAY T3D series, supported by UNICOS 8.0, including CRAY T3D MC, CRAY T3D MCA, and CRAY T3D SC.
All Cray Research systems	All configurations supported by UNICOS 8.0.

It is the objective of Cray Research to become compliant with IEEE Std 1003.1–1990 (POSIX.1) and IEEE Std 1003.2–1992 (POSIX.2). This manual reflects those ongoing efforts.

POSIX.2 uses *utility* to refer to executable programs that Cray Research documentation usually refers to as *commands*. Both terms appear in this document.

In this publication, *Cray Research*, *CRI*, and *Cray* refer to Cray Research, Inc. and/or its products.

Man page references

Throughout this document, reference is made to the online man pages available under UNICOS through the man command. A *man page* is a discussion of a particular element of the UNICOS operating system or a compatible product.

Each man page includes a general description of one or more commands, routines, system calls, or other topics, and provides details of their usage (command syntax, routine parameters, system call arguments, and so on). If more than one topic appears on a page, the entry in the printed manual is alphabetized under its primary name; online, secondary entry names are linked to these primary names. For example, `rc` is a secondary entry on the page with a primary entry name of `brc`. To access `rc` online, you can type `man rc`. To access information about `brc` online, you can type either `man rc` or `man brc`; both commands display the `brc` man page on your terminal.

Section numbers appear in parentheses after man page names. Man pages are referenced in text by entry name and section number, as shown in the following example:

The `-p` and `-s` options to the `dmpu(1)` command require that the caller be super user.

The following lists the type of entry associated with each section number:

<u>Section</u>	<u>Subject</u>
1	User commands
1B	User commands ported from BSD
2	System calls
3	Library routines, macros, and opdefs
4	Devices (special files)
4P	Protocols
5	File formats
7	Miscellaneous topics
7D	DWB-related information
8	Administrator commands

A routine name followed by an empty set of parentheses designates a kernel routine; for example, `ddcntl()`. These routines do not have man pages associated with them.

Printed man pages are published in Cray Research manuals. The following manuals consist of collections of man pages that describe the UNICOS operating system commands, system calls, and file formats:

<u>Publication</u>	<u>Title</u>
SR-2011	<i>UNICOS User Commands Reference Manual</i>
SR-2012	<i>UNICOS System Calls Reference Manual</i>
SR-2014	<i>UNICOS File Formats and Special Files Reference Manual</i>
SR-2022	<i>UNICOS Administrator Commands Reference Manual</i>

The *UNICOS User Commands Ready Reference*, publication SQ-2056, accompanies the *UNICOS User Commands Reference Manual*.

The following manuals contain collections of man pages that describe the UNICOS library routines:

<u>Publication</u>	<u>Title</u>
SR-2079	<i>UNICOS Fortran Library Reference Manual</i>
SR-2080	<i>UNICOS C Library Reference Manual</i>
SR-2081	<i>Scientific Libraries Reference Manual</i>
SR-2138	<i>Math Library Reference Manual</i>

In some cases, man pages associated with a given product are published in the documentation set for that product, rather than in the UNICOS manuals listed here. For more information about the availability and content of any Cray Research publication, see the *User Publications Catalog*, publication CP-0099.

Ordering publications

The *User Publications Catalog*, publication CP-0099, lists all Cray Research hardware and software manuals that are available to customers.

To order a manual, either call the Distribution Center in Mendota Heights, Minnesota, at (612) 683-5907 or send a facsimile of your request to fax number (612) 452-0141. Cray Research employees may choose to send electronic mail to `order.desk` (UNIX system users) or `order desk` (HPDesk users).

Reader comments

If you have comments about the technical accuracy, content, or organization of this manual, please tell us. You can contact us in any of the following ways:

- Send us electronic mail from a UNICOS or UNIX system, using the following UUCP address:

`uunet!cray!publications`

- Send us electronic mail from any system connected to Internet, using the following Internet addresses:

`pubs2101@timbuk.cray.com` (comments specific to this manual)

`publications@timbuk.cray.com` (general comments)

- Contact your Cray Research representative and ask that a Software Problem Report (SPR) be filed. Use `PUBLICATIONS` for the group name, `PUBS` for the command, and `NO-LICENSE` for the release name.
- Call our Software Information Services department in Eagan, Minnesota, through the Technical Support Center, using either of the following numbers:

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- Send a facsimile of your comments to the attention of “Software Information Services” in Eagan, Minnesota, at fax number (612) 683-5599.
- Use the postage-paid Reader’s Comment Form at the back of this manual.

We value your comments and will respond to them promptly.