

AXI for MAXAda for Linux

Version 3.5.1-SR3 Release Notes

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1.0. Introduction

AXI for MAXAda for Linux is the Ada X Interface for MAXAda. The Ada X Interface is an abstract Ada binding to the X Library (Xlib), the X Toolkit (Xt) and Motif (Xm). Using this interface, applications written in Ada may take advantage of the X library, the X Toolkit, and Motif.

2.0. New in this Release

No new features were added in this release, however, support for AXI under 64-bit platforms was added.

The `xlibxt` and `motif` package specifications remain unchanged from the original 32-bit implementation, except as required by the X11/Xt/Motif ABI (e.g. “long” types are now 64-bits).

As such, user applications that utilized the types defined in the `Xlib`, `Xt`, and `Motif` packages, should require little, if any, modification to use the 64-bit AXI product.

However, if user applications were depending on automatic subtype conversion in their use of these packages, changes may need to be made.

For example:

```
function userFunction (d : Xlib.Display;
                      w : Xlib.Window;
                      cursorType : Integer) is
begin
  Xlib.DefineCursor(d,w,cursorType);
end userFunction;
```

This code will fail to compile under the 64-bit version of AXI, because the correct type for a cursor is `Xlib.Cursor`, which is a sub-type of `Long_Integer`, not `Integer`.

The correction could be as simple as:

```
Xlib.DefineCursor(d,w,Xlib.Cursor(cursorType));
```

However, use of the proper AXI types throughout code dealing with AXI is recommended.

3.0. Documentation

Table 2-1 lists the AXI for MAXAda 3.5.1 documentation available from Concurrent.

Table 2-1. AXI for MAXAda Version 3.5.1-SR3 Documentation

Manual Name	Pub. Number
<i>AXI for MAXAda Reference Manual</i>	0890518-000
<i>AXI for MAXAda for Linux Version 3.5.1 Release Notes</i>	0898539-3.5.1-SR3

Copies of the Concurrent documentation can be ordered by contacting the Concurrent Software Support Center. The toll-free number for calls within the continental United States is 1-800-245-6453. For calls outside the continental United States, the number is 1-954-283-1822.

Additionally, the manuals listed above are available:

- on the installation CD under the **documentation** directory
- on the Concurrent Computer Corporation web site at:
<http://redhawk.ccur.com/docs>

4.0. Prerequisites

Prerequisites for AXI for MAXAda Version 3.5.1-SR3 for both the host system and target system are as follows:

4.1. Host System

4.1.1. Software

- Operating Systems:
 - RedHawk Linux Version 2.3 or later
 - Red Hat Enterprise Linux Version 3 or later
 - CentOS 5 or later
- Required RPMs
 - MAXAda for Linux version 3.5.1

NOTE

The following RPM requirements are normally satisfied as part of the standard installation of the MAXAda product. However, during installation of AXI, the user will be notified if the required RPMs do not exist.

```
ccur-MAXAda-i86_3.5.1 (32-bit)  
ccur-MAXAda-amd64_3.5.1 (64-bit)  
ccur-HyperHelp-scripts  
ccur-x11progs
```

- X11 and Motif development RPMs

NOTE

Installation of AXI will not fail due to missing X11 or Motif RPMs, because their dependencies are not called out explicitly in the AXI RPM. Rather, application code that uses AXI will fully compile, but will fail to link.

The RPM names for the X11, Xt, and Motif development packages have changed significantly over the many releases supported by AXI. The following include some of the latest RPM names that supplied the needed libraries:

```
libX11-devel, libXt-devel, openmotif-devel
```


4.1.2. Hardware

- Any 32-bit or 64-bit X86 system supported by the host operating system

4.2. Target System

4.2.1. Software

- RedHawk Linux Version 2.3 or later

4.2.2. Hardware

- Any 32-bit or 64-bit X86 system supported by the target operating system

5.0. System Installation

Installation of AXI for MAXAda is accomplished using the standard Linux product installation mechanism, **rpm** (see **rpm(8)**) which is invoked by an installation script on the CD.

NOTE

The user must be root in order to install AXI.

To install the AXI for MAXAda RPM, issue the following commands on your Linux system:

1. Insert the installation CD in the CD-ROM drive
2. On recent versions of the operating system, the CD will automatically mount and can be found under the **/media** directory. If the CD does not automatically mount, issue commands similar to the following:)

```
[ -d /mnt/cdrom ] || mkdir /mnt/cdrom;  
mount -t iso9660 /dev/cdrom /mnt/cdrom
```

3. Change the current working directory to the directory containing the AXI for MAXAda CD:

```
cd /media/... or /mnt/cdrom
```

4. Install the RPM using the supplied script:

```
./install-axi
```

5. Change the current working directory outside the mounted cd hierarchy

```
cd /
```

6. If you manually mounted the disk, umount it with a command similar to:

```
umount /mnt/cdrom
```

7. Eject the CD:

```
eject
```

To remove AXI for MAXAda, use the **uninstall-axi** script found on the CD.

6.0. Known Issues

Problems with AXI for MAXAda Version 3.5.1-SR3 may be addressed in updates to this release or may be corrected in a future release.

- The Version 3.5.1-SR3 release of AXI for MAXAda does not support Motif 1.2.
- The STARS Xt implementation is incomplete. Use of the STARS bindings is not recommended, as it remains incomplete and in the original form created by the original vendor.
- The Version 3.5.1-SR3 release of AXI for MAXAda supports Motif 2.1.
- Ada programs using the Motif bindings must not link with static versions of both **-lXm** and **-lXmu**. The **openmotif** version 2.2 RPMs have duplicate symbols in those two libraries and an attempt to link would result in multiple definitions.

This is not a problem with default link rule:

```
obj,ar-system,so
```

which links system libraries dynamically when possible.

Other alternatives that work are:

```
obj,so,ar  
obj,ar--lXm,so  
obj,ar--lXmu,so
```

One example that would not work is:

```
obj,ar,so
```

7.0. Direct Software Support

Software support is available from a central source. If you need assistance or information about your system, please contact the Concurrent Software Support Center at our toll free number 1-800-245-6453. For calls outside the continental United States, the number is 1-954-283-1822. The Software Support Center operates Monday through Friday from 8 a.m. to 5 p.m., Eastern Standard Time.

You may also submit a request for assistance at any time by using the Concurrent Computer Corporation web site at http://www.ccur.com/isd_support_contact.asp or by sending an email to support@ccur.com.