Software Product Description

PRODUCT NAME: Objectivity™/DB for ULTRIX, Version 1.2 **SPD 33.61.02**

DESCRIPTION

Objectivity/DB for ULTRIX is a product of Objectivity, Inc. and is distributed under Digital Equipment Corporation's Standard Terms and Conditions.

Objectivity/DB for ULTRIX is an object-oriented database management system that meets the requirements of engineering, scientific, manufacturing, and other applications. Objectivity/DB meets the feature and performance requirements of many types of applications by combining object-oriented design principles with advanced database features to provide unique facilities for data modeling and runtime support.

Features

Data Modeling

- Object-Oriented Data Model — Provides the C++ data model including C++ classes and multiple inheritance. Objects store scalar and aggregate data in the form of attributes. Objects can be linked together by means of dynamic associations.
- Accepts C++ Class Declarations — The schema definition processor understands C++ class declarations so existing data structures can be made persistent.
- Strong Type Checking — Automatic generation of type-specific methods eliminates the need for tedious and error-prone type casting and improves program quality.
- Dynamic Associations — Bi-directional associations for automatic referential integrity; unidirectional for storage efficiency.
- Composite Object Support — Built-in operations such as delete and lock can be propagated along association links.
- Complex Object Support — Each object can contain multiple variable-size arrays.

Programming Language Interface

- Supports C and C++ programming languages.
- Versioning — Supports both linear and branching versioning with built-in genealogy and default versions.
- Iterator Construct — Can be used to traverse one-to-many associations and to scan databases and containers.
- Automatic Type Filtering — Only objects belonging to the class or super-class specified are returned by the iterator.
- Named Objects — Any object can be given names in multiple name scopes.
- Placement Control — Objects can be clustered together under program control into user-defined containers.

Distributed Architecture

- Distributed Database Architecture — Standalone and networked applications are supported with the location of data transparent to user applications.
- Heterogeneous Machine and Operating System Support — Transparent on-demand data format translations among different architectures. The database may be partitioned and the partitions distributed.
- Caching — Flexible and efficient data caching mechanisms for performance.

Multi-User Support

- Concurrency Control — Multi-granularity (hierarchical) automatic locking.
- Short and Long Transactions — Short transactions are supported by the commit/abort semantics. Long transactions are supported by means of Checkin/Checkout.

Database Tools

- Graphical Database Browser — Motif™-based graphical interface allows hypertext-style browsing of database contents through a multi-window view of objects and associations. It provides on-line Help.

- Database Debugger — Interactive debugging support for inspecting and modifying database contents available within a dbx session or as a standalone tool interface.
- Dump/Load Utility — Dump and reload a logical view of objects, containers, or database to and from text format.
- Lock Monitor — Allows database administrator to monitor or set locks; e.g., to coordinate a system shutdown.
- Database Administrator Utilities — Tools for administering the physical components of a federated database. Runtime statistics on logical and physical operations.
- Recovery — Low overhead automatic recovery from hardware and software failures.

Capacity

- Working Sets — Working sets of data are not limited by the size of swap space allocated or the virtual memory available.
- Federated Database — Maximum size per federated database 8*10**18 bytes.
- Object Identifiers — 64-bit address space.

HARDWARE REQUIREMENTS

Processors Supported

VAX-Based Processors:

VAX: VAX 6000 Model 200 Series,
VAX 6000 Model 300 Series,
VAX 6000 Model 400 Series,
VAX 6000 Model 500 Series

VAX 8200, VAX 8250, VAX 8300, VAX 8350,
VAX 8500, VAX 8530, VAX 8550, VAX 8600,
VAX 8650, VAX 8700, VAX 8800, VAX 8810,
VAX 8820, VAX 8830, VAX 8840

VAX 9000 Model 110,
VAX 9000 Model 210,
VAX 9000 Model 300,
VAX 9000 Model 410 Series,
VAX 9000 Model 420

VAX–11/750, VAX–11/780, VAX–11/785

MicroVAX: MicroVAX II, MicroVAX 2000,
MicroVAX 3100, MicroVAX 3300,
MicroVAX 3400, MicroVAX 3500,
MicroVAX 3600, MicroVAX 3800,
MicroVAX 3900

VAXstation: VAXstation II, VAXstation II/GPX,
VAXstation 2000, VAXstation 3100,
VAXstation 3200, VAXstation 3500,
VAXstation 3520, VAXstation 3540

VAXserver: VAXserver 100, VAXserver 2000,
VAXserver 3100, VAXserver 3300,
VAXserver 3400, VAXserver 3500,
VAXserver 3600, VAXserver 3602,
VAXserver 3800, VAXserver 3900

VAXserver 6000 Model 210,
VAXserver 6000 Model 220,
VAXserver 6000 Model 310,
VAXserver 6000 Model 320,
VAXserver 6000 Model 410,
VAXserver 6000 Model 420,
VAXserver 6000 Model 510,
VAXserver 6000 Model 520

RISC-Based Processors:

DECstation: DECstation 2100, DECstation 3100,
DECstation 3100s

Personal DECstation 5000 Model 20/25 MX,
Personal DECstation 5000 Model 20/25 HX,
Personal DECstation 5000 Model 20/25 TX,
Personal DECstation 5000 Model 20/25 PXG+,
Personal DECstation 5000 Model 20/25 PXG Turbo+

DECstation 5000 Model 120/125/133 MX,
DECstation 5000 Model 120/125/133 CX,
DECstation 5000 Model 120/125/133 HX,
DECstation 5000 Model 120/125/133 PX,
DECstation 5000 Model 120/125/133 TX,
DECstation 5000 Model 120/125/133 PXG,
DECstation 5000 Model 120/125/133 PXG+,
DECstation 5000 Model 120/125/133 PXG Turbo,
DECstation 5000 Model 120/125/133 PXG Turbo+

DECstation 5000 Model 200 MX,
DECstation 5000 Model 200 CX,
DECstation 5000 Model 200 HX,
DECstation 5000 Model 200 PX,
DECstation 5000 Model 200 TX,
DECstation 5000 Model 200 PXG,
DECstation 5000 Model 200 PXG+,
DECstation 5000 Model 200 PXG Turbo,
DECstation 5000 Model 200 PXG Turbo+

DECstation 5000 Model 240 MX,
DECstation 5000 Model 240 HX,
DECstation 5000 Model 240 TX,
DECstation 5000 Model 240 PXG+,
DECstation 5000 Model 240 PXG Turbo+

DECsystem: DECsystem 3100,
DECsystem 5000 Model 25,
DECsystem 5000 Model 200,
DECsystem 5000 Model 240,
DECsystem 5100, DECsystem 5400,
DECsystem 5500, DECsystem 5810,
DECsystem 5820, DECsystem 5830,
DECsystem 5840, DECsystem 5900

Note: A DECstation or VAXstation is required for display.

Objectivity/DB requires 8 Mbytes of memory, 12 Mbytes of disk storage for installation, and a TK50 tape drive for installation. Additional disk space is required for usage. Refer to the *Installation Guide* for information to determine space requirements.

SOFTWARE REQUIREMENTS

For Workstations:

- ULTRIX Worksystem Software, Version 4.2 - V4.2A
- Objectivity/C++™ Version 2.0 - 2.1
  (Available through Objectivity, Inc.)

GROWTH CONSIDERATION

The minimum hardware/software requirements for any future version of this product may be different from the requirements for the current version.

DISTRIBUTION MEDIA

TK50 Streaming Tape

ORDERING INFORMATION

For VAX-Based Systems:

Objectivity/DB Database Development System for VAX/ULTRIX

Software Package (License, Media and Documentation): QB-GDBAA-AA
Software Documentation: QA-GDAA*-GZ

Objectivity/DB Application Development System for VAX/ULTRIX

Software Package (License, Media and Documentation): QB-GDKAA-AA
Software Documentation: QA-GDAA*-GZ

Objectivity/DB Runtime System for VAX/ULTRIX

License Only: QL-GDEAB-3B

For RISC-Based Systems:

Objectivity/DB Database Development System for RISC/ULTRIX

Software Package (License, Media and Documentation): QB-GDCAA-AA
Software Documentation: QA-GDAA*-GZ

Objectivity/DB Application Development System for RISC/ULTRIX

Software Package (License, Media and Documentation): QB-GDLAA-AA
Software Documentation: QA-GDAA*-GZ

Objectivity/DB Runtime System for RISC/ULTRIX

License Only: QL-GDFAC-3B

* Denotes variant fields. For additional information on available licenses, services, and media, refer to the appropriate price book.

SOFTWARE LICENSING

The Objectivity/DB Database Development Option supports full development, implementation, maintenance, and system administration including creation of new schemas. This includes the Application Development System.

The Objectivity/DB Application Development Option supports developers of applications not including new schema development, within the context of database meta-data defined by the database developer.

The Objectivity/DB Runtime Option supports end users' use of an application, without the ability to develop new applications in new areas. It includes system administration tools.

The software components contained in each license option are summarized in the following chart:

	Development	**Application**	**Runtime**
Schema (DDL compiler)	X		
Admin (DBA) functions	X	X	X
Runtime Library	X	X	X
Browser	X	X	

	Development	Application	Runtime
Database Debugger	X	X	

This software is furnished under the licensing provisions of Digital Equipment Corporation's Standard Terms and Conditions. For more information, contact your local Digital office.

License Management Facility Support

This layered product offers a Concurrent Use license. Each Concurrent Use license allows any one individual at a time to use the layered product.

SOFTWARE PRODUCT SERVICES

Software product support is available from Objectivity, Inc. Refer to the *Installation Guide* for further information.

SOFTWARE WARRANTY

Objectivity/DB is provided by Digital on an "as is" basis without warranty of any kind, either express or implied.

A standard (90 day) warranty is provided directly by Objectivity, Inc. Please contact Objectivity Inc.'s Customer Services for more information.