

## Advantage™ Database Server ODBC Driver

### PRODUCT DATASHEET

#### KEY FEATURES

- Provides client/server access to the Advantage Database Server RDBMS
- Fully scalable from local to peer-to-peer to client/server environments with no code changes necessary
- Royalty-free distribution for local and peer-to-peer environments using the Advantage Local Server
- Supports SQL commands with both the Advantage Database Server and Advantage Local Server
- ODBC Version 3 compliant driver with Level 2 API conformance
- Includes full server-based transaction processing to eliminate database corruption, drastically minimizing support costs
- provides complete referential integrity support including primary/foreign key definition and cascaded updates and deletes
- includes database security functionality and encryption support
- Low maintenance—no DBA required

The Advantage ODBC Driver is an ODBC Version 3 compliant driver that provides a native connection to the Advantage Database Server and Advantage Local Server. The driver provides full support for the Minimum ODBC SQL grammar specification, as well as most functions included in the Core and Extended grammar specifications. The Advantage ODBC Driver installs in minutes and provides access to Advantage databases from virtually any Windows or Linux environment. When used in combination with the Advantage Database Server, ODBC users can have the stability, performance, and reduced network traffic benefits of client/server architecture.

#### FULL SCALABILITY—WRITE ONCE, DEPLOY ANYWHERE

Advantage applications can be deployed in stand-alone, peer-to-peer, client/server, and Internet environments with one set of source code. Advantage does not require a different ODBC driver or different set of code for different deployment environments. The Advantage ODBC Driver will automatically determine if the Advantage Database Server is available directly or via the Advantage Internet Server, or whether the Advantage Local Server should be used. You only need to write one application with one version of code for local, peer-to-peer, client/server, or Internet database access.

#### PERFORMANCE

The Advantage ODBC Driver is an ultra-thin client that passes SQL statements on to the Advantage SQL engine in the Advantage Database Server and Advantage Local Server.

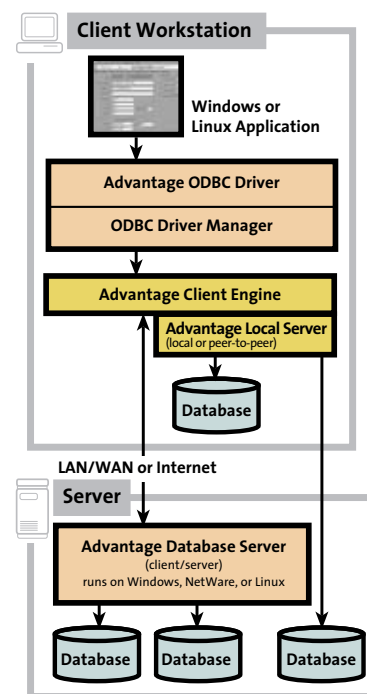
#### SPECIFICATIONS

##### Conformance

The Advantage ODBC Driver is a fully functional ODBC Version 3 driver with Level 2 API conformance. The Advantage SQL engine has SQL support that consists of most of the ANSI SQL-92 standard with ODBC extensions as well as SQL scripting.

##### Server operating systems (via the Advantage Database Server)

- Novell NetWare 5.x or greater (IP, IPX)
- Microsoft Windows x86 (IP, IPX)
- Microsoft Windows x86\_64 (IP)
- Linux x86, x86\_64 (IP)



#### Key Features (continued)

- Includes database security functionality and encryption support
- Includes triggers that provide a powerful means to maintain business rules at the database level - independent of the client application
- Designed for use with Microsoft Visual Studio .NET including support for the Visual Studio .NET component designer
- Provides support for the ADO.NET Entity Framework

#### Client operating systems

- Microsoft Windows
- Linux

#### Supported file formats

- Advantage proprietary database (ADT tables, ADI index files, ADM memo files)
- FoxPro-compatible (DBF tables, CDX index files, FPT memo files)
- CA-Clipper compatible (DBF tables, NTX index files, DBT memo files)
- Visual FoxPro\_compatible (DBF tables, CDX index files, FPT memo files)

#### Database maximums

- Maximum ADT table size
  - Windows NT/2000/XP/2003 with NTFS — 16 exabytes (18,446,744,073,709,551,616 bytes)
  - Windows NT/2000/XP/2003 with FAT32 — 4 gigabytes (4,294,967,296 bytes)
  - NetWare 5 or greater with NSS file systems — 16 exabytes (18,446,744,073,709,551,616 bytes)
  - NetWare 5 or greater with traditional file systems — 4 gigabytes (4,294,967,296 bytes)
  - NetWare 4 — 4 gigabytes (4,294,967,296 bytes)
  - Linux pre-2.1.2 — 11 glibc and pre-2.4 kernel — 2 gigabytes (2,147,483,648 bytes)
  - Linux glibc 2.1.2 — 11+ with kernel 2.4+ — 8 exabytes (9,223,372,036,854,775,807 bytes)
- Maximum DBF table size — Maximum record count (2,147,483,648) multiplied by record length (depending upon operating system and file system)
- Maximum number of records — 2.2 billion
- Maximum record length — 65,530 bytes
- Maximum field name length — 128 characters for ADT tables, 10 characters for DBF tables (dictionary-bound Visual FoxPro tables can have names up to 128 characters)
- Maximum number of columns per table — ~3,500 for ADT tables, 2,035 for DBF tables

#### DATA TYPES SUPPORTED

Advantage ADT data type	ODBC data type
AutoIncrement	SQL_INTEGER
Binary	SQL_LONGVARBINARY
Character	SQL_CHAR
CCharacter	SQL_CHAR
CurDouble	SQL_DOUBLE
Date	SQL_DATE
Double	SQL_DOUBLE
Image	SQL_LONGVARBINARY
Integer	SQL_INTEGER
Logical	SQL_BIT
Memo	SQL_LONGVARCHAR
Modtime	SQL_TIMESTAMP
Money	SQL_NUMERIC
NChar	SQL_WCHAR
NMemo	SQL_WLONGVARCHAR
Numeric	SQL_DECIMAL
NVarChar	SQL_WVARCHAR
Raw	SQL_CHAR
Rowversion	SQL_NUMERIC
ShortInteger	SQL_SMALLINT

Time  
TimeStamp  
VarBinary  
VarChar

**DBF data type**

AutoIncrement  
Binary  
Char  
Date  
Double  
Image  
Integer  
Logical  
Memo  
Money  
NChar  
NMEMO  
Numeric  
NVarChar  
TimeStamp  
VarBinary  
VarChar

SQL\_TIME  
SQL\_TIMESTAMP  
SQL\_VARBINARY  
SQL\_VARCHAR

**ODBC data type**

SQL\_INTEGER  
SQL\_LONGVARBINARY  
SQL\_CHAR  
SQL\_DATE  
SQL\_DOUBLE  
SQL\_LONGVARBINARY  
SQL\_INTEGER  
SQL\_BIT  
SQL\_LONGVARCHAR  
SQL\_NUMERIC  
SQL\_WCHAR  
SQL\_WLONGVARCHAR  
SQL\_DECIMAL  
SQL\_WVARCHAR  
SQL\_TIMESTAMP  
SQL\_VARBINARY  
SQL\_VARCHAR

**DRIVER BOUNDARIES**

**Description**

Number of rows returned  
Number of connections  
Number of statements  
Table qualifier (path)  
Number of joined tables

**Driver boundary**

2.1 billion  
Limited by memory  
Limited by memory per connection  
Limited by operating system  
Limited by memory