

SQL Server for Embedded System

Embedded Database

Microsoft SQL Server

Features

- Breakthrough In-memory Performance
- Proven, Predictable Performance
- High Availability and Disaster Recovery
- Enterprise Scalability across Computers, Networking, and Storage
- Security and Compliance
- Consistent Data Platform On-premises to Cloud
- Corporate Business Intelligence
- Access Data in Familiar Tools Like Excel
- Faster Insights for All Users with Power BI
- Scalable Data Warehousing
- Data Quality and Integration Services
- Easy-to-use Management Tools
- Robust Development Tools

Introduction

Microsoft® SQL Server® for embedded systems is binary identical to Microsoft SQL Server, and is intended for use in embedded solutions consisting of purpose-built hardware running the Windows Embedded Server Operating System and application software. Microsoft SQL Server for Embedded Systems builds on a strong foundation and proven capabilities, providing OEMs with a robust database for their embedded applications deployed on server appliances.

Feature Details

Breakthrough In-memory Performance

With SQL Server, new in-memory capabilities for transaction processing and enhancements for data warehousing complement our existing technologies for data warehousing and analytics. Scale and transform your business with up to a 30x performance gain for transaction processing using existing hardware, and a greater-than 100x performance gain for data warehousing.

Proven, Predictable Performance

SQL Server consistently leads in TPC-E, TPC-H and real-world application performance benchmarks. SQL Server is SAP-certified to run some of the most demanding workloads. Get more predictable performance of virtualized SQL Server instances with IO governance in Resource Governor.

High Availability and Disaster Recovery

Gain mission-critical uptime, fast failover, improved manageability, and better use of hardware resources through enhanced AlwaysOn in SQL Server, a unified solution for high availability. In SQL Server, setting up AlwaysOn becomes even easier with new Add Replica wizard, and if you are looking to implement hybrid HA using Microsoft Azure Virtual Machines, you can take advantage of new AlwaysOn templates to automate HA setup.

Enterprise Scalability across Computers, Networking, and Storage

With SQL Server and Windows Server, physical processing now scales up to 640 logical processors, and virtual machines scale up to 64 logical processors. SQL Server also utilizes storage spaces and network virtualization to optimize your resources. It can also run on Windows Server Core to lower the surface area of attack.

Security and Compliance

Help secure data for mission critical workloads with transparent data encryption, robust auditing, extensible key management and encrypted backups. It is even easier to manage permissions for data access to support separation of duties across various users.

Consistent Data Platform On-premises to Cloud

Leverage existing skills and familiar tools like Active Directory and SQL Server Management Studio across on-premises SQL Server and Microsoft Azure. Have the flexibility to run your SQL Server workloads in Azure Virtual Machines (VM), giving you complete control of the VM. Or use Azure SQL Database service to further simplify managing your SQL Server instances while providing unique scale-out architecture.

Corporate Business Intelligence

Scale your BI models, enrich and help secure your data, and ensure quality and accuracy with a complete BI solution. Build comprehensive, enterprise-scale analytic solutions with Analysis Services and simplify BI model deployment with the BI Semantic Model.

Access Data in Familiar Tools Like Excel

Accelerate time-to-insight using Microsoft Excel. Search, access, and shape internal, external, structured, and unstructured data for analysis in Excel.

Faster Insights for All Users with Power BI

Accelerate time-to-insight, on-premises and in the cloud, with SQL Server and Power BI. Get richer visualizations using Power Map and Power View. Search, access, and shape internal, external, structured, and unstructured data with Power Query. Access insights from anywhere using Power BI.

Scalable Data Warehousing

Scale to petabytes of data for enterprise-grade relational data warehousing using scale out Massive Parallel Processing (MPP) architecture using the Analytics Platform System (APS) and have the ability to integrate with non-relational sources like Hadoop. Support your needs from smaller datamarts to your largest enterprise data warehouses while making queries more than 100x faster than your legacy data platform, and reduce storage with new enhanced data compression.

Data Quality and Integration Services

Integration services include rich support for extract, transform and load (ETL) tasks, and the ability to run and manage as a separate SQL Server instance. Improve data quality by using organizational knowledge and third-party data providers to cleanse data through Data Quality Services.

SQL Server for Embedded System

Easy-to-use Management Tools

SQL Server Management Studio helps you centrally manage your database infrastructure, both on-premises and in the cloud. Added support for Windows PowerShell 2.0 automates management tasks and enhancements to let you more efficiently create virtual machines. Distributed Replay simplifies application testing on a single database.

Robust Development Tools

Updated developer tools are integrated into Visual Studio and are available for download to build next-generation web, enterprise, business intelligence, and mobile applications spanning on-premises and the cloud. Customers can use industry standard APIs (ADO, NET, ODBC, JDBC, PDO, and ADO) across varied platforms including .NET, C/C++, Java, Linux, and PHP.

Specifications and Versions

SQL Server 2017: It's all about choice

In 2017, you can run SQL server on your favorite platform, Windows, Linux, and Docker Containers. You can build modern applications by using the language of your choice, on-premises and in the cloud, no matter on Windows, Linux and Docker containers. SQL server 2017 is the least vulnerable database over the HYPERLINK "https://www.microsoft.com/en-us/sql-server/sql-server-2017" \l "footnote" last seven years in the NIST vulnerabilities database, in which data at rest and in motion are well protected. The real-time analytics at up to 1M prediction/second helps enterprises to gain transformative insights in business.

SQL Server 2016: Everything built-in

There are many new features and functions to be enhanced on SQL Server 2016 from the perspectives of performance and security. The industry-leading OLTP (online transaction processing) is to be built with breakthrough scalability, performance, and availability. Security is enhanced to protect data at rest and in motion by lowering the vulnerability and using a build-in-row security. End-to-end mobile BI transforms data into actionable insights with only 1/5 cost. You could also using R language to analyze data directly within the SQL Server database—without moving the data! It's also helping you to work easier between your datacenter, private cloud, and Microsoft Azure!

Microsoft SQL Server 2014 for Embedded Systems

Microsoft SQL Server 2014 for Embedded Systems is binary identical to Microsoft SQL Server 2014, intended for use in intelligent system solutions consisting of purpose-built devices running application software. Coupled with Windows Server 2012 R2 for Embedded Systems, Microsoft SQL Server 2014 for Embedded Systems provides a comprehensive database foundation for data analytics and operational intelligence in the enterprise. With the ability to scale from applications to the cloud and anywhere in between, Microsoft SQL Server 2014 for Embedded Systems provides greater uptime, superior performance, enhanced security features and stunning data-visualization capabilities.

Microsoft SQL Server 2012 for Embedded Systems

Microsoft SQL Server 2012 for Embedded Systems is binary identical to Microsoft SQL Server 2012, intended for use in intelligent system solutions consisting of purpose-built devices running application software. Coupled with Windows Server 2012 for Embedded Systems, Microsoft SQL Server 2012 for Embedded Systems provides a comprehensive database platform foundational for data analytics and operational intelligence in the enterprise. With the ability to scale from applications to the cloud and anywhere in between, Microsoft SQL Server 2012 for Embedded Systems provides greater uptime, superior performance, enhanced security features, and stunning data-visualization capabilities.

Microsoft SQL Server 2008 R2 for Embedded Systems

For OEMs wanting to offer cutting edge server appliances, Microsoft SQL Server 2008 R2 for embedded systems, which builds on the strong foundation and proven capabilities of Microsoft SQL Server 2008 for embedded systems, provides OEMs with a robust database for their embedded applications deployed on server appliances and offers rich capability to support Business Intel-ligence workloads out of the box at a low total cost of ownership

Microsoft SQL Server 2008 for Embedded Systems

Microsoft SQL Server 2008 provides a trusted, productive and intelligent data platform that enables you to run your most demanding mission-critical applications, reduce time and cost of development and management of applications, and deliver actionable insight to your entire organization.

Features	SQL Server 2008	SQL Server 2008 R2	SQL Server 2012	SQL Server 2014
Performance				
In-memory OLTP*	–	–	–	●
In-memory ColumnStore*	–	–	●	●
Buffer pool extension to SSD	–	–	–	●
Resource Governor	–	–	–	–
Availability				
AlwaysOn*	–	–	●	●
Enhanced virtualization support and live migration	–	●	●	●
Security				
Transparent data encryption*	●	●	●	●
Backup encryption support	–	–	–	●
Fine-grained auditing	●	●	●	●
Separation of duties	–	–	●	●
Cloud-readiness				
Backup to Microsoft Azure	–	–	●	●
Disaster recovery to Microsoft Azure	–	–	–	●
Optimized VM images in Microsoft Azure gallery	–	–	●	●
Management & Programmability				
Distributed replay	–	–	●	●
Policy-based management	●	●	●	●
Enhanced programmability	●	●	●	●
BI & Analytics				
PowerPivot for Excel	–	●	●	●
Integration services managed as a server	–	–	●	●
Hadoop connector via Apache Sqoop	●	●	●	●
Tabular BI semantic model*	–	●	●	●
Master data services*	–	●	●	●
Data quality services*	–	–	●	●

Licensing Model

Version	Licensing Options	
	Server + CAL	Core-based
Enterprise	–	●
Business Intelligence	●	–
Standard	●	●

Ordering Information

Microsoft SQL Server 2017 for Embedded Systems

Advantech PN	Item Name
968TSQ17S1	WinSQLSvr 2017 Std ESD 1ClIt
968TSQ17S5	WinSQLSvr 2017 Std ESD 5ClIt
968TSQ17S4	WinSQLSvr 2017 Std ESD 4Core
968TSQ17S2	WinSQLSvr 2017 Std ESD 2Core Addtnl Lic
968TSQ17E4	WinSQLSvr 2017 Ent ESD 4Core
968TSQ17E2	WinSQLSvr 2017 Ent ESD 2Core Addtnl Lic
968TSQ17D1	WinSQLSvr 2017 ESD 1DeviceCAL
968TSQ17U1	WinSQLSvr 2017 ESD 1UserCAL
968TSQ17D5	WinSQLSvr 2017 ESD 5DeviceCAL
968TSQ17U5	WinSQLSvr 2017 ESD 5UserCAL

Microsoft SQL Server 2016 for Embedded Systems

Advantech PN	Item Name
968TSQ16S1	Embd SQL Svr Std RUNTIME 2016 EMB ESD OLC 1 Clt Std
968TSQ16S5	Embd SQL Svr Std RUNTIME 2016 EMB ESD OLC 5 Clt Std
968TSQ16S4	Embd SQL Svr Std RUNTIME 2016 EMB ESD OLC 4 Core Std
968TSQ16S2	Embd SQL Svr Std RUNTIME 2016 EMB ESD OLC 2 Core Addtnl Lic Std
968TSQ16E4	Embd SQL Svr Ent RUNTIME 2016 EMB ESD OLC 4 Core Ent
968TSQ16E2	Embd SQL Svr Ent RUNTIME 2016 EMB ESD OLC 2 Core Addtnl Lic Ent
968TSQ16U1	Embedded SQL CAL Runtime 2016 EMB ESD OLC 1 Clt User CAL
968TSQ16D1	Embedded SQL CAL Runtime 2016 EMB ESD OLC 1 Clt Device CAL
968TSQ16U5	Embedded SQL CAL Runtime 2016 EMB ESD OLC 5 Clt User CAL
968TSQ16D5	Embedded SQL CAL Runtime 2016 EMB ESD OLC 5 Clt Device CAL

Microsoft SQL Server 2014 for Embedded Systems

Standard Version

Advantech PN	MS PN	Item Name	End of Support	End of License
968TSQ14S1	P6L-00006	SQL Svr Std RUNTIME 2014 EMB ESD OEI 1 Clt Std		
968TSQ14S5	P6L-00008	SQL Svr Std RUNTIME 2014 EMB ESD OEI 5 Clt Std		
968TSQ14S1	P6L-00006	SQL Svr Std RUNTIME 2014 EMB ESD OEI 1 Clt Std		
968TSQ14S4	P6L-00004	SQL Svr Std RUNTIME 2014 EMB ESD OEI 4 Core Std		
968TSQ14S2	P6L-00002	SQL Svr Std RUNTIME 2014 EMB ESD OEI 2 Core Addtnl Lic Std		

Enterprise Version

Advantech PN	MS PN	Item Name	End of Support	End of License
968TSQ14E4	P5L-00004	SQL Svr Ent RUNTIME 2014 EMB ESD OEI 4 Core Ent		
968TSQ14E2	P5L-00002	SQL Svr Ent RUNTIME 2014 EMB ESD OEI 2 Core Addtnl Lic Ent		

SQL Server for Embedded System

Microsoft SQL Server 2012 for Embedded Systems

Standard Version

Advantech PN	MS PN	Item Name	End of Support	End of License
968TSQ12S1	E65-00228	SQL Svr Std Ed RUNTIME 2012 EMB ESD OLC 1 Clt Std	2022/7/12	2027/3/31
968TSQ12S5	E65-00233	SQL Svr Std Ed RUNTIME 2012 EMB ESD OLC 5 Clt Std	2022/7/12	2027/3/31
968TSQ12S4	E65-00223	SQL Svr Std Ed RUNTIME 2012 EMB ESD OLC 4 Core Std	2022/7/12	2027/3/31
968TSQ12S2	E65-00218	SQL Svr Std Ed RUNTIME 2012 EMB ESD OLC 2 Core Addtl Lic Std	2022/7/12	2027/3/31

BI Version

Advantech PN	MS PN	Item Name	End of Support	End of License
968TSQ12B1	3ZQ-00003	SQL Server BI Runtime 2012 EMB ESD OLC 1 Clt Business Intelligence	2022/7/12	2027/3/31
968TSQ12B0	3ZQ-00008	SQL Server BI Runtime 2012 EMB ESD OLC 10 Clt Business Intelligence	2022/7/12	2027/3/31

Enterprise Version

Advantech PN	MS PN	Item Name	End of Support	End of License
968TSQ12E4	E66-00201	SQL Svr Ent Ed RUNTIME 2012 EMB ESD OLC 4 Core Ent	2022/7/12	2027/3/31
968TSQ12E2	E66-00196	SQL Svr Ent Ed RUNTIME 2012 EMB ESD OLC 2 Core Addtl Lic Ent	2022/7/12	2027/3/31

Microsoft SQL Server 2008 R2 for embedded systems

Standard Version

Advantech PN	MS PN	Item Name	End of Support	End of License
968TS82S1C	E65-00195	SQL Svr Std Ed RUNTIME 2008 R2 EMB ESD OEI 1 Clt	2019/7/9	2024/7/9
968TS82S5C	E65-00187	SQL Svr Std Ed RUNTIME 2008 R2 EMB ESD OEI 5 Clt	2019/7/9	2024/7/9
968TS82SC1	E65-00186	SQL Svr Std Ed RUNTIME 2008 R2 EMB ESD OEI 1 CPU	2019/7/9	2024/7/9

Enterprise Version

Advantech PN	MS PN	Item Name	End of Support	End of License
968TS82E1C	E66-00181	SQL Svr Ent Ed RUNTIME 2008 R2 EMB ESD OEI 1 Clt	2019/7/9	2024/7/9
968TS82E0C	E66-00176	SQL Svr Ent Ed RUNTIME 2008 R2 EMB ESD OEI 10 Clt	2019/7/9	2024/7/9
968TS82EC1	E66-00175	SQL Svr Ent Ed RUNTIME 2008 R2 EMB ESD OEI 1 CPU	2019/7/9	2024/7/9

Microsoft SQL Server 2008 for embedded systems

Standard Version

Advantech PN	MS PN	Item Name	End of Support	End of License
968TSQ28S1	E65-00164	SQL Svr Standard Edtn RUNTIME 2008 EMB ESD OEI 1 Clt	2019/7/9	2024/7/9
968TSQ28S5	E65-00139	SQL Svr Standard Edtn RUNTIME 2008 EMB ESD OEI 5 Clt	2019/7/9	2024/7/9
968TSQ28SC	E65-00138	SQL Svr Standard Edtn RUNTIME 2008 EMB ESD OEI 1 CPU	2019/7/9	2024/7/9

Enterprise Version

Advantech PN	MS PN	Item Name	End of Support	End of License
968TSQ28E1	E66-00157	SQL Svr Enterprise Edtn RUNTIME 2008 EMB ESD OEI 1 Clt	2019/7/9	2024/7/9
968TSQ28E0	E66-00140	SQL Svr Enterprise Edtn RUNTIME 2008 EMB ESD OEI 10 Clt	2019/7/9	2024/7/9
968TSQ28EC	E66-00139	SQL Svr Enterprise Edtn RUNTIME 2008 EMB ESD OEI 1 CPU	2019/7/9	2024/7/9

Microsoft SQL Server 2005 for embedded systems

Standard Version

Advantech PN	MS PN	Item Name	End of Support	End of License
968TSQ25S5	E65-00111	SQL Svr Std Ed RUNTIME 2005 Win32 EMB ESD OEI 5 Clt	2016/4/12	2021/4/1
968TSQS113	E65-00113	SQL Svr Std Ed RUNTIME 2005 64Bit EMB ESD OEI 5 Clt	2016/4/12	2021/4/1
968TSQ25SC	E65-00110	SQL Svr Std Ed RUNTIME 2005 Win32 EMB ESD OEI 1 CPU	2016/4/12	2021/4/1
968TSQS112	E65-00112	SQL Svr Std Ed RUNTIME 2005 64Bit EMB ESD OEI 1 CPU	2016/4/12	2021/4/1

Enterprise Version

Advantech PN	MS PN	Item Name	End of Support	End of License
968TSQE115	E66-00115	SQL Svr Ent Ed RUNTIME 2005 Win32 EMB ESD OEI 10 Clt	2016/4/12	2021/4/1
968TSQE116	E66-00116	SQL Svr Ent Ed RUNTIME 2005 64Bit EMB ESD OEI 10 Clt	2016/4/12	2021/4/1
968TSQE109	E66-00109	SQL Svr Ent Ed RUNTIME 2005 Win32 EMB ESD OEI 1 CPU	2016/4/12	2021/4/1
968TSQE117	E66-00117	SQL Svr Ent Ed RUNTIME 2005 64Bit EMB ESD OEI 1 CPU	2016/4/12	2021/4/1