Ubiquitous AI Corporation

RA Ecosystem Partner Solution
Ubiquitous DeviceSQL
Compact & High-Speed database for embedded devices

RENESAS RA
READY

1. Overview

Ubiquitous DeviceSQL is specially designed for embedded devices and is based on the world's smallest stream-based data management technologies (Memory footprint: Min 50KB). This is a framework product that realizes data management functions optimized for embedded systems running on RA MCUs.

2. Features

■ An ultra high-speed, ultra compact database

■ Advanced approach from the DeviceSQL Language based on PL/SQL to the C language

■ Achieving optimal data placement

■ Portability to support any CPU and OS

3. Block dialog
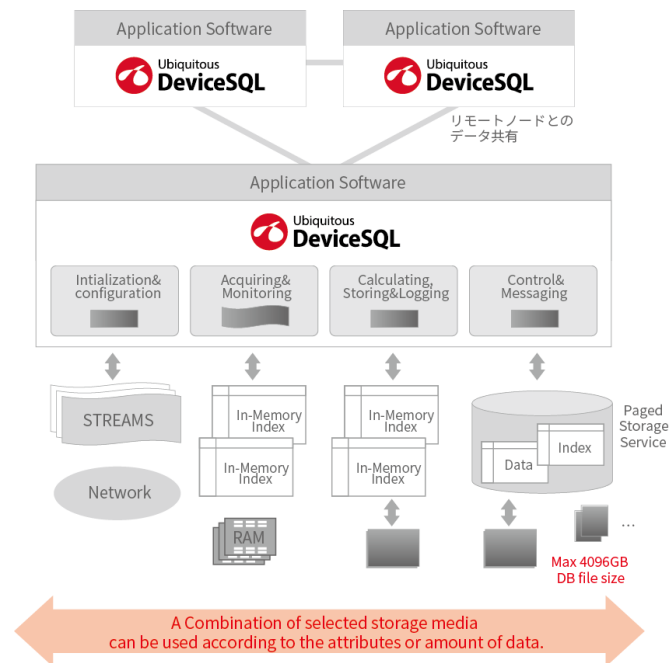
4. Target market and usage

■ Consumer electronics ■ Industrial ■ Healthcare ■ Home appliance

■ Automotive ■ MFP/Printer ■ Smart home ■ IoT devices

https://www.ubiquitous-ai.com/en/products/storage/devicesql/

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5.Specification

DeviceSQL consists of the DeviceSQL development environment (SDK) installed on the development host and the DeviceSQL Runtime Services running on the target.

DeviceSQL Development environment	Development language	■ DeviceSQL language (Industry standard Oracle PL / SQL compliant) ■ C / C ++ (Embedded SQL API / Native API)
	Tool	■ DeviceSQL Compiler ■ DeviceSQL SQLProbe ■ DeviceSQL Starter sample applications
	Development host OS	■ Windows 7/8/10 ■ Linux
DeviceSQL Runtime Services	Footprint	■ 50KB ~. Depends on configuration and compiler type
	DB type	■ Library type
	Data model	■ Relational ■ Data stream
	Maximum database size	•4TB (4096GB)
	Maximum number of tables/ database	•2048
	Maximum records / table	•Unlimited (depends on available resource size such as memory)
	Data format & encoding	•Unicode UTF-8, UTF-16, ASCII •"Instant-On" paged index / storage format
	Data type	INT, SHORT, LONG, FLOAT, DOUBLE, VARCHAR, NVARCHAR, TIMESTAMP, DATE, BINARY, BIT8, BIT16, BIT32, INT8, INT16, INT32, INT64, UINT8, UNIT16, UINT32, UINT64, FLOAT64, POINTER, PHONECHAR, RECORD, STREAM, VECTOR_*type*, TABLE, POINT_I, POINT_IZ, POINT_D, POINT_DZ
	Index service	•Hash, AVL-Tree, B-Tree •R*-Tree (spatial search), N-gram (full text search)
	Storage support	•stream •In-Memory •Memory Mapped Storage on FlashROM, HDD, SD / MMC etc. •Device direct storage (Paged Storage) on FlashROM, HDD, SD / MMC etc.
	Data sharing	•Multi-process (Paged Storage) •Multithread
	Remote access	Accessing remote DeviceSQL DB files (*Depends on platform)
	Cloud collaboration	Supported by communication libraries provided by various IoT cloud platforms
	Support CPU	Compatible with 32bits and 64bits CPUs
	Support OS	µITRON, FreeRTOS, Linux, Windows CE, VxWorks, QNX, ThreadX, In house OS etc.

Company Overview

A world leader in Embedded Software development, Ubiquitous AI Corporation (TYO:3858) has been at the forefront of technological advancement with it's Small, Fast and Light ethos. Every year millions of new devices containing Ubiquitous AI Corporation's software are sold worldwide. Ubiquitous AI Corporation is also a leading software distributor, acting as a gateway to Japan for global software companies.