

c-treeEDGE

IoT DATABASE

A database built specifically for the edge

FairCom's c-treeEDGE IoT Database is a high-performance solution with a robust architecture that empowers organizations to reliably manage their data on the edge, opening the door for mission-critical, real-time decision making at or near the collection point. c-treeEDGE is designed to run on gateways and on the smallest edge IoT devices, yet powerful enough to host data from thousands of sensors in real time.

Supporting native MQTT and OPC UA communication, as well as Node-RED and REST API integration, c-treeEDGE provides all the flexibility required for developing solutions for mission-critical, edge-computing decision processing, which makes it ideal for IoT environments, especially Industrial Internet of Things (IIoT).

Built with trusted technology for an ever-changing technology world

While c-treeEDGE is a new product, it includes core FairCom technology that has been used for edge computing and embedded database activities for many years: medical devices, manufacturing systems, real-time stock analytics, high-speed telecommunications and other mission-critical systems. FairCom products, which includes the c-treeACE unified multimodel database, are trusted by more than 40 members of the Fortune 100 for their data management needs.

Like with c-treeACE, c-treeEDGE developers can take advantage of FairCom's NAV API: A next-generation, object-oriented, record-navigation API based on the relational database model. This proven FairCom technology provides developers with an unprecedented level of control that delivers performance that other databases cannot match.

In addition to harnessing the power of the NAV API, there are many other reasons why c-treeEDGE is unique. It provides developers with an ANSI SQL engine for easy queries and industry standard integration. Developers do not have to choose between SQL and NoSQL because they can use both simultaneously on the exact same data. Another unique aspect is that it can powerfully handle unstructured and structured data types with the benefits of immediately consistent ACID transactions for mission-critical applications.

Key Benefits:

- Edge storage: Keep mission-critical data close to the source
- Mission-critical ops: Enable real-time IoT decision making
- Fast: High-speed data collection at the edge
- Data quality control: Guarantee data quality using transactional edge persistence
- IoT specific: Built for IoT applications to run on major operating systems and hardware platforms
- Security: Transmit only the data needed and store all data securely at the edge
- Database as a microservice: Uses both SQL and NoSQL microservices to collect, query and analyze data in real time for IoT systems
- Analytics-tool neutral: Compatible with nearly all analytics tools for use over actual real-time unstructured data
- Micro footprint

What's New in c-treeEDGE V2.0:

- ThingWorx Integration: Visual data mapping, automatic modeling, automatic updates, and many more
- Massively Parallel Data Replication: Asynchronous, N-to-M schemas, automatic replication and drag-and-drop management, and many more
- Automatic Data Aggregation: User-defined length, retention and functions and numeric data aggregation
- Extensibility: Plug-in module functionality and tuning management and modifiable example code
- OPC-UA Client: Certified OPC-UA client, binary protocol for better performance and improved security and SDK for custom integration
- SQL: ANSI SQL with ODBC and JDBC and integration with all BI and analytic tools
- Browser-based Database Administration: ISAM Explorer, SQL Explorer and Database Monitor

IoT Platforms



thingworx



Node-RED

Operating Systems



Linux



Windows 10



Windows IoT



Raspbian



androidthings



ubuntu core

Communication Interfaces



Plus, many more

Organizations can save time, money and resources by operating on the edge versus sending all of the data to the cloud because of c-treeEDGE's high-performance persistence close to the origin of the data. The benefits also include the easy addition or programming of existing applications, the enabling of the use of unfiltered data for edge-based predictive analytics, and real-time replication to other edge devices and the cloud.

Works well with multiple IoT/IoT platforms and environments

FairCom technology has a strong reputation of successfully operating with multiple platforms, systems and environments. c-treeEDGE is no different as it is compatible with the ThingWorx and Node-RED IoT platforms and can natively run on Linux and Windows systems powered by either x86 or ARM processors.

Through a technology partnership with PTC, ThingWorx customers can easily have access to FairCom's legendary robust database technology. The c-treeEDGE IoT connection to ThingWorx provides easy integration of c-treeEDGE and the ThingWorx IoT platform development environment. The connection provides more than integration. It enables ThingWorx users to have access to features such as visual mapping, enhanced integration with PTC's "AlwaysOn" protocol and automatic modeling.

Makes data aggregation and distribution easy

c-treeEDGE provides massively parallel data replication, allowing data replication to occur between any number of c-tree databases and enabling organizations to automatically replicate data from hundreds of database servers into centralized databases and vice versa. c-treeEDGE includes a drag-and-drop user interface that makes it easy to configure and manage replication. Organizations can filter the data to be replicated between servers.

With the c-treeEDGE automatic data aggregation feature, organizations can quickly set up processes that can aggregate any numeric data in a table. It also provides a

plug-in framework and example code that make it easy for developers to implement any aggregation scenario.

The end result: A fast, flexible and reliable edge computing database

The solution's benefits and features are what make c-treeEDGE ideal in IoT and IIoT situations where organizations must rely on real-time decisions made in environments that go beyond traditional IT settings. c-treeEDGE can quickly store, categorize and transmit data collected from sensors that monitor mission-critical and/or life-saving equipment. The c-treeEDGE Database assures organizations will be able to maintain data management operations for these mission-critical systems when connectivity to outside locations and the cloud are not available.

Best in class support

Unlike other vendors, FairCom's support team is not outsourced nor comprised of entry-level positions. Depending on how mission-critical a system is, FairCom support can provide direct access to senior engineers that are c-treeACE and c-treeEDGE experts, able to dive deep into technical issues and are knowledgeable of the organization's application and environment, reducing the time-to-recover in crucial situations. FairCom's support program allows users to achieve maximum value out of their c-treeEDGE Database engine at every stage of their application's lifecycle, development through production and ongoing maintenance. FairCom support receives high marks with its customers:

- **97.2% technical support satisfaction rate**
- **95.3% technology satisfaction rate**

How to buy

Just as the technical aspects of c-treeEDGE are flexible to meet operation requirements, so are the purchasing options. Contact a FairCom sales representative for pricing and licensing information. For more information see www.faircom.com/products/c-treeEDGE.

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