

# **TDENGINE RECEIVES THE 2023 CUSTOMER VALUE LEADERSHIP AWARD**

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*Identified as best in class in the global industrial data  
management solutions industry*

## Best Practices Criteria for World-Class Performance

Frost & Sullivan applies a rigorous analytical process to evaluate multiple nominees for each award category before determining the final award recipient. The process involves a detailed evaluation of best practices criteria across two dimensions for each nominated company. TDengine excels in many of the criteria in the industrial data management solutions space.

AWARD CRITERIA	
<i>Business Impact</i>	<i>Customer Impact</i>
Financial Performance	Price/Performance Value
Customer Acquisition	Customer Purchase Experience
Operational Efficiency	Customer Ownership Experience
Growth Potential	Customer Service Experience
Human Capital	Brand Equity

### ***Growth Opportunities for the Industrial Data Management Solutions Market***

The industrial data management solutions market is gaining momentum due to the increasing digitization of industrial processes and the application of innovative and disruptive technologies. Artificial intelligence, machine learning, cloud computing, robotics, digital twins, and virtual reality contribute to actionable insights that optimize productivity, efficiency, quality, safety, reliability, agility, and integration between business processes and operations. As organizations recognize the value of data-driven decision-making and continue to embrace digital transformation capabilities, industrial data management solutions providers are experiencing exponential growth. With the ultimate goal of creating intelligent, autonomous, agile, efficient, and sustainable operations, an excellent digital industrial platform business model will support a viable business for customers and deliver value quickly and efficiently. Frost & Sullivan forecasts the digital industrial platforms market to grow with a compound annual growth rate of 19.6% from 2021 to 2026.<sup>1</sup>

### ***TDengine: A Forward-thinking Approach***

Founded in 2017 and headquartered in California, United States, TDengine is a next generation data historian provider. With the aim to democratize industrial data systems, the company stands out in the industrial data management solution industry with its open ecosystem and unprecedented accessibility and affordability. At the core of TDengine is an open-source time-series database, featuring a unique

<sup>1</sup> Global Digital Industrial Platforms Growth Opportunities (Frost & Sullivan, March 2022).

architecture that supports billions of time series while outperforming general-purpose and legacy time-series databases in data ingestion, querying, and compression. TDengine builds on this database with caching, stream processing, data subscription, and a wide variety of data source connectors, forming a complete, purpose-built solution for industrial data optimized for the industrial IoT and Industry 4.0. Founder Jeff Tao’s vision for TDengine was to create a solution to enable traditional industries to embrace digital transformation and enhance operational efficiency.

TDengine’s fundamental value proposition revolves around centralizing, storing, analyzing, and sharing extensive industrial data with a simple and scalable architecture. The company offers several pivotal advantages, including easy integration with industry-leading visualization, analytics, and business intelligence (BI) tools, simple and secure data sharing with fine-grained privileges, and allowing clients to choose on-premises or cloud deployment, including the fully managed TDengine Cloud. Moreover,

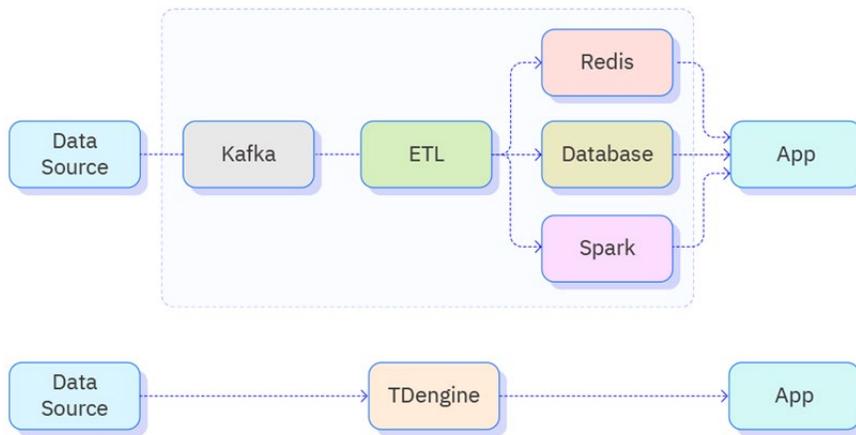
*“Leveraging high performance, scalability, and affordability as the core of its services, Frost & Sullivan believes the company is well-positioned to drive the industrial data management solutions space into its next growth phase, setting it apart from competitive offerings.”*

**- Sebastian Trolli**  
**Research Manager and Head of the Industrial Automation Program**

TDengine seamlessly integrates with established industrial data protocols such as Message Queuing Telemetry Transport (MQTT) and Open Platform Communications (OPC), including Unified Architecture (OPC UA) and Data Access (OPC DA). The recent announcement in October 2023 introduces connectors for OPC and MQTT, complementing the PI System connector released in 2022. This expansion underscores TDengine’s renewed commitment to the industrial sector and its growing capability to work with diverse industrial data sources.

Furthermore, in October 2023, the company announced the successful conclusion of a System and Organization Controls (SOC) 2 Type II audit conducted by Sensiba LLP.<sup>2</sup> Achieving SOC 2 Type II compliance enables TDengine to provide customers with the confidence that it securely and confidentially manages their data.

**TDengine’s Simplified Solution**



Source: TDengine

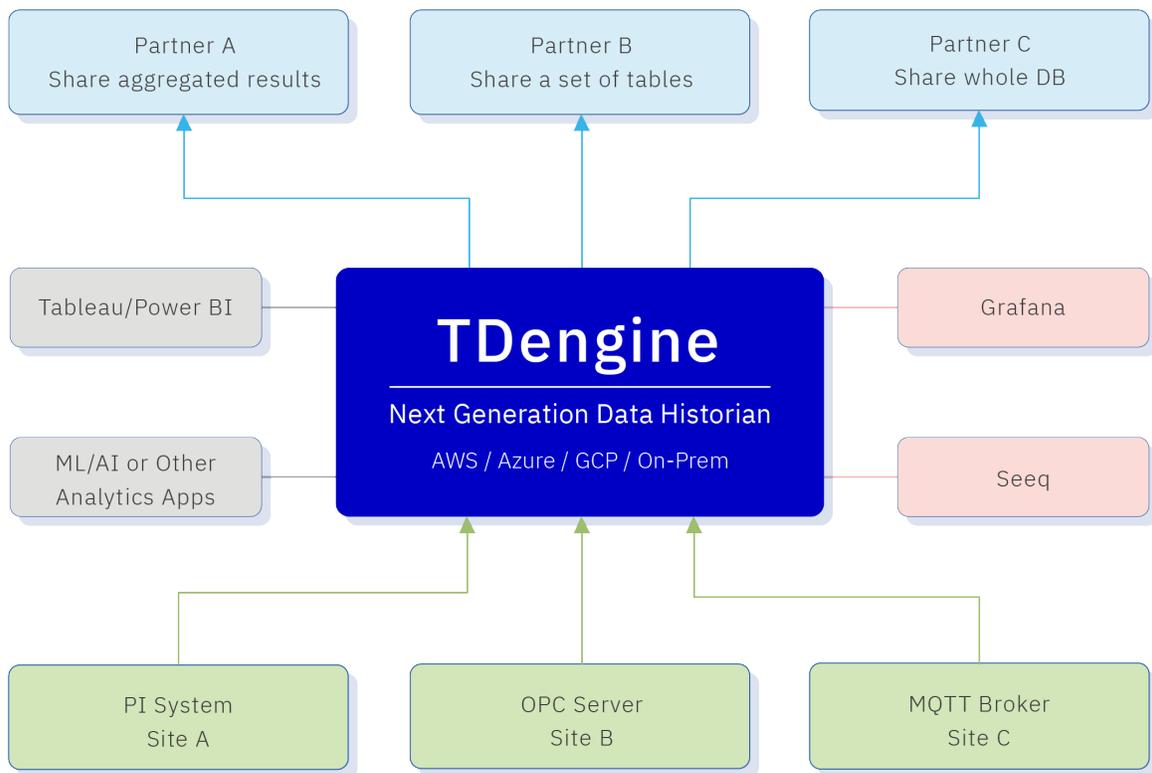
<sup>2</sup> <https://www.prnewswire.com/news-releases/tdengine-completes-soc-2-type-ii-certification-301961497.html> Accessed November 2023.

The company’s solution design for data processing is greatly simplified, integrating essential features such as extract, transform, and load (ETL), as well as stream processing and data subscription, into a unified platform. Its approach enables clients to simplify their architecture, generate actionable insights, and enhance operational efficiency. In addition, its high-performance storage engine can achieve up to 10.6 times faster data ingestion than other time-series databases while using 26.9 times less storage space.<sup>3</sup>

One crucial highlight of TDengine’s solutions is its prompt configuration experience, starting the service in 60 seconds, with no code needed. It also offers libraries for popular programming languages (e.g., Python and Java) that clients can use to create applications. Furthermore, the company customizes its pricing model to suit the client’s needs based on the compute and storage resources used, ensuring affordability. TDengine claims that the performance of its solution, compared with competing offerings, can reduce clients’ total cost of operations by 50%.<sup>4</sup>

Frost & Sullivan applauds TDengine’s approach to industrial data management solutions, allowing clients to make informed decisions, optimize processes, improve efficiency, and enhance overall productivity.

**TDengine Data Platform Architecture**



Source: TDengine

<sup>3</sup> <https://www.globenewswire.com/en/news-release/2023/02/28/2616973/0/en/New-TDengine-Benchmark-Results-Show-Up-to-37-0x-Higher-Query-Performance-Than-InfluxDB-and-TimescaleDB.html> Accessed November 2023.

<sup>4</sup> <https://tdengine.com/reduce-tco/>. Accessed November 2023.

### ***Guaranteed Satisfaction through End-to-end Customer Service***

With its customer-centric corporate philosophy, TDengine operates on the central tenet that its success depends on customer satisfaction. This philosophy permeates the company's daily practices. Over the years, TDengine has expanded its client base to include well-known players in the industrial space, such as Siemens, TCL, and FANUC, achieving significant results. For instance, Siemens, a leading industrial conglomerate, needed to address performance, high availability, cost efficiency, and integration challenges with its SIMICAS solution. After evaluating various competitive options, Siemens opted for TDengine due to its capability to fulfill these needs, with a particular emphasis on its built-in data subscription, stream processing, and caching features.<sup>5</sup> Similarly, TCL chose TDengine to optimize its energy management platform, reducing hardware and energy resource consumption compared to a similar system, resulting in a 50% smaller server footprint and a 5% reduction in energy consumption.<sup>6</sup>

*"Frost & Sullivan applauds TDengine's approach to industrial data management solutions, allowing clients to make informed decisions, optimize processes, improve efficiency, and enhance overall productivity."*

**- Valentina Barcia  
Best Practices Research Analyst**

TDengine meets with clients to assess their specific needs and develops tailored solutions with roadmaps for seamless execution. This foundational approach establishes ongoing trust with customers for long-lasting relationships. By actively listening to its clients, the company invests time in understanding clients' specific use cases and legacy systems. Following this initial stage, TDengine conducts a proof of concept to develop a comprehensive acquaintance of the various stakeholders involved and offer clients the opportunity to experiment with its services. After deployment, the company's customer success team supports clients with a ticket system to address queries quickly.

Additionally, it maintains a repository of documents and blogs on its website and hosts events to stay connected with its clients.

*"TDengine's technical experts also provided a lot of support during the process. TDengine has convenient and active technical support groups on social media and besides community support, technical questions are usually answered by experts from TDengine and the response is very fast."*

- Xu Haijun, TCL<sup>7</sup>

Proven by prominent industry clients' experience, TDengine stands out in the market, delivering substantial outcomes with a customer-centric philosophy defined to democratize industrial data systems.

### ***Impressive Growth Potential***

Achieving notable milestones, TDengine has gained significant momentum in the open-source community, with over 22,000 stars on GitHub, 4,700 forks, and over 400,000 installations in more than 50 countries worldwide. In 2022, the company achieved a remarkable 200% increase in customer adoption, driven by its open-source nature.<sup>8</sup> Being open-source software is an essential pillar in TDengine's

<sup>5</sup> <https://tdengine.com/siemens-simicas-simplifies-industrial-time-series-data-processing-workflows/>. Accessed November 2023.

<sup>6</sup> <https://tdengine.com/an-energy-conservation-and-management-platform-for-industry-4-0/>. Accessed November 2023.

<sup>7</sup> Ibid.

<sup>8</sup> <https://www.prnewswire.com/news-releases/tdengine-achieves-rapid-growth-in-2022-drives-200-increase-in-customer-adoption-301700852.html> Accessed November 2023.

customer acquisition strategy. It builds a robust brand strength within the open-source developer community, offering a distinct advantage as it allows for ongoing updates, feature enhancements, bug fixes, and transparent release notes, facilitating a quick development cycle.

With \$69 million in total funding, TDengine aspires to experience a sustained 100% growth year over year.<sup>9</sup> Thus, it seeks strategic technological partnerships to fortify its core business and expand its services. In June 2023, the company announced a strategic alliance with Casne Engineering, integrating its data infrastructure technology into IIoT solutions. In July, it made public its participation in the AWS Partner Network, a global community of partners working alongside AWS to provide programs, expertise, and resources to develop, promote, and sell customer solutions.<sup>10</sup>

TDengine aims to represent the next generation of data historians, redefining the landscape for traditional industries. Leveraging high performance, scalability, and affordability as the core of its services, Frost & Sullivan believes the company is well-positioned to drive the industrial data management solutions space into its next growth phase, setting it apart from competitive offerings.

## Conclusion

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Customer-centric strategies help companies safeguard leading positions in markets, but only if the approach is authentic and the implementation is seamless. TDengine incorporates client-focused strategies and exemplifies best practice implementation. Addressing evolving manufacturing customers' needs, the company builds a platform for centralizing, storing, analyzing, and sharing data from common industrial sources with a unique approach. As an open-source solution, TDengine ensures an impressive speed to market with notable integrations to popular visualization and analytics tools. As a testament to its successful strategy, the company achieved a 200% increase in customer adoption in 2022. This overall customer-first approach offers immense value to existing and new customers and solidifies TDengine's reputation in the market.

With its strong overall performance, TDengine earns Frost & Sullivan's 2023 Global Customer Value Leadership Award in the industrial data management solutions industry.

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<sup>9</sup> [https://app.dealroom.co/companies/tdengine\\_1](https://app.dealroom.co/companies/tdengine_1). Accessed November 2023.

<sup>10</sup> <https://www.prnewswire.com/news-releases/tdengine-launches-tdengine-cloud-in-aws-marketplace-and-joins-the-aws-partner-network-301877329.html> Accessed November 2023.

## What You Need to Know about the Customer Value Leadership Recognition

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Frost & Sullivan's Customer Value Leadership Award recognizes the company that offers products or services customers find superior for the overall price, performance, and quality.

### Best Practices Award Analysis

For the Customer Value Leadership Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

#### *Business Impact*

**Financial Performance:** Strong overall financial performance is achieved in terms of revenues, revenue growth, operating margin, and other key financial metrics

**Customer Acquisition:** Customer-facing processes support efficient and consistent new customer acquisition while enhancing customer retention

**Operational Efficiency:** Company staff performs assigned tasks productively, quickly, and to a high-quality standard

**Growth Potential:** Growth is fostered by a strong customer focus that strengthens the brand and reinforces customer loyalty

**Human Capital:** Commitment to quality and to customers characterize the company culture, which in turn enhances employee morale and retention

#### *Customer Impact*

**Price/Performance Value:** Products or services provide the best value for the price compared to similar market offerings

**Customer Purchase Experience:** Quality of the purchase experience assures customers that they are buying the optimal solution for addressing their unique needs and constraints

**Customer Ownership Experience:** Customers proudly own the company's product or service and have a positive experience throughout the life of the product or service

**Customer Service Experience:** Customer service is accessible, fast, stress-free, and high quality

**Brand Equity:** Customers perceive the brand positively and exhibit high brand loyalty

