



4D 20 LTS

Powers the Next Generation of Business Applications

With more than **100** new features

4D 20 LTS represents a **paradigm shift** in the world of 4D, leaving an everlasting mark on its history.

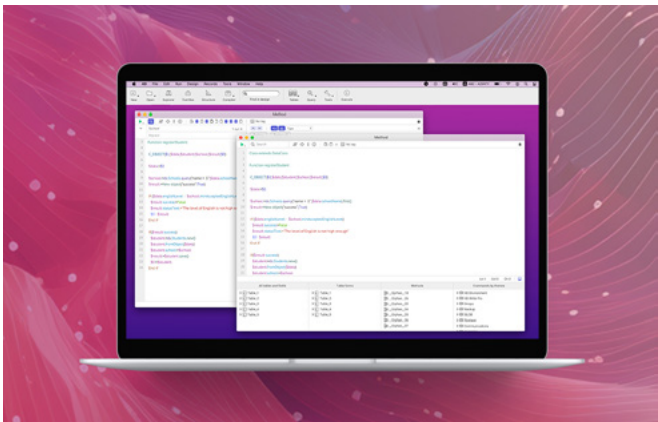
Seamlessly blending innovative new features with improvements to existing ones, this release provides a comprehensive solution that meets all your application requirements and paves the way for a new era of possibilities in the world of 4D.



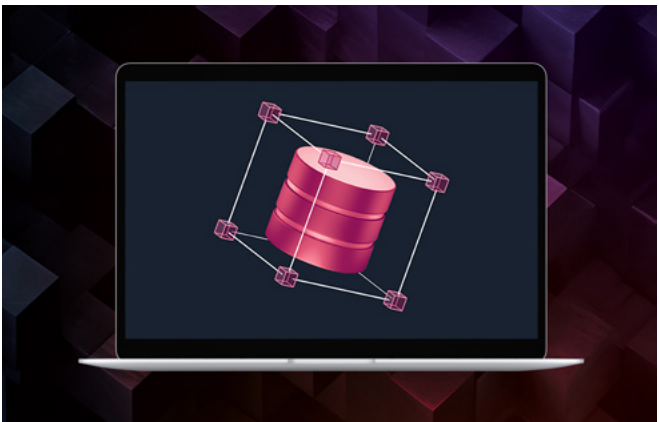
The advancements made to **4D Write Pro** have been nothing short of remarkable. 4D Write Pro becomes a **powerful template-based document generator**, eliminating the laborious task of manual document creation. Effortlessly automate the generation of **pre-filled documents, seamlessly extracting contextual information directly from the 4D database**. 4D Write Pro merges this information with your templates, streamlining the document creation process and improving the efficiency of your workflow.



Enter the world of **4D View Pro**, the ultimate solution for professionals dealing with **large and complex datasets across various domains** such as sales, finance, accounting, and data analysis. As a multilingual product, 4D View Pro grants direct access to your 4D data, empowering you to harness the full potential of integrated, dynamic spreadsheets.

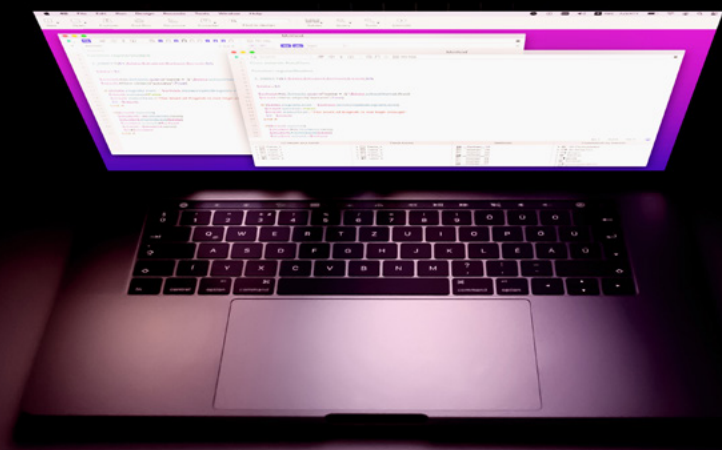


The evolution of the 4D language has embarked on an intriguing journey, embracing a set of features that render it modern and robust and **recalling the programming languages some of you are already familiar with, like JavaScript, for instance, and programming models like Object-Oriented Programming (OOP).**



ORDA (Object Relational Data Access), the revolutionary way of accessing and presenting data, has **its own share of new features**. Whether you're building a simple application or a complex enterprise system, ORDA can help make both your development process and **data access faster, easier, and more efficient**. If you're looking for a better way to work with data, ORDA is well worth exploring.

And that's not all! From enhanced list boxes and an advanced code editor to improved email capabilities and powerful deployment features, this LTS represents the peak of cutting-edge advancements.



4D 20 LTS redefines possibilities, surpassing expectations with its extensive feature set. Brace yourself for a fantastic experience, as this release sets a new standard, pushing boundaries and unlocking limitless potential for your 4D applications.

4D WRITE PRO

4D Write Pro is a powerful template-based document generator. Easy enough to build a classic contract yet powerful enough to create complete invoices, delivery notes, quotes, sales orders, and advertising letters with content, images, and data automatically populated from a 4D application.



Effortless Document Generation

No more tedious and error-prone manual document creation. 4D Write Pro allows the use of 4D data to automatically feed and generate pre-filled documents with contextual information. Pull the required information from the 4D database and let 4D Write Pro merge the information with your templates.

Custom Templates

What could be better than grabbing a ready-to-use document created earlier and adapting it to current needs? Reduce document creation time by creating a custom-themed template and providing just the content or line items dynamically. This also improves compliance by standardizing documents throughout the organization.

Stunning Visual Results

4D Write Pro offers advanced document layout features, including text boxes for inserting and manipulating text in a separate rectangular area, full-area background graphics for enhancing page design, and easy image positioning within documents.

Works well with Microsoft Office

4D Write Pro is a complete word processor, so switching from Microsoft Word to 4D Write Pro is easy. You can import/export and work with your existing Microsoft Word documents, keeping the format, flow, and style intact.

...and Other Popular File Types

Your documents can be saved as PDF or SVG files and sent directly from 4D. Displayed on the web. Sent as an HTML Email (MIME). And you can even import SVG files to be used as background layers.

Go even Further

In addition to the plethora of commands now available, we made it possible to interact with 4D Write Pro using code, and the source code of 4D Write Pro's interface is available on GitHub. To unlock this level of flexibility, we offer you access to the source code of 4D Write Pro's interface on GitHub, allowing your teams to adapt and tailor it to meet your specific needs.



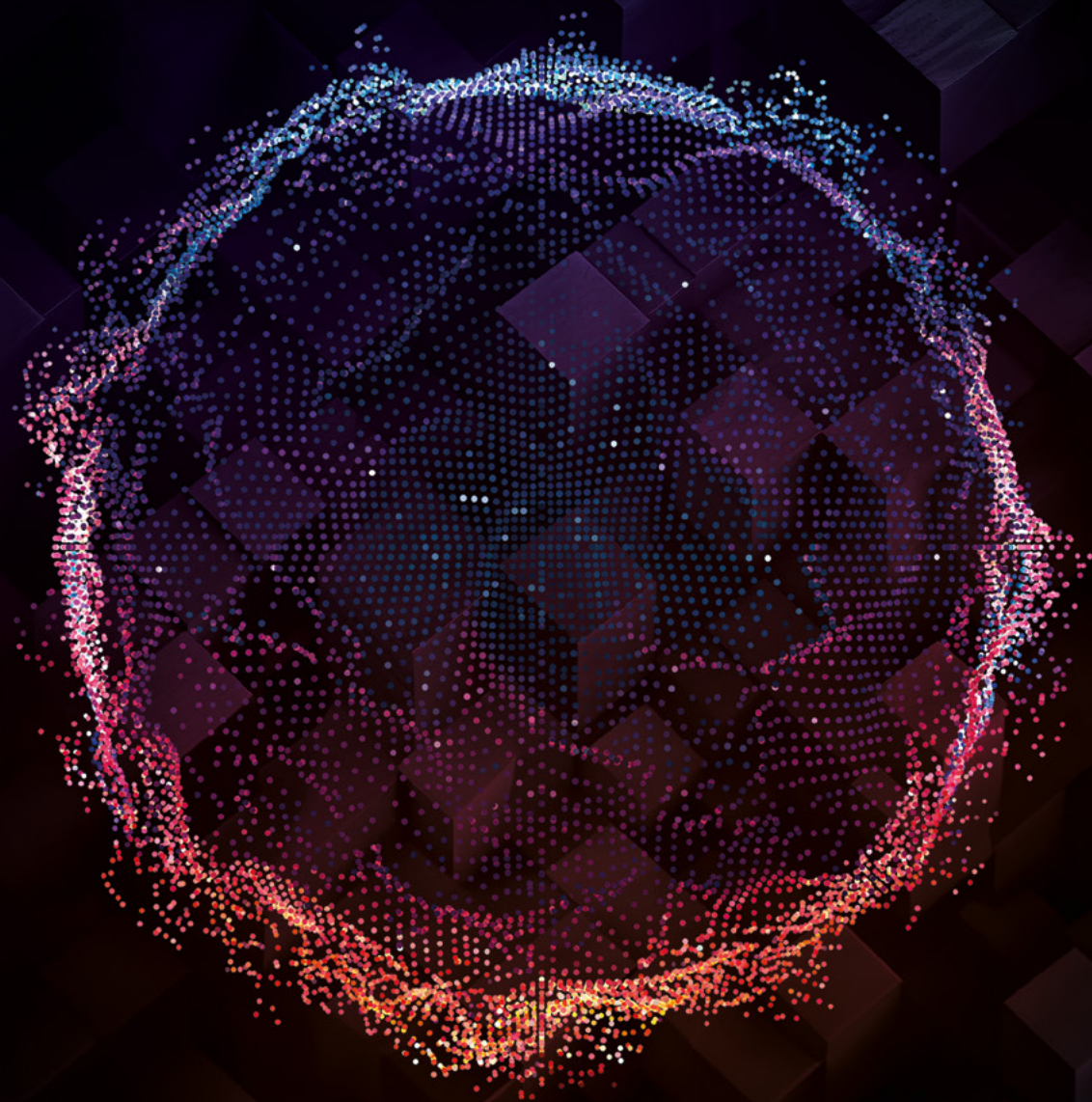
Using 4D Write Pro, we created a comprehensive publishing system within our database. Users can create a complete publication - such as a catalog, directory, or price list - including a cover page, index, and illustrated content drawn from the database. With one single click, the publication can be created and saved as a 4D Write Pro document, a Word document, and/or a PDF. There's no other tool on the market that can achieve this!"

Pat Bensky, Product Manager Catbase Publishing Systems Ltd.

ORDA

(OBJECT RELATIONAL DATA ACCESS)

If you haven't yet embraced ORDA,
you're missing out on a game-changing technology.

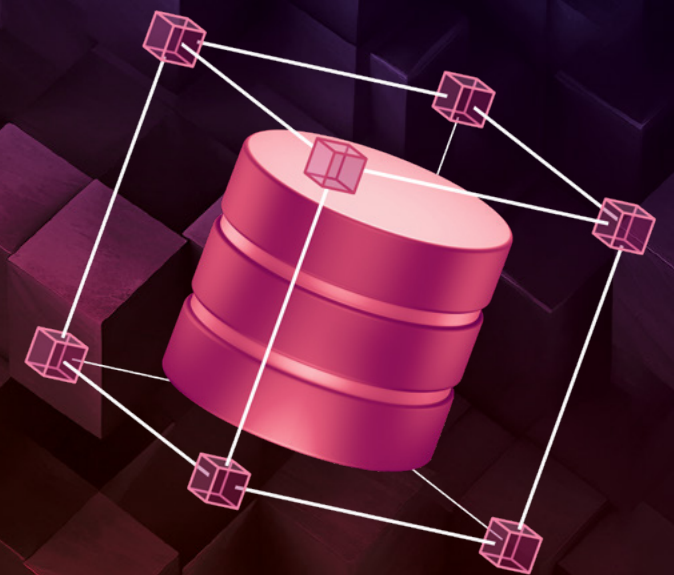


4D 20 LTS further enhances and elevates the power of Object Relational Data Access (ORDA), an innovative way of accessing data that combines the advantages of object-oriented programming with those of relational databases, allowing developers to focus on solving business problems rather than managing data access.

Everything is an Object

ORDA is a world where everything is an object, **including the database itself.**

This approach allows to access the entire 4D database using an object-oriented approach, which makes it easier to work with data and can help reduce the complexity of the code. ORDA maps data to real-world concepts in such a way that using the data becomes simple, eliminating the need for an in-depth understanding of the relational structure.



Business-oriented Code with Classes

ORDA comes with classes dedicated to the data model. Thanks to classes, the complexity of the model's physical implementation can be hidden, the application can easily expose services, be more manageable and easier to maintain, and seamlessly integrate with other applications.

Increased Scalability

ORDA can help make applications more scalable by providing support for distributed database architectures. This means that data can be spread across multiple database servers, which can help improve performance and handle larger amounts of data.

More Done in Less Time

ORDA lets developers focus on solving business problems rather than managing data access. This code can take a significant amount of time to write and can be error-prone, especially for complex applications. When using ORDA, the boilerplate code is reduced, making it easier and faster to develop applications.

Outstanding Performance

ORDA helps improve the performance of applications by providing several optimization techniques, such as contexts and lazy loading. These techniques can help reduce the number of database queries that need to be sent to the server, resulting in shorter application response times. Best part? It's all automatic; no programming is required, unlike using SQL or an ORM tool.

Low Learning Curve

ORDA is designed to be easy to learn, with a simple and modern structure and syntax that are familiar to developers with experience in object-oriented programming or other programming backgrounds such as Java or JavaScript, making it easier for them to transition to ORDA.



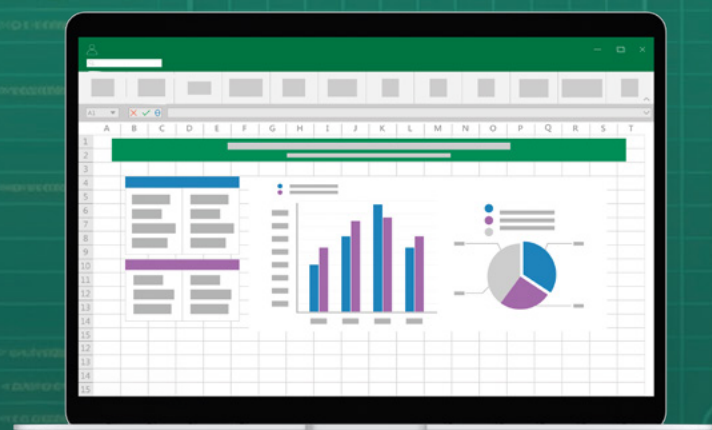
**Once you get going with ORDA, 4D
is really fun to program again.**

Kirk Brooks, a 4D developer, San Francisco,
USA

4D VIEW PRO

Whether it is for sales, finance, accounting, data analysis, or any other profession dealing with long and unwieldy datasets, 4D View Pro is the answer. It is a multilingual product with direct access to your 4D data that allows you to take full advantage of integrated, powerful spreadsheets.

Add useful diagrams and colorful illustrations, build eye-appealing charts, perform complex calculations with great accuracy, and bring critical data to your key stakeholders.



From the possibility to build graphically-advanced dashboards that no longer look like spreadsheets to reports that can be created off-screen every morning and sent automatically to the management — 4D View Pro has everything you need to make meaningful business decisions.

Built-in Intelligence

4D View Pro supports hundreds of functions; its intuitive tools simplify performing hundreds of business calculation functions accurately. Sort, filter, search, sum up, and more. Use pivot tables to quickly summarize, group, and rearrange data to explore trends and patterns.

Globalized UI

The 4D View Pro spreadsheet speaks your native language. It includes built-in support for English, French, German, Spanish, Japanese, and Portuguese.

Compatible with Excel Files

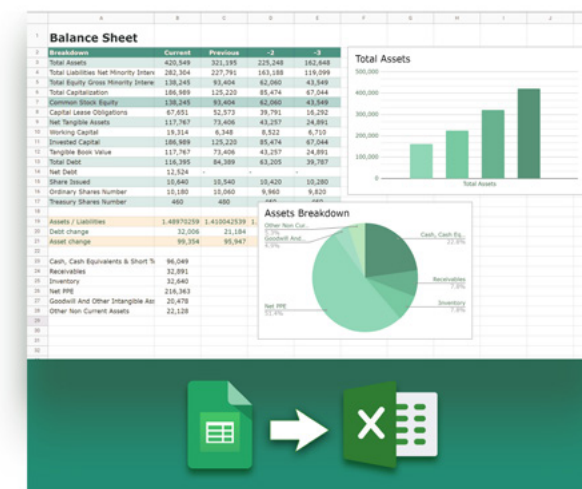
Work seamlessly with Microsoft Excel files and other formats like .svg and .csv. You can even export your spreadsheets as .pdf or print them for reference.

Jumpstart with Templates

What can be better than grabbing a ready-to-use spreadsheet you created earlier and tailoring it to your current needs? Once you create a template, it will only require slight modifications to be ready for different scenarios. Bind the appropriate data to that template to create various reports. Be it budget planners, reports, inventories, or dashboards. You name it.

Instant Visual Results

Showcase your data in engaging ways with formatting, sparklines, and tables. Bar and column charts, insightful radar and donut charts, interactive graphs, and a vast library of customizable shapes — all combined to help you turn your numbers into beautiful data visualizations.



And Far beyond

4D 20 LTS has a plethora of commands for developers who love to get their hands dirty. Commands allow you to find and replace elements in 4D View Pro documents and let you know when your calculations are complete. You can also manage rows and columns, merge and unmerge cells, and much more. This new set of commands places even more capabilities in your hands.



In a way, it has even become a prototyping tool where customers can develop an MVP with no required coding skills. In addition, Excel is used everywhere: for us, 4D View Pro is a bridge, not to MS Office, but to the users, who can now apply their skills directly in our solution without switching to Excel or Numbers!

Ulf Röttger, Product Manager Extragroup GmbH, Germany

4D PROGRAMMING LANGUAGE AND BEYOND

With efficient development and easy-to-manage deployment, 4D applications are in a league of their own. 4D continues to invest in this differentiation and intends to provide 4D developers with innovative tools that are required for their business and productivity. With 4D 20 LTS, a complete range of new features and capabilities are now at your fingertips.



Code Editor at its Finest

In 4D 20 LTS, the built-in code editor received various features, including comment tags, autocompletion, object check syntax, improved navigation between code, documentation and explorer, direct access to online documentation, and more. Additionally, an extension was introduced to support the Visual Studio Code editor, providing standard functionalities such as **syntax highlighting, Go to Definition, Signature Help, code completion, code folding & indentation, and syntax checking**. Whether you prefer the in-house editor or the external extension, we've got you covered for both.

Email Management Simplified

In 4D 20 LTS, email capabilities are seamlessly integrated into your 4D applications with minimal code required. Features that include Microsoft 365 native support, and dozens of POP3 and IMAP commands, giving you extensive control over email operations. These commands allow you to send, receive, and manage emails programmatically.

Upgraded List Boxes

We can't talk about the UI without mentioning list boxes. List boxes are the backbone of nearly every 4D application and are known for their versatility and customization options. We love them just as much as you do, which is why we added automatic row height to list boxes based on collections and entity selections, ensuring a seamless display of data. Plus, horizontal and vertical padding. These seemingly subtle features have a profound impact on the presentation possibilities of your UI, resulting in a more professional look for your application.

Refined 4D Language

In 4D 20 LTS, several enhancements were made to the 4D language, making development more enjoyable. By no means exhaustive, the list of features includes a new way to declare class properties, a more readable syntax for initializing objects and collections, a built-in WebSocket server for real-time web applications, jump statements for improved code readability, short-circuit evaluation for quicker execution, ternary operators for concise conditional expressions, and compound assignment operators for shorter code.

Revised User Interface

The UI is a key element of your 4D applications, which is why 4D 20 LTS brought some interesting features to enhance the visual appeal of your applications, including the option to incorporate rounded corners, a popular design trend that adds a modern touch. And the support for high DPI (Dots Per Inch) on Windows, ensuring that your application maintains visual quality on high-resolution displays.

Wouldn't it be useful to have a tool at hand, with which you could easily group the data of your system into a report, and then export it and send it as a PDF or Excel file to your colleagues, managers or clients?
Well, now you have one. 4D View Pro.



UPGRADE TO 4D 20 LTS

Immediate Value Unleashed

- **ORDA.** Bring your Data and Business Logic Together with style.
- **4D Programming Language.** Packed with Tools for Business and Productivity.
- **4D Write Pro.** Tap into the Power of a Data-driven Documents Generator.
- **4D View Pro.** More than a Spreadsheet Solution.



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