LightningChart®

LightningChart® .NET

Next Generation World's Fastest Charts

Arction

www.lightningchart.com

HIGH-PERFORMANCE WPF, WINFORMS & UWP CHARTS & GRAPHS

LightningChart®.NET is the fastest 2D & 3D data visualization SDK for Windows Forms, UWP, and WPF. LightningChart® is an advanced charting library used in world-class data-driven applications in the most demanding industries that need real-time, fast, accurate, and data-intensive charting controls. Some of the industries working with LightningChart® .NET are science and research, engineering, economics and finance, trading, medicine, energy, space, and defense.

THE TRUTH BEHIND LIGHTNINGCHART® .NET SUCCESS

LightningChart® is entirely GPU-accelerated and performance-optimized for presenting massive amounts of data, as of the first half of 2021, LightningChart® .NET can render up **to 16 billion data points in real-time.**

By prioritizing the efficient CPU and memory resource consumption, LightningChart® has set the standard for professional high-speed data visualization software dealing with the real-time data acquisition and representation of large datasets. This is what sets LightningChart® as the #1 scientific data visualization provider with unmatched performance to final applications.

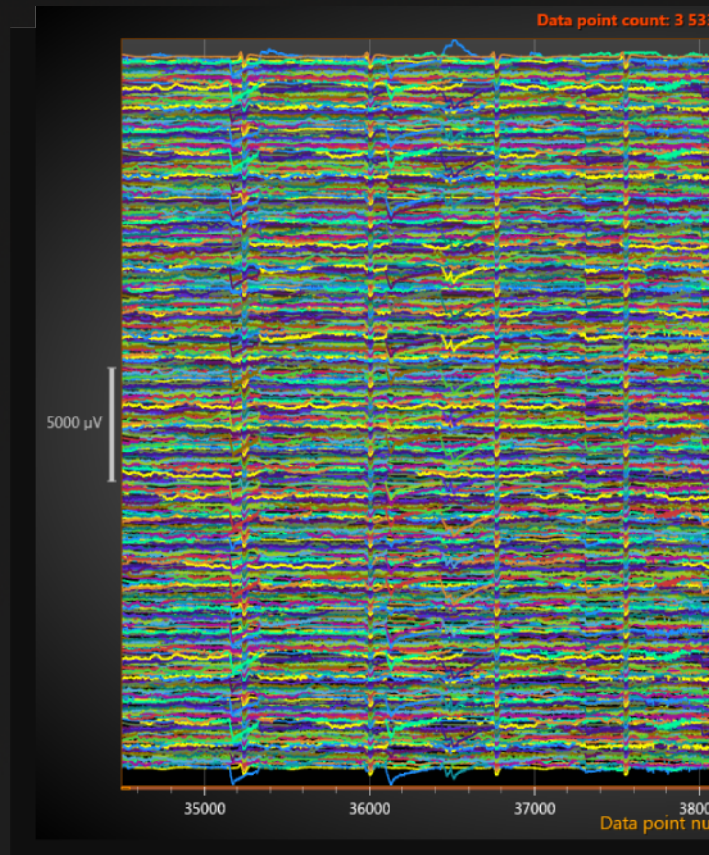LightningChart®
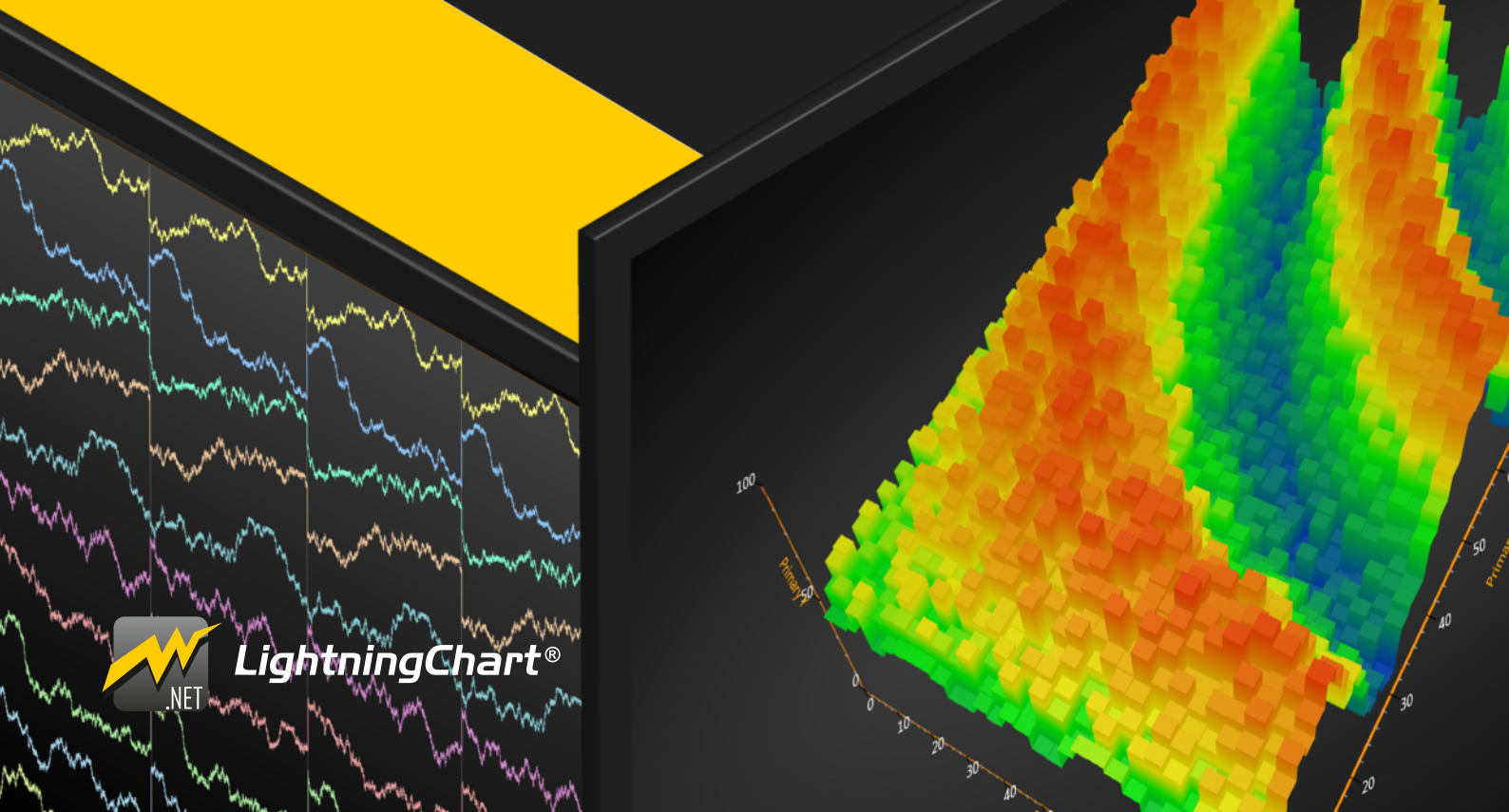
INNOVATION FIRST

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In late June 2021, the developers and data scientists at LightningChart® came up with a major breakthrough for the data visualization industry: the *SampleDataBlockSeries.*

The SampleDataBlockSeries is a line series chart type that we define as the best series type ever to visually interact with data as it happens.

The SampleDataBlockSeries are considered an agent of change in the scientific data visualization industry with characteristics such as **860% memory** consumption and a **5100% CPU** overhead decrement, numbers that can be difficult for anyone to digest but in real development and application, those numbers translate into a more consistent flow-to-screen and smoother data visualization.

Can you think about any industry that requires extremely high charting controls performance?

Learn More About SampleDataBlockSeries

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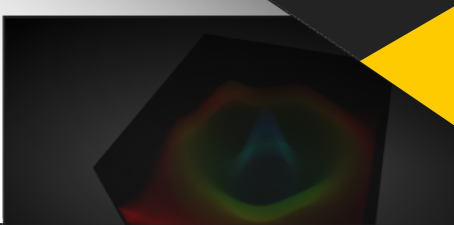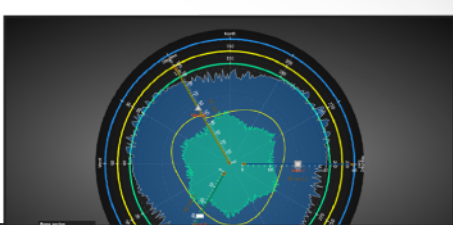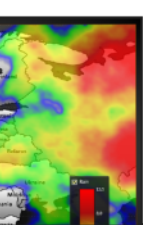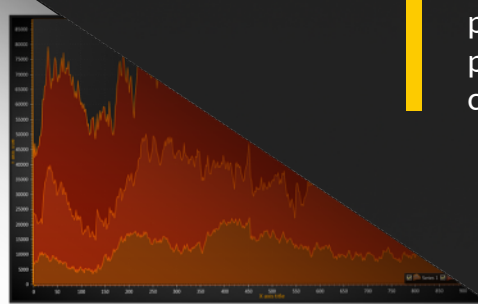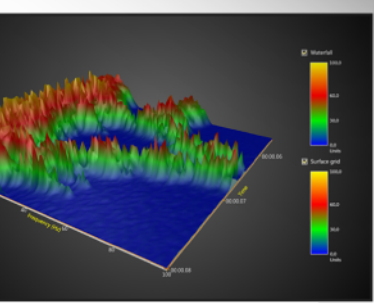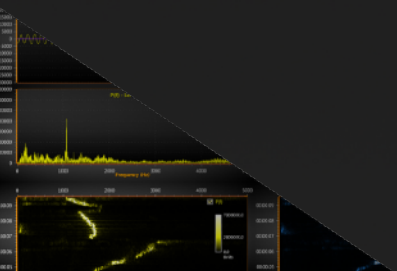
LightningChart® provides the following features: **XY charts, Trader charts, 3D charts, Polar view, Smith view, Maps, Signal Tools, and Volume Rendering.** Thanks to the flexible pricing structure of LightningChart®, developers can choose the most beneficial product option among the available packages which include different combinations of features.

THE EXPERIENCE OF USING
LIGHTNINGCHART®

GENERAL CHARACTERISTICS

→ Full mouse-interaction, touchscreen support, custom mouse interactivity extensions

→ Cursors and Annotations, data colorizing with color palette, and full customizability of components

→ Data breaking by NaN or other specified breaking value, in selected series types

→ Numeric, Time, DateTime, Logarithmic, Geographic Coordinate System (GCS), and Custom axis scales

→ Professional 5-star technical support & Hundreds of chart examples

RENDERING TECHNOLOGY

→ DirectX 11 & DirectX 9 support

→ Automatic software rendering with WARP in systems without graphics hardware and for virtual machines

→ Ability to disable rendering to save GPU resources if the chart is not in use or temporary not needed, or hidden

→ Selectable fonts quality

→ HiDPI scaling support

→ Can be run in both 32-bit and 64-bit modes
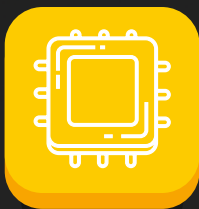
GENERAL CHARACTERISTICS

→ DirectX 9.0c (shader model 3) level graphics adapter or newer, or DirectX11 compatible operating system for rendering without graphics hardware. DirectX11 compatible graphics hardware is recommended

→ Windows Vista, 7, 8, or 10, as 32 bit or 64 bit, and Windows Server 2008 R2 or higher

→ Visual Studio 2010-2017 for development, not required for deployment

→ .NET Framework v. 4.0 or newer installed

WHY LIGHTNINGCHART® .NET?

The characteristics of LightningChart® .NET are superior to any other commercial and open-source library. Characteristics such as:

→ Real-time monitoring without flickering or delay

→ High-resolution datasets

→ Smooth Interactivity

→ Efficient use of machine resources

→ Ability to render data with the older machine hardware, maintaining all advantages mentioned above
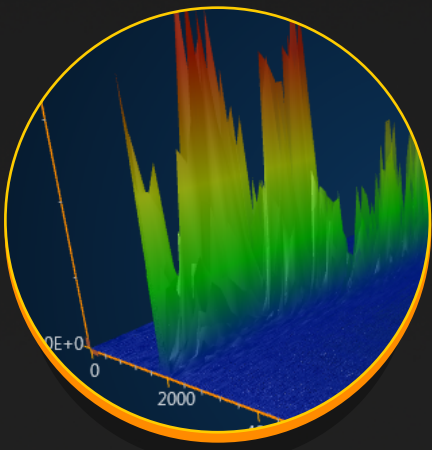
These properties are what made LightningChart® .NET the next-generation charting controls in addition to countless hours of product development and hard work of LightningChart's development team which have resulted in LightningChart .NET becoming the ultimate charting library with unmatched performance results.

Undoubles, these achievements would impress even the most demanding developers in any industry.

As the #1 providers of UWP charts, WPF charts, and WinForms charts, our passion for data visualization continuously drives us to strive for the highest performance indicators in the industry and set the world standards for scientific data visualization.

Learn More About LightningChart® .NET

LightningChart®

SOME OF THE CHARTING CONTROLS AVAILABLE AT LIGHTNINGCHART®.NET
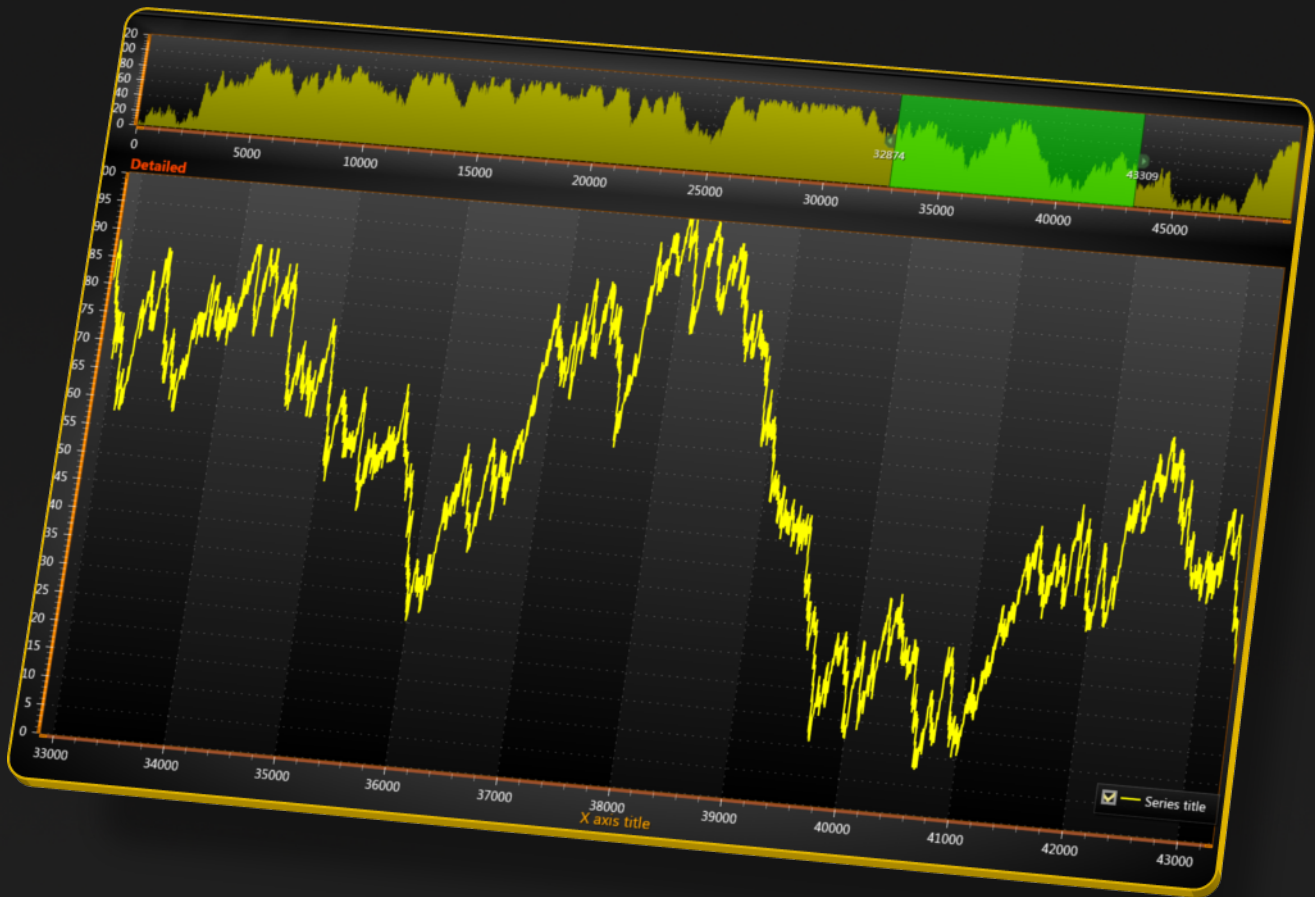
XY Charts

→ **Series types:** sampled data (discrete signal), point-line, freeform point-line, areas, high-low, polygon, stock (candle-stick), bar, band, constant line, intensity grid, intensity mesh, line collections

→ Real-time monitoring scrolling modes: scrolling, sweeping, stepping, oscilloscope style level triggered

→ Heatmaps with contours, wireframe, contour labels

→ Stencil for rendering intensity series inside a polygon, map region

→ Persistent rendering layers, Multiple legends, and Axis scale breaking

→ Scale breaks to clip off unnecessary info, such as non-trading days on weekends

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Trader Charts

→ Data fetching from a web server, or supplying it by code, or reading it from CSV file

→ Stocks search by name or symbol

→ Several color themes

→ Chart types selection: mountain, line, candle-sticks, bars

→ Technical indicators, such as SMA, EMA, WMA, Bollinger band, RSI, MACD

→ Drawing tools, such as Trend line, Linear regression channel, Fibonacci retracement, Fibonacci arcs, Fibonacci fan, Freehand annotation

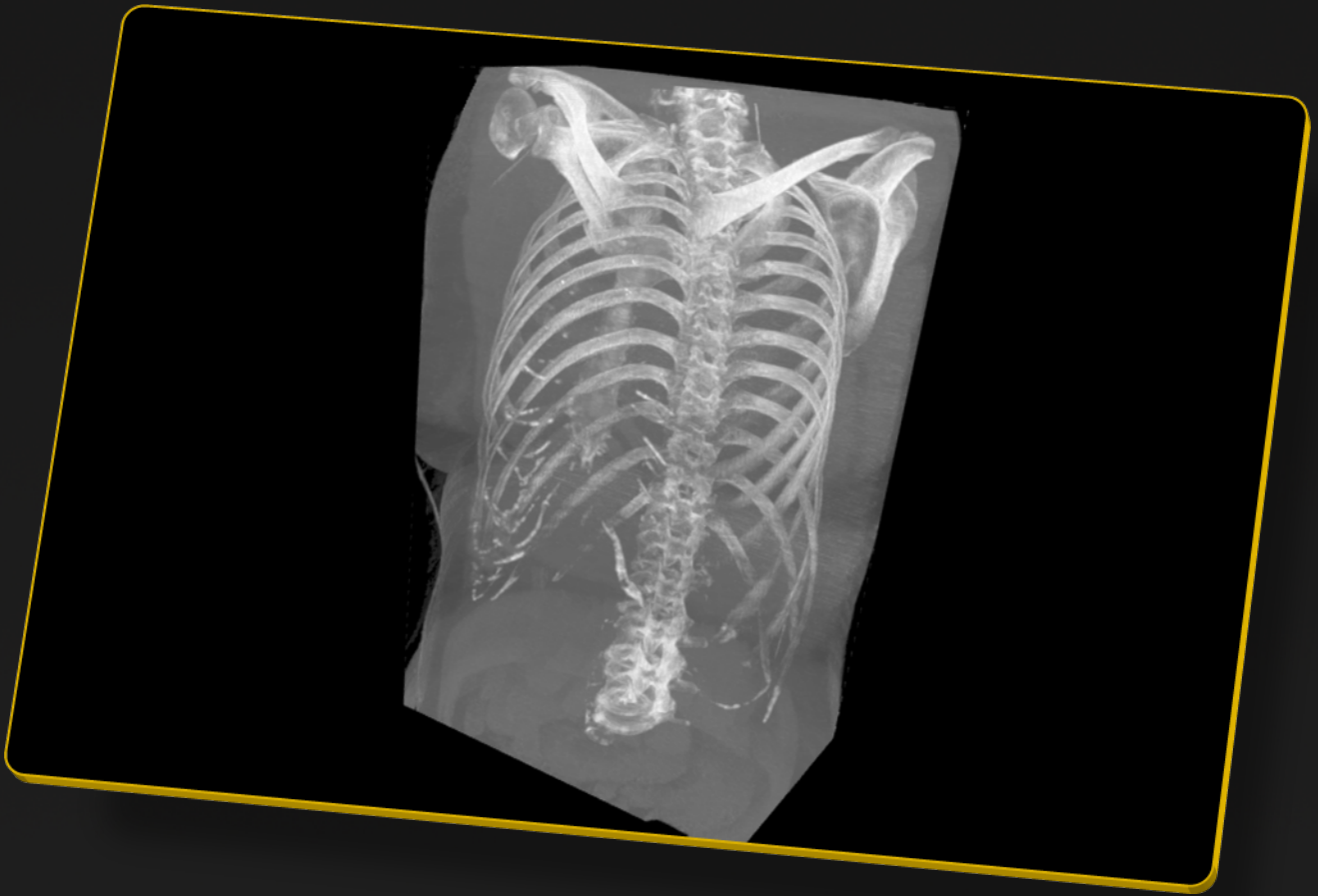→ Chart segments management and resizing

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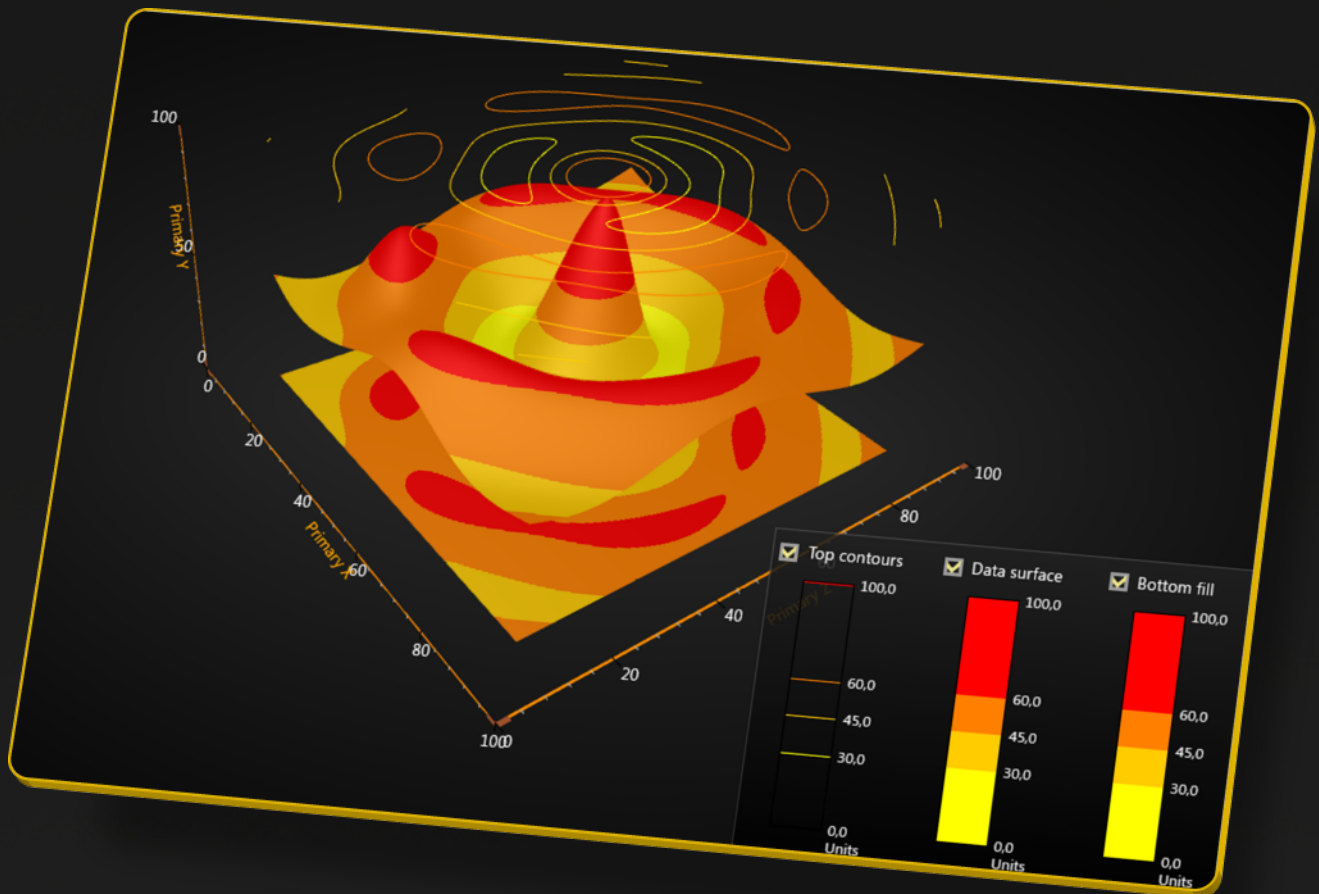
3D Charts

→ **Series types:** surface mesh, surface grid, waterfall, polygon, rectangle planes, mesh models, point-line, bar, and pie charts

→ 3D scene settings with Multiple light sources

→ Import 3D models in .obj

→ Gigantic surface sizes of over 4096x4096, depending on available memory

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Volume Rendering

→ Separate Linear Transfer function for every channel

→ Volume Thresholding in accordance with voxels brightness for every channel

→ Dynamic modification of Voxel range

→ Manual or Automatic Adoptive sampling rate of volume data

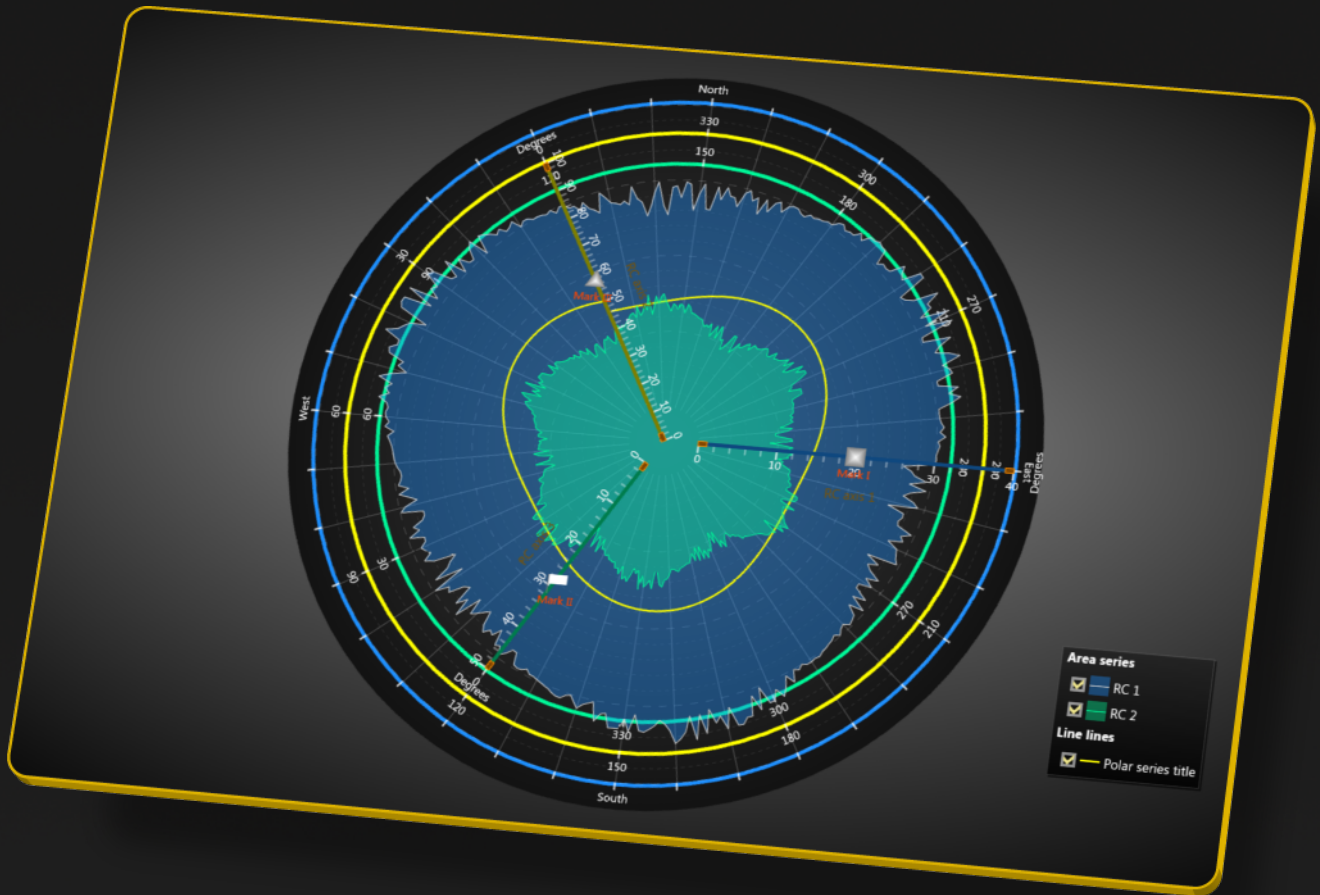→ Three interchangeable options for Volume Rendering Ray function
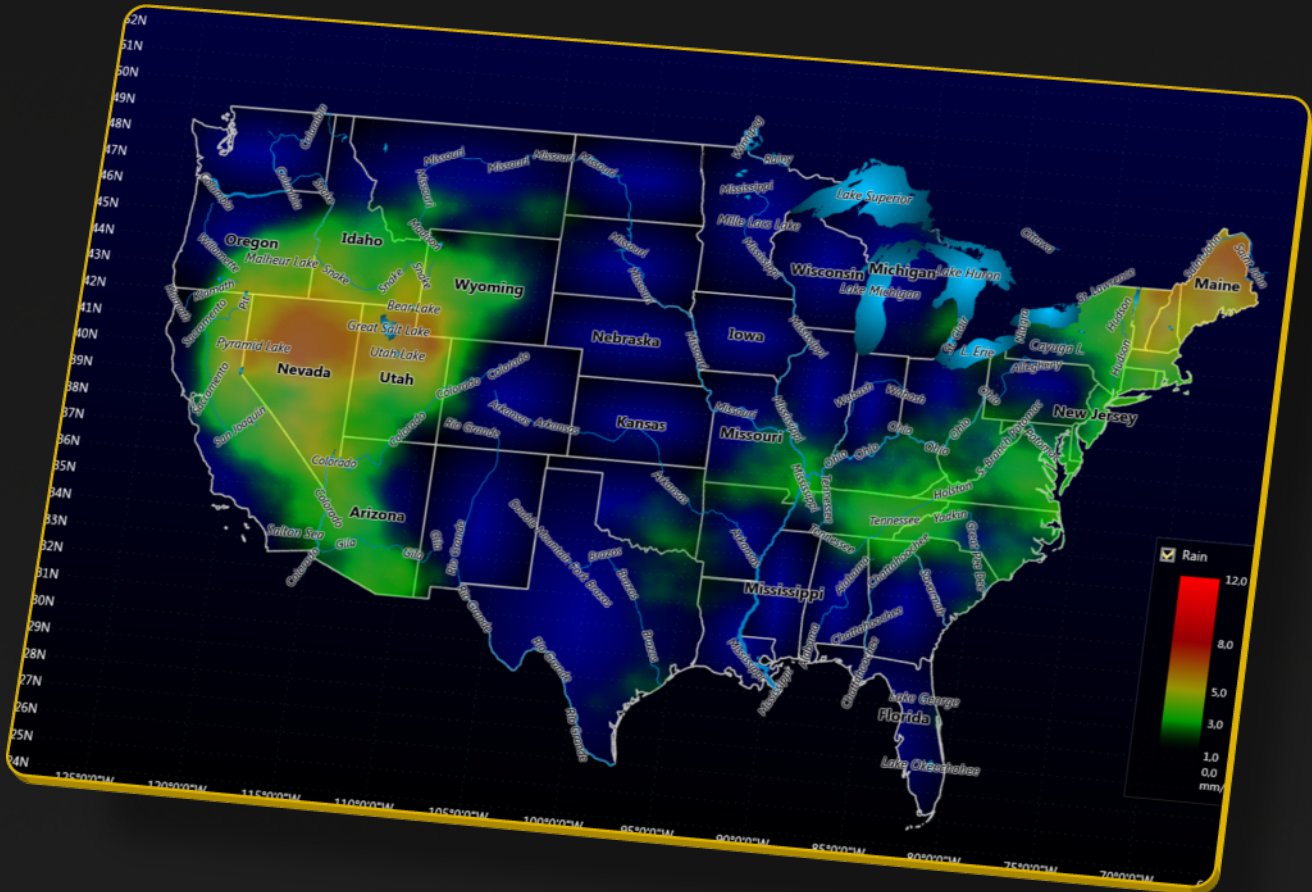
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Maps

→ Online tile maps support street maps and satellite imagery

→ Dozens of maps: World, continents, specific areas

→ **Multi-layer:** land, lakes, rivers, roads, cities, etc.

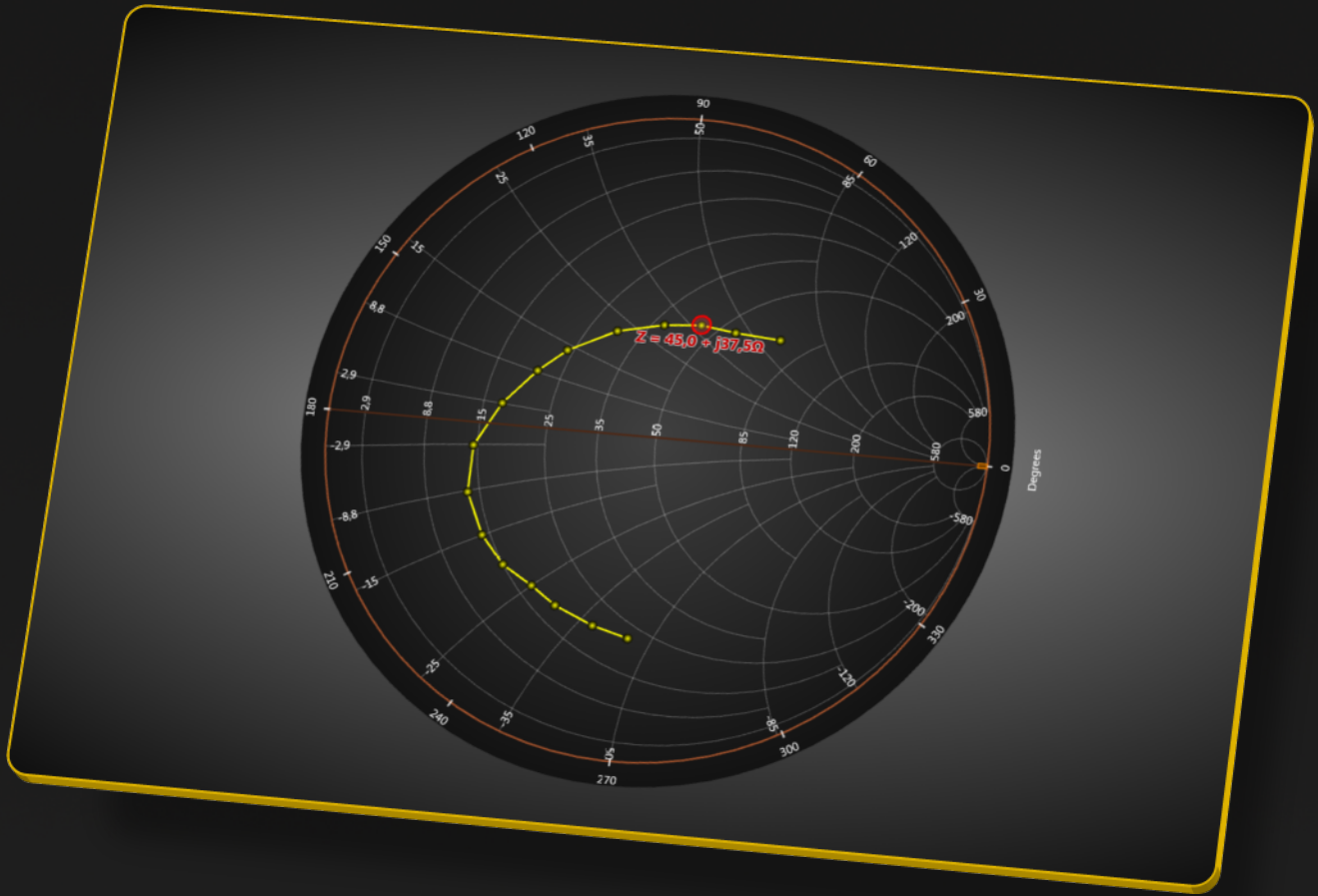→ Map import from ESRI shape file data

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Polar Charts

→ Unlimited, multiple amplitudes and angle axes

→ Palette-colored point-line series

→ Sectors
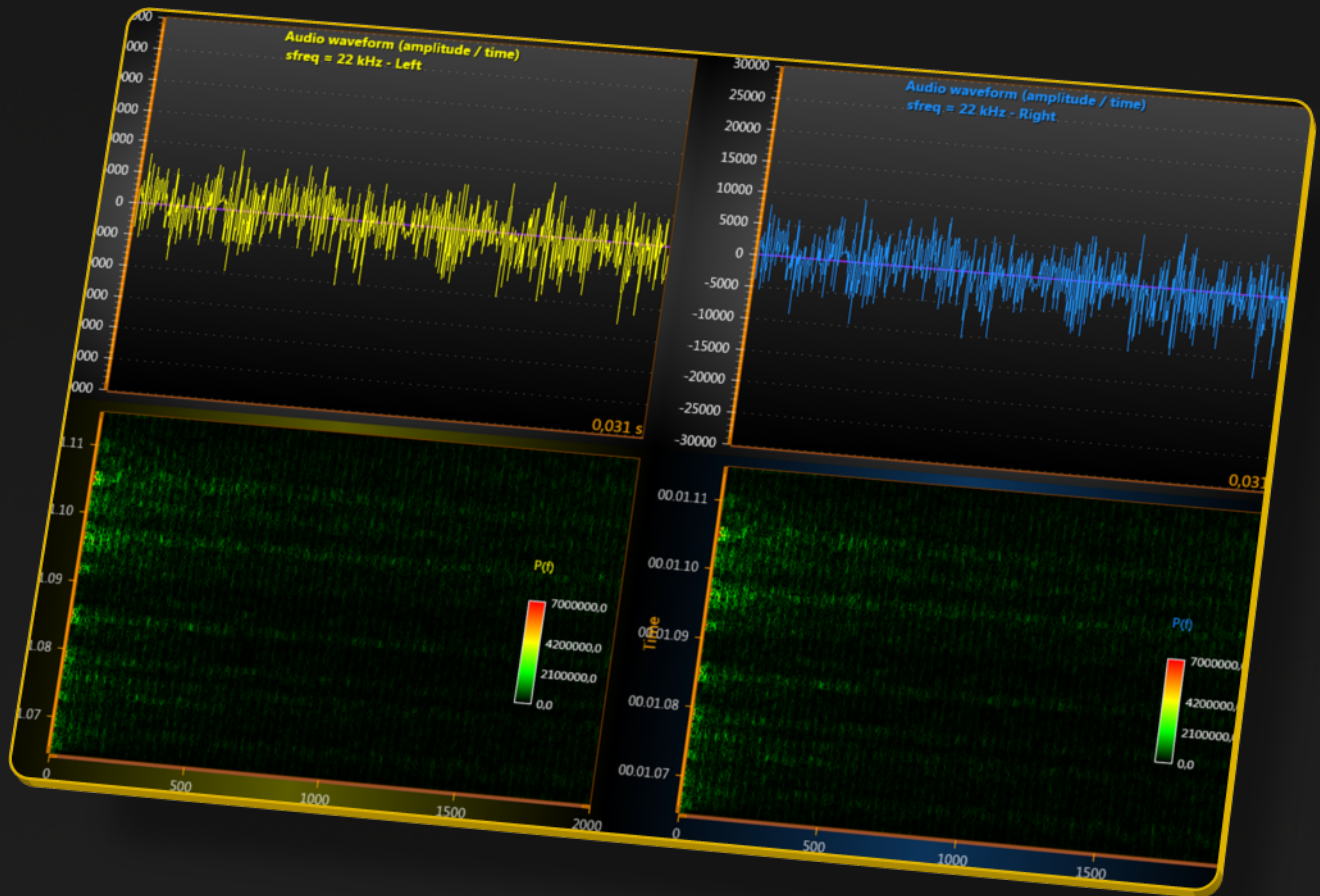
→ Markers

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Smith Charts

→ **Series types:** point-line

→ Absolute and normalized scales

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SignalTools

→ SignalReader, SignalGenerator, AudioInput, AudioOutput, SpectrumCalculator

→ Dozens of maps: World, continents, specific areas

→ **Multi-layer:** land, lakes, rivers, roads, cities, etc.

→ Map import from ESRI shape file data

See LightningChart® .NET Gallery

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Arction Ltd: the creators of LightningChart®

LightningChart® is registered trademark by Arction Ltd, a pioneer in high-performance charting. Ever since 2009, the LightningChart® team has studied different technologies. Prototyped, researched, and innovated new algorithms, which are now part of LightningChart® product lines, to produce the absolute best performance for those advanced applications that really need it. LightningChart® .NET product line was first released in 2009.

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