» iX is the trend-setting HMI solution allowing you to express your ideas with a strong combination of state-of-the-art graphics and solid HMI functionality «

Industrial visualization is in a state of change. Now, industrial user interfaces take on inspiration from consumer-oriented products like personal computers, smart phones, MP3 players, etc. with advanced graphics, icon based navigation and controls, resulting in visually impressive user interfaces.

However, impressive user interfaces have a wider perspective reaching beyond the good looks. They motivate users and operators to interact with the working environment in a positive way, which leads to a more efficient work flow and reduced downtime – both factors which lead to increased profit.

iX is the trend-setting HMI solution allowing you to express your ideas with a strong combination of state-of-the-art graphics and solid HMI functionality. iX covers the gap between proprietary operator panels and cost-intensive SCADA solutions. The iX software is available in developer and runtime packages in several versions. The software is supported by the next generation of our award-winning operator panels and industrial PCs – the iX Panel and iX Panel Pro which combine high-performance hardware finely tuned for iX with a robust construction.

iX is based on Microsoft's market leading .Net framework technology guaranteeing you a future-proof tool with continuous updates and service support in the future. The open platform architecture of iX offers a wide range of opportunities to enhance the functionality of HMI applications – create your own functions and sharpen your competitive advantage!

Your benefits as decision maker:
- Reduced engineering time leads to fast ROI
- Higher profit through minimized downtime
- Future-proof investment due to long term availability of Microsoft standard technology
- Safe investment with easy project recycling and updating
- Competitive advantage through creating customized functionalities
- Integrate your visual identity for brand distinction
- Supplier independent IPC hardware utilization

Your benefits as user:
- Unlimited creative design options by using Microsoft's WPF .Net framework
- Quick creation of user interfaces with predefined templates
- Efficient project realization through a variety of help tools
- Easy integration of multimedia
- Customized functionality by using C# scripting
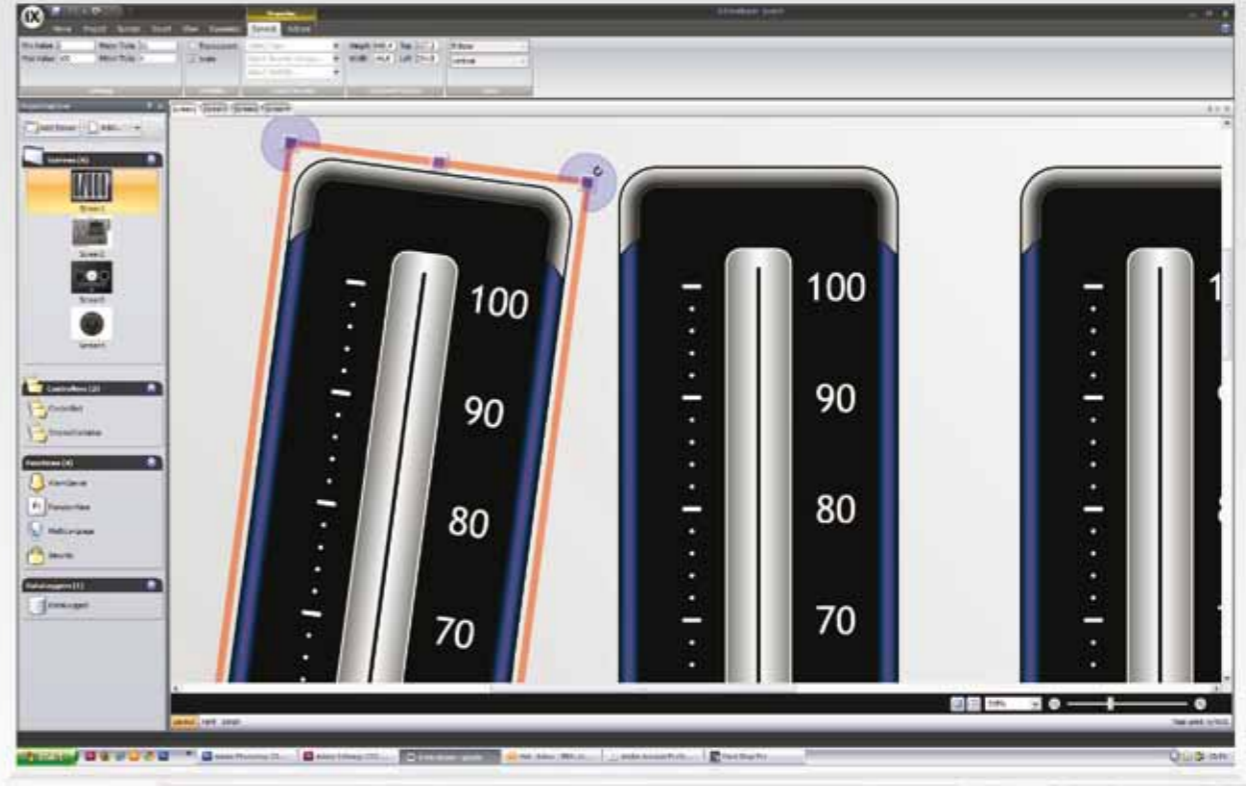- Simplified project documentation with cross references and tag lists

A common look and feel among the products, graphics and environments that represent a corporation's ideas and vision, contribute to brand distinction and consistent customer experiences. iX lifts the concept of a HMI solution from merely being a functional add-on, to becoming an integral part of a user experience by adding the right look and feel with advanced graphics, icon based navigation and controls.

Take advantage of vector-based graphics, enabling you to scale and rotate objects which stay crystal clear without jagged edges or inconsistent color transitions. You may import WPF objects and .Net controls allowing you to use the vast resources behind Microsoft's .Net framework. Add drop shadows, bevels and choose opacity for objects in addition with other graphical effects. iX also enables you to incorporate Windows media objects like Media Player, Internet Explorer and PDF-viewer.

Reduce your design time drastically with ready-made symbols and objects from the component library, perfect for industrial applications. By applying dynamics in your HMI applications, you easily draw the attention of an operator to interact with an ongoing process.

The value addition of intuitive iX HMI solutions is reflected in ease of use, higher efficiency and productivity, improved user satisfaction and trust, and less user errors. Generate your individual graphical operator interface and offer customers a recognizable added value in terms of user-friendly operation and improved user satisfaction.

» see more features & iX showcase videos on www.beijerelectronics.com/ix «

Features

- **Vector-based graphics**
  Vector-based graphics enable you to scale and rotate objects and still maintain crystal clear graphics.

- **Graphical effects**
  Graphical effects offer an enhanced design experience that will improve all your operations.

- **Windows media objects**
  iX supports embedded Windows media objects such as Internet Explorer, Media Player and PDF-viewer.

- **Dynamics**
  Use dynamics to draw the attention of an operator to interact with an ongoing process.

- **Navigation controls**
  Attractive and up-to-date control with thumbnails and scrolling, etc.

State-of-the art graphics and solid HMI functionality is a winning combination with essential synergies. In HMI solutions, the design attracts and keeps the operator's attention while the functionality develops and keeps the operator's trust. Adopt the comprehensive HMI functionality in iX to increase productivity and user acceptance.

Protect your application against unauthorized access by creating efficient security systems with different levels of authorization. iX features powerful audit trail functionality, providing you essential process tracking and user identification linked to interactions or events – ideal for food & beverage and pharmaceutical industries.
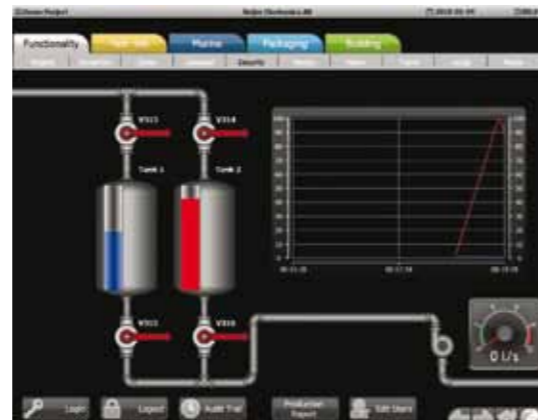
iX recipe management enables the operator to manage recipe libraries containing different sets of parameters, improving runtime efficiency. In critical situations, an operator can be notified of alarms via screen, pop-up, printer, SMS or e-mail, based on predefined criteria. Alarms can easily be logged, divided into groups based on priority.

Your international success is guaranteed by several features. Create multiple-language usability for user-friendly international applications by choosing from the languages available or create the layout to fit your needs. Service staff may perform long distance support, control and troubleshooting via the internet.

Aesthetically convincing HMI solutions powered by solid functionality is your strongest driver to gain and maintain user satisfaction and increased productivity. With iX, you can achieve just that.

Features

- **Alarm management**
  Use the improved alarm viewer to manage alarms and notify the operator via screen, printer, SMS or e-mail.

- **Security**
  Strong password and security features give the operator access to well-defined areas.

- **Data logging**
  Time or event based data logging for documentation or other purposes.

- **Remote access**
  Useful when performing remote customer support, remote control and troubleshooting.

- **Scheduler**
  Automate control of events at specific predefined calendar dates and times, e.g. start/stop of motors.

Features

- **User-friendly environment**
  Create solutions in a streamlined user-friendly Windows environment with an intuitive work approach.

- **Multiple object editing**
  Edit properties like e.g. background color, font, tag, etc. for several objects at the same time.

- **Templates**
  Use the large selection of templates to quickly develop your own applications. It offers the right option for various applications.

- **Navigation manager**
  Manage screens and their relations with respect to project navigation in runtime.

- **Simulation**
  Versatile application simulation in off- and online mode.

Engineering is a crucial aspect in today's cost equation. A reduced time to market as a result of efficient project development gives you a competitive edge. In iX no barriers exist between design and engineering. You create and configure HMI solutions in a streamlined user-friendly Windows environment with ribbon tabs, tool tips and an intuitive work approach – all of which leads to efficient project development.

With the iX object browser you have superior control of objects while designing screens. The properties of any object can be viewed and edited in the property grid which contains all relevant properties of the object. Create uniform corporate screens and objects with time saving templates and reuse them as often as you want. Be even more efficient by using quick styles, where you simply adjust the object style with shape fill and outline, drop shadow and bevel settings, etc.

With multiple objects editing you can easily edit common properties such as background color, font, security settings, tag, etc. for a group of objects at the same time. The navigation manager gives a clear overview of all screens and their interconnection. You can simulate your HMI application before applying it to the machine, even without connecting the controller system.

With iX you can enjoy the time-saving ease of versatile editing tools and benefit from templates and quick styles to help you quickly create professional HMI solutions.

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The open platform architecture of iX offers a wide range of opportunities to enhance the look, the functionality and the connectivity of HMI applications. Select you favorite runtime platform; from our compact operator panels to any industrial PC, depending on your individual application needs.

iX's multi-controller feature provide you with the time saving ease of managing and maintaining only one project covering all the different controller scenarios you need. A tag can be connected to several controllers, allowing you to have the same HMI application running against different PLCs. Additionally, you can mix signals from multiple PLCs and other devices, e.g. inverters, in the same project.

iX provide simple real-time exchange of data between controllers and the open platform architecture is underlined by compatibility with all major automation systems by OPC industrial standard data access. Employ the drivers included or add third party drivers via connection to an external OPC server. Use SQL connectivity to enjoy quick and easy data management.

You may import vector based WPF objects and .Net controls. iX utilizes Microsoft's modern and object-oriented programming language C# for writing applications. C# scripting allows you to customize and enhance the functionality of an object. Helpful IntelliSense boxes and auto-complete functions provide easy scripting, even for beginners.

Features

- **Choice of hardware platform**
  iX offers you a choice of runtime platform e.g. the iX Panels or any industrial PC.

- **Import of .Net controls**
  Create your own .Net controls or acquire third party components, and use them in your projects.

- **OPC connectivity**
  iX features OPC data access - an industry standard for real-time communication with all major automation systems.

- **SQL connectivity**
  Enjoy quick and easy storage, retrieval and management of data in relational database management systems.

- **C# scripting**
  C# scripting allows you to customize or enrich the functionality of an object.

- **Online controller setting**
  Choose the PLC driver during runtime and save extensive programming time.

Available hardware and software

- **iX Panel - Keypad versions**
  5,7" 320 × 240
  6,5" 640 × 480
  10,4" 800 × 600

- **iX Panel - Touch screen versions**
  iX Panel TA
  6,5" 640 × 480
  10,4" 800 × 600
  15" 1024 × 768

- **iX Panel TxA**
  4,3" 480 × 272
  7" 800 × 480
  10,4" 640 × 480

- **iX Panel Pro**
  12" 800 × 600
  15" 1024 × 768
  17" 1280 × 1024
  19" 1280 × 1024
  19" 1280 × 1024 Stainless
  Box PC version

- **iX Panel Pro Nautic**
  15" 1024 × 768
  17" 1280 × 1024
  19" 1280 × 1024
  Box PC version

- **iX Developer and Runtime versions**
  iX Developer, iX Developer Update, iX Developer Trial version
  iX Runtime 250/2000/4000 tags

iX is a complete HMI solution including both software and hardware providing solutions for a wide range of application scenarios.

The iX software
The software is supported by the next generation of our award-winning operator panels and industrial PCs – the iX Panel, the iX Panel Pro and the iX Panel Pro Nautic, combining high-performance hardware finely tuned for iX with robust construction.

iX Panel
The iX Panels combine high-performance with a robust IP66 lightweight aluminum construction and include iX runtime software. The iX Panel series offers both keypad and touchscreen models to choose from. The iX Panel series is designed for industrial applications and complies with global industry standards.

iX Panel Pro and iX Panel Pro Nautic
The iX Panel Pro and iX Panel Pro Nautic series feature industrial class C2D CPU performance with all relevant certifications by major nautical classification societies.

The two iX Panel Pro series deliver full, open and expandable HMI platform functionality for industrial and marine applications, and include the iX runtime installed. Both series feature models with high-contrast TFT touch displays and a Box PC version.

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Screen picture courtesy of Alfa Laval ©

Food and Beverage - Alfa Laval sharpens the competitive edge with iX

iX helps Peter Blomberg and his colleagues create a graphical interface that makes decanter centrifuges as easy to use as today's cell phones. The user-friendly interface is appreciated by customers, as well as the new HMI solution saves time and money in installation and service.

High quality is one of the reasons why the machines from Alfa Laval are exported successfully all over the world. Peter Blomberg is automation manager at Alfa Laval and explains that the company puts great pride in producing reliable and cost-effective machines with a long life time. The strategy also includes that Alfa Laval's machines must be easy to use:
- The goal is to make our machines just as intuitive to use as today's personal computers and mobile phones.

Simplicity in operation

Simplicity in the operation of machines is both a selling point and a quality issue for Alfa Laval. The latest user interface 2Touch is in perfect line with the fundamental intentions.
- The idea is that all information should be readily available when it's needed.

By pressing a finger at any of the tabs on the screen, the operator opens menus to see operational data, adjust parameters, acknowledge alarms, etc. The icons on the screen have the same symbolic language as on the DVD player in your home. A few clicks are enough to view the electronic manual of the decanter or see an instructional video. Alfa Laval is without doubt inspired by more consumer-oriented products and is now in the lead with increased ease of use.

Peter Blomberg is clear on why this effort has been made.
- HMI solutions with different colored push buttons and cryptic text messages on oversized panels belong to yesterday.
Already, more than fifty models of the new generation of decanters with the new user interface have been delivered to customers globally. However, decanter centrifuges are not the only machines equipped with 2Touch:
- Other types of machines within our three product areas; heat transfer, separation and fluid handling will be upgraded to the new platform.

Evaluation of more than a dozen HMI concepts

Although there have been teething problems to overcome, Peter Blomberg does not regret that Alfa Laval was early to adopt iX. The decision was well founded. The project began with nine month's intensive evaluation of more than a dozen different HMI concepts.
- No other vendor could offer the same features and graphic possibilities within the framework of an open architecture.

Alfa Laval has customers and employees spread all around the world. Therefore, another important issue in the selection was also the fact that Beijer Electronics is a well established and globally active company with a strong focus on technology.

Customizing to Alfa Laval's visual identity

The iX Developer is a well structured tool. Deep HMI experience is not needed to create a basic application - something

that actually does not take more than a few minutes.
- We have put a lot of effort in customizing the interface to our visual identity, says Peter Blomberg, who among other things appreciates the vector graphics capability to create crisp, clear images at any magnification.

In addition to openness and graphics, the flexibility speaks for iX. Peter Blomberg notes that iX works with most control systems. This is unlike the competitors that were evaluated, where the link between HMI and PLC products was often very tight. The support for OPC provides freedom to choose communication protocol. This is significant in cases where Alfa Laval's products are integrated with equipment from other suppliers in the same process line. Switching between different protocols is even possible in real time.

A technology shift with more advantages

The touch panel facilitates not only the operator's work through improved overview of the process. The technology shift is also an advantage for Alfa Laval's technicians:
- End-users are satisfied and at the same time we obtain simplified installation and maintenance services, says Peter Blomberg, noting that time is money if a machine fails.

Today Alfa Laval's engineers reach all functions and information via the operator panel. Updating a machine's system software is as easy as putting a memory stick in the panel's USB connector. The ability to monitor and address the machine or process line remotely via modem is another added value.
- With an aesthetically pleasing HMI solution that works today and has a modern feel in the years to come, we have reached our goal, summarizes Peter Blomberg.

Tailormade solutions

iX is the versatile HMI solution allowing you to create brand distinction with state-of-the-art graphics and consistent customer experiences within a wide range of industries:

- Marine and offshore
- OEMs and machine builders
- Building automation
- Energy
- Food and pharma
- Infrastructure and transportation
- Printing and packaging
- Water and waste water
- Automotive and utility vehicles

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About Beijer Electronics

Beijer Electronics is a fast growing technology company with extensive experience of industrial automation and data communication. The company develops and markets competitive products and solutions that focus on the user. Since its start-up in 1981, Beijer Electronics has evolved into a multinational group present in 16 countries and sales of 180 MUSD 2010. The company is listed on the Nasdaq OMX Nordic Exchange Stockholm's Small Cap list under the ticker BELE.

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