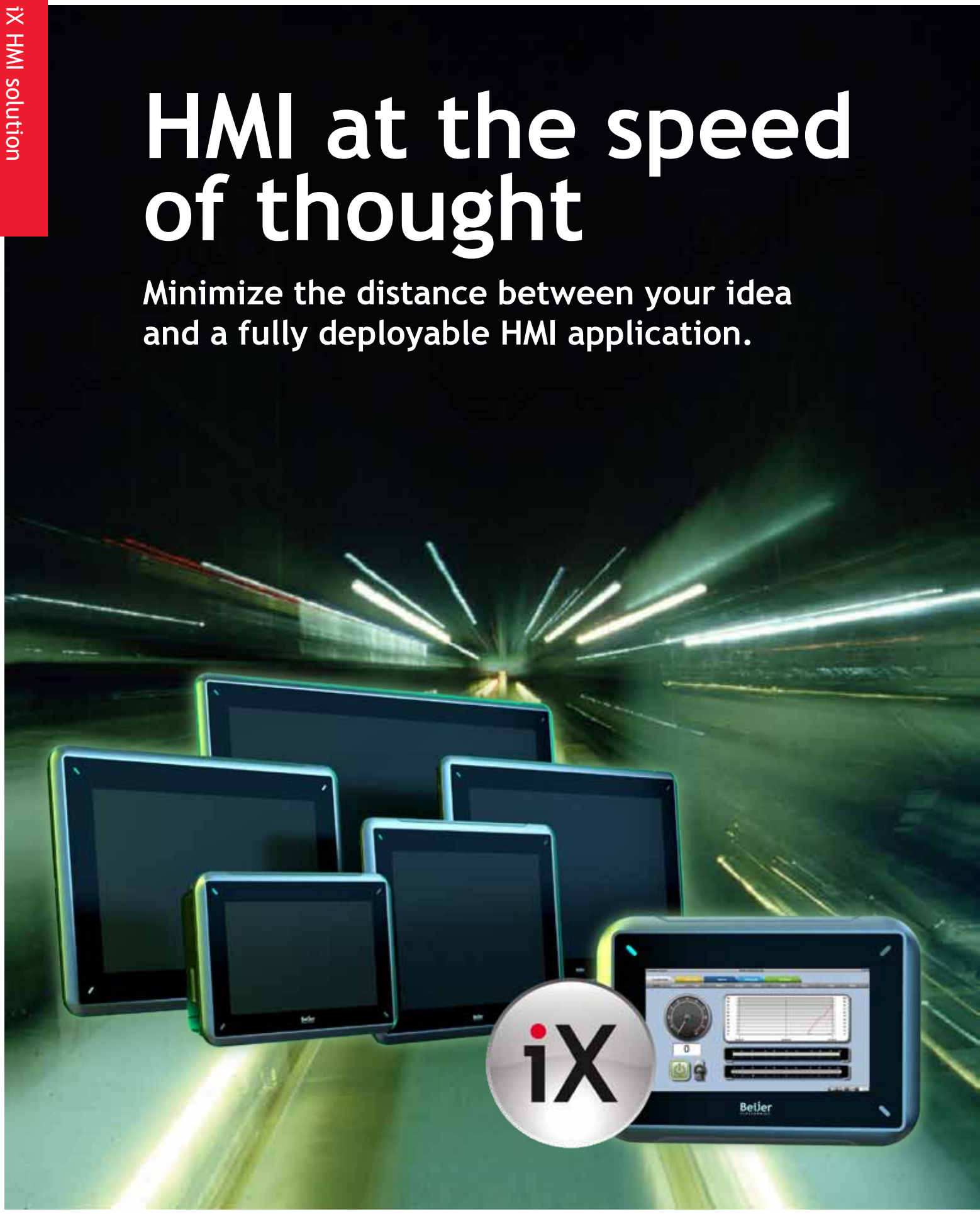
iX HMI solution

HMI at the speed of thought

Minimize the distance between your idea and a fully deployable HMI application.



Beijer ELECTRONICS

Changing the way you develop human machine interfaces. Feature by feature.

The advantages of the iX HMI solution regarding design, functionality and connectivity significantly reduce engineering time and lead to a faster return on your investment.

Create and configure your iX HMI solution in a familiar Windows environment – with ribbon menus, an intuitive workflow and context-sensitive help. Vector based scalable graphics and Windows media objects make sure your applications look professional and reflect your high standard.

The efficient iX development tools take you from idea to result faster. Take advantage of features like pre-defined styles to give your application a consistent look and feel. Make multiple changes by marking several objects and configuring them simultaneously with just one mouse click. Align objects automatically and use the screen explorer for more efficient handling of large projects.

Explore all your new possibilities with iX HMI – feature by feature.

> **The efficient iX development tools take you from idea to result faster.**

Get everything you expect…

The iX HMI solution offers solid and comprehensive built-in HMI functionality such as recipes, trends, schedulers and audit trails, that enable you to create an efficient and safe operation of your application.

…and so much more.

With the open architecture and the technologies that accompany .NET Framework, the iX HMI solution is truly open and flexible. If you have specialized demands, you can use your own C# scripting and .NET components to further extend functionality. iX 2.0 fully supports your ideas without slowing you down.

Microsoft .NET SQL Server OPC FOUNDATION Microsoft Visual C#

Be more efficient in development and operation

Unique and intelligent navigation tools:

Easily handle large projects using screen explorer with built-in zoom.

Mark several objects and configure them all with one mouse click.

Create a complete screen structure faster, and keep a good overview.

Allow one screen to show multiple instances that can be changed during runtime.

Save screen space with new and smarter navigation tools controlled by gestures.

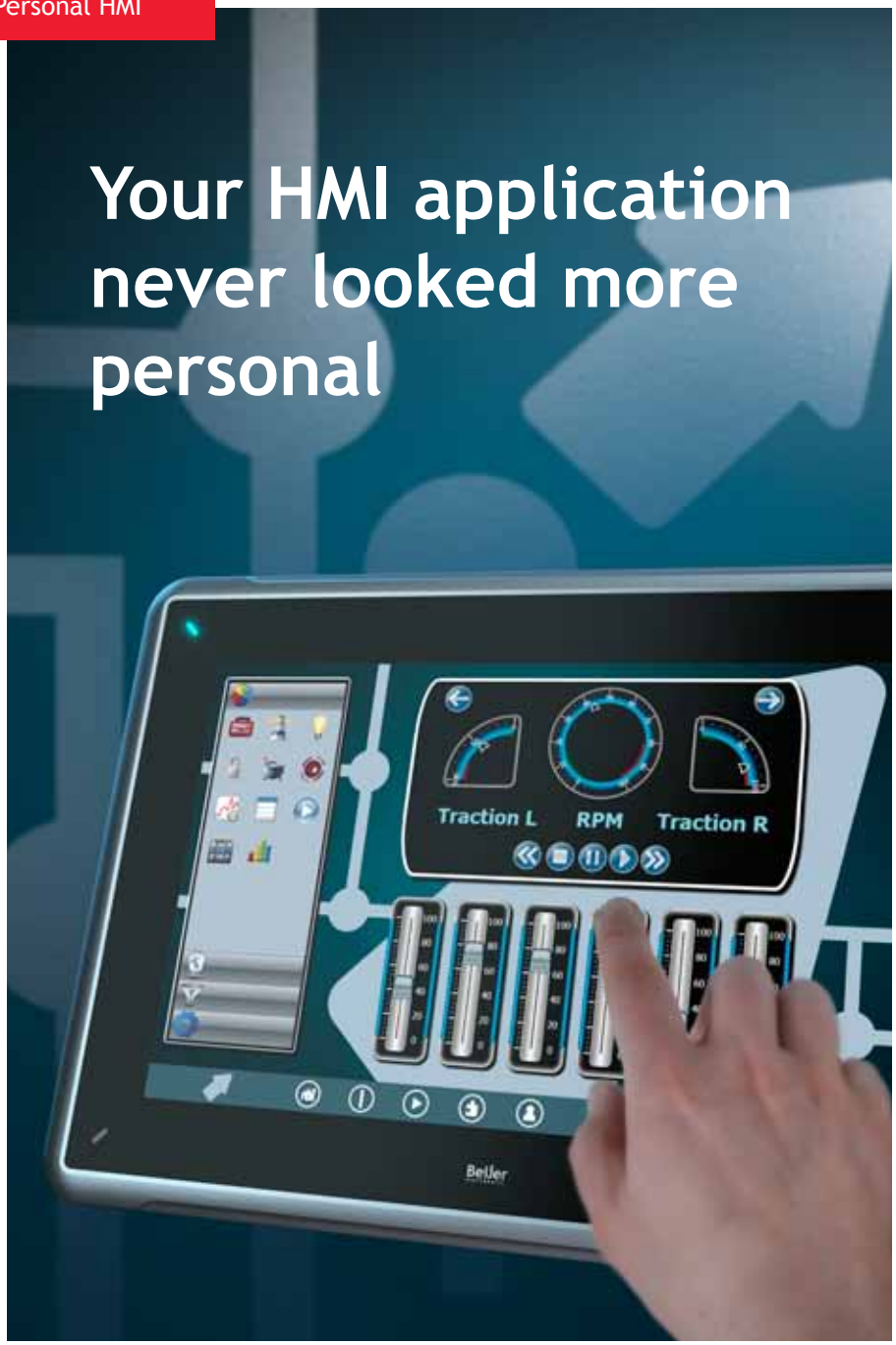
Show vast amounts of information in small areas using animated labels with variable speed and direction.

> **Explore modern controlling using scroll and swipe gestures in iX 2.0.**

Navigation tools inspired by products like mobile devices create new ways to interact with your application. Explore modern controlling using scroll and swipe gestures in iX 2.0 to make your application faster and more efficient to navigate. And, save a lot of screen space while you're at it.

Clear information based on high-quality graphics are key to responding to alarms quickly and preventing personal injury or property damage. With the advanced vector-based graphics and the flexible objects in iX 2.0 you can provide safe and reliable operations creating customer satisfaction and trust in the system. You can offer an intuitive interface with short introduction time. In fact, your user will probably never ask you for the manual.

Your HMI application never looked more personal



Breakthrough ways to personalize:

Add specialized functionality using C# scripting and .NET components.

Customize system dialogues in colors, fonts and touch area size.

Save your custom colors, build you own screens and re-use as a template.

Choose between fourteen different trend charts, also available in 3D style.

Change style on one or all of your objects to get a consistent look with just one click.

With the iX HMI solution you can personalize your application in new ways to create a visual expression in line with the machine – and profile your application to harmonize with the company brand. Even system dialogs are customizable, and you have the option to choose the style you want to give your project that higher dimension.

iX 2.0 offers comprehensive built-in HMI functionality such as recipes, trends, schedulers and audit trails, that enable you to create an efficient and safe operation of your application. Additionally, you can gain further competitive advantages by implementing .NET components and creating customized functionality through C# scripting. With iX 2.0 you can incorporate new functionality for higher production output and reduced maintenance costs.

> **Profile your application to harmonize with the company brand.**

Get the right information at the right time in the right place

Ultra-efficient networking features:

Use the panel as a client or server (OPC UA) for efficient data exchange.

Connect to PLC or business/planning systems.

Communicate between panels with different screen sizes, from 4 inch up to 21 inch.

Create Excel-based reports including graphics, calculation and charts.

Distribute alarms to a printer, mobile phone, e-mail or other operator panel.

Easily import/export recipes by using FTP, USB or SD.

Access panel information remotely via web browser supporting Java Script.

A multitude of connection options are at your disposal for local communication, expansion, remote access and more.

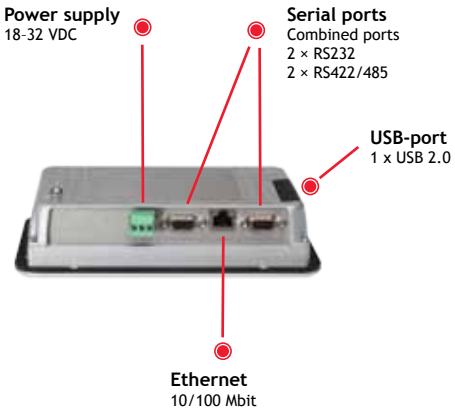
The Beijer Electronics' operator panels can share information with each other via panel networks, regardless of size or performance. This means it's easy to share information between users and provides safer control of complex machines also over long distances.

Because the panels can act as OPC UA server or client, it's possible to distribute information between the factory floor and business or planning systems. If you want to turn facts and figures into Excel reports just use the built-in report generator and print directly or save to file.

Need your HMI to go? Using the panel web server you can design your own web page by using the tag data API and just log-in. The information you see on the panel you'll be able to see and use on a mobile device anywhere in the world.

> **Share data between users and provide safer control of complex machines.**

TxA



The cost-effective solution

The smaller TxA models offer a highly cost-efficient solution with solid HMI functionality for small and medium-sized applications. Display sizes 4, 7 and 10 inches.

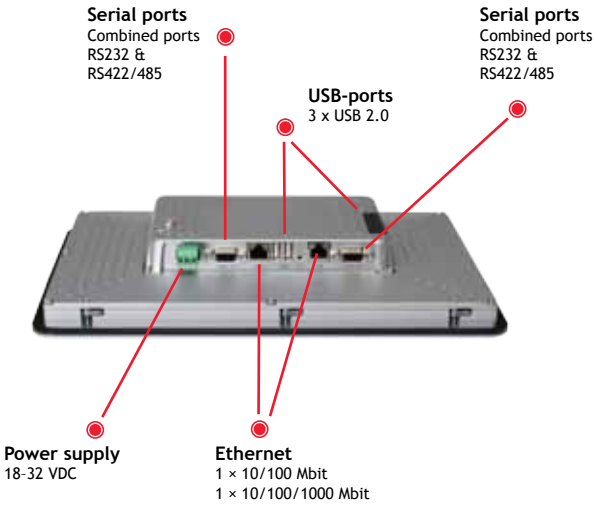
Visual C# Compact Framework

OPC Foundation

TECHNICAL DATA	TxA series		
iX Products	T4A	T7A	T10A
Display size	4.3”	7”	10.4”
Display resolution, ratio	480 × 272 (16:9)	800 × 480 (16:9)	640 × 480 (4:3)
Display colors	TFT-LCD 65 T		
Active area of display, W×H (mm)	95.0 × 53.9	152.4 × 91.4	211.2 × 158.4
Brightness (cd/m2)	350	450	450
View angle (H/V)	115° / 140°	130° / 140°	140° / 160°
Backlight life time	> 40,000 hrs, LED backlight	> 20,000 hrs, LED backlight	> 40,000 hrs, LED backlight
Touch screen operations	Resistive touch, 1 million finger touch operations		
Processor	ARM9 (400 MHz)		
Main memory	128 MB (DDR2)		
Application memory	80 MB		
External storage media	1 × SD card (optional)		
Realtime clock	yes		
Ethernet	1 × 10 Base-T / 100 Base-T (shielded RJ 45)		
USB	1 × USB 2.0, max. 200 mA		
Serial port 1/2	2 combined ports: 2 × RS232, 2 × RS422/485		
Communication modules	CAN (FreeCAN), MPI*		
Dimension W×H×D (mm)	145 × 103 × 49	204 × 143 × 49	280 × 228 × 51
Cut-out dimension W×H×D (mm)	128 × 87 × 43	187 × 126 × 43	262 × 209 × 46
Net weight (kg)	ca. 0.5	ca. 0.8	ca. 1.5
Frame material, front foil	Powder-coated aluminum, Polyester Autotex F157 or F207		
Mounting	Panel mount and VESA 50 × 50	Panel Mount and VESA 75 × 75	
Protection (front/rear)	IP65 / IP20		
Power supply	+24 VDC (18-32 VDC)		
Power comsuption	3.6 W	6.0 W	9.6 W
Operating temperature	-10 to + 60 °C		
Storage temperature	-20 to + 70 °C		
Certification	CE, UL 508, DNV*		

** In Progress*

All data are subject to be changed without notice



TxB

High performance operator panel

The mid-range TxB models deliver high performance suitable for medium to large HMI applications, requiring handling of more data and utilizing more functionality. Display sizes 7, 12 and 15 inches.

TECHNICAL DATA	TxB series		
iX Products	T7B	T12B	T15B
Display size	7”	12.1”	15.4”
Display resolution, ratio	800 × 480 (16:9)	1280 × 800 (16:10)	
Display colors	TFT-LCD 262 T		
Active area of display, W×H (mm)	152.4 × 91.4	261.1 × 163.2	331.2 × 207.0
Brightness (cd/m2)	500	400	450
View angle (H/V)	140° / 120°	176° / 176°	160° / 140°
Backlight life time	> 50,000 hrs, LED backlight		
Touch screen operations	Resistive touch, 1 million finger touch operations		
Processor	Intel® Atom (1.1 GHz)		
Main memory	1 GB DDR2		
Application memory	>= 1.4 GB		
External storage media	1 × SD card (optional)		
Realtime clock	yes		
Ethernet	1 × 10/100/1000 Mbit/s and 1 × 10/100 Mbit/s		
USB	3 × USB 2.0		
Serial port 1/2	2 combined ports: 2 × RS232, 2 × RS422/485		
Communication modules	CAN (FreeCAN), MPI*		
Dimension W×H×D (mm)	204 × 143 × 51	340 × 242.2 × 57	410 × 286 × 61
Cut-out dimension W×H×D (mm)	187 × 126 × 43	324 × 226 × 50	394 × 270 × 54
Net weight (kg)	ca. 1.0	ca. 2.1	ca. 3.3
Frame material, front foil	Powder-coated aluminum, Polyester Autotex F157 or F207		
Mounting	Panel mount and VESA 75 × 75		
Protection (front/rear)	IP65 / IP20		
Power supply	+24 VDC (18-32 VDC)		
Power comsuption	14 W	22 W	24 W
Operating temperature	-10 to + 50 °C		
Storage temperature	-20 to + 70 °C		
Certification	CE, UL 508*, DNV*		

** In Progress*

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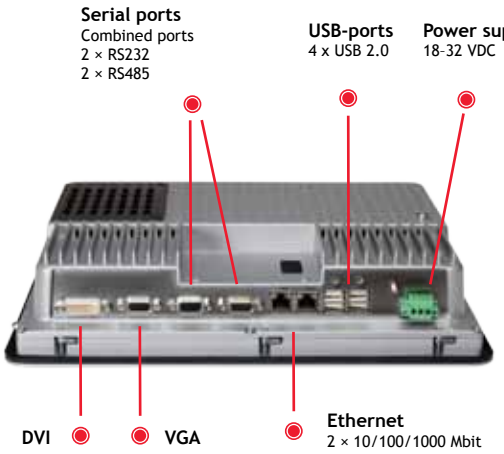

TxC

HMI Industrial PC for demanding applications

The TxC series takes HMI to the industrial PC level, delivering a wide range of connectivity options and high performance for larger projects. The largest 21 inch model supports full HD.

TECHNICAL DATA	TxC series		
iX Products	T12C	T15C	T21C
Display size	12.1”	15.4”	21.5”
Display resolution, ratio	1280 × 800 (16:10)		1920 × 1080 (16:9)
Display colors	TFT-LCD 16 Mio		
Active area of display, W×H (mm)	261.1 × 163.2	331.2 × 207.0	476.6 × 268.1
Brightness (cd/m2)	400	450	250
View angle (H/V)	176° / 176°	160° / 140°	170° / 160°
Backlight life time	> 50,000 hrs, LED backlight		
Touch screen operations	Resistive touch, 1 million finger touch operations		
Processor	Intel® Celeron® B810E (2× 1.6 GHz) Optional: Intel® Core™ i3 2310E (2× 2.1 GHz)*2 / Intel® Core™ i7-2715QE (4× 2.1 GHz)*2		
Main memory	2 GB - 16 GB DDR3 (with ECC support)*2		
Application memory	8 GB - 128 GB: CFast / 2.5“ SSD *2		
External storage media	via USB		
Realtime clock	yes		
Ethernet	2 × 10/100/1000 Mbit/s		
USB	4 × USB 2.0		
Serial port 1/2	2 combined ports: 2 × RS232, 2 × RS485		
Monitor	VGA + DVI-I		
Expansion slot	mini PCIe		
Communication modules	CAN (FreeCAN), MPI*		
Dimension W×H×D (mm)	340 × 242 × 79	410 × 286 × 83	556 × 347 × 87
Cut-out dimension W×H×D (mm)	324 × 226 × 72	394 × 270 × 76	539 × 331 × 79
Net weight (kg)	ca. 4.2 kg	ca. 5.4 kg	ca. 8.1 kg
Frame material, front foil	Powder-coated aluminum, Polyester Autotex F157 or F207		
Mounting	Panel mount and VESA 100 × 100		
Protection (front/rear)	IP65 / IP20		
Power supply	+24 VDC (18-32 V DC); ATX compliant		
Power comsuption*3	107 W	114 W	125 W
Operating temperature	0 to + 50 °C		
Storage temperature	-20 to + 70 °C		
Certification	CE, UL 508*, DNV*		
Operating system	Windows 7, Windows Embedded Standard 7		

* *In Progress*

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*2 *Configuration depending on customer request*

*3 *Depending on configuration*

Hardware and software made for each other

High-performance reliable hardware:

Modern look and feel with a consistent design for the entire panel line.

Dimmable high-resolution TFT display with fast touch response.

Higher user confidence with clear, easy-to-read display.

Plane surface that is easy to clean.

Reliable and robust aluminum housing and IP65 approval.

Available in wide-screen with 30% larger viewing area.

Flexibility guaranteed with long list of drivers from all major automation vendors.

No matter your application, we have the hardware to match it, from the ultra compact 4 inch operator panel to the high-performance 21 inch industrial PC. All with the same look and feel. And naturally, your iX application project can be scaled accordingly to suit the display, making sure you can offer flexible and competitive solutions.

The panels offer high-performance CPUs and the latest technology with LED backlight resulting in an easy-to-read clear screen with wide viewing angles. Fast, easy mounting and a compact format makes it convenient to install your panel. You can rest assured that you've picked a hardware created for a long and reliable life in real-world applications.

> **The panels offer high-performance CPUs and the latest screen technology.**

- **Learn more about the technical specifications and features of Beijer Electronics' HMI hardware series TxA, TxB and TxC in the included charts.**

Solutions through experience

Beijer Electronics offers you user-friendly, leading-edge HMI technology backed by a strong organization that provides worldwide local support. Our iX HMI solution builds on thirty years experience developing innovative hardware and software, working closely with customers from all types of industries around the world. It also represents a new groundbreaking HMI development tool built on an open .NET Framework platform, with few competitors worldwide.

www.beijerelectronics.com

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