

X2 pro

X2 series

Strong. Stylish. Smart.

Beijer
ELECTRONICS

X2 series

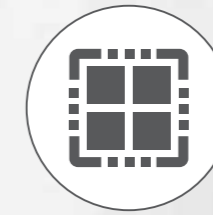
Strong. Stylish. Smart.

The X2 series is the next generation of HMIs from Beijer Electronics. Six product families combine great design with strong performance to power your HMI solutions. Create smart integrated solutions boosted by iX HMI software and WARP Engineering Studio.



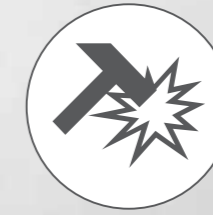
One family, one great design

X2 panels offer a slim, modern design. Consistent across the entire range, adding visual quality to your solution.



All the performance you need

Power-efficient ARM9 processors all the way up to the latest quad core ARM Cortex-A9 processors deliver fast program execution and screen change. It gives you all the performance you need.



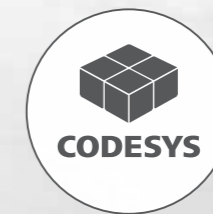
Robust reliability

The robust die cast aluminum body offers great resistance to mechanical stress. We've redesigned the electronics and made other improvements to further enhance solid operation.



Prepared for any environment

X2 panels operate in wide temperature ranges. They offer strong ingress protection and in addition, they hold all the certificates you need to perform in the field.



Integrated CODESYS control

The X2 series offers models with integrated CODESYS IEC 61131-3 PLC functionality directly in the panel by multicore processors for fast, safe program execution.



A simple path forward

It's easy to upgrade your existing iX HMI solution to the X2 series.



We offer a two-year standard warranty for all operator panels in the X2 series.

A match for every requirement

The X2 series matches almost every requirement and lets you choose from a powerful range of more than 50 models and additional options.

X2 extreme

Rugged HMIs for tough environments

Available in 7, 12 and 15 inches, all in 3 versions: Panel mount standard and high-performance versions, and fully sealed high-performance versions. All high-performance versions offer high brightness display and optional integrated CODESYS PLC functionality.

X2 control

Integrated CODESYS control

Available in 4, 7, 10, 12 and 15 inches.

X2 pro

High performance HMIs for all automation needs

Available in 4, 7, 10, 12, 15 and 21 inches.

X2 base

Cost-effective, full functionality HMIs

Available in 5, 7 and 10 inches.

X2 marine

Built for life at sea

Available in 7 and 15 inches with optional high brightness display and integrated CODESYS PLC functionality.

X2 motion

Integrated CODESYS motion and control

Available in 4, 7, 10, 12 and 15 inches.



X2 base

Cost-effective, full functionality HMIs

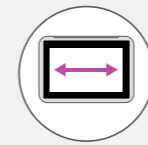
X2 base panels are cost-effective industrial HMIs with high-resolution touch-screens and modern design. The X2 base panels combine IP65 corrosion resistant plastic housing with the full version of the iX software, providing a cost-effective yet advanced HMI solution for small to medium applications.

X2 base panels are available in 5, 7 and 10 inches.



See page 20 for technical data.

Features X2 base



Wide screen format
X2 panels offer wide screen format, designed to succeed the traditional 4:3 square aspect ratio.



UL, CE, FCC and KCC certificates
The entire X2 range offers a strong standard certification with UL, CE, FCC and KCC certificates.



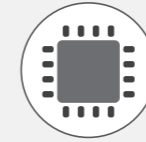
iX software – why you'll love our hardware
The iX software gives you smart communication tools. iX combines top-class vector graphics and easy-to-use functions that provide reliable operation, and almost limitless connectivity to your other equipment.



Fast forward engineering with WARP
Create integrated HMI, control, drives and data communication solutions with WARP Engineering Studio. WARP automatically configures all hardware, software and communication in your application.



Custom design or non-branded
Profile your brand or go for neutral. X2 panels offer custom designed or non-branded front foils, as alternatives to the standard Beiler Electronics branded versions.



Power efficient ARM9 processors
Power efficient ARM9 processor provides strong performance for small and medium sized applications.



Corrosion resistant plastic housing
Corrosion resistant plastic housing with IP65, NEMA 4X/12 and UL Type 4X/12 front.



Operating temperature -10°C to +50°C
The -10°C to +50°C operating temperature range satisfies the demands of most industries.



All the communication ports you need
X2 base offers 1 × USB as standard, securing ample communication with other equipment.

X2 pro

High performance HMIs for all automation needs

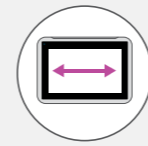
X2 pro includes a range of high performance industrial panels designed for demanding applications. All with the high performance of powerful ARM Cortex-A9 processors, the latest screen technology and a wide range of connectivity options to cover all your automation needs.

X2 pro panels are available in 4, 7, 10, 12, 15 and 21 inches.



See page 22-23 for technical data.

Features X2 pro



Wide screen format
X2 panels offer wide screen format, designed to succeed the traditional 4:3 square aspect ratio.



UL, CE, FCC and KCC certificates*
The entire X2 range offers a strong standard certification with UL, CE, FCC and KCC certificates.



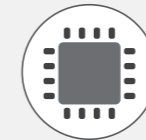
iX software – why you'll love our hardware
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Custom design or non-branded
Profile your brand or go for neutral. X2 panels offer custom designed or non-branded front foils, as alternatives to the standard Beijer Electronics branded versions.



Powerful ARM Cortex-A9 processor
Powerful single or dual core ARM Cortex-A9 processor delivers fast screen changes and program execution in demanding applications.



Robust aluminum housing
Robust aluminum housing with IP65, NEMA 4X/12 and UL Type 4X/12 front. Resistant to direct rain, snow or wash-downs, dirt, grime and dust.



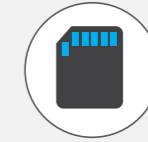
Wide operating temperature -10°C to +60°C*
The wide -10°C to +60°C operating temperature range satisfies the demands of most industries.



Marine certifications*
The X2 panels meet extended classes of marine certifications not normally carried by HMIs, making them suitable for all onboard locations.



CiX CAN, Profibus and MPI module
It's easy to interface with controllers using optional CiX CAN, Profibus or MPI modules.



SD memory card
Card holder and USB connection are located behind the lid on the back of the panel for smart memory expansion, project backup and application loading.

*X2 pro 21 offers UL, CE and FCC and certificates, no marine certifications and a temperature range of 0°C to +50°C.

X2 marine

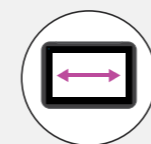
Built for life at sea

X2 marine offers user-friendly, reliable operation offshore, on ships and in other maritime applications. With black frame and nautical society certifications, X2 marine panels are suitable for mounting on the bridge, in the engine room and inside cabins. X2 marine panels are available with optional high brightness display and integrated CODESYS PLC functionality.

X2 marine panels are available in 7 and 15 inches with optional high brightness display and integrated CODESYS PLC functionality.



Features X2 marine



Wide screen format
X2 panels offer wide screen format, designed to succeed the traditional 4:3 square aspect ratio.



UL, CE, FCC and KCC certificates
The entire X2 range offers a strong standard certification with UL, CE, FCC and KCC certificates.



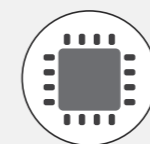
iX software – why you'll love our hardware
The iX software gives you smart communication tools. iX combines top-class vector graphics and easy-to-use functions that provide reliable operation, and almost limitless connectivity to your other equipment.



Fast forward engineering with WARP
Create integrated HMI, control, drives and data communication solutions with WARP Engineering Studio. WARP automatically configures all hardware, software and communication in your application.



Custom design or non-branded
Profile your brand or go for neutral. X2 panels offer custom designed or non-branded front foils, as alternatives to the standard Beijer Electronics branded versions.



Powerful ARM Cortex-A9 processor
Powerful single, dual or quad core ARM Cortex-A9 processor delivers fast screen changes and program execution in demanding applications.



Robust aluminum housing
Robust aluminum housing with IP65, NEMA 4X/12 and UL Type 4X/12 front. Resistant to direct rain, snow or wash-downs, dirt, grime and dust.



Wide operating temperature -10°C to +60°C
The wide -10° to +60°C operating temperature range satisfies the demands of most industries.



Marine certifications
The X2 panels meet extended classes of marine certifications not normally carried by HMIs, making them suitable for all onboard locations.



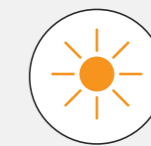
CiX CAN, Profibus and MPI module
It's easy to interface with controllers using optional CiX CAN, Profibus or MPI modules.



SD memory card
Card holder and USB connection are located behind the lid on the back of the panel for smart memory expansion, project backup and application loading.



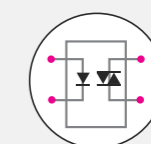
Dimmable backlight
Comfortable and safe operation in high and low ambient light. Backlight is continuously dimmable to less than one cd/m².



High brightness display
Optional 1,000 cd/m² backlight provides excellent readability in high ambient light levels such as sunlight.



Add control by CODESYS
Choose optional IEC 61131-3 PLC functionality by CODESYS, running on dedicated CPU cores for safe and fast program execution. Just add remote I/Os for a scalable, cost-effective solution.



Built-in digital outputs
X2 marine panels with high brightness option have built-in digital outputs for direct connection of alarms, signal lights, etc.



Internal isolation
Internal isolation conforms to marine standards for both burst and surge immunity.

See page 21 for technical data.

X2 control

Integrated CODESYS control

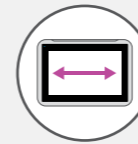
X2 control panels combine industrial HMI and CODESYS PLC functionality in the same compact hardware. Panels range from ultra-compact 4-inch to 15-inch panels designed for demanding applications. Add standard distributed I/Os and you'll get an elegant, scalable and cost-effective solution that's cutting-edge.

X2 control panels are available in 4, 7, 10, 12 and 15 inches.



See page 24-25 for technical data.

Features X2 control



Wide screen format
X2 panels offer wide screen format, designed to succeed the traditional 4:3 square aspect ratio.



UL, CE, FCC and KCC certificates
The entire X2 range offers a strong standard certification with UL, CE, FCC and KCC certificates.



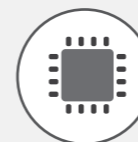
iX software – why you'll love our hardware
The iX software gives you smart communication tools. iX combines top-class vector graphics and easy-to-use functions that provide reliable operation, and almost limitless connectivity to your other equipment.



Fast forward engineering with WARP
Create integrated HMI, control, drives and data communication solutions with WARP Engineering Studio. WARP automatically configures all hardware, software and communication in your application.



Custom design or non-branded
Profile your brand or go for neutral. X2 panels offer custom designed or non-branded front foils, as alternatives to the standard Beijer Electronics branded versions.



Powerful ARM Cortex-A9 processor
Powerful dual or quad core ARM Cortex-A9 processor delivers fast screen changes and program execution in demanding applications.



Robust aluminum housing
Robust aluminum housing with IP65, NEMA 4X/12 and UL Type 4X/12 front. Resistant to direct rain, snow or wash-downs, dirt, grime and dust.



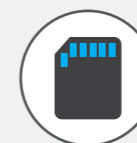
Wide operating temperature -10°C to +60°C
The wide -10°C to +60°C operating temperature range satisfies the demands of most industries.



Marine certifications
The X2 panels meet extended classes of marine certifications not normally carried by HMIs, making them suitable for all onboard locations.



CiX CAN, Profibus and MPI module
It's easy to interface with controllers using optional CiX CAN, Profibus or MPI modules.



SD memory card
Card holder and USB connection are located behind the lid on the back of the panel for smart memory expansion, project backup and application loading.



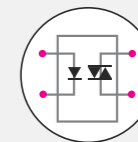
2 Ethernet ports as standard
Panels have two built-in Ethernet ports as standard for communication with other equipment.



EtherCAT as standard
X2 panels support communication with super-fast EtherCAT as standard.



Control by CODESYS
Integrated IEC 61131-3 PLC functionality by CODESYS, running on dedicated CPU cores for safe and fast program execution. Just add remote I/Os for a scalable, cost-effective solution.



Built-in digital outputs
10, 12 and 15 inch panels have built-in digital outputs for direct connection of alarms, signal lights, etc.



Configuration freedom
Applications remain elegantly slim with integrated control in the panel. Add remote I/Os to fit your needs, and select between three major fieldbuses – EtherCAT, Modbus RTU and Modbus TCP.



Less risk of error with one system
Two separate PLC and HMI systems mean twice the risk of error. X2 control changes all that. Simply configure your system with WARP and you're done. It's never been easier to create applications.

X2 motion

Integrated CODESYS motion and control

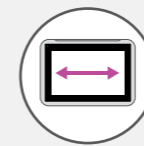
X2 motion panels deliver intuitive HMI with integrated CODESYS motion and PLC functionality in the same compact hardware. Panels range from ultra-compact 4-inch to 15-inch panels designed for demanding applications. Our lean yet powerful hardware with super-fast EtherCAT communication provides the speed you want with the stability you need.

X2 motion panels are available in 4, 7, 10, 12 and 15 inches.



See page 26-27 for technical data.

Features X2 motion



Wide screen format
X2 panels offer wide screen format, designed to succeed the traditional 4:3 square aspect ratio.



UL, CE, FCC and KCC certificates
The entire X2 range offers a strong standard certification with UL, CE, FCC and KCC certificates.



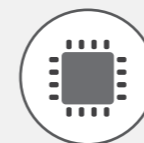
iX software – why you'll love our hardware
The iX software gives you smart communication tools. iX combines top-class vector graphics and easy-to-use functions that provide reliable operation, and almost limitless connectivity to your other equipment.



Fast forward engineering with WARP
Create integrated HMI, control, drives and data communication solutions with WARP Engineering Studio. WARP automatically configures all hardware, software and communication in your application.



Custom design or non-branded
Profile your brand or go for neutral. X2 panels offer custom designed or non-branded front foils, as alternatives to the standard Beijer Electronics branded versions.



Powerful ARM Cortex-A9 processor
Powerful dual or quad core ARM Cortex-A9 processor delivers fast screen changes and program execution in demanding applications.



Robust aluminum housing
Robust aluminum housing with IP65, NEMA 4X/12 and UL Type 4X/12 front. Resistant to direct rain, snow or wash-downs, dirt, grime and dust.



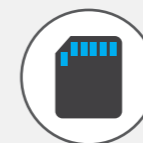
Wide operating temperature -10°C to +60°C
The wide -10°C to +60°C operating temperature range satisfies the demands of most industries.



Marine certifications
The X2 panels meet extended classes of marine certifications not normally carried by HMIs, making them suitable for all onboard locations.



CiX CAN, Profibus and MPI module
It's easy to interface with controllers using optional CiX CAN, Profibus or MPI modules.



SD memory card
Card holder and USB connection are located behind the lid on the back of the panel for smart memory expansion, project backup and application loading.



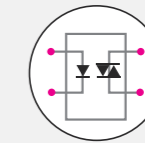
2 Ethernet ports as standard
Panels have two built-in Ethernet ports as standard for communication with other equipment.



EtherCAT as standard
X2 panels support communication with super-fast EtherCAT as standard.



Motion and control by CODESYS
Integrated CODESYS motion and IEC 61131-3 PLC functionality running on dedicated CPU cores for safe and fast program execution. Connect directly to a BSD servo drive and add I/Os for a scalable, cost-effective solution.



Built-in digital outputs
10, 12 and 15 inch panels have built-in digital outputs for direct connection of alarms, signal lights, etc.



Configuration freedom
Applications remain elegantly slim with integrated control/motion in the panel. Add BSD servo drives and remote I/Os to fit your needs, and take advantage of the super-fast EtherCAT communication.



Get a head start
You're off to a flying start with our ready-made template project which sets up all the basic settings for iX and CODESYS. Download the project, adapt it to your application and you're good to go.



Servo drives and motors fitting seamlessly
Our servo drives and motors give you great functions such as auto detect of motor and encoder, online auto tuning, advanced filters, open high-speed EtherCAT network, safe torque-off, etc.

X2 extreme

Rugged HMIs for tough environments

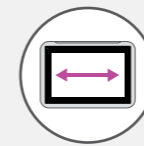
X2 extreme panels are certified by all major classification societies. Designed to perform in rugged environments and in hazardous areas where gases, vapors and dust are present. Extended environmental capabilities include operating temperatures from -30°C to +70°C, high vibrations and high-pressure wash-downs.

X2 extreme panels are available in 7, 12 and 15 inches, all in 3 versions: Panel mount standard and high-performance versions, and fully sealed high-performance versions. All high-performance versions offer high brightness display and optional integrated CODESYS PLC functionality.



See page 28-31 for technical data.

Features X2 extreme



Wide screen format
X2 panels offer wide screen format, designed to succeed the traditional 4:3 square aspect ratio.



UL, CE, FCC and KCC certificates
The entire X2 range offers a strong standard certification with UL, CE, FCC and KCC certificates.



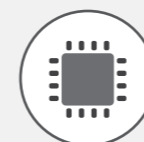
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Powerful ARM Cortex-A9 processor
Powerful dual or quad core ARM Cortex-A9 processor delivers fast screen changes and program execution in demanding applications.



Robust aluminum housing
Robust aluminum housing with IP66 front. Resistant to direct rain, snow or high-pressure washdowns, dirt, grime and dust.



Extreme operating temperature -30°C to +70°C
Extreme -30°C to +70°C operating temperature range guarantees trouble-free use in the harshest environments.



Marine certifications
The X2 panels meet extended classes of marine certifications not normally carried by HMIs, making them suitable for all onboard locations.



Integrated CAN bus
It's easy to interface with controllers using the integrated CAN bus.



SD memory card
Card holder and USB connection are located behind the lid on the back of the panel for smart memory expansion, project backup and application loading.



Dimmable backlight
Comfortable and safe operation in high and low ambient light conditions. Backlight is continuously dimmable to less than one cd/m².



High brightness display
All high-performance versions feature 1,000 cd/m² backlight providing excellent readability in high ambient light levels such as sunlight.



Add control by CODESYS
All high-performance versions offer integrated CODESYS IEC 61131-3 PLC functionality running on dedicated CPU cores for safe and fast program execution. Just add remote I/Os for a scalable, cost-effective solution.



Certified for hazardous environments
Certified for use in hazardous areas where gases, vapors and dust are present.



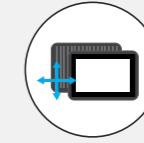
Internal isolation
Internal isolation conforms to marine standards for both burst and surge immunity.



High vibration
Panels are tested to 4 g RMS sweep sine for vibration and 40 g 11 ms half sine for shock.



Panel mount
Panel mount versions hold IP66, NEMA 4X/12 and UL Type 4X/12 ingress protection rating for the front and conform to ATEX Zone 2 and ATEX Zone 22 certification.



Fully sealed
Fully sealed versions with M12 connectors hold IP65 ingress protection rating for the entire product and conform to ATEX Zone 2 and ATEX Zone 22 certification.

iX software – why you’ll love our hardware

The iX software gives you smart communication tools. It combines top-class vector graphics and easy-to-use functions that provide reliable operation, and almost limitless connectivity to your other equipment.



Efficient workflow

Speed up engineering in an intuitive development environment filled with shortcuts. Pre-styled objects, a customizable workspace, a component library and a smart property grid are some of the features that’ll boost your workflow. Share your customized objects and advanced script modules with colleagues.

Complete HMI functionality

It’s easy to get your application up and running. All essential functions you need are included such as data logging, recipes, alarms, trends and audit trail. Take advantage of ready-made objects with built-in functionality, vector-based symbols and graphics that can be easily inserted into the screen.

Functionality for advanced users

iX has support for .NET technology, providing options to design specialized functionality. Use C# scripting or .NET components. Take advantage of third party objects and import .NET assemblies to extend the functionality

further. Control and exchange data with multiple controllers and enjoy connectivity via SQL, FTP, OPC and web.

Connect to all automation brands

An extensive driver list enables communication with hundreds of unique PLCs and automation equipment from all major manufacturers. Share information easily between users and have safe control of complex systems, even over long distances. Transfer files and control panels remotely with FTP and VNC servers.



Download iX HMI software

Go to smartstore.beijerelectronics.com and try out the free demo version of iX.

Fast forward engineering

Create integrated HMI, control, drives and data communication solutions with WARP Engineering Studio. WARP automatically configures all hardware, software and communication in your application. What used to take days to set up, can be up and running in a few minutes.



Features

- Seamless integration of Beijer Electronics products
- Structured and integrated workflow with drag & drop
- Auto-configuration of all hardware, software and communication settings
- Simply draw lines to interconnect devices
- Avoid mistakes and work failsafe with auto-resolve
- Access all individual application program editors automatically
- Smart objects with embedded functionality such as PLC code or HMI screens
- Easy distribution, backup and recovery of projects
- Shortcuts to important documentation
- Generate bill of material for simplified purchase

Save time with smart objects

A great feature of WARP Engineering Studio is the introduction of smart objects. A smart object includes ready-made, embedded functionality such as PLC code, HMI screens, etc. Drag a smart object into your workspace and just drop it on a device. All embedded code is then injected into the targeted devices. Smart and time-saving.

Industrial apps in Smart Store

The future of automation engineering is object-oriented, visual and user-community based. With the introduction of our Smart Store, you will find a growing multitude of industrial apps – smart objects, software and software updates that you can download and use immediately.



Download WARP Engineering Studio

Go to smartstore.beijerelectronics.com and try out the full version of WARP Engineering Studio for free.



	X2 base 5	X2 base 7	X2 base 10
General description			
Part number	630005105	630005205	630005305
Warranty	2 year		
Certifications			
General	CE, FCC, KCC		
Marine	NA		
UL	UL 61010-2-201		
Mechanical			
Mechanical size	170 × 107 × 49 mm	196 × 146 × 52 mm	284 × 187 × 52 mm
Touch type	Resistive		
Cut-out size	161 × 93 mm	186 × 136 mm	275 × 177 mm
Weight	0.5 kg	0.7 kg	1.3 kg
Housing material	Plastic (PC+ABS), Gray		
Power			
Input voltage	24 V DC (18 to 32 VDC)		
Power consumption, max	6W	9.6W	10.8W
Input fuse	Internal DC fuse		
System			
CPU	ARM9 400 MHz		
RAM	128 MB		
FLASH	256 MB, 200 MB free for application storage		
Display			
Size diagonal	5" diagonal	7" diagonal	10.1" diagonal
Resolution	800 × 480 pixels		
Backlight	LED Backlight		
Backlight life time	20 000 hours		
Backlight brightness	300 cd/m ²	400 cd/m ²	350 cd/m ²
Backlight dimming	Industrial Dimming		
Display type	TFT-LCD with LED backlight		
Communication serial			
Number of serial ports	2 Port 9pin DSUB		
Serial port 1	RS 232 (RTS/CTS)		
Serial port 2	RS422/485		
Serial port 3	RS 232		
Serial port 4	RS 485		
Ethernet communication			
Number of ethernet ports	1		
Ethernet port 1	1 × 10/100 Base-T (shielded RJ45)		
Ethernet port 2	NA		
Expansion interface			
Expansion port	No		
SD card	No		
USB	1 × USB 2.0 500mA		
Environmental			
Operating temperature	-10°C to +50°C		
Storage temperature	-20° to +60°C		
Shock	15g, half-sine, 11ms according to IEC60068-2-27		
Vibration	1g, according to IEC 60068-2-6, Test Fc		
Sealing front	IP65, NEMA 4X/12 and UL Type 4X/12		
Sealing back	IP20		
Humidity	5% – 85% non-condensed		



	X2 marine 7 (HB, SC, HB SC)	X2 marine 15 (HB, SC, HB SC)
General description		
Part number	630002505 (HB: 630008705, SC: 630008605, HB SC: 630008805)	640003305 (HB: 640003505, SC: 640009005, HB SC: 640009405)
Warranty	2 year	
Certifications*		
General	CE, FCC, KCC	
Marine	BV, DNV GL, KR, LR, ABS, CCS, EN60945, NK	
UL	UL 61010-2-201	
Mechanical		
Mechanical size	204 × 143 × 50mm	410 × 286 × 61mm
Touch type	Resistive	
Cut-out size	189 × 128mm	394 × 270mm
Weight	0.8 kg	3.85 kg
Housing material	Powder-coated aluminum, Black	
Power		
Input voltage	24 V DC (18 to 32 VDC)	
Power consumption, max	14.4W (HB: 21.6W, SC: 14.4W, HB, SC: 21.6W)	31.2W (HB: 33.6W, SC: 31.2W, HB SC: 33.6W)
Input fuse	Internal DC fuse	
System		
CPU	i.MX6Solo Single Cortex-A9 1.0GHz 512kBL2cache (HB, HB SC: Quad ARM Cortex-A9, SC: Dual Cortex-A9)	i.MX6Quad, Quad ARM Cortex-A9 1.0GHz 1MBL2cache
RAM	512 MB (HB, HB SC: 2 GB, SC: 1 GB)	2 GB
FLASH	2GB SSD(eMMC), 1.5GB free for application storage	
Display		
Size diagonal	7" diagonal	15.4" diagonal
Resolution	800 × 480 pixels	1280 × 800 pixels
Backlight	LED Backlight	
Backlight life time	50 000 hours	50 000 hours (HB, HB SC: 30 000 hours)
Backlight brightness	500 cd/m ² (HB, HB SC: 1 000 cd/m ²)	450 cd/m ² (HB, HB SC: 1 000 cd/m ²)
Backlight dimming	Marine optimized dimming, down to 0,5 cd/m ²	
Display type	TFT-LCD with LED backlight	
Softcontrol		
CODESYS runtime version	NA (HB: NA, SC: 3.5, HB SC: 3.5)	
CODESYS EtherCAT	NA (HB: NA, SC: Yes, HB SC: Yes)	
CODESYS Modbus Ethernet	NA (HB: NA, SC: Yes, HB SC: Yes)	
CODESYS Modbus RTU	NA (HB: NA, SC: Yes, HB SC: Yes)	
Non volatile variables	NA (HB: NA, SC: 32KB, HB SC: 64KB)	NA (HB: NA, SC: 64KB, HB SC: 64KB)
Digital IO		
Digital output	NA (HB, HB SC: 2×DO Solid state relay, 0.5A@24VDC)	
Communication serial		
Number of serial ports	1 Port 9pin DSUB	
Serial port 1	RS 232 (RTS/CTS)	
Serial port 2	RS422/485	
Serial port 3	RS485 (only if COM 2 is RS485)	
Ethernet communication		
Number of ethernet ports	1 (HB, SC, HB SC: 2)	2
Ethernet port 1	1 × 10/100 Base-T (shielded RJ45)	
Ethernet port 2	NA (HB/SC/HB SC: 1×10/100 Base-T - shielded RJ45)	1 × 10/100 Base-T (shielded RJ45)
Expansion interface		
Expansion port	Yes, ciX expansion module	
SD card	SD and SDHC	
USB	1 × USB 2.0 500mA (HB/HB SC: 2×USB 2.0 500mA)	2 × USB 2.0 500mA
Environmental		
Operating temperature	-10°C to +60°C	
Storage temperature	-20°C to +70°C	
Shock	15g, half-sine, 11ms according to IEC60068-2-27	
Vibration	1g, according to IEC 60068-2-6, Test Fc	
Sealing front	IP65, NEMA 4X/12 and UL Type 4X/12	
Sealing back	IP20	
Humidity	5% – 85% non-condensed	

*Certifications pending. Please refer to www.beijerelectronics.com/x2 for detailed status.

Technical data - X2 pro



	X2 pro 4	X2 pro 7
General description		
Part number	630000105	630000205
Warranty	2 year	
Certifications*		
General	CE, FCC, KCC	
Marine	BV, DNV GL, KR, LR, ABS, CCS, NK	
UL	UL 61010-2-201	
Mechanical		
Mechanical size	145 × 104 × 50 mm	204 × 143 × 50 mm
Touch type	Resistive	
Cut-out size	130 × 89 mm	189 × 128 mm
Weight	0.5 kg	0.8 kg
Housing material	Powder-coated aluminum, Gray	
Power		
Input voltage	24 VDC (18 to 32 VDC)	
Power consumption, max	12W	14.4W
Input fuse	Internal DC fuse	
System		
CPU	i.MX6Solo Single Cortex-A9 1.0GHz 512kBL2cache	
RAM	512 MB	
FLASH	2GB SSD(eMMC), 1.5GB free for application storage	
Display		
Size diagonal	4.3" diagonal	7" diagonal
Resolution	480 × 272 pixels	800 × 480 pixels
Backlight	LED Backlight	
Backlight life time	50 000 hours	20 000 hours
Backlight brightness	300 cd/m ²	350 cd/m ²
Backlight dimming	Industrial Dimming	
Display type	TFT-LCD with LED backlight	
Communication serial		
Number of serial ports	1 Port 9pin DSUB	
Serial port 1	RS 232 (RTS/CTS)	
Serial port 2	RS422/485	
Serial port 3	RS485 (only if COM 2 is RS485)	
Ethernet communication		
Number of ethernet ports	1	
Ethernet port 1	1 × 10/100 Base-T (shielded RJ45)	
Ethernet port 2	NA	
Expansion interface		
Expansion port	Yes, ciX expansion module	
SD card	SD and SDHC	
USB	1 × USB 2.0 500mA	
Environmental		
Operating temperature	-10°C to +60°C	
Storage temperature	-20°C to +70°C	
Shock	15g, half-sine, 11ms according to IEC60068-2-27	
Vibration	1g, according to IEC 60068-2-6, Test Fc	
Sealing front	IP66, NEMA 4X/12 and UL Type 4X/12	IP65, NEMA 4X/12 and UL Type 4X/12
Sealing back	IP20	
Humidity	5% – 85% non-condensed	



X2 pro 10	X2 pro 12	X2 pro 15	X2 pro 21
630000305	640000205	640000305	640009505
2 year		2 year	
CE, FCC, KCC			CE, FCC
BV, DNV GL, KR, LR, ABS, CCS, NK			NA
UL 61010-2-201			
292 × 194 × 52mm	340 × 242 × 57 mm	410 × 286 × 61mm	556 × 347 × 65mm
Resistive			
275 × 177mm	324 × 226mm	394 × 270mm	539 × 331mm
1.65 kg	2.6 kg	3.85 kg	7,38 kg
Powder-coated aluminum, Gray			
24 V DC (18 to 32 VDC)			
21.6W	28.8W	31.2W	45,6W
Internal DC fuse			
i.MX6DualLite, Dual Cortex-A9 1.0GHz 512kBL2cache			i.MX6Quad, Quad ARM Cortex-A9 1.0GHz 1MBL2cache
1 GB			2 GB
2GB SSD(eMMC), 1.5GB free for application storage			
10.1" diagonal	12.1" diagonal	15.4" diagonal	21,5" diagonal
1024 × 600 pixels	1280 × 800 pixels	1280 × 800 pixels	1920 × 1080 pixels
LED Backlight			
50 000 hours			
500 cd/m ²	400 cd/m ²	450 cd/m ²	250 cd/m ²
Industrial Dimming			
TFT-LCD with LED backlight			
1 Port 9pin DSUB			
RS 232 (RTS/CTS)			
RS422/485			
RS485 (only if COM 2 is RS485)			
2			
1 × 10/100 Base-T (shielded RJ45)			
1 × 10/100 Base-T (shielded RJ45)			
Yes, ciX expansion module			
SD and SDHC			
2 × USB 2.0 500mA			
-10°C to +60°C		0°C to +50°C	
-20°C to +70°C		-20°C to +60°C	
15g, half-sine, 11ms according to IEC60068-2-27			
1g, according to IEC 60068-2-6, Test Fc			
IP65, NEMA 4X/12 and UL Type 4X/12			
IP20			
5% – 85% non-condensed			

*Certifications pending. Please refer to www.beijerelectronics.com/x2 for detailed status.

Technical data - X2 control



	X2 control 4	X2 control 7
General description		
Part number	630001705	630001805
Warranty	2 year	
Certifications*		
General	CE, FCC, KCC	
Marine	BV, DNV GL, KR, LR, ABS, CCS, NK	
UL	UL 61010-2-201	
Mechanical		
Mechanical size	145 × 104 × 50mm	204 × 143 × 50mm
Touch type	Resistive	
Cut-out size	130 × 89mm	189 × 128mm
Weight	0.5 kg	0.8 kg
Housing material	Powder-coated aluminum, Gray	
Power		
Input voltage	24 V DC (18 to 32 VDC)	
Power consumption, max	12W	14.4W
Input fuse	Internal DC fuse	
System		
CPU	i.MX6DualLite, Dual Cortex-A9 1.0GHz 512kBL2cache	
RAM	1 GB	
FLASH	2GB SSD(eMMC), 1.5GB free for application storage	
Display		
Size diagonal	4.3" diagonal	7" diagonal
Resolution	480 × 272 pixels	800 × 480 pixels
Backlight	LED Backlight	
Backlight life time	50 000 hours	20 000 hours
Backlight brightness	300 cd/m ²	350 cd/m ²
Backlight dimming	Industrial Dimming	
Display type	TFT-LCD with LED backlight	
Softcontrol		
CODESYS runtime version	3.5	
CODESYS EtherCAT	Yes	
CODESYS Modbus Ethernet	Yes	
CODESYS Modbus RTU	Yes	
Non volatile variables	32KB	
Communication serial		
Number of serial ports	1 Port 9pin DSUB	
Serial port 1	RS 232 (RTS/CTS)	
Serial port 2	RS422/485	
Serial port 3	RS485 (only if COM 2 is RS485)	
Ethernet communication		
Number of ethernet ports	2	
Ethernet port 1	1 × 10/100 Base-T (shielded RJ45)	
Ethernet port 2	1 × 10/100 Base-T (shielded RJ45)	
Expansion interface		
Expansion port	Yes, ciX expansion module	
SD card	SD and SDHC	
USB	1 × USB 2.0 500mA	
Environmental		
Operating temperature	-10°C to +60°C	
Storage temperature	-20°C to +70°C	
Shock	15g, half-sine, 11ms according to IEC60068-2-27	
Vibration	1g, according to IEC 60068-2-6, Test Fc	
Sealing front	IP66, NEMA 4X/12 and UL Type 4X/12	IP65, NEMA 4X/12 and UL Type 4X/12
Sealing back	IP20	
Humidity	5% – 85% non-condensed	

*Certifications pending. Please refer to www.beijerelectronics.com/x2 for detailed status.



	X2 control 10	X2 control 12	X2 control 15
General description			
Part number	630001905	640002205	640002405
Warranty	2 year		
Certifications*			
General	CE, FCC, KCC		
Marine	BV, DNV GL, KR, LR, ABS, CCS, NK		
UL	UL 61010-2-201		
Mechanical			
Mechanical size	292 × 194 × 52 mm	340 × 242 × 57 mm	410 × 286 × 61 mm
Touch type	Resistive		
Cut-out size	275 × 177 mm	324 × 226 mm	394 × 270 mm
Weight	1.65 kg	2.6 kg	3.85 kg
Housing material	Powder-coated aluminum, Gray		
Power			
Input voltage	24 V DC (18 to 32 VDC)		
Power consumption, max	21.6W	28.8W	31.2W
Input fuse	Internal DC fuse		
System			
CPU	i.MX6Quad, Quad ARM Cortex-A9 1.0GHz 1MBL2cache		
RAM	2 GB		
FLASH	2GB SSD(eMMC), 1.5GB free for application storage		
Display			
Size diagonal	10.1" diagonal	12.1" diagonal	15.4" diagonal
Resolution	1024 × 600 pixels	1280 × 800 pixels	1280 × 800 pixels
Backlight	LED Backlight		
Backlight life time	50 000 hours		
Backlight brightness	500 cd/m ²	400 cd/m ²	450 cd/m ²
Backlight dimming	Industrial Dimming		
Display type	TFT-LCD with LED backlight		
Softcontrol			
CODESYS runtime version	3.5		
CODESYS EtherCAT	Yes		
CODESYS Modbus Ethernet	Yes		
CODESYS Modbus RTU	Yes		
Non volatile variables	64KB		
Communication serial			
Number of serial ports	1 Port 9pin DSUB		
Serial port 1	RS232 (RTS/CTS)		
Serial port 2	RS422/485		
Serial port 3	RS485 (only if COM 2 is RS485)		
Ethernet communication			
Number of ethernet ports	2		
Ethernet port 1	1 × 10/100 Base-T (shielded RJ45)		
Ethernet port 2	1 × 10/100 Base-T (shielded RJ45)		
Expansion interface			
Expansion port	Yes, ciX expansion module		
SD card	SD and SDHC		
USB	2 × USB 2.0 500mA		
Environmental			
Operating temperature	-10°C to +60°C		
Storage temperature	-20°C to +70°C		
Shock	15g, half-sine, 11ms according to IEC60068-2-27		
Vibration	1g, according to IEC 60068-2-6, Test Fc		
Sealing front	IP65, NEMA 4X/12 and UL Type 4X/12		
Sealing back	IP20		
Humidity	5% – 85% non-condensed		

Technical data - X2 motion



	X2 motion 4	X2 motion 7
General description		
Part number	630008305	630008405
Warranty	2 year	
Certifications*		
General	CE, FCC, KCC	
Marine	BV, DNV GL, KR, LR, ABS, CCS, NK	
UL	UL 61010-2-201	
Mechanical		
Mechanical size	145 × 104 × 50mm	204 × 143 × 50mm
Touch type	Resistive	
Cut-out size	130 × 89mm	189 × 128mm
Weight	0.5 kg	0.8 kg
Housing material	Powder-coated aluminum, Gray	
Power		
Input voltage	24 V DC (18 to 32 VDC)	
Power consumption, max	12W	14.4W
Input fuse	Internal DC fuse	
System		
CPU	i.MX6DualLite, Dual Cortex-A9 1.0GHz 512kBL2cache	
RAM	1 GB	
FLASH	2GB SSD(eMMC), 1.5GB free for application storage	
Display		
Size diagonal	4.3" diagonal	7" diagonal
Resolution	480 × 272 pixels	800 × 480 pixels
Backlight	LED Backlight	
Backlight life time	50 000 hours	20 000 hours
Backlight brightness	300 cd/m ²	350 cd/m ²
Backlight dimming	Industrial Dimming	
Display type	TFT-LCD with LED backlight	
Softcontrol		
CODESYS runtime version	3.5	
CODESYS EtherCAT	Yes	
CODESYS Modbus Ethernet	Yes	
CODESYS Modbus RTU	Yes	
Non volatile variables	32KB	
Communication serial		
Number of serial ports	1 Port 9pin DSUB	
Serial port 1	RS232 (RTS/CTS)	
Serial port 2	RS422/485	
Serial port 3	RS485 (only if COM 2 is RS485)	
Ethernet communication		
Number of ethernet ports	2	
Ethernet port 1	1 × 10/100 Base-T (shielded RJ45)	
Ethernet port 2	1 × 10/100 Base-T (shielded RJ45)	
Expansion interface		
Expansion port	Yes, ciX expansion module	
SD card	SD and SDHC	
USB	1 × USB 2.0 500mA	
Environmental		
Operating temperature	-10°C to +60°C	
Storage temperature	-20°C to +70°C	
Shock	15g, half-sine, 11ms according to IEC60068-2-27	
Vibration	1g, according to IEC 60068-2-6, Test Fc	
Sealing front	IP66, NEMA 4X/12 and UL Type 4X/12	IP65, NEMA 4X/12 and UL Type 4X/12
Sealing back	IP20	
Humidity	5% – 85% non-condensed	

*Certifications pending. Please refer to www.beijerelectronics.com/x2 for detailed status.



X2 motion 10	X2 motion 12	X2 motion 15
630008905	640002305	640002505
2 year		
Certifications*		
CE, FCC, KCC		
BV, DNV GL, KR, LR, ABS, CCS, NK		
UL 61010-2-201		
292 × 194 × 52mm	340 × 242 × 57mm	410 × 286 × 61mm
Resistive		
275 × 177mm	324 × 226mm	394 × 270mm
1.65 kg	2.6 kg	3.85 kg
Powder-coated aluminum, Gray		
Power		
24 V DC (18 to 32 VDC)		
21.6W	28.8W	31.2W
Internal DC fuse		
System		
i.MX6Quad, Quad ARM Cortex-A9 1.0GHz 1MBL2cache		
2 GB		
2GB SSD(eMMC), 1.5GB free for application storage		
10.1" diagonal	12.1" diagonal	15.4" diagonal
1024 × 600 pixels	1280 × 800 pixels	1280 × 800 pixels
LED Backlight		
50 000 hours		
500 cd/m ²	400 cd/m ²	450 cd/m ²
Industrial Dimming		
TFT-LCD with LED backlight		
Softcontrol		
3.5		
Yes		
Yes		
Yes		
64KB		
Communication serial		
1 Port 9pin DSUB		
RS 232 (RTS/CTS)		
RS422/485		
RS485 (only if COM 2 is RS485)		
Ethernet communication		
2		
1x10/100 Base-T (shielded RJ45)		
1x10/100 Base-T (shielded RJ45)		
Expansion interface		
Yes, ciX expansion module		
SD and SDHC		
2xUSB 2.0 500mA		
Environmental		
-10°C to +60°C		
-20°C to +70°C		
15g, half-sine, 11ms according to IEC60068-2-27		
1g, according to IEC 60068-2-6, Test Fc		
IP65, NEMA 4X/12 and UL Type 4X/12		
IP20		
5% – 85% non-condensed		

Technical data - X2 extreme, panel mount versions

Standard versions, high performance versions (HP) and high-performance versions with integrated CODESYS PLC functionality (HP SC)



	X2 extreme 7	X2 extreme 7 12V	X2 extreme 7 HP (HP SC ^{**)}
General description			
Part number	640013905	640014005	640014105 (HP SC: 640016005)
Warranty	2 year		
Certifications *			
General	CE, FCC, KCC, UL 61010-2-201, UL 746C (UV protection)		
Hazardous	UL Class I Div 2, ATEX/IECEx Zone 2,2		
Marine	DNV GL, KR, LR, ABS, CCS, BV, NK		
Mechanical			
Mechanical size	204 x 143 x 62mm		
Touch type	Resistive		
Touch surface	Polyester on glass, ITO film		
Touch operations	1million finger touch operations		
Cut-out size	189 x 128mm		
Weight	0.8 kg		
Housing material	Powder-coated aluminum, Black		
Power			
Input voltage	24 V DC (18 to 32 VDC)	12 V DC (9 to 16 VDC)	24 V DC (18 to 32 VDC)
Power consumption	10W	11W	17W (HP SC: 17W)
Input fuse	Internal DC fuse		
System			
CPU	i.MX6DualLite, Dual Cortex-A9 800MHz 512kBL2cache		i.MX6Quad, Quad ARM Cortex-A9 1.0GHz 1MBL2cache
RAM	1 GB		2 GB
FLASH	2GB SSD(eMMC), 1.5GB free for application		4GB SSD(eMMC), 3.5GB free for application
Display			
Size diagonal	7" diagonal		
Resolution	800x480 pixels		
Backlight	LED Backlight		
Backlight life time	50 000 hours		100 000 hours
Backlight brightness	500 cd/m ²		1 000 cd/m ²
Backlight dimming	Marine optimized dimming, down to 0,5 cd/m ²		
Display type	TFT-LCD with LED backlight		
Softcontrol			
CODESYS runtime version	NA		NA (HP SC: 3.5)
CODESYS EtherCAT	NA		NA (HP SC: Yes)
CODESYS Modbus Ethernet	NA		NA (HP SC: Yes)
CODESYS Modbus RTU	NA		NA (HP SC: Yes)
Non volatile variables	NA		NA (HP SC: Yes)
Communication serial			
Number of serial ports	1 Port 9pin DSUB		2 Port 9pin DSUB
Serial port 1	RS232 (RTS/CTS)		
Serial port 2	RS422/RS485/CAN		
Serial port 3	NA		RS485/CAN
Ethernet communication			
Number of Ethernet ports	1		2
Ethernet port 1	1x10/100 Base-T (shielded RJ45)		
Ethernet port 2	NA		1x10/100 Base-T (shielded RJ45)
Expansion interface			
Expansion port	NA		
SD card	SD and SDHC		
USB	2xUSB 2.0 500mA		
Environmental			
Operating temperature	-30°C to +70°C		
Storage temperature	-40°C to +80°C		
Shock	40g, half-sine, 11ms according to IEC60068-2-27		
Vibration	4g, according to IEC 60068-2-6, Test Fc		
Sealing front	IP66, NEMA 4X/12 and UL Type 4X/12		
Sealing back	IP20		
Humidity	5% – 95% non-condensed		

*Certifications pending. Please refer to www.beijerelectronics.com/X2 for detailed status.

**Scheduled for Q3 2018.

	X2 extreme 12	X2 extreme 12 HP (HP SC ^{**)}	X2 extreme 15	X2 extreme 15 HP (HP SC ^{**)}
Part number	640014305	640014405 (HP SC: 640016405)	640014605	640014705 (HP SC: 640016805)
Warranty	2 year		2 year	
Certifications *				
General	CE, FCC, KCC, UL 61010-2-201, UL 746C (UV protection)		CE, FCC, KCC, UL 61010-2-201, UL 746C (UV protection)	
Hazardous	UL Class I Div 2, ATEX/IECEx Zone 2,2		UL Class I Div 2, ATEX/IECEx Zone 2,2	
Marine	DNV GL, KR, LR, ABS, CCS, BV, NK		DNV GL, KR, LR, ABS, CCS, BV, NK	
Mechanical				
Mechanical size	340 x 242 x 69mm		410 x 286 x 73mm	
Touch type	Resistive		Resistive	
Touch surface	Polyester on glass, ITO film		Polyester on glass, ITO film	
Touch operations	1million finger touch operations		1million finger touch operations	
Cut-out size	324 x 226mm		394 x 270mm	
Weight	2.8 kg		4.1 kg	
Housing material	Powder-coated aluminum, Black		Powder-coated aluminum, Black	
Power				
Input voltage	24 V DC (18 to 32 VDC)		24 V DC (18 to 32 VDC)	
Power consumption	16W	23W (HP SC: 23W)	18W	28W (HP SC: 28W)
Input fuse	Internal DC fuse			
System				
CPU	i.MX6DualLite, Dual Cortex-A9 800MHz 512kBL2cache	i.MX6Quad, Quad ARM Cortex-A9 1.0GHz 1MBL2cache	i.MX6DualLite, Dual Cortex-A9 800MHz 512kBL2cache	i.MX6Quad, Quad ARM Cortex-A9 1.0GHz 1MBL2cache
RAM	1 GB	2 GB	1 GB	2 GB (HP SC: 2 GB)
FLASH	2GB SSD(eMMC), 1.5GB free for application	4GB SSD(eMMC), 3.5GB free for application	2GB SSD(eMMC), 1.5GB free for application	4GB SSD(eMMC), 3.5GB free for application
Display				
Size diagonal	12.1" diagonal		15.4" diagonal	
Resolution	1280x800 pixels		1280x800 pixels	
Backlight	LED Backlight		LED Backlight	
Backlight life time	100 000 hours		50 000 hours	100 000 hours
Backlight brightness	500 cd/m ²	1 000 cd/m ²	450 cd/m ²	1 000 cd/m ²
Backlight dimming	Marine optimized dimming, down to 0,5 cd/m ²			
Display type	TFT-LCD with LED backlight		TFT-LCD with LED backlight	
Softcontrol				
CODESYS runtime version	NA	NA (HP SC: 3.5)	NA	NA (HP SC: 3.5)
CODESYS EtherCAT	NA	NA (HP SC: Yes)	NA	NA (HP SC: Yes)
CODESYS Modbus Ethernet	NA	NA (HP SC: Yes)	NA	NA (HP SC: Yes)
CODESYS Modbus RTU	NA	NA (HP SC: Yes)	NA	NA (HP SC: Yes)
Non volatile variables	NA	NA (HP SC: Yes)	NA	NA (HP SC: Yes)
Communication serial				
Number of serial ports	1 Port 9pin DSUB	2 Port 9pin DSUB	1 Port 9pin DSUB	2 Port 9pin DSUB
Serial port 1	RS232 (RTS/CTS)		RS232 (RTS/CTS)	
Serial port 2	RS422/RS485/CAN		RS422/RS485/CAN	
Serial port 3	NA	RS485/CAN	NA	RS485/CAN
Ethernet communication				
Number of Ethernet ports	1	2	1	2
Ethernet port 1	1x10/100 Base-T (shielded RJ45)		1x10/100 Base-T (shielded RJ45)	
Ethernet port 2	NA	1x10/100 Base-T (shielded RJ45)	NA	1x10/100 Base-T (shielded RJ45)
Expansion interface				
Expansion port	NA			
SD card	SD and SDHC		SD and SDHC	
USB	2xUSB 2.0 500mA		2xUSB 2.0 500mA	
Environmental				
Operating temperature	-30°C to +70°C		-30°C to +70°C	
Storage temperature	-40°C to +80°C		-40°C to +80°C	
Shock	40g, half-sine, 11ms according to IEC60068-2-27		40g, half-sine, 11ms according to IEC60068-2-27	
Vibration	4g, according to IEC 60068-2-6, Test Fc		4g, according to IEC 60068-2-6, Test Fc	
Sealing front	IP66, NEMA 4X/12 and UL Type 4X/12		IP66, NEMA 4X/12 and UL Type 4X/12	
Sealing back	IP20		IP20	
Humidity	5% – 95% non-condensed		5% – 95% non-condensed	

Technical data - X2 extreme, fully sealed versions
 High-performance versions (SL HP) and high-performance versions
 with integrated CODESYS PLC functionality (SL HP SC)



	X2 extreme 7 SL HP	X2 extreme 7 SL HP SC**
General description		
Part number	640014205	640016205
Warranty	2 year	
Certifications *		
General	CE, FCC, KCC, UL 61010-2-201, UL 746C (UV protection)	
Hazardous	UL Class I Div 2, ATEX/IECEX Zone 2,22	
Marine	DNV GL, KR, LR, ABS, CCS, BV, NK	
Mechanical		
Mechanical size	205 x 160 x 65mm	
Touch type	Resistive	
Touch surface	Polyester on glass, ITO film	
Touch operations	1million finger touch operations	
Weight	1.6 kg	
Housing material	Powder-coated aluminum, Black	
Power		
Input voltage	24 V DC (18 to 32 VDC)	
Power consumption	17 W	
Input fuse	Internal DC fuse	
System		
CPU	i.MX6Quad, Quad ARM Cortex-A9 1.0GHz 1MBL2cache	
RAM	2 GB	
FLASH	4GB SSD(eMMC), 3.5GB free for application	
Display		
Size diagonal	7" diagonal	
Resolution	800x480 pixels	
Backlight	LED Backlight	
Backlight life time	100 000 hours	
Backlight brightness	1 000 cd/m ²	
Backlight dimming	Marine optimized dimming, down to 0,5 cd/m ²	
Display type	TFT-LCD with LED backlight	
Softcontrol		
CODESYS runtime version	NA	3.5
CODESYS EtherCAT	NA	Yes
CODESYS Modbus Ethernet	NA	Yes
CODESYS Modbus RTU	NA	Yes
Non volatile variables	NA	Yes
Communication serial		
Number of serial ports	2 Port 8pin M12	
Serial port 1	RS232 (RTS)	
Serial port 2	RS422/RS485/CAN	
Serial port 3	RS485/CAN	
Ethernet communication		
Number of Ethernet ports	2x4pinM12	
Ethernet port 1	1x10/100 Base-T (M12)	
Ethernet port 2	1x10/100 Base-T (M12)	
Expansion interface		
Expansion port	NA	
SD card	SD and SDHC	
USB	2xUSB 2.0 500mA	
Environmental		
Operating temperature	-30°C to +70°C	
Storage temperature	-40°C to +80°C	
Shock	40g, half-sine, 11ms according to IEC60068-2-27	
Vibration	4g, according to IEC 60068-2-6, Test Fc	
Sealing	IP66 (IP65 for ATEX/IECEX)	
Humidity	5% – 95% non-condensed	

*Certifications pending. Please refer to www.beijerelectronics.com/X2 for detailed status.
 **Scheduled for Q3 2018.



	X2 extreme 12 SL HP	X2 extreme 12 SL HP SC**	X2 extreme 15 SL HP	X2 extreme 15 SL HP SC**
General description				
Part number	640014505	640016605	640014805	640017005
Warranty	2 year			
Certifications *				
General	CE, FCC, KCC, UL 61010-2-201, UL 746C (UV protection)		CE, FCC, KCC, UL 61010-2-201, UL 746C (UV protection)	
Hazardous	UL Class I Div 2, ATEX/IECEX Zone 2,22		UL Class I Div 2, ATEX/IECEX Zone 2,22	
Marine	DNV GL, KR, LR, ABS, CCS, BV, NK		DNV GL, KR, LR, ABS, CCS, BV, NK	
Mechanical				
Mechanical size	341 x 243 x 65mm		410 x 286 x 65mm	
Touch type	Resistive		Resistive	
Touch surface	Polyester on glass, ITO film		Polyester on glass, ITO film	
Touch operations	1million finger touch operations		1million finger touch operations	
Weight	3.4 kg		4.8 kg	
Housing material	Powder-coated aluminum, Black		Powder-coated aluminum, Black	
Power				
Input voltage	24 V DC (18 to 32 VDC)		24 V DC (18 to 32 VDC)	
Power consumption	23 W		28 W	
Input fuse	Internal DC fuse		Internal DC fuse	
System				
CPU	i.MX6Quad, Quad ARM Cortex-A9 1.0GHz 1MBL2cache		i.MX6Quad, Quad ARM Cortex-A9 1.0GHz 1MBL2cache	
RAM	2 GB		2 GB	
FLASH	4GB SSD(eMMC), 3.5GB free for application		4GB SSD(eMMC), 3.5GB free for application	
Display				
Size diagonal	12.1" diagonal		15.4" diagonal	
Resolution	1280x800 pixels		1280x800 pixels	
Backlight	LED Backlight		LED Backlight	
Backlight life time	100 000 hours		100 000 hours	
Backlight brightness	1 000 cd/m ²		1 000 cd/m ²	
Backlight dimming	Marine optimized dimming, down to 0,5 cd/m ²		Marine optimized dimming, down to 0,5 cd/m ²	
Display type	TFT-LCD with LED backlight		TFT-LCD with LED backlight	
Softcontrol				
CODESYS runtime version	NA	3.5	NA	3.5
CODESYS EtherCAT	NA	Yes	NA	Yes
CODESYS Modbus Ethernet	NA	Yes	NA	Yes
CODESYS Modbus RTU	NA	Yes	NA	Yes
Non volatile variables	NA	Yes	NA	Yes
Communication serial				
Number of serial ports	2 Port 8pin M12		2 Port 8pin M12	
Serial port 1	RS232 (RTS)		RS232 (RTS)	
Serial port 2	RS422/RS485/CAN		RS422/RS485/CAN	
Serial port 3	RS485/CAN		RS485/CAN	
Ethernet communication				
Number of Ethernet ports	2x4pinM12		2x4pinM12	
Ethernet port 1	1x10/100 Base-T (M12)		1x10/100 Base-T (M12)	
Ethernet port 2	1x10/100 Base-T (M12)		1x10/100 Base-T (M12)	
Expansion interface				
Expansion port	NA		NA	
SD card	SD and SDHC		SD and SDHC	
USB	2xUSB 2.0 500mA		2xUSB 2.0 500mA	
Environmental				
Operating temperature	-30°C to +70°C		-30°C to +70°C	
Storage temperature	-40°C to +80°C		-40°C to +80°C	
Shock	40g, half-sine, 11ms according to IEC60068-2-27		40g, half-sine, 11ms according to IEC60068-2-27	
Vibration	4g, according to IEC 60068-2-6, Test Fc		4g, according to IEC 60068-2-6, Test Fc	
Sealing	IP66 (IP65 for ATEX/IECEX)		IP66 (IP65 for ATEX/IECEX)	
Humidity	5% – 95% non-condensed		5% – 95% non-condensed	

A simple path forward

It's easy to upgrade your existing iX HMI solution

Continues on next page ...

Hardware upgrade to X2 series

Use the migration tables to find the right panel when you want to upgrade your existing iX HMI solution to the X2 panel series.

From iX HMI Industrial to X2 pro

iX HMI panel	X2 panel	Comment
iX T4A	X2 pro 4	-
iX T7A	X2 pro 7	-
iX T10A	X2 pro 10	Different cut-out size
iX T7B	X2 pro 7	-
iX T12B	X2 pro 12	-
iX T15B	X2 pro 15	-
-	X2 pro 21	-

From iX HMI Marine to X2 marine

iX HMI panel	X2 panel	Comment
iX T7AM	X2 marine 7	-
-	X2 marine 7 HB	-
-	X2 marine 7 SC	New 7-inch panel with integrated control
-	X2 marine 7 HB SC	New 7-inch panel with integrated control and high brightness display
iX T15BM	X2 marine 15	-
iX T15BM-HB	X2 marine 15 HB	-
-	X2 marine 15 SC	New 15-inch panel with integrated control
-	X2 marine 15 HB SC	New 15-inch panel with integrated control and high brightness display

From iX HMI SoftControl to X2 control

iX HMI panel	X2 panel	Comment
iX T4A-SC	X2 control 4	-
iX T7A-SC	X2 control 7	-
iX T10A-SC	X2 control 10	Different cut-out size
iX T7B-SC	X2 control 7	-
iX T12B-SC	X2 control 12	-
iX T15B-SC	X2 control 15	-

From iX HMI SoftMotion to X2 motion

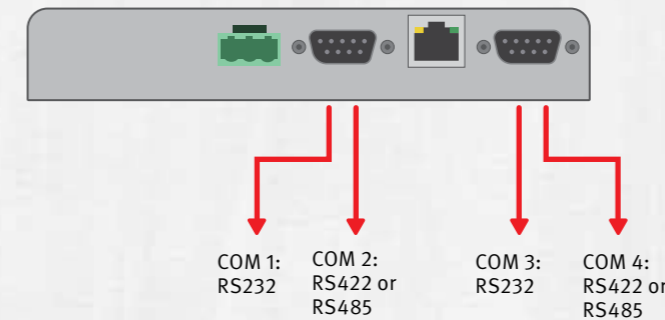
iX HMI panel	X2 panel	Comment
-	X2 motion 4	New 4-inch panel with integrated motion and control
iX T7B-SM	X2 motion 7	-
-	X2 motion 10	New 10-inch panel with integrated motion and control
iX T12B-SM	X2 motion 12	-
iX T15B-SM	X2 motion 15	-
-	-	-

From iX HMI TxF-2 series to X2 base

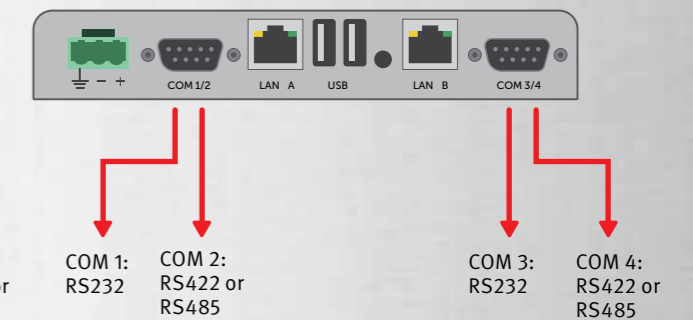
iX HMI panel	X2 panel	Comment
iX T5F-2	X2 base 5	-
iX T7F-2	X2 base 7	-
iX T10F-2	X2 base 10	-

Serial port layout

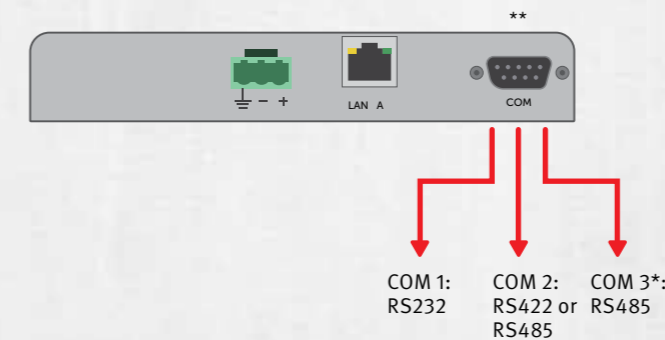
TxA



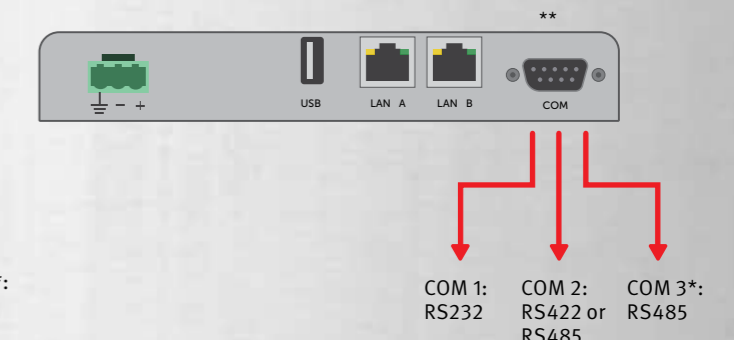
TxB



X2 pro 4 and X2 pro 7



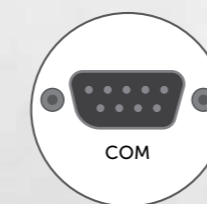
X2 pro 10, X2 pro 12 and X2 pro 15



* COM3 can only be used if COM2 is RS485

* COM3 can only be used if COM2 is RS485

** CAB150 splitter cable provides the connectivity for the three serial ports.



If you use COM3 for RS232 in TxA or TxB:

- Change to COM 1

If you use 2 × RS485:

- Change COM4 to COM3
- COM 2 needs to be RS485

OPC DA communication

- OPC DA communication is not supported in X2 platform
- Change to OPC UA instead



X2 panels are software compatible with iX 2.20 SP2 and forwards. Watch the video on www.beijerelectronics.com/X2 to see how easily you update an existing iX application to an X2 panel.

... continued from previous page.

Hardware upgrade to X2 series

Use the migration tables to find the right panel when you want to upgrade your existing iX HMI solution to the X2 panel series.

From QTERM-Ax to X2 extreme

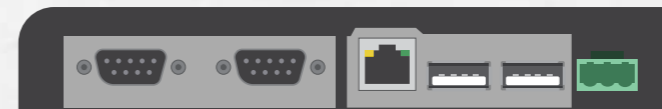
QTERM panel	X2 panel	Comment
QTERM-A7 iX	X2 extreme 7	Different cut-out size
QTERM-A7 Qlarity	X2 extreme 7	Different cut-out size, new HMI software
QTERM-G72	X2 extreme 7	Different cut-out size, new HMI software
QTERM-A12 iX	X2 extreme 12	Different cut-out size, different aspect ratio
QTERM-A12 Qlarity	X2 extreme 12	Different cut-out size, different aspect ratio, new HMI software

From iX TxBR to X2 extreme

iX TxBR panel	X2 panel	Comment
iX T7BR	X2 extreme 7	-
iX T7BR HB HP	X2 extreme 7 HP	-
-	X2 extreme 7 SL HP	New 7-inch rugged fully sealed high-performance panel
-	X2 extreme 7 HP SC	New 7-inch rugged high-performance panel with integrated control
-	X2 extreme 7 SL HP SC	New 7-inch rugged fully sealed high-performance panel with integrated control
iX T15BR	X2 extreme 15	-
iX T15BR HB HP	X2 extreme 15 HP	-
-	X2 extreme 15 SL HP	New 15-inch rugged fully sealed high-performance panel
-	X2 extreme 15 HP SC	New 15-inch rugged high-performance panel with integrated control
-	X2 extreme 15 SL HP SC	New 15-inch rugged fully sealed high-performance panel with integrated control

Serial port layout

QTERM-Ax



COM 1:
RS232 or
RS485 or
RS422

COM 2:
RS232

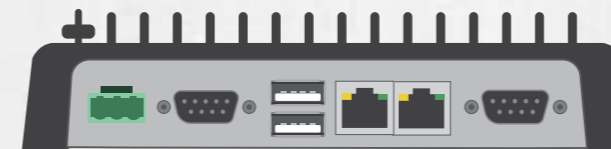
TxBR



COM 1:
RS232

COM 2:
RS485 or
RS422

X2 extreme x HP, HC



COM 3:
RS485

CAN**:
CAN2
Isolated

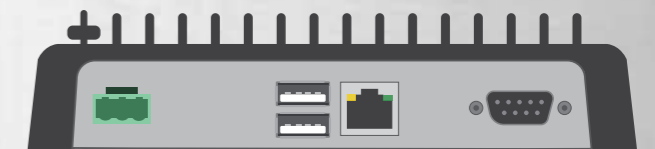
Com1:
RS232

Com2:
RS422 or
RS485

CAN*:
CAN1

*CAN1 can only be used if COM2 is not used
**CAN2 can only be used if COM3 is not used

X2 extreme x



Com1:
RS232

Com2:
RS422
or
RS485

Com3*:
RS485

CAN**:
CAN1
CAN2

*COM3 can only be used if COM2 is RS485
**CAN1 can only be used if COM2 is not used
**CAN2 can only be used if COM3 is not used

iX application upgrade



X2 panels are software compatible with iX 2.20 SP2 and forwards. Watch the video on www.beijerelectronics.com/X2 to see how easily you update an existing iX application to an X2 panel.

OPC DA communication

- OPC DA communication is not supported in X2 platform
- Change to OPC UA instead



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Beijer Electronics is a multinational cross-industry innovator of flexible solutions to control, connect and present data for business-critical applications. Our open software, hardware and IIoT solutions help customers optimize processes and create reliable secure communication, complete with leading-edge user experiences. By making the complex simple, our passion is to work together with our customers to capture the opportunities of tomorrow.

Beijer Electronics is a Beijer Group company. Beijer Group has a sale over 1.2 billion SEK in 2017 and is listed on the NASDAQ OMX Nordic Stockholm Small Cap list under the ticker BELE. www.beijergroup.com

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