

X2 pro

High performance HMI panels for all automation needs

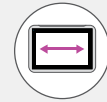
X2 pro includes a range of high performance industrial panels designed for demanding applications. All with the high performance of powerful ARM Cortex-A9 processors, the latest screen technology and a wide range of connectivity options to cover all your automation needs.

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

The X2 pro family additionally offers web HMIs perfect for enterprises and users who wants to utilize HTML5 web technologies in industrial environments, see page 16.



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
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.



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.



Internal CANOpen and optional bus modules
It's easy to interface with controllers using the internal CANOpen bus or 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.

See page 22-23 for technical data.

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

Technical data – X2 pro



	X2 pro 4	X2 pro 7 (2eth)
General description		
Part number	630000105	630000205 (630009405)
Warranty	2 year	
Certifications		
General	CE, FCC, KCC	
Marine	BV, DNV GL, KR, LR, ABS, CCS, NK	BV, DNV GL, KR, LR, ABS, CCS, NK (NA)
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	i.MX6Solo Single Cortex-A9 1.0GHz 512kBL2cache (i.MX6DualLite, Dual Cortex-A9 1.0GHz 512kBL2cache)
RAM	512 MB	512 MB (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	
IOs		
Digital output		
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	1 (2)
Ethernet port 1	1 × 10/100 Base-T (shielded RJ45)	
Ethernet port 2	NA	
Expansion interface		
Expansion port	Yes	
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, KCC	
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			
			2xDO Solid state relay, 0.5A@24VDC
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			
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			

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 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	-

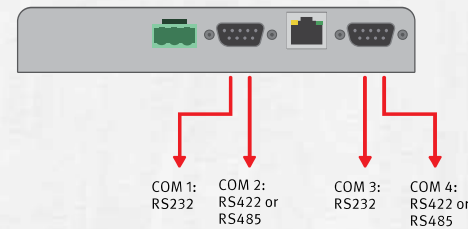
iX application upgrade



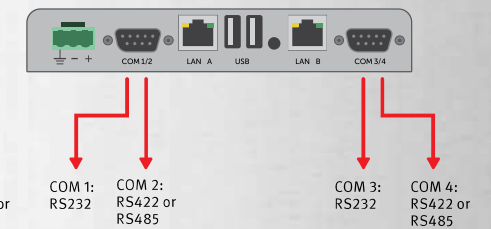
X2 panels are software compatible with iX 2.20 SP2 and forwards. Watch the video on www.beijerelectronics.com/X2 to see how easily you update an existing iX application to an X2 panel.

Serial port layout

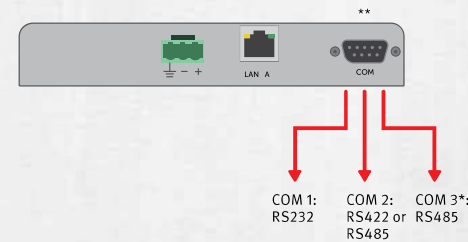
TxA



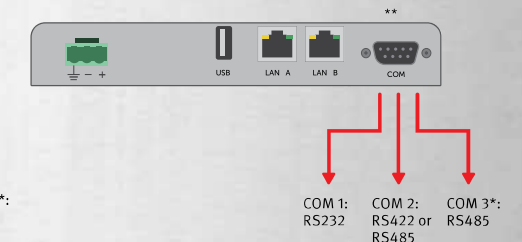
TxB



X2 pro 4 and X2 pro 7



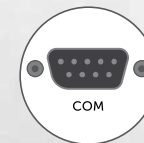
X2 pro 10, X2 pro 12 and X2 pro 15



* COM3 can only be used if COM2 is RS485

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** 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

