# eX700 Series Tech-Notes

## Key Features

- Created Within the X Platform
- Industry 4.0 Product Concept
- HW and FW Optimised for Extremely Fast Operation
- System and Project Rapid Boot-Up
- OS Linux RT
- JMobile - the software that powers the X Platform
- CODESYS V3 with Ethernet I/O Stacks
- Multitouch and Gesturing
- Brilliant 2,100,000 pixel Display
- Wide Angle Visibility
- Beautiful 16,000,000 Colors
- Resistant to Scratches, UV and Chemicals
- Total Glass Design
- Network Separation possibile via up to 3 Ethernet Networks with different IP addresses
- Plug in Modules for System Expansion
- IECEx*, ATEX*, DNV-GL*, cULus, cULus Haz. Loc.*, RCM*

## Highlights

A beautiful product, created within the X Platform and hence with an unsurpassed ability to offer access and scalability into Industry 4.0. The tremendous technical flexibility is backed by a company with 45 years in the industry and still with a market price at previous models.

The eX700 Series represents a ground breaking product to come to market:

The Revolutionary IIoT Controller.

The product's concept permits a prudent investment into the implementation of IIoT and hence Industry 4.0 compatibility.
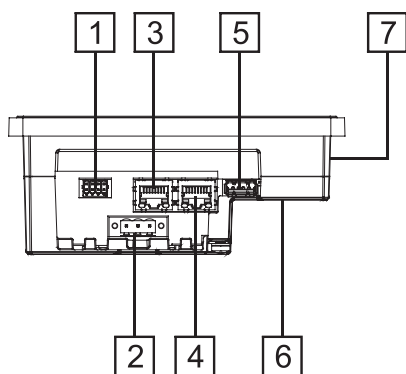As such it provides a true all-in-one solution covering many functions such as:

- As a powerful **Browser** with industry standard Web engine powering state of the art Chromium browser

- As a powerful **HMI** using JMobile inside with multi touch operation in a brilliant high resolution display

- As a **Gateway** with up to 3 Ethernet networks, OPC UA pub/sub* Server and Client, future TSN connectivity* and multiple protocols

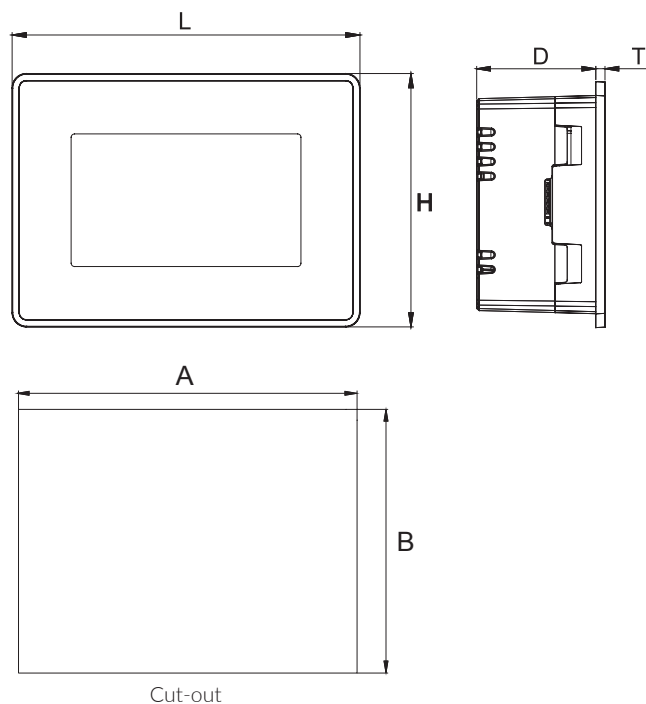- As a **PLC** with the CODESYS V3 can function as Master through major protocols

*Road map for 2017

## Technical Data

| System Resources | |
|---|---|
| Display - Colors | 5" TFT 16:9 LED - 64K |
| Resolution | 800x480, WVGA |
| Brightness | 300 Cd/m² typ. |
| Dimming | to 0% |
| Touchscreen | True Glass Projected Capacitive, Multitouch |
| CPU | ARM Cortex-A8 - 1 GHz |
| Operating System | Linux RT |
| Flash | 4 GB |
| RAM | 512 MB |
| Real Time Clock, RTC Back-up, Buzzer | Yes |
| **Interface** | |
| Ethernet port | 2 (port 0 - 10/100, port 1 - 10/100) |
| USB port | 1 (Host V2.0, max. 500 mA) |
| Serial port | 1 (RS-232, RS-485, RS-422, software configurable) Max 2 serial ports using plug-in modules. |
| SD card | Yes |
| Expansion | 1 slot for plug in modules |
| **Ratings** | |
| Power supply | 24 Vdc ( 10 to 32 Vdc ) |
| Current Consumption | 0.6 A at 24 Vdc (max.) |
| Input Protection | Electronic |
| Battery | Rechargeable Lithium battery,  not user-replaceable |
| **Environment Conditions** | |
| Operating Temp | -20° to +60 °C (vertical installation) Plug-in modules and USB devices may limit max temperature to +50 °C |
| Storage Temp | -20°C to +70°C |
| Operating / Storage Humidity | 5-85% RH, non condensing |
| Protection Class | IP66 (front), IP20 (rear) |
| **Dimensions and Weights** | |
| Faceplate LxH | 147x107 mm (5.78x4.21") |
| Cutout AxB | 136x96 mm (5.35x3.78") |
| Depth D+T | 52+8 mm (2.40+0.31") |
| Weight | 1.3 Kg |
| **Approvals** | |
| CE | Emission EN 61000-6-4, Immunity EN 61000-6-2 for installation in industrial environments |
| cULus | UL61010-1 / UL61010-2-201 |

1  Serial port
2  Power supply
3  Ethernet port 1 (10/100 Mb)
4  Ethernet port 0 (10/100 Mb)
5  USB port 1
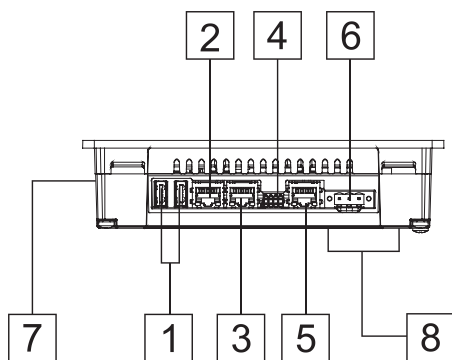6  Expansion slots for plug-in modules
7  SD Card slot

Cut-out

## Ordering Information

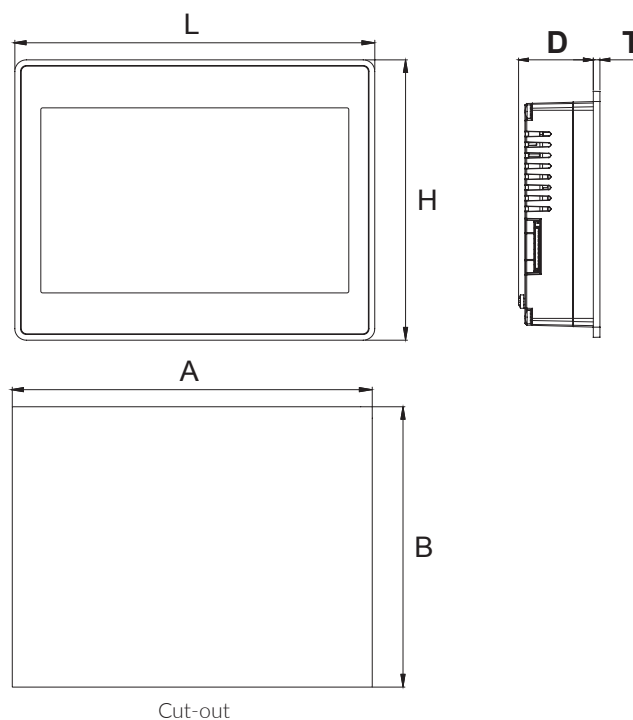| Model | Part Number | Description |
|---|---|---|
| eX705 | +EX705U5P1 | 5" widescreen TFT color with multitouch projected capacitive touchscreen. 2 Ethernet ports, 1 serial port, 1 USB port. JMobile runtime. |

## Technical Data

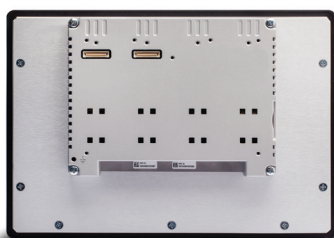| System Resources | |
|---|---|
| Display - Colors | 7" TFT 16:9 LED - 16M |
| Resolution | 800x480, WVGA |
| Brightness | 500 Cd/m² typ. |
| Dimming | to 0% |
| Touchscreen | True Glass Projected Capacitive, Multitouch |
| CPU | ARM Cortex-A9 dual core 800 MHz |
| Operating System | Linux RT |
| Flash | 4 GB |
| RAM | 1 GB |
| Real Time Clock, RTC Back-up, Buzzer | Yes |
| **Interface** | |
| Ethernet port | 3 (port 0 - 10/100/1000, port 1 - 10/100, port 2 - 10/100) |
| USB port | 2 (Host V2.0, max. 500 mA) |
| Serial port | 1 (RS-232, RS-485, RS-422, software configurable) Max 3 serial ports using plug-in modules. |
| SD card | Yes |
| Expansion | 2 slot for plug in modules |
| **Ratings** | |
| Power supply | 24 Vdc (10 to 32 Vdc) |
| Current Consumption | 0.7 A at 24 Vdc (max.) |
| Input Protection | Electronic |
| Battery | Rechargeable Lithium battery, not user-replaceable |
| **Environment Conditions** | |
| Operating Temp | -20° to +60 °C (vertical installation) Plug-in modules and USB devices may limit max temperature to +50 °C |
| Storage Temp | -20°C to +70°C |
| Operating / Storage Humidity | 5-85% RH, non condensing |
| Protection Class | IP66 (front), IP20 (rear) |
| **Dimensions and Weights** | |
| Faceplate LxH | 187x147 mm (7.36x5.79") |
| Cutout AxB | 176x136 mm (6.93x5.35") |
| Depth D+T | 47+8 mm (1.85+0.31") |
| Weight | 1.5 Kg |
| **Approvals** | |
| CE | Emission EN 61000-6-4, Immunity EN 61000-6-2 for installation in industrial environments |
| cULus | UL61010-1 / UL61010-2-201 |

1 USB ports 1 and 2
2 Ethernet port 2 (10/100 Mb)
3 Ethernet port 1 (10/100 Mb)
4 Serial port
5 Ethernet port 0 (10/100/1000 Mb)
6 Power supply
7 SD Card slot
8 2 Expansion slots for plugin modules

Cut-out

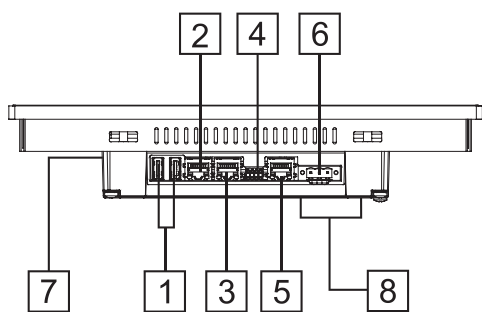## Ordering Information

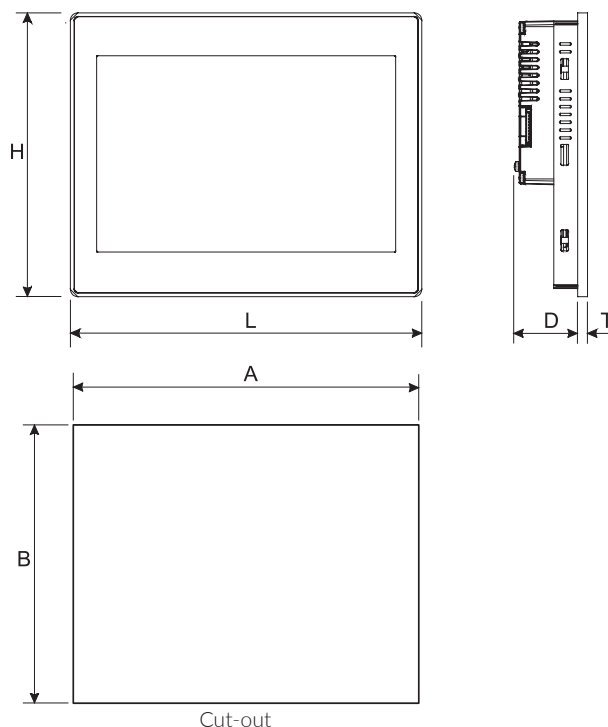| Model | Part Number | Description |
|---|---|---|
| eX707 | +EX707U5P1 | 7" widescreen TFT color with multitouch projected capacitive touchscreen. 3 Ethernet ports, 1 serial port, 2 USB ports. JMobile runtime. |

# eX710 Tech-Note

## Technical Data



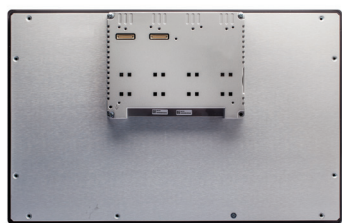| System Resources | |
|---|---|
| Display - Colors | 10.1" TFT 16:9 LED - 16M |
| Resolution | 1280x800, WXGA |
| Brightness | 500 Cd/m² typ. |
| Dimming | to 0% |
| Touchscreen | True Glass Projected Capacitive, Multitouch |
| CPU | ARM Cortex-A9 dual core 800 MHz |
| Operating System | Linux RT |
| Flash | 4 GB |
| RAM | 1 GB |
| Real Time Clock, RTC Back-up, Buzzer | Yes |
| **Interface** | |
| Ethernet port | 3 (port 0 - 10/100/1000, port 1 - 10/100, port 2 - 10/100) |
| USB port | 2 (Host V2.0, max. 500 mA) |
| Serial port | 1 (RS-232, RS-485, RS-422, software configurable) Max 3 serial ports using plug-in modules. |
| SD card | Yes |
| Expansion | 2 slot for plug in modules |
| **Ratings** | |
| Power supply | 24 Vdc (10 to 32 Vdc) |
| Current Consumption | 1.0 A at 24 Vdc (max.) |
| Input Protection | Electronic |
| Battery | Rechargeable Lithium battery, not user-replaceable |
| **Environment Conditions** | |
| Operating Temp | -20° to +60 °C (vertical installation) Plug-in modules and USB devices may limit max temperature to +50 °C |
| Storage Temp | -20°C to +70°C |
| Operating / Storage Humidity | 5-85% RH, non condensing |
| Protection Class | IP66 (front), IP20 (rear) |
| **Dimensions and Weights** | |
| Faceplate LxH | 282x197 mm (11.10x7.80") |
| Cutout AxB | 271x186 mm (10.67x7.32") |
| Depth D+T | 56+8 mm (2.20+0.33") |
| Weight | 2.5 Kg |
| **Approvals** | |
| CE | Emission EN 61000-6-4, Immunity EN 61000-6-2 for installation in industrial environments |
| cULus | UL61010-1 / UL61010-2-201 |





1. USB ports 1 and 2
2. Ethernet port 2 (10/100 Mb)
3. Ethernet port 1 (10/100 Mb)
4. Serial port
5. Ethernet port 0 (10/100/1000 Mb)
6. Power supply
7. SD Card slot
8. 2 Expansion slots for plugin modules



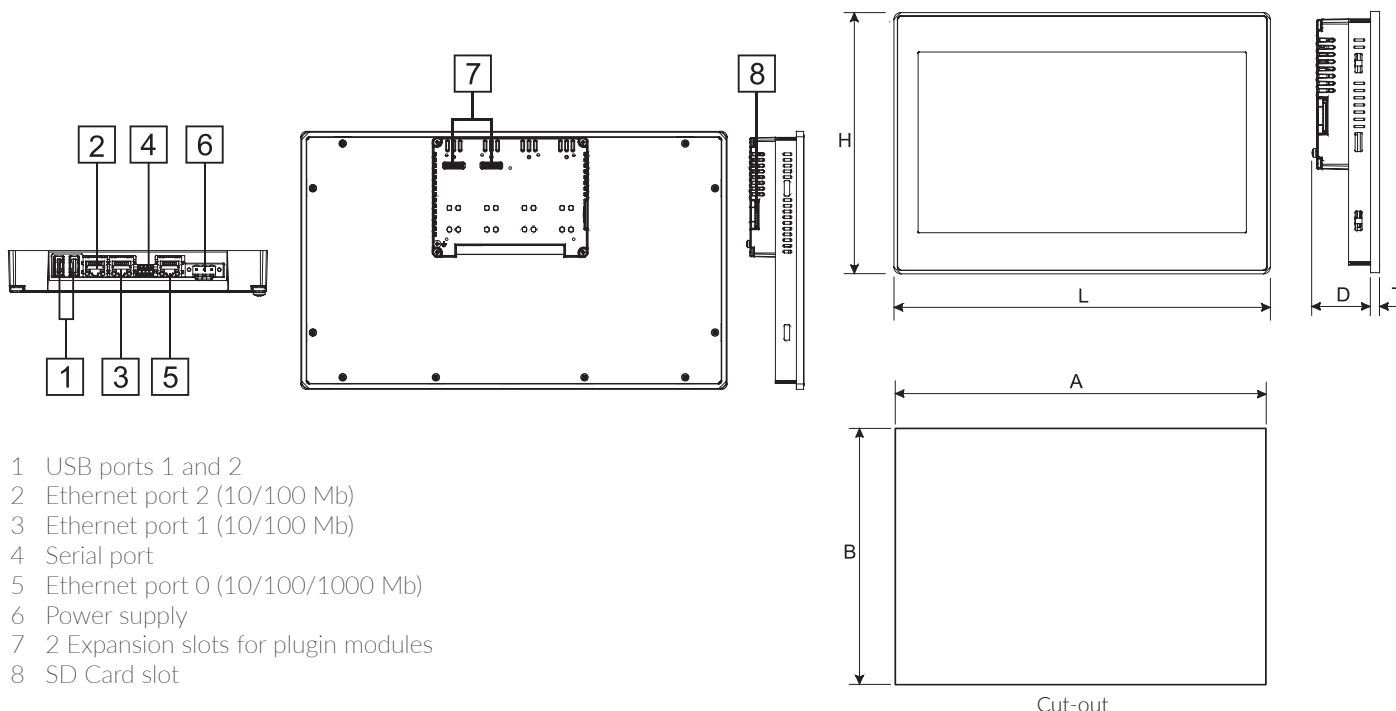Cut-out

## Ordering Information

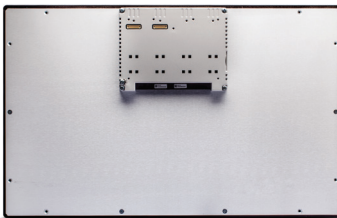| Model | Part Number | Description |
|---|---|---|
| eX710 | +EX710U5P1 | 10.1" widescreen TFT color with multitouch projected capacitive touchscreen. 3 Ethernet ports, 1 serial port, 2 USB ports. JMobile runtime. |

# eX715 Tech-Note

## Technical Data

| System Resources | |
|---|---|
| Display - Colors | 15,6" TFT LED - 16M |
| Resolution | 1366x768, HD |
| Brightness | 400 Cd/m² typ. |
| Dimming | to 0% |
| Touchscreen | True Glass Projected Capacitive, Multitouch |
| CPU | ARM Cortex-A9 quad core 800 MHz |
| Operating System | Linux RT |
| Flash | 8 GB |
| RAM | 2 GB |
| Real Time Clock, RTC Back-up, Buzzer | Yes |
| **Interface** | |
| Ethernet port | 3 (port 0 - 10/100/1000, port 1 - 10/100, port 2 - 10/100) |
| USB port | 2 (Host V2.0, max. 500 mA) |
| Serial port | 1 (RS-232, RS-485, RS-422, software configurable) Max 3 serial ports using plug-in modules. |
| SD card | Yes |
| Expansion | 2 slot for plug in modules |
| **Ratings** | |
| Power supply | 24 Vdc (10 to 32 Vdc) |
| Current Consumption | 1.2 A at 24 Vdc (max.) |
| Input Protection | Electronic |
| Battery | Rechargeable Lithium battery,  not user-replaceable |
| **Environment Conditions** | |
| Operating Temp | -20° to +60 °C (vertical installation) Plug-in modules and USB devices may limit max temperature to +50 °C |
| Storage Temp | -20°C to +70°C |
| Operating / Storage Humidity | 5-85% RH, non condensing |
| Protection Class | IP66 (front), IP20 (rear) |
| **Dimensions and Weights** | |
| Faceplate LxH | 422x267 mm (16.6x10.5") |
| Cutout AxB | 411x256 mm (16.18x10") |
| Depth D+T | 56+8 mm (2.20+0.33") |
| Weight | 4.1 Kg |
| **Approvals** | |
| CE | Emission EN 61000-6-4, Immunity EN 61000-6-2 for installation in industrial environments |
| cULus | UL61010-1 / UL61010-2-201 |

1  USB ports 1 and 2
2  Ethernet port 2 (10/100 Mb)
3  Ethernet port 1 (10/100 Mb)
4  Serial port
5  Ethernet port 0 (10/100/1000 Mb)
6  Power supply
7  2 Expansion slots for plugin modules
8  SD Card slot

Cut-out

## Ordering Information

| Model | Part Number | Description |
|---|---|---|
| eX715 | +EX715U5P1 | 15.6" widescreen TFT color with multitouch projected capacitive touchscreen. 3 Ethernet ports, 1 serial port, 2 USB ports. JMobile runtime. |

## Technical Data

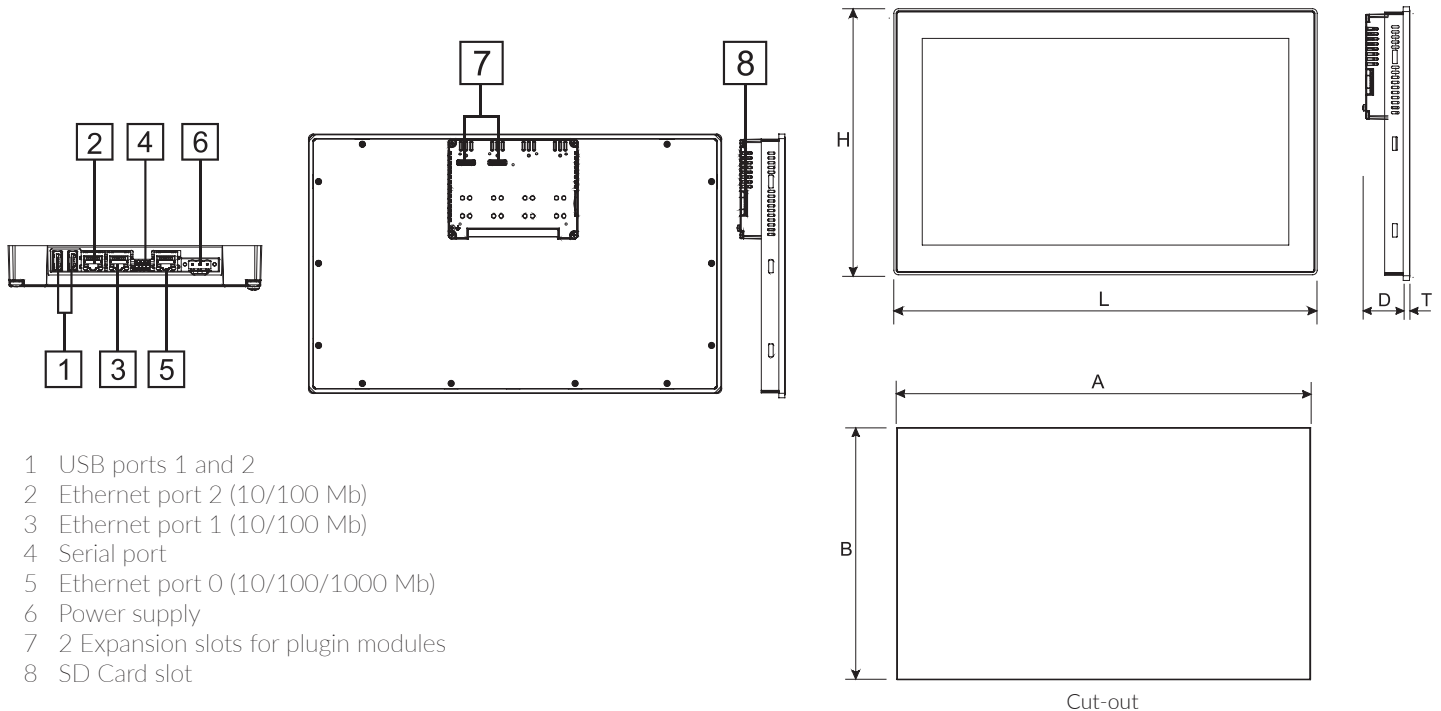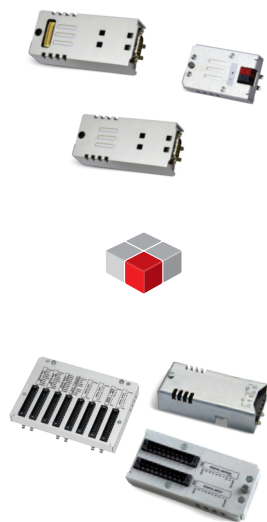| System Resources | |
|---|---|
| Display - Colors | 21,5" TFT LED - 16M |
| Resolution | 1920x1080, full HD |
| Brightness | 300 Cd/m² typ. |
| Dimming | to 0% |
| Touchscreen | True Glass Projected Capacitive, Multitouch |
| CPU | ARM Cortex-A9 quad core 800 MHz |
| Operating System | Linux RT |
| Flash | 8 GB |
| RAM | 2 GB |
| Real Time Clock, RTC Back-up, Buzzer | Yes |
| **Interface** | |
| Ethernet port | 3 (port 0 - 10/100/1000, port 1 - 10/100, port 2 - 10/100) |
| USB port | 2 (Host V2.0, max. 500 mA) |
| Serial port | 1 (RS-232, RS-485, RS-422, software configurable) Max 3 serial ports using plug-in modules. |
| SD card | Yes |
| Expansion | 2 slot for plug in modules |
| **Ratings** | |
| Power supply | 24 Vdc (10 to 32 Vdc) |
| Current Consumption | 1.7 A at 24 Vdc (max.) |
| Input Protection | Electronic |
| Battery | Rechargeable Lithium battery, not user-replaceable |
| **Environment Conditions** | |
| Operating Temp | -20° to +60 °C (vertical installation) Plug-in modules and USB devices may limit max temperature to +50 °C |
| Storage Temp | -20°C to +70°C |
| Operating / Storage Humidity | 5-85% RH, non condensing |
| Protection Class | IP66 (front), IP20 (rear) |
| **Dimensions and Weights** | |
| Faceplate LxH | 552x347 mm (21,7x13,66") |
| Cutout AxB | 541x336 mm |
| Depth D+T | 56+8.5 mm |
| Weight | 6.1 Kg |
| **Approvals** | |
| CE | Emission EN 61000-6-4, Immunity EN 61000-6-2 for installation in industrial environments |
| cULus | UL61010-1 / UL61010-2-201 |

1. USB ports 1 and 2
2. Ethernet port 2 (10/100 Mb)
3. Ethernet port 1 (10/100 Mb)
4. Serial port
5. Ethernet port 0 (10/100/1000 Mb)
6. Power supply
7. 2 Expansion slots for plugin modules
8. SD Card slot

Cut-out

## Ordering Information

| Model | Part Number | Description |
|---|---|---|
| eX721 | +EX721U5P1 | 21.5" widescreen TFT color with multitouch projected capacitive touchscreen. 3 Ethernet ports, 1 serial port, 2 USB ports. JMobile runtime. |

# Accessories

## Technical Data

| | |
|---|---|
| PLCM01 | Plug-in module CAN |
| PLCM02 | Plug-in module for KNX/EIB (TP interface) |
| PLCM03 | Plug-in module RS-232 |
| PLCM04 | Plug-in module RS-422/485 with optical insulation |
| PLCM06 | Plug-in module Profibus DP slave 12 MB |
| PLCM07 | Secure Cloud Connector |
| CODESYS V3 SoftPLC | CODESYS V3 activation license |
| PLIO03 | I/O Module with 20 DI 24VDC, 12 DO 24VDC 0,5 A, 8 AI (4 diff or 8 single or 4 PT100 or 4 TC), 4 AO, 1 PT100 Cold Junct |
| PLIO04 | I/O Module with 10 DI 24VDC, 10 DO SSR 1.4 A, 4 Programmable AI voltage/PT100/TC, 4 AI voltage, 1 PT100 |
| PLIO06 | Compact I/O module. 8 DI, 6 DO, 1 Relay Output |
| PLIO07 | Compact I/O module. 2 Relay Outputs |