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For the constant desire to improve our products and services or for variations due to manufacturing reasons, the specifications are subject to change without notice.

The information given in this document only contains general descriptions and/or performance figures, the technical specifications of products are given in product datasheets available in EXOR International website www.exorint.com. The images are for presentation purposes and may not represent the chosen configuration. We accept no responsibility for typographical errors.

Your Objective, Your Solution, Our Technology.

Your company faces the same old problem: How to make money today and how to make money tomorrow?

The varied solutions to this ever-present question do however alter over time. Industrie 4.0, and the digitalization of the information thread that runs throughout the company have brought new and innovative solutions.

They fall into 8 distinct categories where every company is or will be competing within:

1. Data-driven Plant Performance
2. Data-driven Inventory Performance
3. Data-driven Quality Improvement
4. Machines as a Service
5. Human data interface
6. Predictive Maintenance
7. Remote Servicing
8. Virtual Training and Validation

Many of our competitors say that they offer solutions, so maybe EXOR can also tell what you should do? Maybe EXOR should give you the solution that would work in your industry, in your company, in your unique place in the world?

Yet it seems to us that to answer yes to these questions would be to diminish the importance of the challenges that you face. Because your company is unique. You have multiple years of experience in your sector and **only you can provide the solution to your problem**. Only you and your team can truly envisage how to make money today and tomorrow.

What EXOR International can offer you is the ability to securely acquire data from almost any approval critical location across multiple vendor and protocols, powerfully work with this data in real time at the edge and then send this data to a robust cloud to visualize, manipulate and analyse.

With Our Technology, we are able to help you implement Your Industrie 4.0 solution to Your business objective.

That's why EXOR International is a technology provider.

SOFTWARE

JMobile®

OPERATIONAL TECHNOLOGY SOFTWARE

JMobile: The Only Industrial IoT Software you will ever need

In just one easily learned software suite, JMobile **completely covers** the connectivity from edge to cloud, device management, process management and data visualization essential for all the edge to cloud levels in **any Industrial IoT platform architecture**.

- High User Interface Experience
- Create IIoT ecosystems with reduced risk
- From Shop Floor to Cloud / Big Data
- Real Interoperability
- **Great HTML5 interface with JM4Web**
- Create Alarms with associated Alerts
- Efficient scripting with JavaScript
- More than 200 communication protocols readily available for all platforms with gateway function
- Browser widget
- Integrated PLC runtime as an option for compact control solutions. Include full support of networked I/O
- Software and documentation available in 6 languages: English, German, French, Korean, Traditional and Simplified Chinese
- Multi platform runtime: Linux, Windows
- **Full compatibility with OPC UA**



Overview

In just one easily learnt software, JMobile completely covers the connectivity, device management, process management and data visualization essential for the lower levels of any IIoT platform architecture.

For connectivity, with a fully integrated CODESYS PLC, JMobile permits communication to all I/O, Sensors, Motion devices via the significant protocols of PROFINET, EtherCAT, POWERLINK, EtherNet/IP, Modbus amongst many others. Transmitted using the highly robust and secure OPC UA standard and soon pub/sub over TSN, **data is seamlessly shared within the network of edge points as well as sending all data to higher Enterprise levels and external interfaces.**

This exacting communication universally envied as a real technical achievement does not, however, convey the total completeness of JMobile. Born from an industrial market need, this close contact with customers has remained so deeply ingrained in the constant development process that **the beautiful user experience is a defining attribute.** The ease of implementation, using evident stunning graphics elements built into a vast library, allows quick and uniquely defining clear visualization.

As the market moves more towards ever increasingly complex web applications, JMobile is ready. The JMobile client-server architecture is already conversant with current HTML5 web technologies and uses a QT engine and Scalable Vector Graphics, **JM4Web.** This provides users with advanced control and remote supervision from any browser, any device (smartphone, tablet, or computer).

Guiding Principles of Development

The **three principles that have guided and will continue to guide** the development of JMobile are:

1. **Remain open** to the major fieldbus / protocols of communication
2. **Use open and universally recognized** market technological standards such as HTML5, SVG, XML
3. Integrate selected market-leading **3rd party software with a seamless UI and extremely secure.**

These three principles working together offer EXOR International and our customers the best of all situations where the secure, solid JMobile backbone of highly critical software is able to contain and implement all the software required for Industrial IoT implementation.

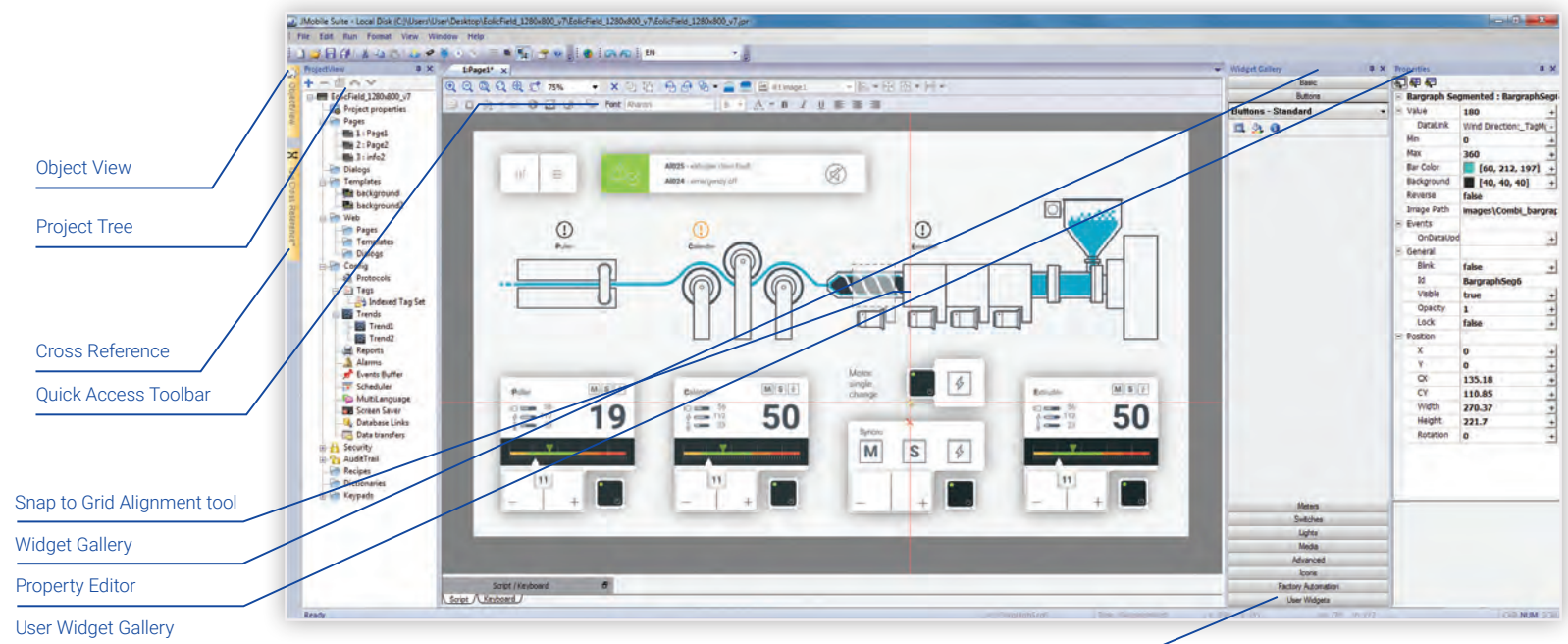
Version 4.5 Improvements

New Features:

- Fully redesigned Widget Gallery with search functionality
- Security and protection of intellectual property with project encryption and sign
- New dashboard pages for responsive design
- New watch window in JMobile Simulator
- Native support for connecting SQL Databases (MySQL, MariaDB, PostgreSQL, ODBC)
- New Tab/Toolbar widget with gestures
- New Stack widget to manage many layers on Z axis at design time and in runtime
- New QR code widget to load a specific page or URL

Improvements, usability and productivity:

- Browser widget with new technology engine
- TLS support for sending emails
- Trends Autofill, Import/Export, Copy/Paste to maximize productivity
- Indexed Tag Sets Import/Export and Copy/Paste to maximize productivity
- Possibility to attach client variable to index of Indexed Tags Sets to support session-based instances
- Pick any color from screen to maximize design power
- Added custom selectors in table and grid based widget for better suggestion on how to use them
- Alphanumeric fields with custom language-based keypads
- Improved way to import certificates in OPC UA Client protocol
- Added validation controls on OPC UA Client protocol
- Added TCP mode to CODESYS V3 ETH protocol



MQTT (MQ Telemetry Transport) is the publish/subscribe protocol designed for constrained devices and low-bandwidth, high-latency networks. It is a common protocol used for light load IIoT communication.

JMobile comes with an efficient implementation that seamlessly connects to any MQTT broker, including those offered by providers such as Amazon, Exosite, IBM, Microsoft. The MQTT protocol has been built-in to JMobile runtime as a service with full data gateway capability.



You can easily configure automatic data push from field devices to the cloud. Data security is enforced by the use of TLS and X509 certificates.



CORVINA is an open IoT platform that connects any products, plants, systems, and machines, allowing data generated IIoT to be processed simply and intuitively with advanced analysis.

CORVINA Cloud is a **PaaS** (Platform as a Service) and **RMM** (Remote Monitoring and Management) system. JMobile 4.0 brings the first service for edge data collection to CORVINA.

The simplest approach you can imagine to bring your data to the cloud.

Unified programming approach for native and web HMI applications. It is easier than ever to create screens optimized for visualization on any client while saving programming time.

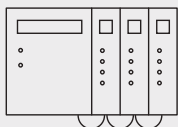
JMobile project validation technology makes it simpler creating fully operational applications under all conditions.



The redesign and refactoring of existing JMobile function is the best way to improve programming efficiency while ensuring full compatibility. It is also a method to keep GUI up to date. In JMobile you will find a great design for:

- Project View with drag&drop to move pages within the project and multiple selections
- Tag Editor with unification of tag database and dictionary, customizable view, multiple editing of common properties, powerful search and synchronization of symbol files
- Alarm Editor with customizable view, powerful search and multiple editing of common properties

Reporting complex data, such as tables (alarms, trends, audits) and trend graphs is possible with the new PDF report function. PDF files can now have a signature for data security, as required in demanding applications such as those compliant with 21 CFR Part 11.



Communication is always a central point in JMobile applications; even more now that IIoT data collection and edge data processing is becoming the focus in industrial applications.

JMobile includes support for the most common protocols for PLCs like Siemens, Rockwell, Omron, Beckhoff and many others. Open protocols for direct CAN, serial and TCP/UDP communication are included as well.

Pure Web Technology

JM4Web is the seamless connection between industrial control applications and ubiquitous mobile devices such as smart phones and tablets.

Developed **ahead of the market's vision in 2010** and continuously updated ever since using the very same guiding principles for JMobile, it now provides the most comprehensive Pure Web Technology available.

Designed and maintained by EXOR, a company with 45 years experience in the industrial sector.

- Pure Web Technology
- Created and Developed since 2010
- Based on HTML5/JS
- Secure connection with https protocol support
- 100% HTML5 web HMI Interface
- Ready for responsive design
- Realtime Data Update (up to 10x per second)
- Multitouch Support
- Ready for most common Browsers for PC and Smart Devices with iOS and Android
- Ease of Use. No HTML competence required
- Full JMobile library of over 2000 Widgets
- Available as Component for 3rd party platforms
- Data Acquisition and Trends
- Recipes
- Multilanguage
- JavaScript
- User management
- Canvas and custom widgets

Overview

With HTML5 and JavaScript technology embedded in JMobile, all that is needed to remotely monitor and control applications is a web browser with HTML5 support: Firefox, Chrome, Safari and Microsoft EDGE. No "apps" needed when operating from mobile devices, hence reducing the risk of compatibility across various operating systems.

With JM4Web you can have **instant Web access to JMobile applications** via the integrated Web server included in all JMobile runtime systems.

JM4Web allows for creating the **exact responsive user experience** for the target mobile device. The Web server will detect the resolution of the connected client device and serve the appropriate pages.

JM4Web is the ideal complement to the powerful remote connectivity and visualization tools already available in JMobile.



CLOUD

CORVINA®



The Company

CORVINA

CORVINA is a company that offers Servitization and Digitization solutions through the CORVINA IoT Digital Platform.

Digitization applications are solutions based on mathematical models that help companies optimise their production processes, consolidate and take advantage of new business opportunities. Thanks to a consolidated data collection platform, whether from application or production systems, we enable advanced machine learning and artificial intelligence engines to allow companies to see further, innovate and be faster.

Through the power of data and people we realise new possibilities, generating value from existing opportunities, while creating innovation and re-imagining processes and systems.

We develop breakthrough solutions, with an agnostic vision, thus applicable in any context.

CORVINA designs edge devices specific to every sector. Thus providing you with a complete technological and service stack to achieve your objectives.

Your Objective

- Inventory optimization
- Alarm Detection/Anomaly Detection
- Replenishment Management
- Energy Optimization
- Logistic Planning
- Production Scheduling
- Demand Forecasting
- HVAC optimization
- Intelligent Building Automation
- Energy MPC (Model Predictive Controller)

Working method



ANALYSIS Data understanding

Insight into the business context
Data visualisation
Insight and alignment of objectives



MODELLING Data modelling

Data preparation and visualisation
Defining the solution
Model development

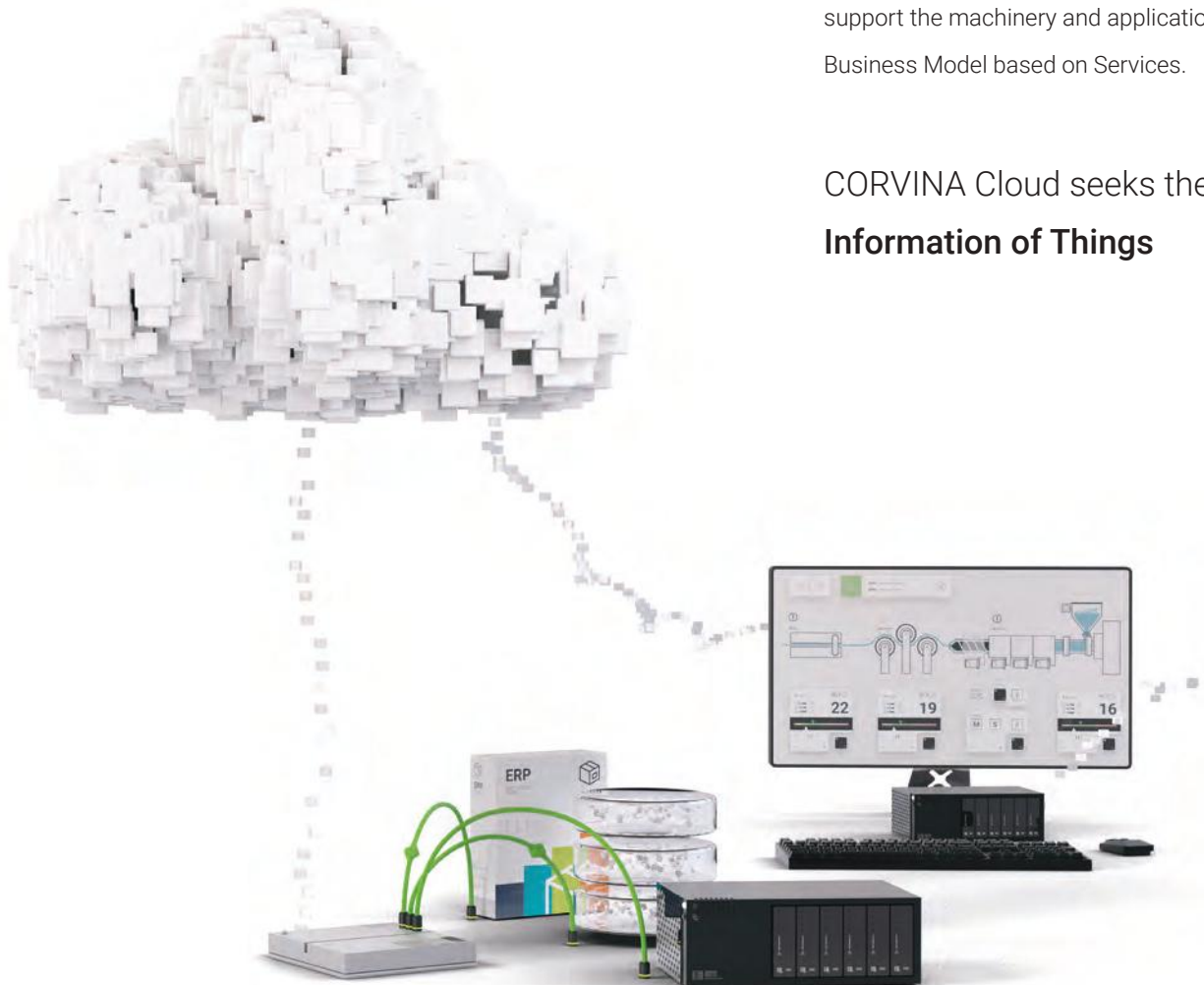


DEPLOYMENT Objective validation

Model validation
Deployment
Set up and running

OPEN INDUSTRIAL IOT PLATFORM

The Industrial Cloud



CORVINA Cloud is the cloud-based, open industrial IoT platform that provides the technology you need for the industrial world. Corvina Cloud is an administration shell for distributed edge systems, integrating data collection, monitoring and control, configuration management, integrated web tools and programming environments to support the machinery and applications throughout its whole lifecycle providing productivity increase and new Business Model based on Services.

CORVINA Cloud seeks the **Information of Things**

It connects any products, plants, systems, and machines, be they **new or legacy**. It allows the data generated by the Internet of Things (IoT) to be processed simply and intuitively with advanced analysis.

It bridges layers between IT and OT architecture, providing effective tools to access all the industry 4.0 benefits, such as asset performance management, artificial intelligence, predictive maintenance and OT remote monitoring.

Our Technology that allows you to implement at scale and securely Your solution to Your objective: how to maintain competitiveness, grow and maybe just to disrupt.

REMOTE ACCESS AND EDGE MANAGEMENT

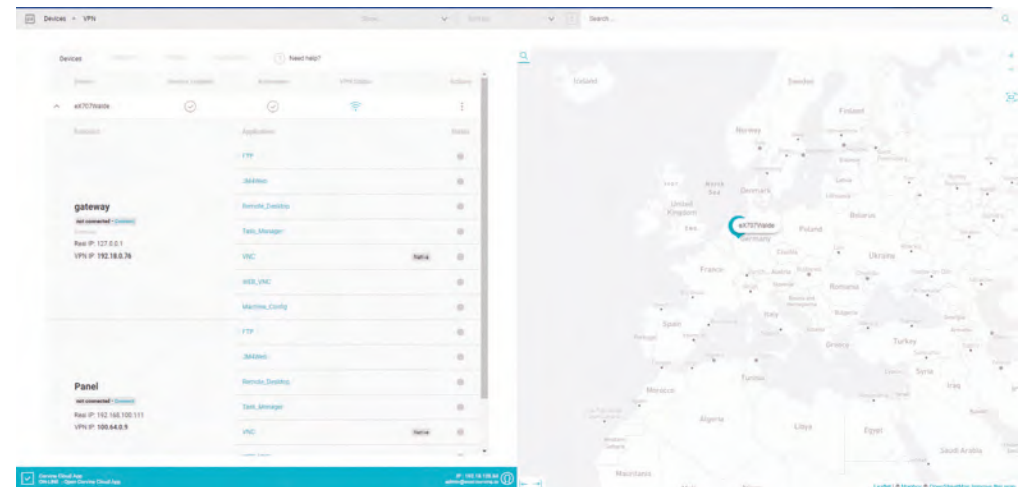
VPN Service

Remote Access and Edge Management allows to securely and easily connects your edge devices and your machines.

It is an advanced connectivity management solution that allows you to manage your IIoT business. The user interface is incredibly easy to use. The web-based solution makes all your remote devices, networks and users to communicate securely, to manage updates on devices and to connect endpoints (PLCs, Drives, etc...).

Benefits

- Only outgoing connectivity
- Direct access to device and defined endpoints (PLC, Drive, PC..)
- Installation and maintenance cost reduction
- Easy management of tenants access with dedicated company domains
- User and profile management to differentiate user access to function and devices
- Multiple applications (Web, VNC, JMobile client...) on device and endpoints via Web browser
- Web agent to connect machine and endpoints (PLC, PC, Drive..) using related configuration software to debug, update project, update firmware etc.



Recent Updates Have Included

Multiple Direct access application:

Possibility to create a user that can access applications on multiple device in an easy and direct way.

VNC runtime Password:

Possibility to enable runtime password for VNC connections.

Device Pairing simplified using Activation Key

Fastest Device Provisioning thanks to a simple and intuitive process.

PLCM10 4G modem Compatibility:

Usage of the PLCM10 4G modem with CORVINA Cloud allows to connect any device and plants without the need of a cabled Internet Connection.

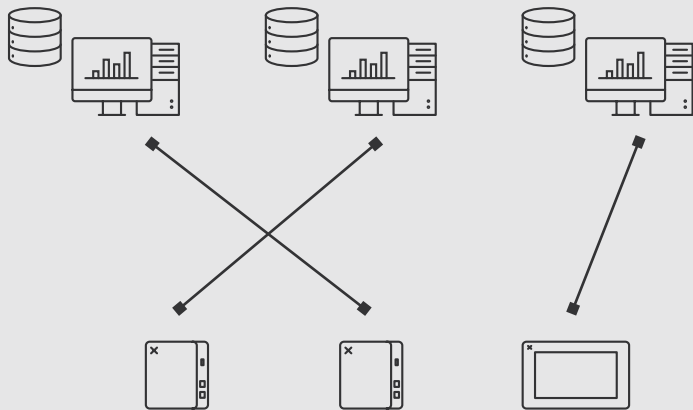
Architecture

DATA PLATFORM

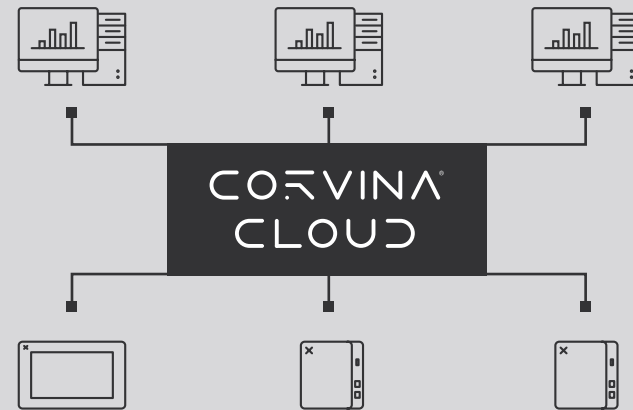
App and Marketplace

CORVINA Cloud allows to implement and deploy services and apps inside the platform as internal tools or as value added or market differentiator for the product. A unique access to the platform allows tenants to access to their application, service or complex analytics in a uniformed and harmonic visualization. There is no limit in the application and service that can be implemented.

LEGACY SERVICES



APPS AND SERVICES WITH CORVINA



APP AND SERVICE DEALER
Machine builder creates and propose apps and services to their customers as a value added to their product offer and as a business differentiation strategy

MARKETPLACE

Data model freely defined by the service dealer

FINAL CUSTOMER / END USER
End User and Final Customer benefit of the apps and services use for optimizing the machine operation, performance, etc. (i.e. AI/ML)

Platform, Framework, SDK and node hosting for connect devices, remote maintenance and develop/create/migrate services.



Reliable and Secure Cloud for Data Storage, Data Analysis and Apps on an unified User Interface.

Benefits

KEY FEATURES



PLUG & CONNECT

Simplifies the process of connecting any device to the cloud



DATA MODELING

Optimize the Device connection allowing the creation of Profiles for machine models



DASHBOARD CREATOR

Autonomously increase profits creating dashboard that shows you relevant data for your business



MULTITENANT MANAGEMENT

Easy upgrade, easy customisation and ongoing cost savings



CUSTOM SDK

Customize Dashboard with implementing Widget, KPI, data analysis functions



UI CUSTOMIZATION

Placing the visual design in line with your brand provides good secondary sales



FINE GRAIN ACCESS

Highly specific access constraints to data and functions



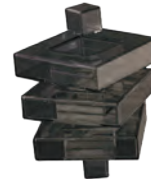
GEOLOCATION

Possibility to implement all the functions related to the positioning of the device (Route, GeoFencing, ...)



REST API

Offering great deal of flexibility. Data is not tied to resources or methods.



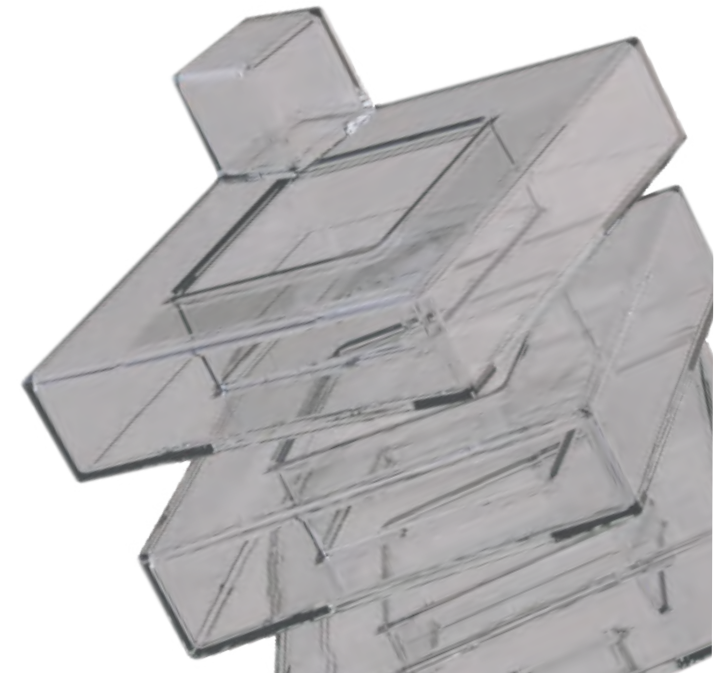
ALARMS

Protect plant uptime and safety minimizing the number and impact of abnormal situations thanks to the prompt information received by Email notifications.



REMOTE MANAGEMENT

Proactive Service based on Alarm, Remote Support to the Customer



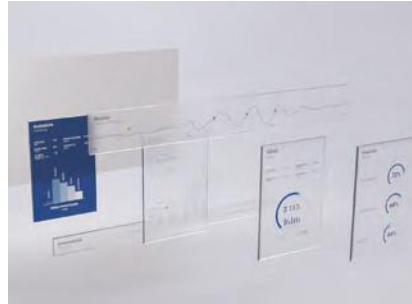
Benefits

KEY BENEFITS

Data Analysis

Data analysis has never been so easy, thanks to an intuitive, easy to use platform: everyone can connect its own machinery and start Data Collection and Analysis.

CORVINA Cloud is a no-code Cloud that allows to easily collect and visualize real-time or historical data on dedicated dashboards.



Thanks to a secure and reliable data storage, CORVINA Cloud allows to have high-speed update on RealTime or historical data providing every tool for Conditional Monitoring and machine/production monitoring (KPIs like OEE, Pareto Chart, Discrete Monitoring).

Incredibly within a short time, CORVINA will provide powerful **asset management performance** and **maintenance management** applications.

VPN Remote Access

CORVINA Cloud provide an high-speed remote connection to your HMI or Gateway and to any components of your machinery. Thanks to a multiserver architecture your machine will be automatically connected to the nearest server to provide the optimal performance for remote edge management and service.

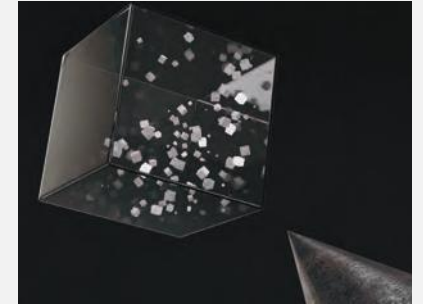


A **Web Based interface** allows to configure your device and endpoints. It is possible to create Application and Profile for every single machine components and assign this to User roles for provide specific access to the different function and components of the machinery. Direct Access functionality provide effective access to Applications and endpoints without the need of the full User Interface usage. Thanks to a simplified UI users will rapidly connects to the needed application/endpoints with any devices (mobile, tablet, PC).

Alarms & Notification

Reliability and high availability have always been a major concern in distributed systems.

Having the right people informed about machine malfunctions, problems and event provide optimal management of the machinery and an immediate reaction on production or machinery problems.



Decreasing unplanned downtime being advised via email or other communication system provide an effective tool to increase machine reliability and warranty SLA on products.

Visual Design

Although not often thought of in the industrial sector, visual design is a crucial element of a thoughtfully made software.

CORVINA Cloud is used often in white label with sub organisations; the ability to customise the product is essential.



Aesthetics and usability have a positive correlation which helps to communicate your brand to the market.

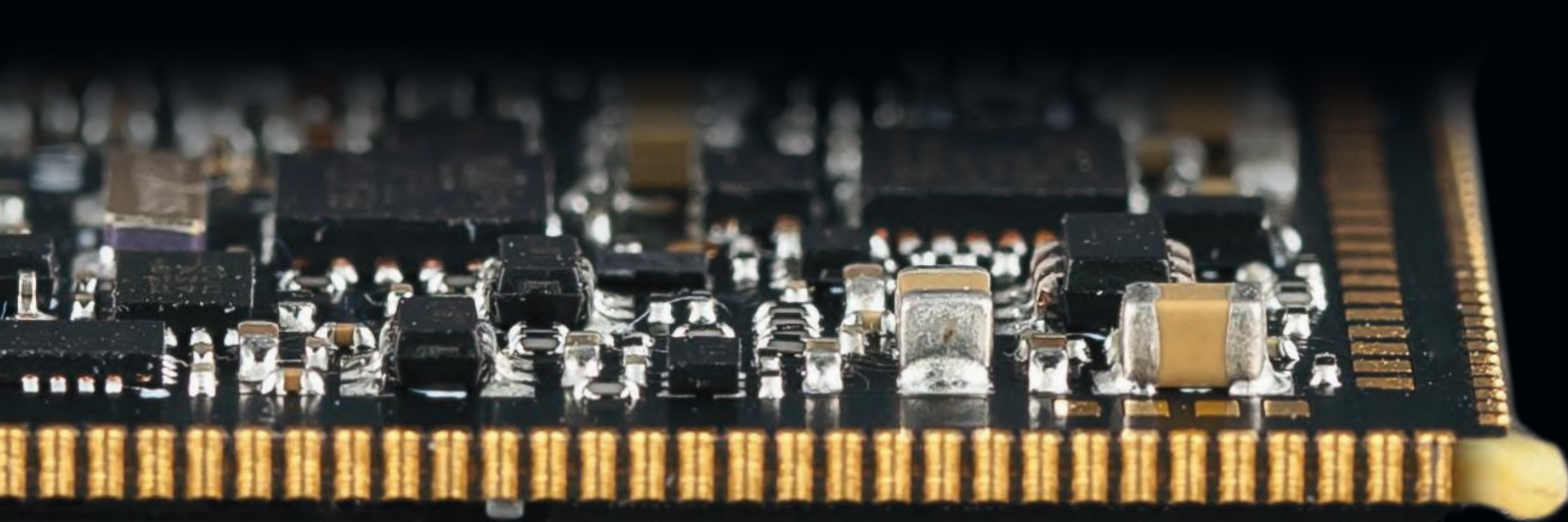
The visual design of CORVINA Cloud provides a balance between visual appeal, usability and utility unseen in the industrial space.

Thanks to navigable 3D twin you can keep monitoring your machine and locate immediately the fault for a fast reaction.



PRODUCT

CATEGORIES



EMBEDDED

SYSTEMS

EMBEDDED SYSTEMS



gS01 - GigaSOM

Dimensions	81,6 x 54 x 4,9 mm
Temperature range	-40°C to +85°C
Power supply	5V,+ 5%, current (TBD)
CPU	Intel® Atom E39XX Quad or Dual cores
FPGA	Intel® Cyclone 10 GX up to 220 KLE
DDR	LPDDR4 up to 8 Gbytes for CPU and DDR3 up to 2 GBytes for FPGA
Flash memory	Up to 64 Gbytes eMMC Flash for CPU, 1 Gbytes QSPI Flash for FPGA
FRAM	64 Kbytes via CPU side
Video out interfaces	eDP, DP0 and DP1 via CPU side
Video in interfaces	CSI MIPI via CPU side (4 lanes)
Audio	HDA and I2S via CPU side
CPU high speed interfaces	6 (USB 2.0), 2 (USB 3.0), 2 (SATA3), 1 (Gigabit Ethernet), PCIe (1 lane), PCIe (2 lane)
CPU low speed interfaces	SMB bus, 5 (I2C), 3 (UART), SPI, LPC, SDIO, SD card, GPIO
FPGA high speed interfaces	34 LVDS pairs plus six 10Gb transceivers (support for FMC LPC and LPC+)
FPGA low speed interfaces	2 (CAN), 3 (SPI), 2 (I2C), 1 (UART), 1 (GPIO)
Interface CPU-FPGA	Dual Lane Gen 2 PCIe
FPGA image	Configurable via CPU
Ordering Code	+GS01-0001: Intel® Atom E3930, 4GB LPDDR4, 32GB Flash, -40 to +85°C +GS01-0002: Intel® Atom E3940, 8GB LPDDR4, 64GB Flash, -40 to +85°C +GS01-0003: Intel® Atom E3930, 4GB LPDDR4, 32GB Flash, Cyclone 10GX 85KLE, -40 to +85°C +GS01-0004: Intel® Atom E3940, 8GB LPDDR4, 64GB Flash, Cyclone 10GX 220KLE, -40 to +85°C +EE16EK-0011: gigaSOM gS01 Development Kit

Software configurable. Not all selections can be combined.



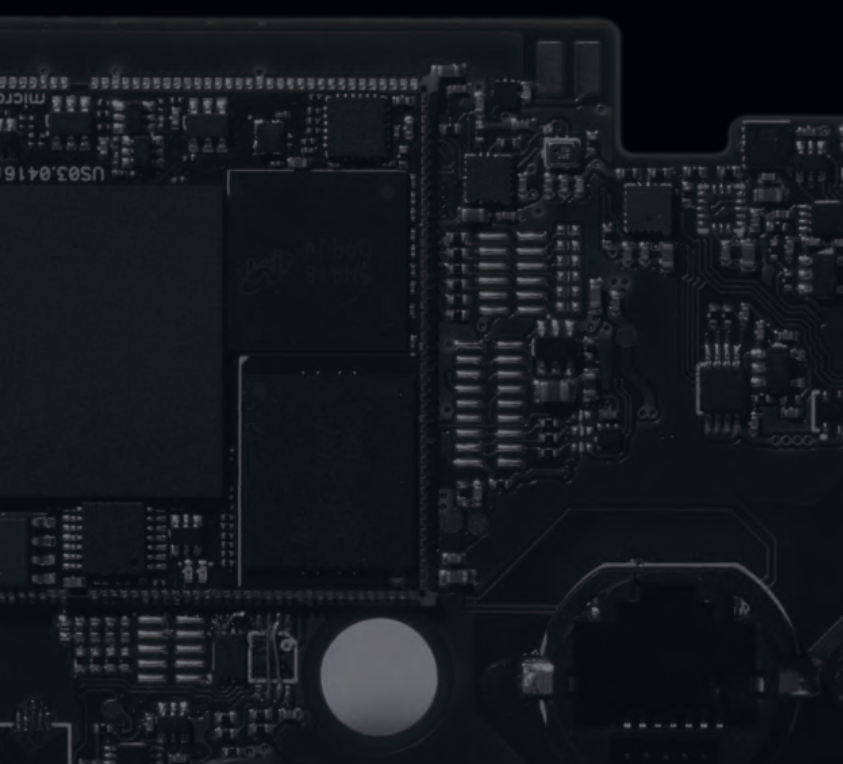
	uS01 - MicroSOM	uS02 - MicroSOM	uS03 - MicroSOM	uS04 - MicroSOM	uS05 - MicroSOM
Dimensions	46x35 mm	46x35 mm	46x35 mm	46x35 mm	46x35 mm
Temperature Range	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to 85°C	-40°C to +85°C
CPU	TI Sitara AM3352/AM3354 up to 1 GHz	Intel 5CSEBA2 (A6) Dual ARM Cortex - A9 925 MHz	i.MX6DL DualLite up to 800 MHz, i.MX6Q Quad up to 800 MHz	i.MX8M Mini Quad/Dual ARM Cortex-A53 at 1.6 Ghz	Intel 5CSEBA6 Dual ARM Cortex - A9 925 MHz
Integrated with FPGA up to 110 KLEs	-	25/110 KLE	-	-	110 KLE
DDR	Up to 512 Mbytes DDR3	1 Gbyte DDR3	Up to 2 GBytes high performance, LVDDRAM2 Dual Channel mode (2x32 bit)	Up to 2 GbLPDDR4 x32 @ 3000 MT	1 Gbyte DDR3
Flash Disk	Up to 4 Gbytes eMMC (The actual size could vary according to the device's vendor. 2MB min. of boot sectors.)		Up to 8 Gbytes eMMC	eMMC 5.0, up to 32 GB on board	4 GByte eMMC / 256 Mbits
EEPROM	4 Kbits	4 Kbits	4 Kbits	I2C, 4 Kbits	4 Kbits
FRAM	64 Kbytes (optional)	64 Kbytes	64-Kbytes (optional)	64 Kbytes	64-Kbytes
Watchdog/RTC/Voltage monitor/JTAG	Yes	Yes	Yes	Yes	Yes
USB	2 (Host V2.0)	2 (Host V2.0) or 1 (OTG)	2 (Host V2.0), 1 (OTG)	1 (OTG 2.0), 2 (Host 2.0)	2 (Host V2.0) or 1 (OTG)
Ethernet	2 (RMII ports 10/100 Mb)	2 (RMII ports 10/100 Mb)	1 (RMII 10/100 Mb) or 1 (RGMII 10/100/1000 Mb)	US04-0001 (RMII port 10/100 Mb)	4 (RGMII 10/100/1000 Mb Ethernet MAC)
TSN	Not Available	Not Available	Not Available	Not Available	3 Ports Ethernet TSN Switch (RGMII)
SD	1	1	2	1	1
Serial Port	3*	3	3	3 UARTS (4 lines)	3
SPI	2	2	2	2 channels with two CS*	2
I2C	1	1	1	2	1
CAN	2*	2	2	2 using onboard SPI/CAN bridges	2
Audio	1 (I2S Channel)	1 (I2S Channel)	1 (I2S Channel)	1 (I2S), 1 (Generic audio channel with 15 signals)	
Video interfaces	1 (Video Out Controller 16 Bit)	(1) Video Out Controller 16 Bit - Video Input: Digital Interface ITU656	1 (Video Out Controller 24 Bit), 1 (Video Out LVDS Dual Ch. or 2 Single Channel), 1 (HDMI 1.4), 1 (MIPI DSI) 1 (Camera int. MIPI CSI), 1 (Camera parallel input up to 12 bits)	1 Video Out LVDS Single or dual Channel - 1 (MIPI CSI 4 lanes)	1 (Video Out Controller 16 Bit)
GPIO	19	Several GPIO available depending of FPGA configuration, 2 LVDS I/O with 5 lanes each	27	15 signals from CPU and 13 signals from on board I2C extenders	Several GPIO available depending of FPGA configuration, 2 LVDS I/O with 5 lanes each
Analog input	5	5	5	5 single ended channels, 12bits, 1V8 Max	5
PCIe	-	-	GEN1 (2,5 Gbps)	Single lane, GEN1, GEN2	
Ordering Code	+US01-0001: AM3354 1Ghz, 512MB DDR3, 4 GB Flash, -40 to +85°C +EE16EK-0002: microSOM uS01 Development Kit	+US02-0001: 110 KLE, 1GB DDR3, 4 GB Flash, -40 to +85°C +AL15EK-0001: microSOM uS02 Development Kit	+US03-0001: i.MX6 DualLite 800Mhz, 1GB DDR, 4GB Flash, -40 to +85°C +US03-0002: i.MX6 Quad 800Mhz, 2GB DDR, 8GB Flash, -40 to +85°C +EE16EK-0001: microSOM uS03 Development Kit	+US04-0001: i.MX8M Mini, 2 GB LPDDR4, 8GB, RMII, -40 to +85°C	+US05-0001: 110 KLE, 1GB DDR3, 4 GB Flash, TSN Support, -40 to +85°C +EE16EK-0008: microSOM uS05 Development Kit

* One UART shared with one CAN
Software configurable. Not all selections can be combined.

EMBEDDED SYSTEMS



	nS01 - NanoSOM	nS02 - NanoSOM
Dimensions	25,4x25,4 mm	25,4x25,4 mm
Temperature Range	Commercial 0 to +70°C / Industrial -40 to +85°C	Commercial 0°C to 70°C / Industrial -40°C to +85°C
CPU	NXP i.MX6 UltraLite 528 Mhz - ARM Cortex-A7 MPCore with TrustZone and NEON Media Processor unit.	STM32MP157 up to 800 Mhz Dual Cortex-A7 plus M4 MPU with 3D GPU.
DDR	Up to 1 GByte high performance DDR3L	Up to 1 GByte high performance DDR3L
Flash Disk	Up to 32 GByte eMMC Flash	Up to 32 GByte eMMC Flash
EEPROM	512 Bytes x 8	512 Bytes x 8
RTC	Yes, Battery or SuperCAP backup	Yes, Battery or SuperCAP backup
Watchdog/RTC/ Voltage monitor/JTAG	Yes	Yes
USB	2 (Host V2.0), 1 (OTG)	2 (Host V2.0), 1 (OTG)
Ethernet	2 (RMII ports 10/100Mb MAC IEEE1588)	1 (RMII 10/100Mb MAC IEEE1588) and 1 (10/100Mb Direct Line Interface)
SD	1 (via External connectors)	2 (via external connectors)
SPI	4	4
I2C	1	1
CAN	2	2
UARTs	3	3
Audio	1 (I2S Channel)	1 (I2S Channel)
Video out/Video in	24 bits RGB LCD parallel / Optional Video Input Port 8 bits (shared with some peripherals)	24 bits RGB LCD parallel or 2 lane MIPI DSI - Video Input Port (camera port) 8,10,12 Bit
Analog Input / GPIO	3 Analog Inputs and several programming GPIO signals with interrupt capability (2 PWM). Reserved Pins for Power-Fail, Power Good, Reset IN, Reset Out functions.	More Analog Inputs and several programming GPIO signals with interrupt capability. Reserved Pins for Power-Fail, Power Good, Reset IN, Reset Out functions."
Security features	Optional Advanced Security functions ARM TrustZone with optional 10 Tamper pads	Secure boot, Trust Zone IPs
Power Supply	Single 3,3 Volt / VBB for RTC Backup	Single 3,3 Volt / VBB for RTC Backup
Ordering Code	+NS01-0001: i.MX6 UltraLite 528Mhz, 256MB DDR3L, 4GB Flash, 0 to +70°C +NS01-0002 : i.MX6 UltraLite 528Mhz, 512MB DDR3L, 4GB Flash, -40 to +85°C +EE16EK-0005: nanoSOM nS01 Development Kit	+NS02-0001: STM32MP157 up to 800Mhz, 256MB DDR3L, 4GB Flash, -40 to +85°C +NS02-0002: STM32MP157 up to 800Mhz, 512MB DDR3L, 4GB Flash, -40 to +85°C +NS02-0003: STM32MP157 up to 800Mhz, 1GB DDR3L, 8GB Flash, -40 to +85°C





	OpenHMI nS01 Kit	OpenHMI nS02 Kit
CPU Type	iMX.6UL	STM32MP157
Core Class	Single Core Cortex-A7 528Mhz	Dual Cortex -A7 plus M4 MPU with 3D GPU
RTC	30 ppm @25°C – Batt. backup	30 ppm @25°C – Batt. backup
eMMC	4GByte	8 GB
RAM	512MByte DDR	1 GByte DDR
EEPROM	4KBits	4 KBits
SD Card Slot	1 (Standard SD card)	1 (Standard SD card)
Supported OS	Linux Yocto	Linux Yocto
Ethernet	2 (10/100 Mb)	2 (10/100 Mb)
Wi-Fi (optional)	802.11 a/b/g/n (2.4 - 5 GHz)	802.11 a/b/g/n (2.4 - 5 GHz)
USB 2.0	1 (USB OTG) + 2 (USB Host)	1 (USB OTG) + 2 (USB Host)
CAN Fieldbus	1 (CAN (isolated))	1 (CAN (isolated))
Serial Port	1 (RS232/RS422/RS485)	1 (RS232/RS422/RS485)
SPI / I2C	2 (SPI) / 1 (I2C) / Serial TTL / I/O Connector	2 (SPI) / 1 (I2C) / Serial TTL / I/O Connector
Audio Interface	MIC/SPKL-SPKR 3,5mm Headset connector + Buzzer	MIC/SPKL-SPKR 3,5mm Headset connector + Buzzer
Size	5"	5
Resolution	800x480	800x480
Brightness	300 cd/m ²	300 cd/m ²
Backlite Lifetime	Typ. 30.000 h.	Typ. 30.000 h.
Colors	16 bit	16 bit
Touch	PCAP - Multitouch Controller	PCAP - Multitouch Controller
Analog Input	2 (0 to 5 VDC)	2 (0 to 5 VDC)
Analog Output	2 (0 to 5 VDC)	2 (0 to 5 VDC)
Cover Glass	Optional	Optional
Dim. / Thickness	121x76x38 mm	121x76x38 mm
Supply voltage	18 to 32 VDC	18 to 32 VDC
Consumption	Typ. 5W	Typ. 5W
Operating Temp. / Hum.	-20 to +60°C / 5 to 90% RH	-20°C to +70°C / 5 to 90% RH
Storage temp	-30 to +85°C	-30°C to +80°C
Ordering Code	+EE16EK-0007: i.MX6UL, Industrial, -20°C to +60°C, 528Mhz, 512MByte DDR, 4GByte Flash disk, 4Kbits EEPROM, NO WIFI Version.	+EE16EK-0009: STM32MP157, Industrial, 20°C to +70°C, Up to 800 Mhz, 1GB DDR, 8GByte Flash disk, 4Kbits EEPROM, NO WIFI Version.



INDUSTRIAL

HMIS &

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PANELS

INDUSTRIAL HMIs & IoT CONTROL PANELS

eX700M Series



eX707M

System Resources	
Display - Colors	7" TFT - 16M
Resolution	800x480
Brightness	500 cd/m ² typ.
Dimming	Yes
Touchscreen	Projected Capacitive, Multitouch
CPU	64-bit RISC quad core - 1.6 GHz
Operating System	Linux
Flash	8 GB
RAM	2 GB
FRAM	64 KB
RTC, 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 Temperature	-20° to +60 °C (vertical installation). Plug-in and USB devices may limit max temperature to +50 °C
Storage Temperature	-20°C to +70°C
Operating / Storage Humidity	5-85% RH, non condensing
Protection Class	IP66 (front), IP20 (rear) - Type: 12, 4X
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	Electromagnetic Compatibility Directive 2014/30/EU (EMC)
ATEX	Zone 2/22: II 3 G Ex ec IIC T5...T4 Gc, II 3 D Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C"
IECEX	Zone 2/22: Ex ec IIC T5...T4 Gc, Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C"
UL	cULus: UL61010-1 / UL61010-2-201
UL	cULus: Class 1 Div 2
DNV	Yes
RCM	Yes
Ordering Code	+EX707MU5P1



eX710M

eX712M

eX715M

eX721M

System Resources				
Display - Colors	10.1" TFT - 16M	12.3" TFT - 16M	15.6" TFT - 16M	21.5" TFT - 16M
Resolution	1280x800	1920x720	1366x768	1920x1080
Brightness	500 cd/m ² typ.	600 cd/m ² typ.	400 cd/m ² typ.	300 cd/m ² typ.
Dimming	Yes	Yes	Yes	Yes
Touchscreen	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch
CPU	64-bit RISC quad core - 1.6 GHz	64-bit RISC quad core - 1.6 GHz	64-bit RISC quad core - 1.6 GHz	64-bit RISC quad core - 1.6 GHz
Operating System	Linux	Linux	Linux	Linux
Flash	8 GB	8 GB	8 GB	8 GB
RAM	2 GB	2 GB	2 GB	2 GB
FRAM	64 KB	64 KB	64 KB	64 KB
RTC, RTC Back-up, Buzzer	Yes	Yes	Yes	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)	2 (Host V2.0, max. 500 mA)	2 (Host V2.0, max. 500 mA)	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	Yes	Yes	Yes
Expansion	2 slot for plug in modules	2 slot for plug in modules	2 slot for plug in modules	2 slot for plug in modules
Ratings				
Power supply	24 Vdc (10 to 32 Vdc)	24 Vdc (10 to 32 Vdc)	24 Vdc (10 to 32 Vdc)	24 Vdc (10 to 32 Vdc)
Current Consumption	1.0 A at 24 Vdc (max.)	1.1 A at 24 Vdc (max.)	1.2 A at 24 Vdc (max.)	1.7 A at 24 Vdc (max.)
Input Protection	Electronic	Electronic	Electronic	Electronic
Battery	Rechargeable Lithium battery, not user-replaceable			
Environment Conditions				
Operating Temperature	-20° to +60 °C (vertical installation). Plug-in and USB devices may limit max temperature to +50 °C			
Storage Temperature	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C
Operating / Storage Humidity	5-85% RH, non condensing	5-85% RH, non condensing	5-85% RH, non condensing	5-85% RH, non condensing
Protection Class	IP66 (front), IP20 (rear) - Type: 12, 4X	IP66 (front), IP20 (rear) - Type: 12, 4X	IP66 (front), IP20 (rear) - Type: 12, 4X	IP66 (front), IP20 (rear) - Type: 12, 4X
Dimensions and Weights				
Faceplate LxH	282x197 mm (11.10x7.80")	344.5x163 mm (13.56x6.41")	422x267 mm (16.6x10.5")	552x347 mm (21.7x13.66")
Cutout AxB	271x186 mm (10.67x7.32")	332.5x152 mm (13.09x5.94")	411x256 mm (16.18x10")	541x336 mm (21.3x13.22")
Depth D+T	56+8 mm (2.20+0.31")	49+8.5 mm (1.92+0.33")	56+8 mm (2.20+0.31")	56+8 mm (2.20+0.31")
Weight	2.5 Kg	1.8 Kg	4.1 Kg	6.1 Kg
Approvals				
CE	Electromagnetic Compatibility Directive 2014/30/EU (EMC)			
ATEX	Zone 2/22: II 3 G Ex ec IIC T5...T4 Gc, II 3 D Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C			
IECEX	Zone 2/22: Ex ec IIC T5...T4 Gc, Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C			
UL	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201
UL	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2
DNV	Yes	Yes	Yes	Yes
RCM	Yes	Yes	Yes	Yes
Ordering Code	+EX710MU5P1	+EX712MU5P1	+EX715MU5P1	+EX721MU5P1

INDUSTRIAL HMIs & IoT CONTROL PANELS

eX700 Series



eX705

System Resources	
Display - Colors	5" TFT - 64K
Resolution	800x480, WVGA
Brightness	300 Cd/m ² typ.
Dimming	to 0%
Touchscreen	Projected Capacitive, Multitouch
CPU	32-bit RISC single core - 1 GHz
Operating System	Linux RT
Flash	4 GB
RAM	512 MB
FRAM	64 KB
RTC, 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 Temperature	-20° to +60 °C (vertical installation). Plug-in modules and USB devices may limit max temperature to +50 °C
Storage Temperature	-20°C to +70°C
Operating / Storage Humidity	5-85% RH, non condensing
Protection Class	IP66 (front), IP20 (rear) - Type: 12, 4X
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	Electromagnetic Compatibility Directive 2014/30/EU (EMC)
ATEX	Zone 2/22: II 3 G Ex ec IIC T5...T4 Gc, II 3 D Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C
IECEX	Zone 2/22: Ex ec IIC T5...T4 Gc, Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C
UL	cULus: UL61010-1 / UL61010-2-201
UL	cULus: Class 1 Div 2
DNV	Yes
LR, EU RO MR	Yes
RCM	Yes
Ordering Code	+EX705U5P1



	eX707	eX710	eX712	eX715	eX721
System Resources					
Display - Colors	7" TFT - 16M	10.1" TFT - 16M	12,3" TFT - 16M	15,6" TFT - 16M	21,5" TFT - 16M
Resolution	800x480, WVGA	1280x800, WXGA	1920x720, HD	1366x768, HD	1920x1080, full HD
Brightness	500 Cd/m ² typ.	500 Cd/m ² typ.	600 Cd/m ² typ.	400 Cd/m ² typ.	300 Cd/m ² typ.
Dimming	to 0%	to 0%	to 0%	to 0%	to 0%
Touchscreen	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch
CPU	32-bit RISC dual core - 800 MHz	32-bit RISC dual core - 800MHz	32-bit RISC quad core - 800MHz	32-bit RISC quad core - 800MHz	32-bit RISC quad core - 800MHz
Operating System	Linux RT	Linux RT	Linux RT	Linux RT	Linux RT
Flash	4 GB	4 GB	8 GB	8 GB	8 GB
RAM	1 GB	1 GB	2 GB	2 GB	2 GB
FRAM	64 KB	64 KB	64 KB	64 KB	64 KB
RTC, RTC Back-up, Buzzer	Yes	Yes	Yes	Yes	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)		2 (Host V2.0, max. 500 mA)		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	Yes	Yes	Yes	Yes
Expansion	2 slot for plug in modules		2 slot for plug in modules		2 slot for plug in modules
Ratings					
Power supply	24 Vdc (10 to 32 Vdc)		24 Vdc (10 to 32 Vdc)		24 Vdc (10 to 32 Vdc)
Current Consumption	0.7 A at 24 Vdc (max.)		1.1 A at 24 Vdc (max.)		1.7 A at 24 Vdc (max.)
Input Protection	Electronic		Electronic		Electronic
Battery	Rechargeable Lithium battery, not user-replaceable				
Environment Conditions					
Operating Temperature	-20° to +60 °C (vertical installation). Plug-in modules and USB devices may limit max temperature to +50 °C				
Storage Temperature	-20°C to +70°C		-20°C to +70°C		-20°C to +70°C
Operating / Storage Humidity	5-85% RH, non condensing		5-85% RH, non condensing		5-85% RH, non condensing
Protection Class	IP66 (front), IP20 (rear) - Type: 12, 4X		IP66 (front), IP20 (rear) - Type: 12, 4X		IP66 (front), IP20 (rear) - Type: 12, 4X
Dimensions and Weights					
Faceplate LxH	187x147 mm (7.36x5.79")		344.5x163 mm (13.56x6.41")		422x267 mm (16.6x10.5")
Cutout AxB	176x136 mm (6.93x5.35")		332.5x152 mm (13.09x5.94")		411x256 mm (16.18x10")
Depth D+T	47+8 mm (1.85+0.31")		49+8.5 mm (1.92+0.33")		56+8 mm (2.20+0.31")
Weight	1.5 Kg		2.5 Kg		4.1 Kg
Approvals					
CE	Electromagnetic Compatibility Directive 2014/30/EU (EMC)				
ATEX	Zone 2/22: II 3 G Ex ec IIC T5...T4 Gc, II 3 D Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C				
IECEX	Zone 2/22: Ex ec IIC T5...T4 Gc, Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C				
UL	cULus: UL61010-1 / UL61010-2-201		cULus: UL61010-1 / UL61010-2-201		cULus: UL61010-1 / UL61010-2-201
UL	cULus: Class 1 Div 2		cULus: Class 1 Div 2		cULus: Class 1 Div 2
DNV	Yes		Yes		Yes
LR, EU RO MR	Yes		-		Yes
RCM	Yes		Yes		Yes
Ordering Code	+EX707U5P1		+EX710U5P1		+EX715U5P1
					+EX721U5P1

INDUSTRIAL HMIs & IoT CONTROL PANELS

JSmart700 & JSmart700M Series

	JSmart707M	JSmart710M	JSmart715M	JSmart721M
System Resources				
Display - Colors	7" TFT - 16M	10.1" TFT - 16M	15.6" TFT - 16M	21.5" TFT - 16M
Resolution	1024x600	1280x800	1366x768	1920x1080
Brightness	400 cd/m ² typ.	400 cd/m ² typ.	400 cd/m ² typ.	400 cd/m ² typ.
Dimming	Yes	Yes	Yes	Yes
Touchscreen	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch
CPU	64-bit RISC Quad core - 1.6 GHz	64-bit RISC Quad core - 1.6 GHz	64-bit RISC Quad core - 1.6 GHz	64-bit RISC Quad core - 1.6 GHz
Operating System	Linux	Linux	Linux	Linux
Flash	8 GB	8 GB	8 GB	8 GB
RAM	2 GB	2 GB	2 GB	2 GB
FRAM	64 KB	64 KB	64 KB	64 KB
RT-Clock, RTC Back-up	Yes	Yes	Yes	Yes
Interface				
Ethernet port	10/100 PoE	10/100 PoE	10/100 PoE	10/100 PoE
USB port	1 (Host V2.0, max. 500 mA, available with special cable)	1 (Host V2.0, max. 500 mA, available with special cable)	1 (Host V2.0, max. 500 mA, available with special cable)	1 (Host V2.0, max. 500 mA, available with special cable)
LED	1 RGB	1 RGB	1 RGB	1 RGB
Sensors	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer
Buzzer	Yes	Yes	Yes	Yes
NFC	ISO/IEC 14443A	ISO/IEC 14443A	ISO/IEC 14443A	ISO/IEC 14443A
Wi-Fi	IEEE 802.11a/b/g	IEEE 802.11a/b/g	IEEE 802.11a/b/g	IEEE 802.11a/b/g
Ratings				
Power supply	IEEE 802.3af PoE	IEEE 802.3af PoE	IEEE 802.3at PoE+	IEEE 802.3bt 4PPoE
Power Consumption	12W max.	14W max.	23W max.	35W max.
Battery	Rechargeable Lithium battery, not user-replaceable	Rechargeable Lithium battery, not user-replaceable	Rechargeable Lithium battery, not user-replaceable	Rechargeable Lithium battery, not user-replaceable
Environment Conditions				
Operating Temperature	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)
Storage Temperature	-30°C to +80°C	-30°C to +80°C	-30°C to +80°C	-30°C to +80°C
Operating / Storage Humidity	5-85% RH, non-condensing	5-85% RH, non-condensing	5-85% RH, non-condensing	5-85% RH, non-condensing
Protection Class	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x
Dimensions and Weights				
Faceplate LxH	195.2x131.6 mm (7.68x5.18")	264.5x183.1 mm (10.41x7.20")	398.6x248 mm (15.69x 9.76")	534.1x325.6 mm (21.02x 12.81")
Depth D	16.5 mm (0.6")	16.5 mm (0.6")	26.5 mm (1.04")	26.5 mm (1.04")
Weight	0.7 Kg	1.2 Kg	4.0 Kg	6.0 Kg
Approvals				
CE	Radio Equipment Directive 2014/53/EU (RED)	Radio Equipment Directive 2014/53/EU (RED)	Radio Equipment Directive 2014/53/EU (RED)	Radio Equipment Directive 2014/53/EU (RED)
UL	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201
UL	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2
DNV	To be planned	To be planned	To be planned	To be planned
RCM	Yes	Yes	Yes	Yes
Ordering Code	+JS707GB2U5P1	+JS710GC2U5P1	+JS715GD2U5P1	+JS721GE2U5P1



	JSmart705	JSmart707	JSmart710	JSmart715	JSmart721
System Resources					
Display - Colors	5" TFT – 16M	7" TFT – 16M	10.1" TFT – 16M	15.6" TFT – 16M	21.5" TFT – 16M
Resolution	800x480	1024x600	1280x800	1366x768	1920x1080
Brightness	300 cd/m ² typ.	400 cd/m ² typ.	400 cd/m ² typ.	400 cd/m ² typ.	400 cd/m ² typ.
Dimming	to 0%	to 0%	to 0%	to 0%	to 0%
Touchscreen	Projected Capacitive – Multitouch	Projected Capacitive – Multitouch	Projected Capacitive – Multitouch	Projected Capacitive – Multitouch	Projected Capacitive – Multitouch
CPU	32-bit RISC dual core - 800 MHz	32-bit RISC dual core - 800 MHz	32-bit RISC dual core - 800 MHz	32-bit RISC quad core - 800 MHz	32-bit RISC quad core - 800 MHz
Operating system	Linux RT	Linux RT	Linux RT	Linux RT	Linux RT
Flash	4 GB	4 GB	4 GB	8 GB	8 GB
RAM	1 GB	1 GB	1 GB	2 GB	2 GB
FRAM	64 KB	64 KB	64 KB	64 KB	64 KB
RT-Clock, RTC Back-up	Yes	Yes	Yes	Yes	Yes
Interface					
Ethernet port	10/100 PoE	10/100 PoE	10/100 PoE	10/100 PoE	10/100 PoE
USB port	1 (Host V2.0, max. 50 mA, available with special cable)	1 (Host V2.0, max. 50 mA, available with special cable)	1 (Host V2.0, max. 50 mA, available with special cable)	1 (Host V2.0, max. 50 mA, available with special cable)	1 (Host V2.0, max. 50 mA, available with special cable)
LED	1 RGB	1 RGB	1 RGB	1 RGB	1 RGB
Sensors	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer
Wi-Fi	No	IEEE 802.11a/b/g	IEEE 802.11a/b/g	IEEE 802.11a/b/g	IEEE 802.11a/b/g
Buzzer	Yes	Yes	Yes	Yes	Yes
Ratings					
Power supply	IEEE 802.3af PoE	IEEE 802.3af PoE	IEEE 802.3af PoE	IEEE 802.3at PoE+	IEEE 802.3bt 4PPoE
Power Consumption	6 W max.	12 W max.	14 W max.	23 W max.	35 W max.
Battery	Yes (rechargeable)	Yes (rechargeable)	Yes (rechargeable)	Yes (rechargeable)	Yes (rechargeable)
Environment Conditions					
Operating Temperature	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)
Storage Temperature	-30°C to +80°C	-30°C to +80°C	-30°C to +80°C	-30°C to +80°C	-30°C to +80°C
Operating / Storage Humidity	5-85% RH, non-condensing	5-85% RH, non-condensing	5-85% RH, non-condensing	5-85% RH, non-condensing	5-85% RH, non-condensing
Protection Class	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x
Dimensions and Weights					
Faceplate LxH	148.3x105.1 mm (5.83x 4.13")	195.2x131.6 mm (7.68x5.18")	264.5x183.1 mm (10.41x7.20")	398.6x248 mm (15.69x 9.76")	534.1x325.6 mm (21.02x 12.81")
Depth D+T+T	16.5 mm (0.06")	16.5 mm (0.06")	16.5 mm (0.06")	26.5 mm (1.04")	26.5 mm (1.04")
Weight	0.5 Kg	0.7 Kg	1.2 Kg	4.0 Kg	6.0 Kg
Approvals					
CE	Electromagnetic Compatibility Directive 2014/30/EU (EMC)	Radio Equipment Directive 2014/53/EU (RED)	Radio Equipment Directive 2014/53/EU (RED)	Radio Equipment Directive 2014/53/EU (RED)	Radio Equipment Directive 2014/53/EU (RED)
UL	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201
UL	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2
DNV	Yes	Yes	Yes	Yes	Yes
RCM	Yes	Yes	Yes	Yes	Yes
Ordering Code	+JS705BA0U5P1	+JS707BB1U5P1	+JS710BC1U5P1	+JS715CD1U5P1	+JS721CE1U5P1

INDUSTRIAL HMIs & IoT CONTROL PANELS

eSMART Series



eSMART04

System Resources	
Display - Colors	4.3" TFT 16:9 - 64K
Resolution	480x272
Brightness	200 cd/m ² typ.
Dimming	Yes
Touchscreen	Resistive
CPU	32-bit RISC single core - 300 MHz
Operating System	Linux 3.12
Flash	2 GB
RAM	256 MB
RTC, RTC Back-up, Buzzer	Yes
Interface	
Ethernet port	1 (port 0 - 10/100)
USB port	1 (Host v. 2.0, max. 500 mA)
Serial port	1 (RS-232, RS-485, RS-422, software configurable)
SD card	No
Expansion	No
Ratings	
Power supply	24 Vdc (10 to 32 Vdc)
Current Consumption	0.25 A max. at 24 Vdc
Input Protection	Automatic
Battery	Yes (Supercapacitor)
Environment Conditions	
Operating Temperature	0 to 50 °C (vertical installation)
Storage Temperature	-20°C to +70°C
Operating / Storage Humidity	5-85% RH, non condensing
Protection Class	IP66 (front), IP20 (rear) - Type: 2, 4X
Dimensions and Weights	
Faceplate LxH	147x107 mm (5.78x4.21")
Cutout AxB	136x96 mm (5.35x3.78")
Depth D+T	29+5 mm (1.14+0.19")
Weight	Approx 0.4 Kg
Approvals	
CE	Electromagnetic Compatibility Directive 2014/30/ EU (EMC)
ATEX	Zone 2: II 3 G Ex ic ec IIC T6 Gc
UL	cULus: UL508
UL	cULus: Class 1 Div 2
DNV	Yes
EU RO MR	Yes
RCM	Yes
Ordering Code	+ESMA04U301



	eSMART04M	eSMART07M	eSMART107	eSMART107B	eSMART10
System Resources					
Display - Colors	4.3" TFT 16:9 - 64K	7" TFT 16:9 - 64K	7" TFT 16:9 - 64K	7" TFT 16:9 - 64K	10.1" TFT 16:9 - 64K
Resolution	480x272	800x480, WVGA	800x480, WVGA	800x480, WVGA	1024x600, WVGA
Brightness	200 cd/m ² typ.	200 cd/m ² typ.	200 cd/m ² typ.	200 cd/m ² typ.	200 cd/m ² typ.
Dimming	Yes	Yes	Yes	to 0%	Yes
Touchscreen	Resistive	Resistive	Resistive	Resistive	Resistive
CPU	32-bit RISC single core - 1 GHz	32-bit RISC single core - 1 GHz	32-bit RISC dual core - 800 MHz	32-bit RISC dual core - 800 MHz	32-bit RISC single core - 1 GHz
Operating System	Linux 3.12	Linux 3.12	Linux RT	Linux RT	Linux 3.12
Flash	4 GB	4 GB	4 GB	4 GB	4 GB
RAM	512 MB	512 MB	1 GB	1 GB	512 MB
RTC, RTC Back-up, Buzzer	Yes	Yes	Yes, Yes, No	Yes, Yes, No	Yes
Interface					
Ethernet port	1 (port 0 - 10/100)	1 (port 0 - 10/100)	2 (port 0 - 10/100/1000, port 1 - 10/100)	1 (port 0 - 10/100/1000)	1 (port 0 - 10/100)
USB port	1 (Host v. 2.0, max. 500 mA)	1 (Host v. 2.0, max. 500 mA)	2 (Host V2.0, max. 100 mA)	1 (Host V2.0, max. 100 mA)	1 (Host v. 2.0, max. 500 mA)
Serial port	1 (RS-232, RS-485, RS-422, software configurable)	1 (RS-232, RS-485, RS-422, software configurable)	2 (RS-232), 2 (RS-422/RS-485 isolated), 2 (CAN 2.0b isolated)	No	1 (RS-232, RS-485, RS-422, software configurable)
SD card	No	No	No	No	No
Expansion	No	No	No	No	No
Ratings					
Power supply	24 Vdc (10 to 32 Vdc)	24 Vdc (10 to 32 Vdc)	24 Vdc (10 to 32 Vdc)	24 Vdc (10 to 32 Vdc)	24 Vdc (10 to 32 Vdc)
Current Consumption	0.25 A max. at 24 Vdc	0.3 A at 24 Vdc (max.)	0.3 A at 24 Vdc (max.)	0.3 A at 24 Vdc (max.)	0.38 A at 24 Vdc (max.)
Input Protection	Automatic	Automatic	Automatic	Electronic	Automatic
Battery	Yes (Supercapacitor)	Yes (Supercapacitor)	Yes (Supercapacitor)		Yes (Supercapacitor)
Environment Conditions					
Operating Temperature	0 to 50 °C (vertical installation)	0 to 50 °C (vertical installation)	0 to +50°C (vertical installation)	0 to +50°C (vertical installation)	0 to 50 °C (vertical installation)
Storage Temperature	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C
Operating / Storage Humidity	5-85% RH, non condensing	5-85% RH, non condensing	5-85% RH, non condensing	5-85% RH, non condensing	5-85% RH, non condensing
Protection Class	IP66 (front), IP20 (rear) - Type: 2, 4X	IP66 (front), IP20 (rear) - Type: 2, 4X	IP66 (front), IP20 (rear) - Type: 2, 4X	IP66 (front); IP20 (rear) - Type: 2, 4X	IP66 (front), IP20 (rear) - Type: 2, 4X
Dimensions and Weights					
Faceplate LxH	147x107 mm (5.78x4.21")	187x147 mm (7.36x5.79")	187x147 mm (7.36x5.79")	187x147 mm (7.36x5.79")	282x197 mm (11.10x7.80")
Cutout AxB	136x96 mm (5.35x3.78")	176x136 mm (6.93x5.35")	176x136 mm (6.93x5.35")	176x136 mm (6.93x5.35")	271x186 mm (10.66x7.32")
Depth D+T	29+5 mm (1.14+0.19")	29+5 mm (1.14+0.19")	29+5 mm (1.14+0.19")	29+5 mm (1.14+0.19")	29+6 mm (1.14+0.23")
Weight	Approx 0.4 Kg	Approx 0.6 Kg	0.875 Kg	0.875 Kg	Approx 1.0 Kg
Approvals					
CE	Electromagnetic Compatibility Directive 2014/30/EU (EMC)	Electromagnetic Compatibility Directive 2014/30/EU (EMC)	Electromagnetic Compatibility Directive 2014/30/EU (EMC)	Electromagnetic Compatibility Directive 2014/30/EU (EMC)	Electromagnetic Compatibility Directive 2014/30/EU (EMC)
ATEX	Zone 2: II 3 G Ex ic ec IIC T6 Gc	Zone 2: II 3 G Ex ic ec IIC T6 Gc	-	-	Zone 2: II 3 G Ex ic ec IIC T6 Gc
UL	cULus: UL508	cULus: UL508	cULus: UL508	cULus: UL508	cULus: UL508
UL	cULus: Class 1 Div 2	cULus: Class 1 Div 2	-	-	cULus: Class 1 Div 2
DNV	Yes	Yes	Yes	-	Yes
EU RO MR	Yes	Yes	Yes	-	Yes
RCM	Yes	Yes	Yes	Yes	Yes
Ordering Code	+ESMA04MU301	+ESMA07MU301	+ESMA107U301	+ESMA107BU301	+ESMA10U301



INDUSTRIAL

IoT GATEWAYS

INDUSTRIAL IoT GATEWAYS

eXware Series

eXware703

System Resources	
CPU	32-bit RISC single core - 1 GHz
Operating System	Linux RT
Flash	4 GB
RAM	512 MB
FRAM	64 KB
RT Clock, RTC Back-up, Buzzer	Yes
Interface	
Ethernet port	2 (port 0 - 10/100, port 1 - 10/100)
USB port	1 (Host v. 2.0, 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	0.35 A max. at 24 Vdc
Input Protection	Electronic
Battery	Yes
Environment Conditions	
Operating Temperature	-20°C to +60°C - Plug-in modules and USB devices may limit max temperature to +50 °C.
Storage Temperature	-20°C to +70°C
Operating/Storage Humidity	5 - 85% RH, non condensing
Protection Class	IP20
Dimensions and Weights	
Faceplate LxH	45x134 mm (1.77x5.27")
Depth D	102 mm (4.01")
Weight	0.6 Kg
Mounting	DIN Rail (TS35)
Approvals	
CE	Electromagnetic Compatibility Directive 2014/30/EU (EMC)
ATEX	Zone 2: II 3 G Ex ec IIC T5...T4 Gc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C
IECEX	Zone 2: Ex ec IIC T5...T4 Gc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C
UL	cULus: UL61010-1 / UL61010-2-201
UL	cULus: Class 1 Div 2
DNV	Yes
RCM	Yes
Ordering Code	+EXW703U0P1



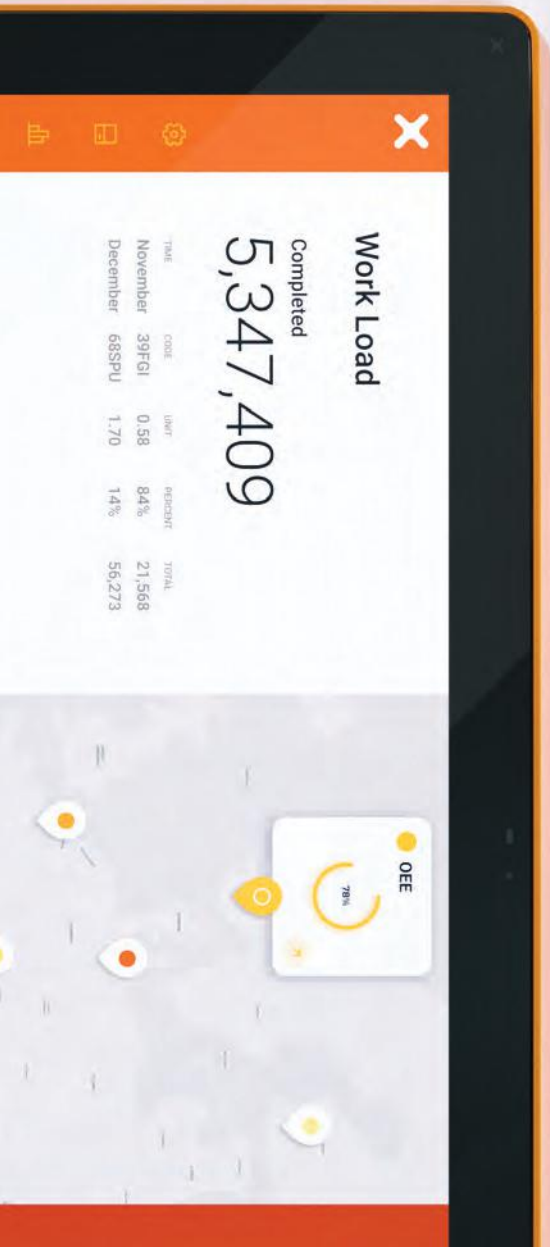
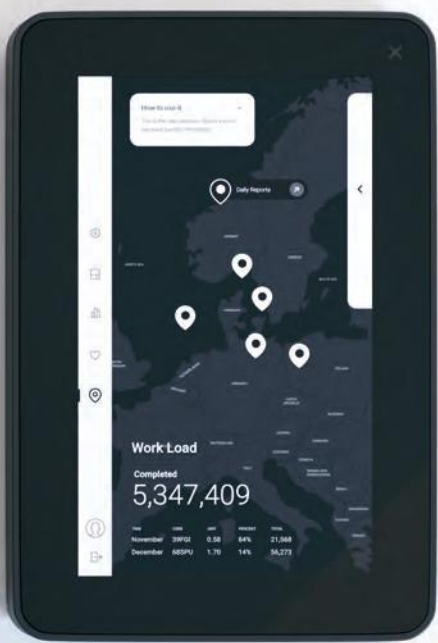
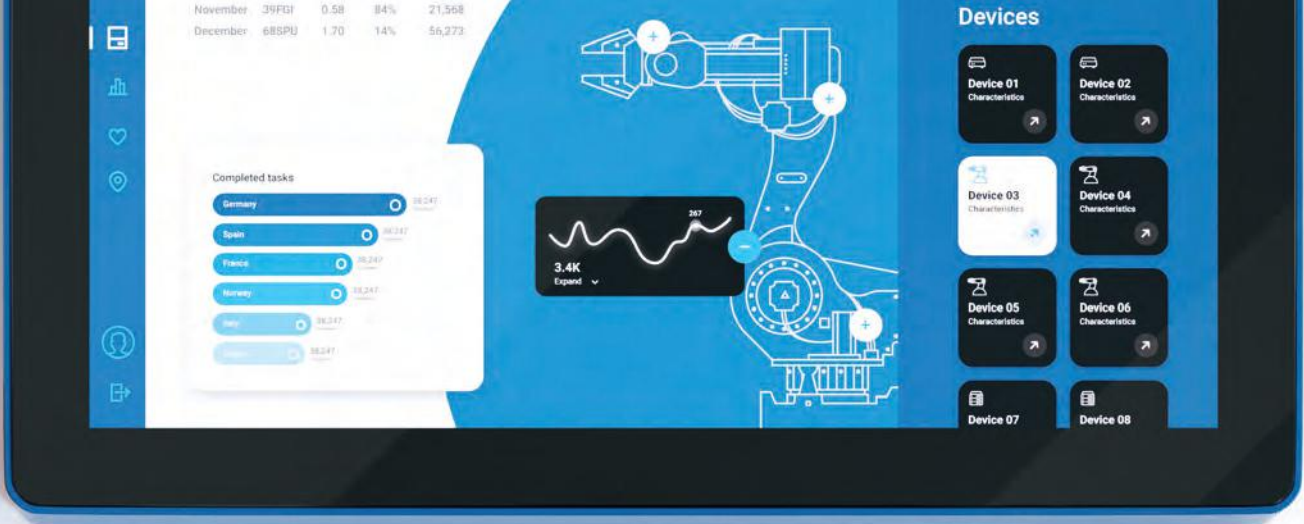


eXware707

eXware707M

eXware707Q

System Resources			
CPU	32-bit RISC dual core - 800 MHz	64-bit RISC quad core - 1.6 GHz	32-bit RISC quad core - 800 MHz
Operating System	Linux RT	Linux RT	Linux RT
Flash	4 GB	8 GB	8 GB
RAM	1 GB	2 GB	2 GB
FRAM	64 KB	64 KB	64 KB
RT Clock, RTC Back-up, Buzzer	Yes	Yes	Yes
Interface			
Ethernet port	3 (port 0 - 10/100/1000, port 1 - 10/100, port 2 - 10/100)	3 (port 0 - 10/100/1000, port 1 - 10/100, port 2 - 10/100)	3 (port 0 - 10/100/1000, port 1 - 10/100, port 2 - 10/100)
USB port	2 (Host v. 2.0, max. 500 mA)	2 (Host v. 2.0, max. 500 mA)	2 (Host v. 2.0, max. 500 mA)
Serial port	1 (RS-232, RS-485, RS-422, software configurable) Max 3 serial ports using plug-in modules.	1 (RS-232, RS-485, RS-422, software configurable) Max 3 serial ports using plug-in modules.	1 (RS-232, RS-485, RS-422, software configurable) Max 3 serial ports using plug-in modules.
SD card	Yes	Yes	Yes
Expansion	2 slots for plug-in modules	2 slots for plug-in modules	2 slots for plug-in modules
Ratings			
Power supply	24 Vdc (10 to 32 Vdc)	24 Vdc (10 to 32 Vdc)	24 Vdc (10 to 32 Vdc)
Current Consumption	0.5 A max. at 24 Vdc	0.5 A max. at 24 Vdc	0.55 A max. at 24 Vdc
Input Protection	Electronic	Electronic	Electronic
Battery	Yes	Yes	Yes
Environment Conditions			
Operating Temperature	-20°C to +60°C - Plug-in modules and USB devices may limit max temperature to +50 °C.	-20°C to +60°C - Plug-in modules and USB devices may limit max temperature to +50 °C.	-20°C to +60°C - Plug-in modules and USB devices may limit max temperature to +50 °C.
Storage Temperature	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C
Operating/Storage Humidity	5 - 85% RH, non condensing	5 - 85% RH, non condensing	5 - 85% RH, non condensing
Protection Class	IP20	IP20	IP20
Dimensions and Weights			
Faceplate LxH	44 x 174 mm	44 x 174 mm	44 x 174 mm
Depth D	144 mm	144 mm	144 mm
Weight	0.7 Kg	0.7 Kg	0.7 Kg
Mounting	DIN Rail (TS35)	DIN Rail (TS35)	DIN Rail (TS35)
Approvals			
CE	Electromagnetic Compatibility Directive 2014/30/EU (EMC)	Electromagnetic Compatibility Directive 2014/30/EU (EMC)	Electromagnetic Compatibility Directive 2014/30/EU (EMC)
ATEX	Zone 2: II 3 G Ex ec IIC T5...T4 Gc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C	Zone 2: II 3 G Ex ec IIC T5...T4 Gc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C	Zone 2: II 3 G Ex ec IIC T5...T4 Gc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C
IECEX	Zone 2: Ex ec IIC T5...T4 Gc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C	Zone 2: Ex ec IIC T5...T4 Gc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C	Zone 2: Ex ec IIC T5...T4 Gc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C
UL	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201
UL	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2
DNV	Yes	To be planned	Yes
RCM	Yes	Yes	Yes
Ordering Code	+EXW707U0P1	+EXW707MU0P1	+EXW707QU0P1



WEB

BASED

HMIS

WEB BASED HMIs

eX700M & eSMART Web Series

Why Web based HMIs ?

Web-based systems run client applications from any web-browser and when users login they always get the most recent version of an application.

There are no client licenses to manage, no tedious software installations, no application files to copy over and no communication configuration to setup. IT departments are willing to embrace technology they understand.

All this is in sharp contrast to traditional systems. The economic advantages of using web-based systems are compelling.

eSMART107B Web

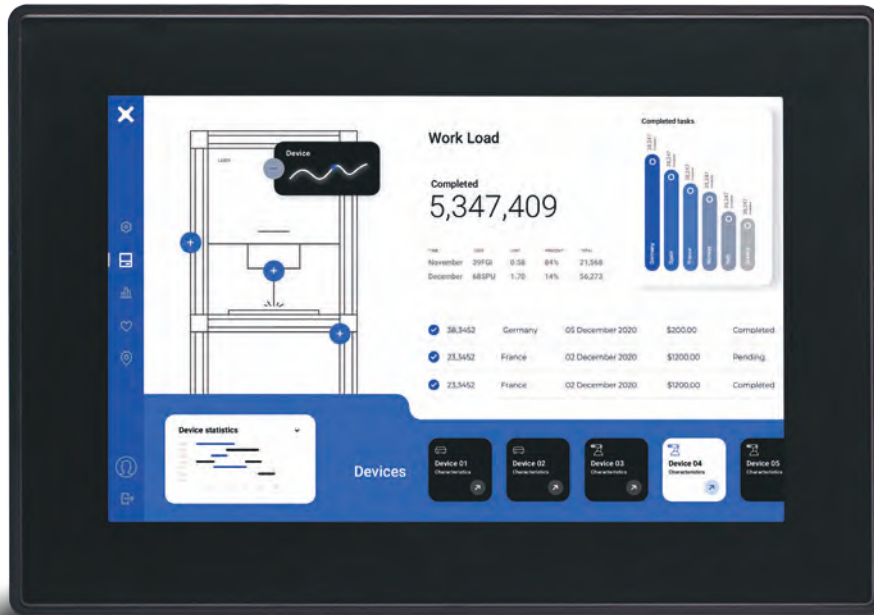
System Resources	
Display - Colors	7" TFT 16:9 - 64K
Resolution	800x480, WVGA
Brightness	200 cd/m ² typ.
Dimming	to 0%
Touchscreen	Resistive
CPU	32-bit RISC dual core - 800 MHz
Operating System	Linux RT
Flash	4 GB
RAM	1 GB
RTC, RTC Back-up, Buzzer	Yes, Yes, No
Interface	
Ethernet port	1 (port 0 - 10/100/1000)
USB port	1 (Host V2.0, max. 100 mA)
Ratings	
Power supply	24 Vdc (10 to 32 Vdc)
Current Consumption	0.3 A at 24 Vdc (max.)
Input Protection	Electronic
Environment Conditions	
Operating Temp	0 to +50°C (vertical installation)
Storage Temp	-20°C to +70°C
Operating / Storage Humidity	5-85% RH, non condensing
Protection Class	IP66 (front); IP20 (rear) - Type: 2, 4X
Dimensions and Weights	
Faceplate LxH	187x147 mm (7.36x5.79")
Cutout AxB	176x136 mm (6.93x5.35")
Depth D+T	29+5 mm (1.14+0.19")
Weight	0.875 Kg
Approvals	
CE	Electromagnetic Compatibility Directive 2014/30/ EU (EMC)
UL	cULus: UL508
RCM	Yes
Ordering Code	+ESMA107BU30C



	eX707M Web	eX710M Web	eX712M Web	eX715M Web	eX721M Web
System Resources					
Display - Colors	7" TFT - 16M	10.1" TFT - 16M	12.3" TFT - 16M	15.6" TFT - 16M	21.5" TFT - 16M
Resolution	800x480	1280x800	1920x720	1366x768	1920x1080, full HD
Brightness	500 cd/m ² typ.	500 cd/m ² typ.	600 cd/m ² typ.	400 cd/m ² typ.	300 cd/m ² typ.
Dimming	Yes	Yes	Yes	Yes	Yes
Touchscreen	True Glass Projected Capacitive, Multitouch				
CPU	64-bit RISC quad core - 1.6 GHz	64-bit RISC quad core - 1.6 GHz	64-bit RISC quad core - 1.6 GHz	64-bit RISC quad core - 1.6 GHz	64-bit RISC quad core - 1.6 GHz
Operating System	Linux	Linux	Linux	Linux	Linux
Flash	8 GB	8 GB	8 GB	8 GB	8 GB
RAM	2 GB	2 GB	2 GB	2 GB	2 GB
RTC, RTC Back-up, Buzzer	Yes	Yes	Yes	Yes	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)	2 (Host V2.0, max. 500 mA)	2 (Host V2.0, max. 500 mA)	2 (Host V2.0, max. 500 mA)	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	Yes	Yes	Yes	Yes
Expansion	2 slot for plug in modules	2 slot for plug in modules	2 slot for plug in modules	2 slot for plug in modules	2 slot for plug in modules
Ratings					
Power supply	24 Vdc (10 to 32 Vdc)	24 Vdc (10 to 32 Vdc)	24 Vdc (10 to 32 Vdc)	24 Vdc (10 to 32 Vdc)	24 Vdc (10 to 32 Vdc)
Current Consumption	0.7 A at 24 Vdc (max.)	1.0 A at 24 Vdc (max.)	1.1 A at 24 Vdc (max.)	1.2 A at 24 Vdc (max.)	1.7 A at 24 Vdc (max.)
Input Protection	Electronic	Electronic	Electronic	Electronic	Electronic
Battery	Rechargeable Lithium battery, not user-replaceable				
Environment Conditions					
Operating Temperature	-20° to +60 °C (vertical installation). Plug-in and USB devices may limit max temperature to +50 °C				
Storage Temperature	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C
Operating / Storage Humidity	5-85% RH, non condensing	5-85% RH, non condensing	5-85% RH, non condensing	5-85% RH, non condensing	5-85% RH, non condensing
Protection Class	IP66 (front), IP20 (rear) - Type: 12, 4X	IP66 (front), IP20 (rear) - Type: 12, 4X	IP66 (front), IP20 (rear) - Type: 12, 4X	IP66 (front), IP20 (rear) - Type: 12, 4X	IP66 (front), IP20 (rear) - Type: 12, 4X
Dimensions and Weights					
Faceplate LxH	187x147 mm (7.36x5.79")	282x197 mm (11.10x7.80")	344.5x163 mm (13.56x6.41")	422x267 mm (16.6x10.5")	552x347 mm (21.7x13.66")
Cutout AxB	176x136 mm (6.93x5.35")	271x186 mm (10.67x7.32")	332.5x152 mm (13.09x5.94")	411x256 mm (16.18x10")	541x336 mm (21.3x13.22")
Depth D+T	47+8 mm (1.85+0.31")	56+8 mm (2.20+0.31")	49+8.5 mm (1.92+0.33")	56+8 mm (2.20+0.31")	56+8 mm (2.20+0.31")
Weight	1.5 Kg	2.5 Kg	1.8 Kg	4.1 Kg	6.1 Kg
Approvals					
CE	Electromagnetic Compatibility Directive 2014/30/EU (EMC)				
ATEX	Zone 2/22: II 3 G Ex ec IIC T5...T4 Gc, II 3 D Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C				
IECEX	Zone 2/22: Ex ec IIC T5...T4 Gc, Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C				
UL	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201
UL	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2
DNV	Yes	Yes	Yes	Yes	Yes
RCM	Yes	Yes	Yes	Yes	Yes
Ordering Code	+EX707MU5PW	+EX710MU5PW	+EX712MU5PW	+EX715MU5PW	+EX721MU5PW

WEB BASED HMIs

eX700MG & JSmart700M Web Series



eX715MG Web

System Resources	
Display - Colors	15,6 TFT - 16M
Resolution	1920x1080
Brightness	700 cd/m ² typ.
Dimming	Yes
Touchscreen	True Glass Projected Capacitive, Multitouch, Optical Bonding
CPU	64-bit RISC quad core - 1.6GHz
Operating System	Linux
Flash	8 GB
RAM	2 GB
Real Time Clock, RTC Back-up	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	1.35 A at 24 Vdc (max.)
Input Protection	Electronic
Battery	Rechargeable Lithium battery, not user-replaceable
Environment Conditions	
Operating Temperature	-30° to +70 °C (vertical installation). Plug-in modules and USB devices may limit max temperature to +50 °C
Storage Temperature	-40°C to +85°C
Operating / Storage Humidity	5-85% RH, non condensing
Protection Class	IP66 (front), IP20 (rear) - Type: 12, 4X
Dimensions and Weights	
Faceplate LxH	422x267 mm (16.6x10.5")
Cutout AxB	411x256 mm (16.18x10")
Depth D+T	56+8 mm (2.20+0.31")
Weight	4.1 Kg
Approvals	
CE	Electromagnetic Compatibility Directive 2014/30/EU (EMC)
UL	cULus: UL61010-1 / UL61010-2-201
UL	* cULus: Class 1 Div 2
DNV	Yes
RCM	Yes
Ordering Code	+EX715MGU5PW

* Scheduled



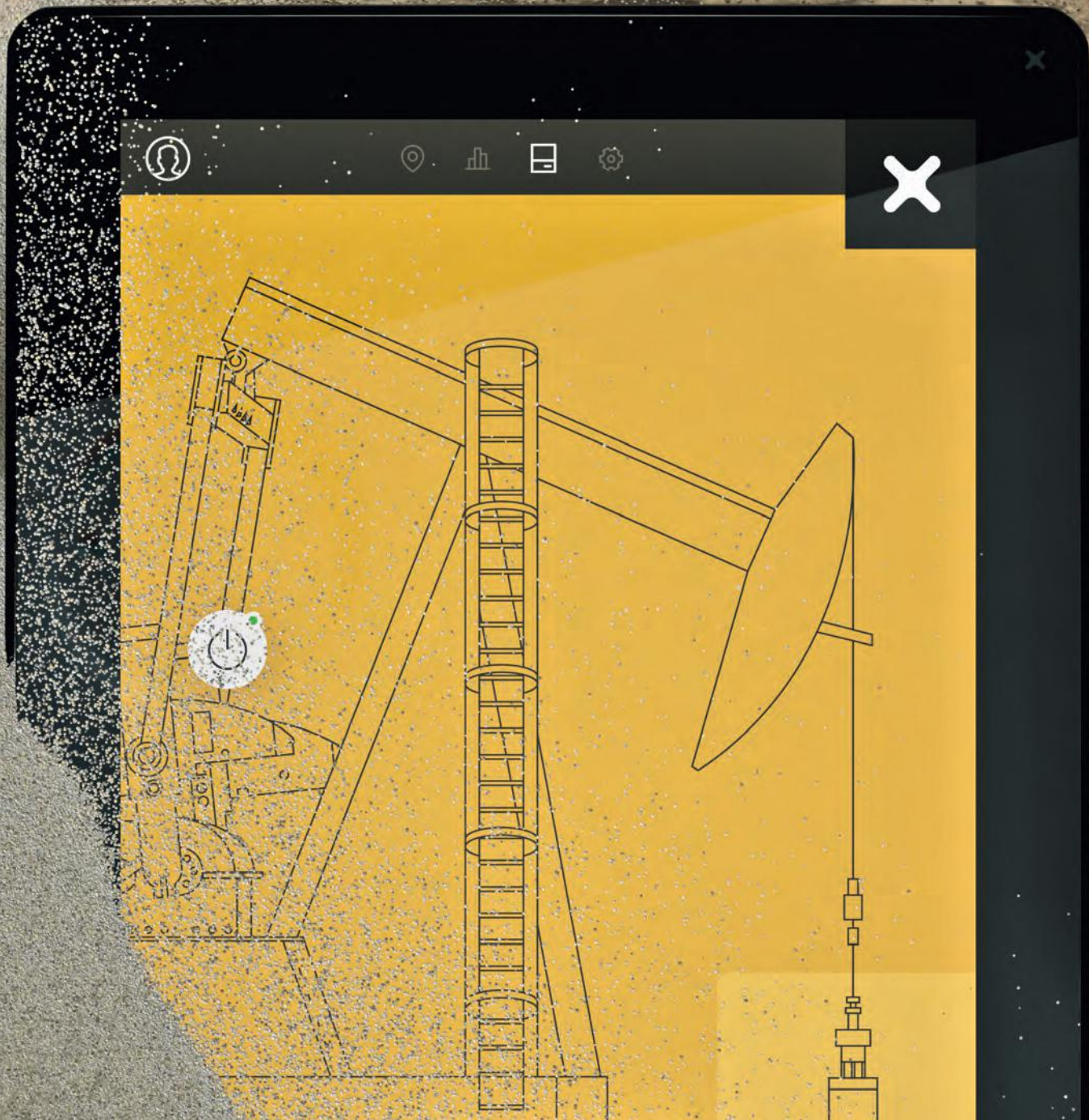
JSmart707M Web

JSmart710M Web

JSmart715M Web

JSmart721M Web

System Resources				
Display - Colors	7" TFT - 16M	10.1" TFT - 16M	15.6" TFT - 16M	21.5" TFT - 16M
Resolution	1024x600	1280x800	1366x768	1920x1080
Brightness	400 cd/m ² typ.	400 cd/m ² typ.	400 cd/m ² typ.	400 cd/m ² typ.
Dimming	Yes	Yes	Yes	Yes
Touchscreen	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch
CPU	64-bit RISC Quad core - 1.6 GHz	64-bit RISC Quad core - 1.6 GHz	64-bit RISC Quad core - 1.6 GHz	64-bit RISC Quad core - 1.6 GHz
Operating System	Linux	Linux	Linux	Linux
Flash	8 GB	8 GB	8 GB	8 GB
RAM	2 GB	2 GB	2 GB	2 GB
Real Time Clock, RTC Back-up	Yes	Yes	Yes	Yes
Interface				
Ethernet port	10/100 PoE	10/100 PoE	10/100 PoE	10/100 PoE
USB port	1 (Host V2.0, max. 500 mA, available with special cable)	1 (Host V2.0, max. 500 mA, available with special cable)	1 (Host V2.0, max. 500 mA, available with special cable)	1 (Host V2.0, max. 500 mA, available with special cable)
LED	1 RGB	1 RGB	1 RGB	1 RGB
Sensors	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer
Buzzer	Yes	Yes	Yes	Yes
NFC	ISO/IEC 14443A	ISO/IEC 14443A	ISO/IEC 14443A	ISO/IEC 14443A
Wi-Fi	IEEE 802.11a/b/g	IEEE 802.11a/b/g	IEEE 802.11a/b/g	IEEE 802.11a/b/g
Ratings				
Power supply	IEEE 802.3af PoE	IEEE 802.3af PoE	IEEE 802.3at PoE+	IEEE 802.3bt 4PPoE
Power Consumption	12W max.	14W max.	23W max.	35W max.
Battery	Rechargeable Lithium battery, not user-replaceable	Rechargeable Lithium battery, not user-replaceable	Rechargeable Lithium battery, not user-replaceable	Rechargeable Lithium battery, not user-replaceable
Environment Conditions				
Operating Temperature	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)
Storage Temperature	-30°C to +80°C	-30°C to +80°C	-30°C to +80°C	-30°C to +80°C
Operating / Storage Humidity	5-85% RH, non-condensing	5-85% RH, non-condensing	5-85% RH, non-condensing	5-85% RH, non-condensing
Protection Class	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x
Dimensions and Weights				
Faceplate LxH	195.2x131.6 mm (7.68x5.18")	264.5x183.1 mm (10.41x7.20")	398.6x248 mm (15.69x 9.76")	534.1x325.6 mm (21.02x 12.81")
Depth D	16.5 mm (0.6")	16.5 mm (0.6")	26.5 mm (1.04")	26.5 mm (1.04")
Weight	0.7 Kg	1.2 Kg	4.0 Kg	6.0 Kg
Approvals				
CE	Radio Equipment Directive 2014/53/EU (RED)	Radio Equipment Directive 2014/53/EU (RED)	Radio Equipment Directive 2014/53/EU (RED)	Radio Equipment Directive 2014/53/EU (RED)
UL	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201
UL	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2
RCM	Yes	Yes	Yes	Yes
Ordering Code	+JS707GB2U5PW	+JS710GC2U5PW	+JS715GD2U5PW	+JS721GE2U5PW



OUTDOOR

HMIS

OUTDOOR HMIs

XA5 & eX700G Series



XA5

System Resources	
Display - Colors	5" TFT - 64K
Resolution	800x480
Brightness	500 cd/m ² typ.
Dimming	Yes - down to 0%
Touchscreen	Projected Capacitive, Multitouch, Optical Bonding
CPU	32-bit RISC Dual Core - 650 MHz
Operating System	Linux RT
Flash	8 GB
RAM	1 GB
FRAM	64 KB
Real Time Clock, RTC Back-up	Yes, rechargeable battery
Interface	
Ethernet port	2 ports 10/100 Mbit/s
CAN port	2, FD, isolated, up to 1 Mbit/s
USB port	1 Host v. 2.0 500mA
Serial port	RS-485, isolated
Digital Output	1 SSR NO 60V 0.5A
Wi-Fi	IEEE 802.11a/b/g
Sensors	Temperature, 3-Axis Accelerometer, Environment Light
Buzzer	Yes
Expansion	1 slot for plug-in modules
Ratings	
Power supply	24 Vdc (10 to 32 Vdc)
Power consumption	1.4 A at 24 Vdc (max.)
Power management key	Yes
Environment Conditions	
Operating Temperature	-30°C to +70°C
Storage Temperature	-40°C to +85°C
Operating / Storage Humidity	5-85% RH, non condensing
Protection Class	IP66/IP67
Dimensions and Weights	
Faceplate LxH	158.6x115 mm (6.24"x4.53")
Cutout AxB	142.6x99 mm (5.61"x3.90")
Depth D+T	44+6.5 mm (1.73"+0.26")
Weight	0.6 Kg
Approvals	
CE	Radio Equipment Directive 2014/53/EU (RED)
UL	* cULus: UL61010-1 / UL61010-2-201
DNV	* Yes
RCM	Yes
Ordering Code	+XA5U5P1

* Scheduled



	eX707G	eX710G	eX715MG
System Resources			
Display - Colors	7" TFT - 16M	10.1" TFT - 16M	15,6 TFT - 16M
Resolution	800x480	1280x800	1920x1080
Brightness	600 cd/m ² typ.	800 cd/m ² typ.	700 cd/m ² typ.
Dimming	to 0%	to 0%	Yes
Touchscreen	True Glass Projected Capacitive, Multitouch	True Glass Projected Capacitive, Multitouch	True Glass Projected Capacitive, Multitouch, Optical Bonding
CPU	32-bit RISC Dual core - 800 MHz	32-bit RISC Dual core - 800 MHz	64-bit RISC Quad core - 1.6GHz
Operating System	Linux RT	Linux RT	Linux
Flash	4 GB	4 GB	8 GB
RAM	1 GB	1 GB	2 GB
FRAM	64 KB	64 KB	64 KB
RT-Clock, RTC Back-up, Buzzer	Yes	Yes	Yes
Interface			
Ethernet port	3 (port 0 - 10/100/1000, port 1 - 10/100, port 2 - 10/100)	3 (port 0 - 10/100/1000, port 1 - 10/100, port 2 - 10/100)	3 (port 0 - 10/100/1000, port 1 - 10/100, port 2 - 10/100)
USB port	2 (Host V2.0, max. 500 mA)	2 (Host V2.0, max. 500 mA)	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.	1 (RS-232, RS-485, RS-422, software configurable) Max 3 serial ports using plug-in modules.	1 (RS-232, RS-485, RS-422, software configurable) Max 3 serial ports using plug-in modules.
SD card	Yes	Yes	Yes
Expansion	2 slot for plug in modules	2 slot for plug in modules	2 slot for plug in modules
Ratings			
Power supply	24 Vdc (10 to 32 Vdc)	24 Vdc (10 to 32 Vdc)	24 Vdc (10 to 32 Vdc)
Current Consumption	0.7 A at 24 Vdc (max.)	1.0 A at 24 Vdc (max.)	1.35 A at 24 Vdc (max.)
Input Protection	Electronic	Electronic	Electronic
Battery	Rechargeable Lithium battery, not user-replaceable	Rechargeable Lithium battery, not user-replaceable	Rechargeable Lithium battery, not user-replaceable
Environment Conditions			
Operating Temperature	-20° to +60 °C (vertical installation) Plug-in modules and USB devices may limit max temperature to +50 °C	-20° to +60 °C (vertical installation) Plug-in modules and USB devices may limit max temperature to +50 °C	-30° to +70 °C (vertical installation). Plug-in modules and USB devices may limit max temperature to +50 °C
Storage Temperature	-20°C to +70°C	-20°C to +70°C	-40°C to +85°C
Operating / Storage Humidity	5-85% RH, non condensing	5-85% RH, non condensing	5-85% RH, non condensing
Protection Class	IP66 (front), IP20 (rear) - Type: 12, 4X	IP66 (front), IP20 (rear) - Type: 12, 4X	IP66 (front), IP20 (rear) - Type: 12, 4X
Dimensions and Weights			
Faceplate LxH	187x147 mm (7.36x5.79")	282x197 mm (11.10x7.80")	422x267 mm (16.6x10.5")
Cutout AxB	176x136 mm (6.93x5.35")	271x186 mm (10.67x7.32")	411x256 mm (16.18x10")
Depth D+T	47+8 mm (1.85+0.31")	56+8 mm (2.20+0.31")	56+8 mm (2.20+0.31")
Weight	1.5 Kg	2.5 Kg	4.1 Kg
Approvals			
CE	Electromagnetic Compatibility Directive 2014/30/EU (EMC)	Electromagnetic Compatibility Directive 2014/30/EU (EMC)	Electromagnetic Compatibility Directive 2014/30/EU (EMC)
ATEX	Zone 2/22: II 3 G Ex ec IIC T5...T4 Gc, II 3 D Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C		To be planned
IECEX	Zone 2/22: Ex ec IIC T5...T4 Gc, Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C		To be planned
UL	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201
UL	cULus: Class I Div. 2	cULus: Class I Div. 2	* cULus: Class 1 Div 2
DNV	Yes	Yes	Yes
RCM	Yes	Yes	Yes
Ordering Code	+EX707GU5P1	+EX710GU5P1	+EX715MGU5P1

* Scheduled



RUGGED

HMIS

RUGGED HMIs

JSmart700M & JSmart700 Series

	JSmart707M	JSmart710M	JSmart715M	JSmart721M
System Resources				
Display - Colors	7" TFT - 16M	10.1" TFT - 16M	15.6" TFT - 16M	21.5" TFT - 16M
Resolution	1024x600	1280x800	1366x768	1920x1080
Brightness	400 cd/m ² typ.	400 cd/m ² typ.	400 cd/m ² typ.	400 cd/m ² typ.
Dimming	Yes	Yes	Yes	Yes
Touchscreen	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch
CPU	64-bit RISC Quad core - 1.6 GHz	64-bit RISC Quad core - 1.6 GHz	64-bit RISC Quad core - 1.6 GHz	64-bit RISC Quad core - 1.6 GHz
Operating System	Linux	Linux	Linux	Linux
Flash	8 GB	8 GB	8 GB	8 GB
RAM	2 GB	2 GB	2 GB	2 GB
FRAM	64 KB	64 KB	64 KB	64 KB
RT-Clock, RTC Back-up	Yes	Yes	Yes	Yes
Interface				
Ethernet port	10/100 PoE	10/100 PoE	10/100 PoE	10/100 PoE
USB port	1 (Host V2.0, max. 500 mA, available with special cable)	1 (Host V2.0, max. 500 mA, available with special cable)	1 (Host V2.0, max. 500 mA, available with special cable)	1 (Host V2.0, max. 500 mA, available with special cable)
LED	1 RGB	1 RGB	1 RGB	1 RGB
Sensors	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer
Buzzer	Yes	Yes	Yes	Yes
NFC	ISO/IEC 14443A	ISO/IEC 14443A	ISO/IEC 14443A	ISO/IEC 14443A
Wi-Fi	IEEE 802.11a/b/g	IEEE 802.11a/b/g	IEEE 802.11a/b/g	IEEE 802.11a/b/g
Ratings				
Power supply	IEEE 802.3af PoE	IEEE 802.3af PoE	IEEE 802.3at PoE+	IEEE 802.3bt 4PPoE
Power Consumption	12W max.	14W max.	23W max.	35W max.
Battery	Rechargeable Lithium battery, not user-replaceable	Rechargeable Lithium battery, not user-replaceable	Rechargeable Lithium battery, not user-replaceable	Rechargeable Lithium battery, not user-replaceable
Environment Conditions				
Operating Temperature	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)
Storage Temperature	-30°C to +80°C	-30°C to +80°C	-30°C to +80°C	-30°C to +80°C
Operating / Storage Humidity	5-85% RH, non-condensing	5-85% RH, non-condensing	5-85% RH, non-condensing	5-85% RH, non-condensing
Protection Class	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x
Dimensions and Weights				
Faceplate LxH	195.2x131.6 mm (7.68x5.18")	264.5x183.1 mm (10.41x7.20")	398.6x248 mm (15.69x 9.76")	534.1x325.6 mm (21.02x 12.81")
Depth D	16.5 mm (0.6")	16.5 mm (0.6")	26.5 mm (1.04")	26.5 mm (1.04")
Weight	0.7 Kg	1.2 Kg	4.0 Kg	6.0 Kg
Approvals				
CE	Radio Equipment Directive 2014/53/EU (RED)	Radio Equipment Directive 2014/53/EU (RED)	Radio Equipment Directive 2014/53/EU (RED)	Radio Equipment Directive 2014/53/EU (RED)
UL	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201
UL	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2
DNV	To be planned	To be planned	To be planned	To be planned
RCM	Yes	Yes	Yes	Yes
Ordering Code	+JS707GB2U5P1	+JS710GC2U5P1	+JS715GD2U5P1	+JS721GE2U5P1



	JSmart705	JSmart707	JSmart710	JSmart715	JSmart721
System Resources					
Display - Colors	5" TFT – 16M	7" TFT – 16M	10.1" TFT – 16M	15.6" TFT – 16M	21.5" TFT – 16M
Resolution	800x480	1024x600	1280x800	1366x768	1920x1080
Brightness	300 cd/m ² typ.	400 cd/m ² typ.	400 cd/m ² typ.	400 cd/m ² typ.	400 cd/m ² typ.
Dimming	to 0%	to 0%	to 0%	to 0%	to 0%
Touchscreen	Projected Capacitive – Multitouch	Projected Capacitive – Multitouch	Projected Capacitive – Multitouch	Projected Capacitive – Multitouch	Projected Capacitive – Multitouch
CPU	32-bit RISC dual core - 800 MHz	32-bit RISC dual core - 800 MHz	32-bit RISC dual core - 800 MHz	32-bit RISC quad core - 800 MHz	32-bit RISC quad core - 800 MHz
Operating system	Linux RT	Linux RT	Linux RT	Linux RT	Linux RT
Flash	4 GB	4 GB	4 GB	8 GB	8 GB
RAM	1 GB	1 GB	1 GB	2 GB	2 GB
FRAM	64 KB	64 KB	64 KB	64 KB	64 KB
RT-Clock, RTC Back-up	Yes	Yes	Yes	Yes	Yes
Interface					
Ethernet port	10/100 PoE	10/100 PoE	10/100 PoE	10/100 PoE	10/100 PoE
USB port	1 (Host V2.0, max. 50 mA, available with special cable)	1 (Host V2.0, max. 50 mA, available with special cable)	1 (Host V2.0, max. 50 mA, available with special cable)	1 (Host V2.0, max. 50 mA, available with special cable)	1 (Host V2.0, max. 50 mA, available with special cable)
LED	1 RGB	1 RGB	1 RGB	1 RGB	1 RGB
Sensors	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer
Wi-Fi	No	IEEE 802.11a/b/g	IEEE 802.11a/b/g	IEEE 802.11a/b/g	IEEE 802.11a/b/g
Buzzer	Yes	Yes	Yes	Yes	Yes
Ratings					
Power supply	IEEE 802.3af PoE	IEEE 802.3af PoE	IEEE 802.3af PoE	IEEE 802.3at PoE+	IEEE 802.3bt 4PPoE
Power Consumption	6 W max.	12 W max.	14 W max.	23 W max.	35 W max.
Battery	Yes (rechargeable)	Yes (rechargeable)	Yes (rechargeable)	Yes (rechargeable)	Yes (rechargeable)
Environment Conditions					
Operating Temperature	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)
Storage Temperature	-30°C to +80°C	-30°C to +80°C	-30°C to +80°C	-30°C to +80°C	-30°C to +80°C
Operating / Storage Humidity	5-85% RH, non-condensing	5-85% RH, non-condensing	5-85% RH, non-condensing	5-85% RH, non-condensing	5-85% RH, non-condensing
Protection Class	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x
Dimensions and Weights					
Faceplate LxH	148.3x105.1 mm (5.83x 4.13")	195.2x131.6 mm (7.68x5.18")	264.5x183.1 mm (10.41x7.20")	398.6x248 mm (15.69x 9.76")	534.1x325.6 mm (21.02x 12.81")
Depth D+T+T	16.5 mm (0.06")	16.5 mm (0.06")	16.5 mm (0.06")	26.5 mm (1.04")	26.5 mm (1.04")
Weight	0.5 Kg	0.7 Kg	1.2 Kg	4.0 Kg	6.0 Kg
Approvals					
CE	Electromagnetic Compatibility Directive 2014/30/EU (EMC)	Radio Equipment Directive 2014/53/EU (RED)	Radio Equipment Directive 2014/53/EU (RED)	Radio Equipment Directive 2014/53/EU (RED)	Radio Equipment Directive 2014/53/EU (RED)
UL	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201
UL	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2
DNV	Yes	Yes	Yes	Yes	Yes
RCM	Yes	Yes	Yes	Yes	Yes
Ordering Code	+JS705BA0U5P1	+JS707BB1U5P1	+JS710BC1U5P1	+JS715CD1U5P1	+JS721CE1U5P1

RUGGED HMIs

eX700M Series



eX707M

System Resources	
Display - Colors	7" TFT - 16M
Resolution	800x480
Brightness	500 cd/m ² typ.
Dimming	Yes
Touchscreen	Projected Capacitive, Multitouch
CPU	64-bit RISC quad core - 1.6 GHz
Operating System	Linux
Flash	8 GB
RAM	2 GB
FRAM	64 KB
RTC, 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 Temperature	-20° to +60 °C (vertical installation). Plug-in and USB devices may limit max temperature to +50 °C
Storage Temperature	-20°C to +70°C
Operating / Storage Humidity	5-85% RH, non condensing
Protection Class	IP66 (front), IP20 (rear) - Type: 12, 4X
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	Electromagnetic Compatibility Directive 2014/30/EU (EMC)
ATEX	Zone 2/22: II 3 G Ex ec IIC T5...T4 Gc, II 3 D Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C"
IECEX	Zone 2/22: Ex ec IIC T5...T4 Gc, Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C"
UL	cULus: UL61010-1 / UL61010-2-201
UL	cULus: Class 1 Div 2
DNV	Yes
RCM	Yes
Ordering Code	+EX707MU5P1



eX710M

eX712M

eX715M

eX721M

System Resources				
Display - Colors	10.1" TFT - 16M	12.3" TFT - 16M	15.6" TFT - 16M	21.5" TFT - 16M
Resolution	1280x800	1920x720	1366x768	1920x1080
Brightness	500 cd/m ² typ.	600 cd/m ² typ.	400 cd/m ² typ.	300 cd/m ² typ.
Dimming	Yes	Yes	Yes	Yes
Touchscreen	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch
CPU	64-bit RISC quad core - 1.6 GHz	64-bit RISC quad core - 1.6 GHz	64-bit RISC quad core - 1.6 GHz	64-bit RISC quad core - 1.6 GHz
Operating System	Linux	Linux	Linux	Linux
Flash	8 GB	8 GB	8 GB	8 GB
RAM	2 GB	2 GB	2 GB	2 GB
FRAM	64 KB	64 KB	64 KB	64 KB
RTC, RTC Back-up, Buzzer	Yes	Yes	Yes	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)	2 (Host V2.0, max. 500 mA)	2 (Host V2.0, max. 500 mA)	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	Yes	Yes	Yes
Expansion	2 slot for plug in modules	2 slot for plug in modules	2 slot for plug in modules	2 slot for plug in modules
Ratings				
Power supply	24 Vdc (10 to 32 Vdc)	24 Vdc (10 to 32 Vdc)	24 Vdc (10 to 32 Vdc)	24 Vdc (10 to 32 Vdc)
Current Consumption	1.0 A at 24 Vdc (max.)	1.1 A at 24 Vdc (max.)	1.2 A at 24 Vdc (max.)	1.7 A at 24 Vdc (max.)
Input Protection	Electronic	Electronic	Electronic	Electronic
Battery	Rechargeable Lithium battery, not user-replaceable			
Environment Conditions				
Operating Temperature	-20° to +60 °C (vertical installation). Plug-in and USB devices may limit max temperature to +50 °C			
Storage Temperature	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C
Operating / Storage Humidity	5-85% RH, non condensing	5-85% RH, non condensing	5-85% RH, non condensing	5-85% RH, non condensing
Protection Class	IP66 (front), IP20 (rear) - Type: 12, 4X	IP66 (front), IP20 (rear) - Type: 12, 4X	IP66 (front), IP20 (rear) - Type: 12, 4X	IP66 (front), IP20 (rear) - Type: 12, 4X
Dimensions and Weights				
Faceplate LxH	282x197 mm (11.10x7.80")	344.5x163 mm (13.56x6.41")	422x267 mm (16.6x10.5")	552x347 mm (21.7x13.66")
Cutout AxB	271x186 mm (10.67x7.32")	332.5x152 mm (13.09x5.94")	411x256 mm (16.18x10")	541x336 mm (21.3x13.22")
Depth D+T	56+8 mm (2.20+0.31")	49+8.5 mm (1.92+0.33")	56+8 mm (2.20+0.31")	56+8 mm (2.20+0.31")
Weight	2.5 Kg	1.8 Kg	4.1 Kg	6.1 Kg
Approvals				
CE	Electromagnetic Compatibility Directive 2014/30/EU (EMC)			
ATEX	Zone 2/22: II 3 G Ex ec IIC T5...T4 Gc, II 3 D Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C			
IECEX	Zone 2/22: Ex ec IIC T5...T4 Gc, Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C			
UL	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201
UL	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2
DNV	Yes	Yes	Yes	Yes
RCM	Yes	Yes	Yes	Yes
Ordering Code	+EX710MU5P1	+EX712MU5P1	+EX715MU5P1	+EX721MU5P1

RUGGED HMIs

XA5 & eX700G Series



XA5

System Resources	
Display - Colors	5" TFT - 64K
Resolution	800x480
Brightness	500 cd/m ² typ.
Dimming	Yes - down to 0%
Touchscreen	Projected Capacitive, Multitouch, Optical Bonding
CPU	32-bit RISC Dual Core - 650 MHz
Operating System	Linux RT
Flash	8 GB
RAM	1 GB
FRAM	64 KB
Real Time Clock, RTC Back-up	Yes, rechargeable battery
Interface	
Ethernet port	2 ports 10/100 Mbit/s
CAN port	2, FD, isolated, up to 1 Mbit/s
USB port	1 Host v. 2.0 500mA
Serial port	RS-485, isolated
Digital Output	1 SSR NO 60V 0.5A
Wi-Fi	IEEE 802.11a/b/g
Sensors	Temperature, 3-Axis Accelerometer, Environment Light
Buzzer	Yes
Expansion	1 slot for plug-in modules
Ratings	
Power supply	24 Vdc (10 to 32 Vdc)
Power consumption	1.4 A at 24 Vdc (max.)
Power management key	Yes
Environment Conditions	
Operating Temperature	-30°C to +70°C
Storage Temperature	-40°C to +85°C
Operating / Storage Humidity	5-85% RH, non condensing
Protection Class	IP66/IP67
Dimensions and Weights	
Faceplate LxH	158.6x115 mm (6.24"x4.53")
Cutout AxB	142.6x99 mm (5.61"x3.90")
Depth D+T	44+6.5 mm (1.73"+0.26")
Weight	0.6 Kg
Approvals	
CE	Radio Equipment Directive 2014/53/EU (RED)
UL	* cULus: UL61010-1 / UL61010-2-201
DNV	* Yes
RCM	Yes
Ordering Code	+XA5U5P1

* Scheduled



	eX707G	eX710G	eX715MG
System Resources			
Display - Colors	7" TFT - 16M	10.1" TFT - 16M	15,6 TFT - 16M
Resolution	800x480	1280x800	1920x1080
Brightness	600 cd/m ² typ.	800 cd/m ² typ.	700 cd/m ² typ.
Dimming	to 0%	to 0%	Yes
Touchscreen	True Glass Projected Capacitive, Multitouch	True Glass Projected Capacitive, Multitouch	True Glass Projected Capacitive, Multitouch, Optical Bonding
CPU	32-bit RISC Dual core - 800 MHz	32-bit RISC Dual core - 800 MHz	64-bit RISC Quad core - 1.6GHz
Operating System	Linux RT	Linux RT	Linux
Flash	4 GB	4 GB	8 GB
RAM	1 GB	1 GB	2 GB
FRAM	64 KB	64 KB	64 KB
RT-Clock, RTC Back-up, Buzzer	Yes	Yes	Yes
Interface			
Ethernet port	3 (port 0 - 10/100/1000, port 1 - 10/100, port 2 - 10/100)	3 (port 0 - 10/100/1000, port 1 - 10/100, port 2 - 10/100)	3 (port 0 - 10/100/1000, port 1 - 10/100, port 2 - 10/100)
USB port	2 (Host V2.0, max. 500 mA)	2 (Host V2.0, max. 500 mA)	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.	1 (RS-232, RS-485, RS-422, software configurable) Max 3 serial ports using plug-in modules.	1 (RS-232, RS-485, RS-422, software configurable) Max 3 serial ports using plug-in modules.
SD card	Yes	Yes	Yes
Expansion	2 slot for plug in modules	2 slot for plug in modules	2 slot for plug in modules
Ratings			
Power supply	24 Vdc (10 to 32 Vdc)	24 Vdc (10 to 32 Vdc)	24 Vdc (10 to 32 Vdc)
Current Consumption	0.7 A at 24 Vdc (max.)	1.0 A at 24 Vdc (max.)	1.35 A at 24 Vdc (max.)
Input Protection	Electronic	Electronic	Electronic
Battery	Rechargeable Lithium battery, not user-replaceable	Rechargeable Lithium battery, not user-replaceable	Rechargeable Lithium battery, not user-replaceable
Environment Conditions			
Operating Temperature	-20° to +60 °C (vertical installation) Plug-in modules and USB devices may limit max temperature to +50 °C	-20° to +60 °C (vertical installation) Plug-in modules and USB devices may limit max temperature to +50 °C	-30° to +70 °C (vertical installation). Plug-in modules and USB devices may limit max temperature to +50 °C
Storage Temperature	-20°C to +70°C	-20°C to +70°C	-40°C to +85°C
Operating / Storage Humidity	5-85% RH, non condensing	5-85% RH, non condensing	5-85% RH, non condensing
Protection Class	IP66 (front), IP20 (rear) - Type: 12, 4X	IP66 (front), IP20 (rear) - Type: 12, 4X	IP66 (front), IP20 (rear) - Type: 12, 4X
Dimensions and Weights			
Faceplate LxH	187x147 mm (7.36x5.79")	282x197 mm (11.10x7.80")	422x267 mm (16.6x10.5")
Cutout AxB	176x136 mm (6.93x5.35")	271x186 mm (10.67x7.32")	411x256 mm (16.18x10")
Depth D+T	47+8 mm (1.85+0.31")	56+8 mm (2.20+0.31")	56+8 mm (2.20+0.31")
Weight	1.5 Kg	2.5 Kg	4.1 Kg
Approvals			
CE	Electromagnetic Compatibility Directive 2014/30/EU (EMC)	Electromagnetic Compatibility Directive 2014/30/EU (EMC)	Electromagnetic Compatibility Directive 2014/30/EU (EMC)
ATEX	Zone 2/22: II 3 G Ex ec IIC T5...T4 Gc, II 3 D Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C		To be planned
IECEX	Zone 2/22: Ex ec IIC T5...T4 Gc, Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C		To be planned
UL	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201
UL	cULus: Class I Div. 2	cULus: Class I Div. 2	* cULus: Class 1 Div 2
DNV	Yes	Yes	Yes
RCM	Yes	Yes	Yes
Ordering Code	+EX707GU5P1	+EX710GU5P1	+EX715MGU5P1

* Scheduled



FOOD &

PHARMA

INDUSTRY

FOOD & PHARMACEUTICAL INDUSTRY

eX700FB Series





eX707FB

eX715FB

System Resources		
Display - Colors	7" TFT 16:9 - 16M	15,6" TFT - 16M
Resolution	800x480, WVGA	1366x768, HD
Brightness	500 Cd/m ² typ.	400 Cd/m ² typ.
Dimming	to 0%	to 0%
Touchscreen	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch
CPU	32-bit RISC dual core - 800 MHz	32-bit RISC quad core - 800 MHz
Operating System	Linux RT	Linux RT
Flash	4 GB	8 GB
RAM	1 GB	2 GB
Real-Time-Clock, RTCBack-up, Buzzer	Yes	Yes
Interface		
Ethernet port	3 (port 0 - 10/100/1000, port 1 - 10/100, port 2 - 10/100)	3 (port 0 - 10/100/1000, port 1 - 10/100, port 2 - 10/100)
USB port	2 (Host V2.0, max. 500 mA)	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.	1 (RS-232, RS-485, RS-422, software configurable) Max 3 serial ports using plug-in modules.
SD card	Yes	Yes
Expansion	2 slot for plug in modules	2 slot for plug in modules
Ratings		
Power supply	24 Vdc (10 to 32 Vdc)	24 Vdc (10 to 32 Vdc)
Current Consumption	0.7 A at 24 Vdc (max.)	1.2 A at 24 Vdc (max.)
Input Protection	Electronic	Electronic
Battery	Rechargeable Lithium battery, not user-replaceable	Rechargeable Lithium battery, not user-replaceable
Environment Conditions		
Operating Temperature	-20° to +60 °C (vertical installation) Plug-in modules and USB devices may limit max temperature to +50 °C	-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	-30°C to +80°C
Operating / Storage Humidity	5-85% RH, non condensing	5-85% RH, non condensing
Protection Class	IP69 (front), IP20 (rear) - Type: 12, 4X	IP69 (front), IP20 (rear) - Type: 12, 4X
Dimensions and Weights		
Faceplate LxH	217x177 mm (8.54x6.96")	450x295mm
Cutout AxB	176x136 mm (6.93x5.35")	411x256 mm (16.18x10")
Depth D+T	45+10 mm (1.77+0.4")	54+10 mm (2,125+0,394")
Weight	2.5 Kg	5.2 Kg
Approvals		
CE	Electromagnetic Compatibility Directive 2014/30/EU (EMC)	Electromagnetic Compatibility Directive 2014/30/EU (EMC)
UL	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201
RCM	Yes	Yes
Ordering Code	+EX707U4F1	+EX715U4F1

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MARINE &

OFFSHORE

MARINE & OFFSHORE

XA5 & eX700G Series



XA5

System Resources

Display - Colors	5" TFT - 64K
Resolution	800x480
Brightness	500 cd/m ² typ.
Dimming	Yes - down to 0%
Touchscreen	Projected Capacitive, Multitouch, Optical Bonding
CPU	32-bit RISC Dual Core - 650 MHz
Operating System	Linux RT
Flash	8 GB
RAM	1 GB
FRAM	64 KB
Real Time Clock, RTC Back-up	Yes, rechargeable battery

Interface

Ethernet port	2 ports 10/100 Mbit/s
CAN port	2, FD, isolated, up to 1 Mbit/s
USB port	1 Host v. 2.0 500mA
Serial port	RS-485, isolated
Digital Output	1 SSR NO 60V 0.5A
Wi-Fi	IEEE 802.11a/b/g
Sensors	Temperature, 3-Axis Accelerometer, Environment Light
Buzzer	Yes
Expansion	1 slot for plug-in modules

Ratings

Power supply	24 Vdc (10 to 32 Vdc)
Power consumption	1.4 A at 24 Vdc (max.)
Power management key	Yes

Environment Conditions

Operating Temperature	-30°C to +70°C
Storage Temperature	-40°C to +85°C
Operating / Storage Humidity	5-85% RH, non condensing
Protection Class	IP66/IP67

Dimensions and Weights

Faceplate LxH	158.6x115 mm (6.24"x4.53")
Cutout AxB	142.6x99 mm (5.61"x3.90")
Depth D+T	44+6.5 mm (1.73"+0.26")
Weight	0.6 Kg

Approvals

CE	Radio Equipment Directive 2014/53/EU (RED)
UL	* cULus: UL61010-1 / UL61010-2-201
DNV	* Yes
RCM	Yes

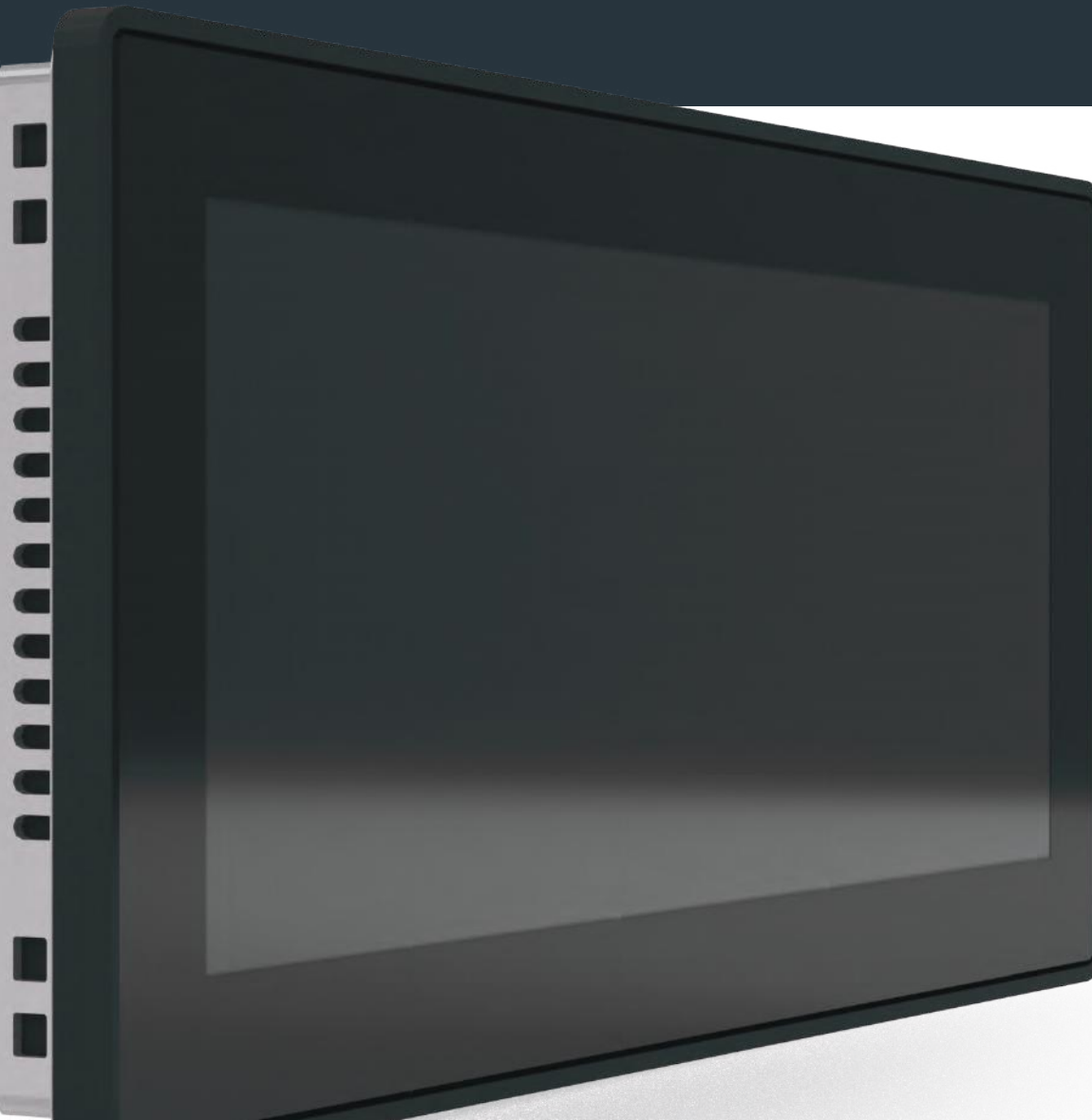
Ordering Code	+XA5U5P1
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* Scheduled



	eX707G	eX710G	eX715MG
System Resources			
Display - Colors	7" TFT - 16M	10.1" TFT - 16M	15,6 TFT - 16M
Resolution	800x480	1280x800	1920x1080
Brightness	600 cd/m ² typ.	800 cd/m ² typ.	700 cd/m ² typ.
Dimming	to 0%	to 0%	Yes
Touchscreen	True Glass Projected Capacitive, Multitouch	True Glass Projected Capacitive, Multitouch	True Glass Projected Capacitive, Multitouch, Optical Bonding
CPU	32-bit RISC Dual core - 800 MHz	32-bit RISC Dual core - 800 MHz	64-bit RISC Quad core - 1.6GHz
Operating System	Linux RT	Linux RT	Linux
Flash	4 GB	4 GB	8 GB
RAM	1 GB	1 GB	2 GB
FRAM	64 KB	64 KB	64 KB
RT-Clock, RTC Back-up, Buzzer	Yes	Yes	Yes
Interface			
Ethernet port	3 (port 0 - 10/100/1000, port 1 - 10/100, port 2 - 10/100)	3 (port 0 - 10/100/1000, port 1 - 10/100, port 2 - 10/100)	3 (port 0 - 10/100/1000, port 1 - 10/100, port 2 - 10/100)
USB port	2 (Host V2.0, max. 500 mA)	2 (Host V2.0, max. 500 mA)	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.	1 (RS-232, RS-485, RS-422, software configurable) Max 3 serial ports using plug-in modules.	1 (RS-232, RS-485, RS-422, software configurable) Max 3 serial ports using plug-in modules.
SD card	Yes	Yes	Yes
Expansion	2 slot for plug in modules	2 slot for plug in modules	2 slot for plug in modules
Ratings			
Power supply	24 Vdc (10 to 32 Vdc)	24 Vdc (10 to 32 Vdc)	24 Vdc (10 to 32 Vdc)
Current Consumption	0.7 A at 24 Vdc (max.)	1.0 A at 24 Vdc (max.)	1.35 A at 24 Vdc (max.)
Input Protection	Electronic	Electronic	Electronic
Battery	Rechargeable Lithium battery, not user-replaceable	Rechargeable Lithium battery, not user-replaceable	Rechargeable Lithium battery, not user-replaceable
Environment Conditions			
Operating Temperature	-20° to +60 °C (vertical installation) Plug-in modules and USB devices may limit max temperature to +50 °C	-20° to +60 °C (vertical installation) Plug-in modules and USB devices may limit max temperature to +50 °C	-30° to +70 °C (vertical installation). Plug-in modules and USB devices may limit max temperature to +50 °C
Storage Temperature	-20°C to +70°C	-20°C to +70°C	-40°C to +85°C
Operating / Storage Humidity	5-85% RH, non condensing	5-85% RH, non condensing	5-85% RH, non condensing
Protection Class	IP66 (front), IP20 (rear) - Type: 12, 4X	IP66 (front), IP20 (rear) - Type: 12, 4X	IP66 (front), IP20 (rear) - Type: 12, 4X
Dimensions and Weights			
Faceplate LxH	187x147 mm (7.36x5.79")	282x197 mm (11.10x7.80")	422x267 mm (16.6x10.5")
Cutout AxB	176x136 mm (6.93x5.35")	271x186 mm (10.67x7.32")	411x256 mm (16.18x10")
Depth D+T	47+8 mm (1.85+0.31")	56+8 mm (2.20+0.31")	56+8 mm (2.20+0.31")
Weight	1.5 Kg	2.5 Kg	4.1 Kg
Approvals			
CE	Electromagnetic Compatibility Directive 2014/30/EU (EMC)	Electromagnetic Compatibility Directive 2014/30/EU (EMC)	Electromagnetic Compatibility Directive 2014/30/EU (EMC)
ATEX	Zone 2/22: II 3 G Ex ec IIC T5...T4 Gc, II 3 D Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C		To be planned
IECEX	Zone 2/22: Ex ec IIC T5...T4 Gc, Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C		To be planned
UL	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201
UL	cULus: Class I Div. 2	cULus: Class I Div. 2	* cULus: Class 1 Div 2
DNV	Yes	Yes	Yes
RCM	Yes	Yes	Yes
Ordering Code	+EX707GU5P1	+EX710GU5P1	+EX715MGU5P1

* Scheduled



eX707M

System Resources	
Display - Colors	7" TFT - 16M
Resolution	800x480
Brightness	500 cd/m ² typ.
Dimming	Yes
Touchscreen	Projected Capacitive, Multitouch
CPU	64-bit RISC quad core - 1.6 GHz
Operating System	Linux
Flash	8 GB
RAM	2 GB
FRAM	64 KB
RTC, 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 Temperature	-20° to +60 °C (vertical installation). Plug-in and USB devices may limit max temperature to +50 °C
Storage Temperature	-20°C to +70°C
Operating / Storage Humidity	5-85% RH, non condensing
Protection Class	IP66 (front), IP20 (rear) - Type: 12, 4X
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	Electromagnetic Compatibility Directive 2014/30/EU (EMC)
ATEX	Zone 2/22: II 3 G Ex ec IIC T5...T4 Gc, II 3 D Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C"
IECEX	Zone 2/22: Ex ec IIC T5...T4 Gc, Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C"
UL	cULus: UL61010-1 / UL61010-2-201
UL	cULus: Class 1 Div 2
DNV	Yes
RCM	Yes
Ordering Code	+EX707MU5P1



	eX710M	eX712M	eX715M	eX721M
System Resources				
Display - Colors	10.1" TFT - 16M	12.3" TFT - 16M	15.6" TFT - 16M	21.5" TFT - 16M
Resolution	1280x800	1920x720	1366x768	1920x1080
Brightness	500 cd/m ² typ.	600 cd/m ² typ.	400 cd/m ² typ.	300 cd/m ² typ.
Dimming	Yes	Yes	Yes	Yes
Touchscreen	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch
CPU	64-bit RISC quad core - 1.6 GHz	64-bit RISC quad core - 1.6 GHz	64-bit RISC quad core - 1.6 GHz	64-bit RISC quad core - 1.6 GHz
Operating System	Linux	Linux	Linux	Linux
Flash	8 GB	8 GB	8 GB	8 GB
RAM	2 GB	2 GB	2 GB	2 GB
FRAM	64 KB	64 KB	64 KB	64 KB
RTC, RTC Back-up, Buzzer	Yes	Yes	Yes	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)		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	Yes	Yes	Yes
Expansion	2 slot for plug in modules		2 slot for plug in modules	
Ratings				
Power supply	24 Vdc (10 to 32 Vdc)		24 Vdc (10 to 32 Vdc)	
Current Consumption	1.0 A at 24 Vdc (max.)		1.2 A at 24 Vdc (max.)	
Input Protection	Electronic		Electronic	
Battery	Rechargeable Lithium battery, not user-replaceable			
Environment Conditions				
Operating Temperature	-20° to +60 °C (vertical installation). Plug-in and USB devices may limit max temperature to +50 °C			
Storage Temperature	-20°C to +70°C		-20°C to +70°C	
Operating / Storage Humidity	5-85% RH, non condensing		5-85% RH, non condensing	
Protection Class	IP66 (front), IP20 (rear) - Type: 12, 4X		IP66 (front), IP20 (rear) - Type: 12, 4X	
Dimensions and Weights				
Faceplate LxH	282x197 mm (11.10x7.80")		344.5x163 mm (13.56x6.41")	
Cutout AxB	271x186 mm (10.67x7.32")		332.5x152 mm (13.09x5.94")	
Depth D+T	56+8 mm (2.20+0.31")		49+8.5 mm (1.92+0.33")	
Weight	2.5 Kg		1.8 Kg	
Approvals				
CE	Electromagnetic Compatibility Directive 2014/30/EU (EMC)			
ATEX	Zone 2/22: II 3 G Ex ec IIC T5...T4 Gc, II 3 D Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C			
IECEX	Zone 2/22: Ex ec IIC T5...T4 Gc, Ex tc IIIC T95°C Dc -20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C			
UL	cULus: UL61010-1 / UL61010-2-201		cULus: UL61010-1 / UL61010-2-201	
UL	cULus: Class 1 Div 2		cULus: Class 1 Div 2	
DNV	Yes		Yes	
RCM	Yes		Yes	
Ordering Code	+EX710MU5P1		+EX715MU5P1	
	+EX712MU5P1		+EX721MU5P1	

MARINE & OFFSHORE

JSmart700M & JSmart700 Series

	JSmart707M	JSmart710M	JSmart715M	JSmart721M
System Resources				
Display - Colors	7" TFT - 16M	10.1" TFT - 16M	15.6" TFT - 16M	21.5" TFT - 16M
Resolution	1024x600	1280x800	1366x768	1920x1080
Brightness	400 cd/m ² typ.	400 cd/m ² typ.	400 cd/m ² typ.	400 cd/m ² typ.
Dimming	Yes	Yes	Yes	Yes
Touchscreen	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch	Projected Capacitive, Multitouch
CPU	64-bit RISC Quad core - 1.6 GHz	64-bit RISC Quad core - 1.6 GHz	64-bit RISC Quad core - 1.6 GHz	64-bit RISC Quad core - 1.6 GHz
Operating System	Linux	Linux	Linux	Linux
Flash	8 GB	8 GB	8 GB	8 GB
RAM	2 GB	2 GB	2 GB	2 GB
FRAM	64 KB	64 KB	64 KB	64 KB
RT-Clock, RTC Back-up	Yes	Yes	Yes	Yes
Interface				
Ethernet port	10/100 PoE	10/100 PoE	10/100 PoE	10/100 PoE
USB port	1 (Host V2.0, max. 500 mA, available with special cable)	1 (Host V2.0, max. 500 mA, available with special cable)	1 (Host V2.0, max. 500 mA, available with special cable)	1 (Host V2.0, max. 500 mA, available with special cable)
LED	1 RGB	1 RGB	1 RGB	1 RGB
Sensors	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer
Buzzer	Yes	Yes	Yes	Yes
NFC	ISO/IEC 14443A	ISO/IEC 14443A	ISO/IEC 14443A	ISO/IEC 14443A
Wi-Fi	IEEE 802.11a/b/g	IEEE 802.11a/b/g	IEEE 802.11a/b/g	IEEE 802.11a/b/g
Ratings				
Power supply	IEEE 802.3af PoE	IEEE 802.3af PoE	IEEE 802.3at PoE+	IEEE 802.3bt 4PPoE
Power Consumption	12W max.	14W max.	23W max.	35W max.
Battery	Rechargeable Lithium battery, not user-replaceable	Rechargeable Lithium battery, not user-replaceable	Rechargeable Lithium battery, not user-replaceable	Rechargeable Lithium battery, not user-replaceable
Environment Conditions				
Operating Temperature	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)
Storage Temperature	-30°C to +80°C	-30°C to +80°C	-30°C to +80°C	-30°C to +80°C
Operating / Storage Humidity	5-85% RH, non-condensing	5-85% RH, non-condensing	5-85% RH, non-condensing	5-85% RH, non-condensing
Protection Class	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x
Dimensions and Weights				
Faceplate LxH	195.2x131.6 mm (7.68x5.18")	264.5x183.1 mm (10.41x7.20")	398.6x248 mm (15.69x 9.76")	534.1x325.6 mm (21.02x 12.81")
Depth D	16.5 mm (0.6")	16.5 mm (0.6")	26.5 mm (1.04")	26.5 mm (1.04")
Weight	0.7 Kg	1.2 Kg	4.0 Kg	6.0 Kg
Approvals				
CE	Radio Equipment Directive 2014/53/EU (RED)	Radio Equipment Directive 2014/53/EU (RED)	Radio Equipment Directive 2014/53/EU (RED)	Radio Equipment Directive 2014/53/EU (RED)
UL	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201
UL	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2
DNV	To be planned	To be planned	To be planned	To be planned
RCM	Yes	Yes	Yes	Yes
Ordering Code	+JS707GB2U5P1	+JS710GC2U5P1	+JS715GD2U5P1	+JS721GE2U5P1



	JSmart705	JSmart707	JSmart710	JSmart715	JSmart721
System Resources					
Display - Colors	5" TFT – 16M	7" TFT – 16M	10.1" TFT – 16M	15.6" TFT – 16M	21.5" TFT – 16M
Resolution	800x480	1024x600	1280x800	1366x768	1920x1080
Brightness	300 cd/m ² typ.	400 cd/m ² typ.	400 cd/m ² typ.	400 cd/m ² typ.	400 cd/m ² typ.
Dimming	to 0%	to 0%	to 0%	to 0%	to 0%
Touchscreen	Projected Capacitive – Multitouch	Projected Capacitive – Multitouch	Projected Capacitive – Multitouch	Projected Capacitive – Multitouch	Projected Capacitive – Multitouch
CPU	32-bit RISC dual core - 800 MHz	32-bit RISC dual core - 800 MHz	32-bit RISC dual core - 800 MHz	32-bit RISC quad core - 800 MHz	32-bit RISC quad core - 800 MHz
Operating system	Linux RT	Linux RT	Linux RT	Linux RT	Linux RT
Flash	4 GB	4 GB	4 GB	8 GB	8 GB
RAM	1 GB	1 GB	1 GB	2 GB	2 GB
FRAM	64 KB	64 KB	64 KB	64 KB	64 KB
RT-Clock, RTC Back-up	Yes	Yes	Yes	Yes	Yes
Interface					
Ethernet port	10/100 PoE	10/100 PoE	10/100 PoE	10/100 PoE	10/100 PoE
USB port	1 (Host V2.0, max. 50 mA, available with special cable)	1 (Host V2.0, max. 50 mA, available with special cable)	1 (Host V2.0, max. 50 mA, available with special cable)	1 (Host V2.0, max. 50 mA, available with special cable)	1 (Host V2.0, max. 50 mA, available with special cable)
LED	1 RGB	1 RGB	1 RGB	1 RGB	1 RGB
Sensors	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer	Temperature, 3-Axis Accelerometer
Wi-Fi	No	IEEE 802.11a/b/g	IEEE 802.11a/b/g	IEEE 802.11a/b/g	IEEE 802.11a/b/g
Buzzer	Yes	Yes	Yes	Yes	Yes
Ratings					
Power supply	IEEE 802.3af PoE	IEEE 802.3af PoE	IEEE 802.3af PoE	IEEE 802.3at PoE+	IEEE 802.3bt 4PPoE
Power Consumption	6 W max.	12 W max.	14 W max.	23 W max.	35 W max.
Battery	Yes (rechargeable)	Yes (rechargeable)	Yes (rechargeable)	Yes (rechargeable)	Yes (rechargeable)
Environment Conditions					
Operating Temperature	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)	-20° to +55° C (vertical installation)
Storage Temperature	-30°C to +80°C	-30°C to +80°C	-30°C to +80°C	-30°C to +80°C	-30°C to +80°C
Operating / Storage Humidity	5-85% RH, non-condensing	5-85% RH, non-condensing	5-85% RH, non-condensing	5-85% RH, non-condensing	5-85% RH, non-condensing
Protection Class	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x	IP67 (requires appropriate accessories and cables) - Type: 1, 12, 4x
Dimensions and Weights					
Faceplate LxH	148.3x105.1 mm (5.83x 4.13")	195.2x131.6 mm (7.68x5.18")	264.5x183.1 mm (10.41x7.20")	398.6x248 mm (15.69x 9.76")	534.1x325.6 mm (21.02x 12.81")
Depth D+T+T	16.5 mm (0.06")	16.5 mm (0.06")	16.5 mm (0.06")	26.5 mm (1.04")	26.5 mm (1.04")
Weight	0.5 Kg	0.7 Kg	1.2 Kg	4.0 Kg	6.0 Kg
Approvals					
CE	Electromagnetic Compatibility Directive 2014/30/EU (EMC)	Radio Equipment Directive 2014/53/EU (RED)	Radio Equipment Directive 2014/53/EU (RED)	Radio Equipment Directive 2014/53/EU (RED)	Radio Equipment Directive 2014/53/EU (RED)
UL	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201
UL	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2	cULus: Class 1 Div 2
DNV	Yes	Yes	Yes	Yes	Yes
RCM	Yes	Yes	Yes	Yes	Yes
Ordering Code	+JS705BA0U5P1	+JS707BB1U5P1	+JS710BC1U5P1	+JS715CD1U5P1	+JS721CE1U5P1



MOBILE

HMIS

Handheld Series





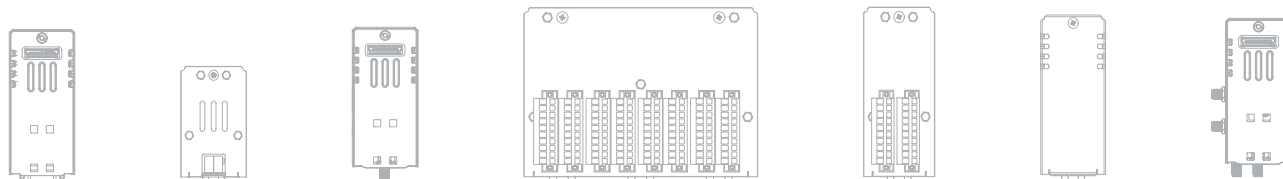
X5 Wireless

System Resources	
Display - Colors	5" TFT - 64K colors
Resolution	480x272
Brightness	300 Cd/m ² typ.
Dimming	Yes
Touchscreen	Resistive
CPU	32-bit RISC Single Core 528 MHz
Operating System	Linux 4.14
Flash	4 GB
RAM	512 MB
Real Time Clock, RTC Back-up	Yes, rechargeable Lithium battery (not user-replaceable)
Handwheel	Yes
Potentiometer	2
Selector Rotary Switch	16 positions
Emergency Stop Button	Yes, illuminated
Enabling Button	3 positions
Status Indicators	2 bi-color LED
Keys	19 user-programmable
Sensors	3-axis Accelerometer, Temperature (internal)
Buzzer, Vibrator	Yes
Interface	
Wireless	IEEE Std 802.11a/b/g/n
USB	2 Host V2.0, 250mA max
NFC	Yes (optional)
Ratings	
Power Supply	Rechargeable Battery
Battery capacity	4400 mAh
Charging Station	Yes
Environment Conditions	
Operating Temp	+5 to +45°C
Storage Temp	-20 to +70°C
Operating / Storage Humidity	5-85% RH, non condensing
Protection Class	IP64
Dimensions and Weights	
Faceplate LxH	220x144 mm
Depth D+T	63 mm
Weight	Approx 0.8 Kg
Approvals	
CE	Radio Equipment Directive 2014/53/EU (RED) - Machine Directive (2006/42/EC)
FCC	In progress
Electrical Safety	EN 61010-1 / EN 61010-2-201, UL61010-1 / UL61010-2-201
Safety functions	SIL (IEC 61508): Emergency Stop SIL3, Enabling Device SIL 3, Selector SIL 1 - Performance Level (EN ISO 13849-1): Emergency Stop PL=d, Cat.3, Enabling Device PL=d, Cat.3, Selector PL=b, Cat.B
Ordering Code	
10100390YE-0001	X5 Wireless HMI
10100390YE-0000	Xbase - Base station X5
10100390YE-0002	Xcharging - Charging station

X5 Wired - PRELIMINARY DATA

System Resources	
Display - Colors	5" TFT - 64K colors
Resolution	480x272
Brightness	300 Cd/m ² typ.
Dimming	Yes
Touchscreen	Resistive
CPU	32-bit RISC Single Core 528 MHz
Operating System	Linux 4.14
Flash	4 GB
RAM	512 MB
Real Time Clock, RTC Back-up	Yes, rechargeable Lithium battery (not user-replaceable)
Handwheel	Yes
Potentiometer	2
Selector Rotary Switch	16 positions
Emergency Stop Button	Yes, illuminated
Enabling Button	3 positions
Status Indicators	2 bi-color LED
Keys	19 user-programmable
Sensors	3-axis Accelerometer, Temperature (internal)
Buzzer, Vibrator	Yes
Interface	
Ethernet	10/100 Mbit (selected models)
Serial	1 RS-232, RS-422, RS-485 (selected models)
USB	2 Host V2.0, 250mA max
NFC	Yes
Ratings	
Power supply (charging station)	24 Vdc (18 to 30 Vdc)
Current Consumption	0.25 A at 24 Vdc (max.)
Input Protection	Automatic
Battery	Rechargeable Lithium battery, not user-replaceable
Environment Conditions	
Operating Temp	+5 to +45°C
Storage Temp	-20 to +70°C
Operating / Storage Humidity	5-85% RH, non condensing
Protection Class	IP64
Dimensions and Weights	
Faceplate LxH	220x144 mm
Depth D+T	63 mm
Weight	Approx 0.8 Kg
Approvals	
CE	Electromagnetic Compatibility Directive 2014/30/EU (EMC)
Electrical Safety	To be defined
Safety functions	To be defined
Ordering Code	
To be defined	X5 Wired
To be defined	Xdocking

Plug-Ins



Model	Ordering Code	Description	Compatible with
PLCM01	+PLCM01U0P1	Plug-in CAN	eX700, eX700M, eX700FB, eX700G, eXware Series
PLCM02	+PLCM02U001	Plug-in KNX/EIB (TP interface)	eX700, eX700FB, eX700G, eXware Series
PLCM03	+PLCM03U0P1	Plug-in RS-232	eX700, eX700M, eX700FB, eX700G, eXware Series
PLCM04	+PLCM04U0P1	Plug-in RS-422/485 with optical insulation	eX700, eX700M, eX700FB, eX700G, eXware Series
PLCM05	+PLCM05U0P2	Plug-in extender (for use with PLIO03/04)	eX705, eXware703
PLCM06	+PLCM06U0P1	Plug-in Profibus DP slave 12 MB	eX700, eX700M, eX700FB, eX700G, eXware Series
PLCM09	+PLCM09U0P1	Plug-in Wireless Modem 3G	eX700, eX700G, eX700FB, eXware Series
PLCM10	+PLCM10U0P1	Plug-in Wireless Modem LTE/4G, Wi-Fi, GNSS	eX700, eX700M, eX700G, eX700FB, eXware Series
PLCM10B	+PLCM10BU0P1	Plug-in Wireless Modem LTE/4G	eX700, eX700M, eX700G, eX700FB, eXware Series
CODESYS V3 SoftPLC	+SWLC00R000000	CODESYS V3 activation license	eX700, eX700M, eX700FB, eX700G, eXware, JSmart, eSMART Series
DB Connector	+SWLJ00C000000	JMobile Native Database Connector	eX700, eX700M, eX700FB, eX700G, eXware, JSmart, eSMART Series
PLIO03	+PLIO03U0P1	Plug-in I/O 20 DI 24 VDC, 12 DO 24 VDC 0,5 A, 8 AI (4 diff or 8 single or 4 PT100 or 4 TC), 4 AO, 1 PT100 Cold Junct	eX700, eX700M, eX700FB, eX700G, eXware Series
PLIO04	+PLIO04U0P1	Plug-in I/O 10 DI 24 VDC, 10 DO SSR 1.4 A, 4 Programmable AI voltage/PT100/TC, 4 AI voltage, 1 PT100	eX700, eX700M, eX700FB, eX700G, eXware Series
PLIO06	+PLIO06U0P1	Plug-in I/O compact 8 DI, 6 DO, 1 Relay Output	eX700, eX700M, eX700FB, eX700G, eXware Series
PLIO07	+PLIO07U001	Plug-in I/O compact 2 Relay Outputs	eX700, eX700M, eX700FB, eX700G, eXware Series

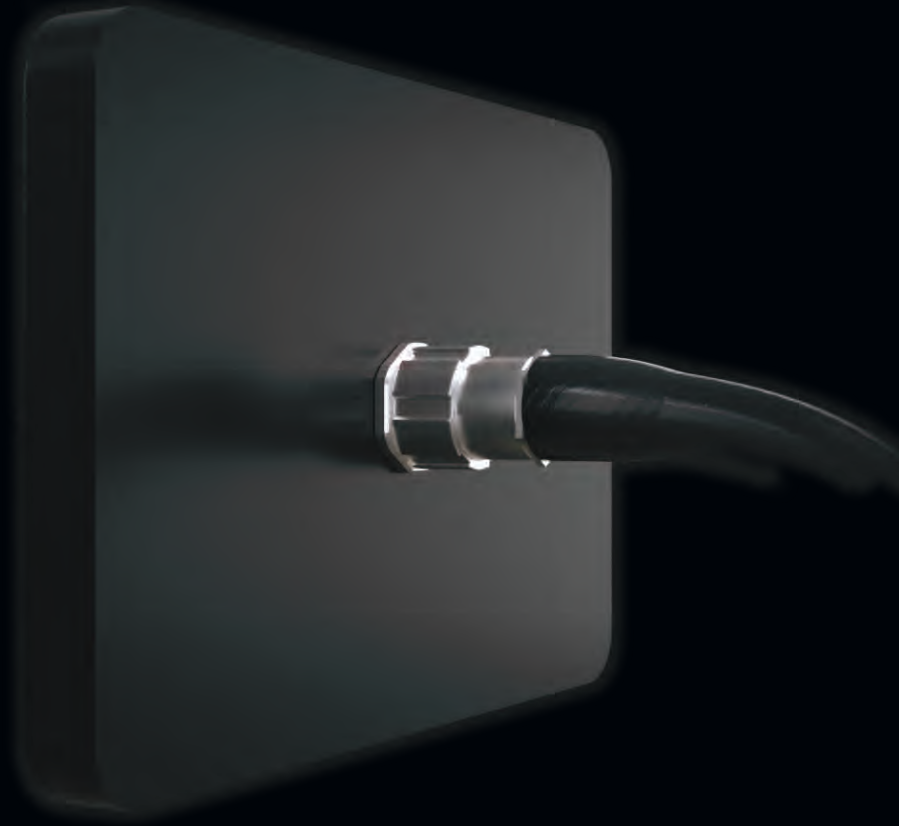
JSmart Series Accessories



PoE DIN Mounting

PoE Panel Mounting

Features		
PoE Standard	IEEE 802.3af/at	IEEE 802.3af/at
Output Power	36W max	36W max
DC Output Voltage	+54 Vdc	+54 Vdc
Data rates	10/100	10/100
Interface		
Ethernet IN port	10/100	10/100
Ethernet OUT port	10/100 PoE	10/100 PoE
Diagnostic LEDS	3	3
Ratings		
Power Supply	+24 Vdc (18-32 Vdc)	+24 Vdc (18-32 Vdc)
Current Consumption	2.0 A at 24 Vdc (max.)	2.0 A at 24 Vdc (max.)
Efficiency	80% typ	80% typ
Over Voltage / Current Protection	Yes	Yes
Short Circuit Protection	Yes	Yes
Reverse Polarity	Yes	Yes
Environment Conditions		
Operating Temp	-20°C to +55° C	-20°C to +55°C
Storage Temp	-30°C to +80°C	-30°C to +80°C
Operating / Storage Humidity	5-85% RH, non-condensing	5-85% RH, non-condensing
Protection Class	IP20 EN60529	IP67 EN60529 front cabinet
Dimensions and Weights		
Faceplate LxH	80x120 mm	80x120 mm
Depth D	28 mm	28 mm
Weight	350 g	350 g
Approvals		
CE	Electromagnetic Compatibility Directive 2014/30/EU (EMC)	Electromagnetic Compatibility Directive 2014/30/EU (EMC)
UL	cULus: UL61010-1 / UL61010-2-201	cULus: UL61010-1 / UL61010-2-201
RCM	Yes	Yes
Ordering Code	+JSP0U0P1	+JSP0U0P2





Tube Bracket

Ordering Code: +JSBRU001

Tube Bracket

Ordering Code: +JSBRU002

Wall Bracket

Ordering Code: +JSBRU003

Wall Bracket

Ordering Code: +JSBRU004

Multiuse Bracket

Ordering Code: +JSBRU009

Multiuse Bracket

Ordering Code: +JSBRU010

VESA Bracket

Ordering Code: +JSBRU005

Table Stand

Ordering Code: +JSBRU006

Gooseneck Bracket

Ordering Code: +JSBRU007

VESA Adapter Bracket

Ordering Code: +JSBRU008

90° PoE Cable

Ordering Code: +JSCAU001

Ethernet PoE Cable

Ordering Code: +JSCAU002

PoE USB Cable

Ordering Code: +JSCAU003

PoE Injector Cable

Ordering Code: +JSBRU004



INDUSTRIAL

PCs

Industrial PCs

eCC, EPC, IPC, MON Series





	eCC52	eCC105U	eCC106	eCC107	eCC108	eCC3800E	eCC3800E-H110
CPU	Intel® Celeron® processor J3455 Quad Core, 1.50GHz	Intel® Celeron® J1900 2.0GHz	Intel® Pentium® N3710 1.6GHz	Intel Atom® E3930 1.30 GHz	Intel® Celeron® J3455 1.50GHz	6th Gen Intel® Core™ i7/i5/i3 LGA socket	6th Gen Intel® Core™ i7/i5/i3 LGA socket
Chipset	Intel® Apollo Lake	Intel® Bay Trail-D	Intel® Braswell	Intel® Apollo Lake	Intel® Apollo Lake	Q170 PCH	H110 PCH
Max. Memory	8GB DDR3L	8GB DDR3L	8GB DDR3L	8GB DDR3L	8GB DDR3L	16GB DDR4	16GB DDR4
HDD Space	mSATA	1 x 2.5" SATA 2.0 HDD bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA 2.0 HDD bay	1 x 2.5" SATA 2.0 HDD bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay
CFast Socket	-	-	1 (External, CFast)	-	-	1 (External, M.2)	-
eMMC	-	-	-	-	-	-	-
VGA	-	-	-	-	-	-	-
LVDS	-	-	-	-	Dual, 48-bit (Internal)	-	-
DVI	-	1 (DVI-I)	1 (DVI-D)	1 (DVI-D)	-	1 (DVI-D)	1 (DVI-D)
HDMI	3	1	1	-	-	1	1
DisplayPort	-	-	1	1	2	1	-
USB	6 x USB 3.0, 2 x USB 2.0	2 x USB 2.0, 1 x USB 3.0*	4 x USB 3.0	4 x USB 3.0	2 x USB 2.0, 2 x USB 3.0	4 x USB 2.0, 4 x USB 3.0	4 x USB 3.0, 2 x USB 2.0
Serial Port	4	4	4	2	3	2	2
RS422/485	1	2	2	2	1	2	2
RS422/485 Iso- lation	-	-	-	-	-	2	r
mini-PCIe	2	1	1	1	1	2	2
M.2	-	1	-	1 (External)	1	1	1
SIM Card Holder	1 (Internal)	1	1	1	-	1	1
GPIO	4-in/4-out (Internal)	4-in/4-out (Internal)	4-in/4-out (Internal)	4-in/4-out (Internal)	8-in/8-out (Internal)	4-in/4-out (Internal)	4-in/4-out (Internal)
LAN Ports	3 x GbE	2x GbE	2 x GbE	2x GbE	2 x GbE	3 x GbE	2 x GbE
Audio	-	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	-	Mic-in & Line-out	Mic-in & Line-out
Power Input Range	ATX, DC +9V/+30V	ATX, DC + 9V ~ 30VDC	ATX, DC + 9V ~ 30VDC	ATX, DC + 9V ~ 30VDC	ATX,DC + 24V	ATX, DC +9 ~ 30V	ATX, DC +9 ~ 30V
Power Supply Adapter	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Expansion	-	-	-	-	-	1 x PCIe x4	1 x PCIe x4
Win7 32-bit	-	V	-	-	-	V	V
Win7 64-bit	-	V	V	-	-	V	V
WES2009 32-bit	-	-	-	-	-	-	-
Win8 32-bit	-	-	-	-	-	-	-
Win8 64-bit	-	-	V	-	-	V	V
WinCE/WEC	-	-	-	-	-	V	V
Win10 32-bit	-	-	-	-	-	-	-
Win10 64-bit	V	V	V	V	V	V	V
System Dimension (WxDxH)(mm)	162 x 150 x 26	185 x 131 x 54	185 x 131 x 54	185 x 131 x 54	185 x 131 x 54	215 x 272 x 93	215 x 272 x 93
Carton Dimension (WxDxH) (mm)	233x 227x 169	318 x 245 x 152	318 x 245 x 152	318 x 245 x 152	318 x 245 x 167	378 x 342 x 269	378 x 342 x 269
Net Weight (kg)	0.87	1.3	1.3	1.3	1.3	4.5	4.5
Gross weight (kg)	2	2	2	2	2	5.9	5.9
Ordering Code	+70ECC52A01	+70ECC105U	+70ECC106	+70ECC107	+70ECC108	+70ECC3800E	+70ECC3800EH110



	eCCF104M	eCCF105	eCCF200	eCCF300
CPU	Intel® Celeron® J1900 2.0GHz	Intel Atom® x5-E3930 1.8GHz	Intel® Celeron® J1900 2.0GHz	6th Gen. Intel® Core™ i7/i5/i3 LGA socket (Skylake-S)
Chipset	Intel® Bay Trail-D	Intel® Apollo Lake-I	Intel® Bay Trail-D	Intel® Q170
Max. Memory	Onboard 4GB DDR3L	Onboard 4GB DDR3L	8GB DDR3L	8GB DDR4
TPM	TPM 2.0 (SLB9665)	-	-	-
NVRAM	-	-	-	-
Storage	1 x mSATA	Onboard eMMC 16GB	1 x 2.5" SATA HDD bay	2 x 2.5" SATA HDD bay
CFast Socket	-	-	-	1 (external, CFast)
SD Card	-	1	1	-
DVI	-	-	1 (DVI-I)	1 (DVI-D)
HDMI	1	1	-	1
DisplayPort	-	-	1	-
USB	1 x USB 2.0, 1 x USB 3.0, 1 x USB 2.0 (internal)	4 x USB 3.0	3 x USB 2.0, 1 x USB 3.0	2 x USB2.0, 4 x USB3.0
Serial Port	1	2	2	2
RS422/485	1 (RS232/RS485)	2 (RS232/422/485)	2 (RS232/422/485)	2 (RS232/422/485)
RS422/485 Isolation	1 (2.5KV isolation)	2 (2.5KV isolation)	2 (2.5KV isolation)	2 (2.5KV isolation)
mini-PCIe	1 x Full for mSATA 1 x Half for USB/PCIe module	2 x Full size	2	2
SIM Card Holder	1	1	1	1
GPIO	4-in/4-out (external)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)
LAN Port	2 x GbE (Intel® I211)	2 x GbE (Intel® I210-IT)	2 x GbE	3 x GbE
Audio	-	-	Line-out (internal)	Mic-in & Line-out
Fieldbus I/O Support	-	-	1 (optional)	1 (optional)
Power Input Range	ATX, DC +24V	ATX, DC +24V	ATX, DC +24V	ATX, DC +24V
Win7 32-bit	V	-	V	V
Win7 64-bit	V	-	V	V
WinCE/WEC	-	-	V	-
Win10 32-bit	V	V	V	V
Win10 64-bit	V	V	V	V
Power Supply Adapter	Optional	Optional	Optional	Optional
Expansion	-	-	-	-
Operating temp. (w/ HDD) Based on IEC 60068 STD	-5°C to 50°C	-5°C to 55°C	-5°C to 55°C	-5°C to 55°C
System Dimension (W x D x H, mm)	56.5 x 100 x 130	46.2 x 100 x 120	85 x 157 x 214	90 x 185 x 251
Carton Dimension (W x D x H, mm)	223 x 191 x 206	223 x 191 x 206	346 x 265 x 200	389 x 329 x 251
Net Weight (kg)	0.6	0.7	2.3	3.5
Gross Weight (kg)	1.5	1.6	3.3	4.9
Net Weight (kg)	2.3	3.6	4.7	5.6
Ordering Code	+70ECCF104M	+70ECCF105	+70ECCF200	+70ECCF300



	eTOP-EPC1245T	eTOP-EPC1540T	eTOP-EPC1740T	eTOP-EPC1940T
LCD Size	12.1" 4:3	15" 4:3	17" 4:3	19" 4:3
Max Resolution	XGA, 1024 x 768	XGA, 1024 x 768	SXGA, 1280 x 1024	SXGA, 1280 x 1024
Luminance (cd/m ²)	500	400	350	350
Contrast Ratio	700	2500	800	1000
LCD Color	16.7M	16.7M	16.7M	16.7M
Viewing Angel (H-V)	70(U), 70(D), 80(L), 80(R)"	88(U), 88(D), 88(L), 88(R)	60(U), 80(D), 80(L), 80(R)	80(U), 80(D), 85(L), 85(R)
Backlight	LED	LED	LED	LED
Touch Screen	Resistive 5-wire	Resistive 5-wire	Resistive 5-wire	Resistive 5-wire
Touch Light Transmission	80%	81%	81%	81%
CPU	Intel® Celeron® J1900 Quad Core up to 2.0GHz	Intel Celeron J1900 Quad Core up to 2.0GHz	Intel Celeron J1900 Quad Core up to 2.0GHz	Intel Celeron J1900 Quad Core up to 2.0GHz
OS	Win7, Win10	Win7, Win10	Win7, Win10	Win7, Win10
Memory	4GB DDR3L, SO-DIMM module	4GB DDR3L, SO-DIMM module	4GB DDR3L, SO-DIMM module	4GB DDR3L, SO-DIMM module
CFast Socket	1	1	1	1
2nd Display Output	VGA	VGA	VGA	VGA
Ethernet (10/100/1000)	2	2	2	2
Line-out	Line out	Line out	Line out	Line out
USB 2.0/3.0	2/1	2/1	2/1	2/1
COM Port	Isolation 2 x RS232/422/485"	Isolation 2 x RS232/422/485"	Isolation 2 x RS232/422/485	Isolation 2 x RS232/422/485
Power Switch	1	1	1	1
Remote Power Switch	2-pin	2-pin	2-pin	2-pin
Reset Button	1	1	1	1
Power Jack	Terminal blocks 3-pin phoenix connector	Terminal blocks 3-pin phoenix connector	Terminal blocks 3-pin phoenix connector	Terminal blocks 3-pin phoenix connector
Expansion	2 x mini-PCle	2 x mini-PCle	2 x mini-PCle	2 x mini-PCle
Construction Front Panel	ABS+PC plastic front bezel	ABS+PC plastic front bezel	ABS+PC plastic front bezel	ABS+PC plastic front bezel
Mounting	Panel/Wall/Stand/VESA 100 x 100 mm	Panel/Wall/Stand/VESA 100 x 100 mm	Panel/Wall/Stand/VESA 100 x 100 mm	Panel/Wall/Stand/VESA 100 x 100 mm
Power Input	+12 to 30V DC	+12 to 30V DC	+12 to 30V DC	+12 to 30V DC
Power Supply Adapter	Optional	Optional	Optional	Optional
Operating Temp.	-5°C to 60°C	-5°C to 60°C	-5°C to 60°C	0°C to 50°C
Storage Temp.	-20°C to 75°C	-20°C to 75°C	-20°C to 75°C	-20°C to 75°C
Operating Humidity	10%~90%, non-condensing	10%~90%, non-condensing	10%~90%, non-condensing	10%~90%, non-condensing
IP Level	Front frame IP65	Front frame IP65	Front frame IP65	Front frame IP65
Certification	CE: EN61000-6-2/4; FCC Class A	CE: EN61000-6-2/4; FCC Class A	CE: EN61000-6-2/4; FCC Class A	CE: EN61000-6-2/4; FCC Class A
Cut Out Size (W x H) (mm)	304.5 x 230	371 x 297	399 x 329	436 x 366
Dimension (W x H x D) (mm)	317 x 243 x 65.5	384.3 x 309.9 x 63.2	410.4 x 340.4 x 65.9	457.6 x 379.2 x 61.2
Net Weight (kg)	3.6	4.7	5.6	6.3
Ordering Code	+71EPC1245TJ	+71EPC1540TJ	+71EPC1740TJ	+71EPC1940TJ



	eTOP-IPC1040P	eTOP-IPC1640P	eTOP-IPC2140P	eTOP-IPC1680P	eTOP-IPC2180P
LCD Size	10.1" 16:9	15.6" 16:9	21.5" 16:9	15.6" 16:9	21.5" 16:9
Max. Resolution	WXGA 1280 x 800	HD, 1366x768	Full HD, 1920 x 1080	HD, 1366x768	Full HD, 1920 x 1080
Luminance (cd/m ²)	300	400	300	300	250
Contrast Ratio	1300	500	5000	500	5000
Viewing Angle (H-V)	85(U), 85(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)	89(U), 89(D), 89(L), 89(R)	16.7M	16.7M
Backlight	LED	LED	LED	80(U), 80(D), 85(L), 85(R)	89(U), 89(D), 89(L), 89(R)
LCD Color	262K	16.7M	16.7M	LED	LED
Touch Screen	10 x point P-Cap	10 x point P-Cap	10 x point P-Cap	Ten Point P-Cap	Ten Point P-Cap
Touch Light Transmission	87%	87%	87%	87%	87%
CPU	Intel Atom® quad core processor J1900, 2.0GHz	Intel Atom® quad core processor J1900, 2.0GHz	Intel Atom® quad core processor J1900, 2.0GHz	6th Gen Intel® Core™ i5/i3 BGA	6th Gen Intel® Core™ i5/i3 BGA
Chipset	-	-	-	-	-
OS	Win7, Win10	Win7, Win10	Win7, Win10	Win10	Win10
Memory	4GB DDR3 SO-DIMM module	4GB DDR3 SO-DIMM module	4GB DDR3 SO-DIMM module	Max. 32GB DDR3L	Max. 32GB DDR3L
CFast Socket	1	1	1	-	-
2nd Display Output	VGA	VGA	VGA	2 x DP	2 x DP
PS2 KB/MS	-	-	-	1 x DB15 (4xGPI/4xGPO)	1 x DB15 (4xGPI/4xGPO)
Ethernet (10/100/1000)	2	2	2	2	2
Line-out	Line-out	Line-out	Line-out	-	-
Line-in	-	-	-	-	-
Mic-in	-	-	-	-	-
USB 2.0/3.0	2/1	2/1	2/1	2/2	2/2
COM Port	Isolation 2 x RS232/422/485	Isolation 2 x RS232/422/485	Isolation 2 x RS232/422/485	2xRS232; 1xRS232/422/485	2xRS232; 1xRS232/422/485
Power Switch	1	1	1	1	1
Remote Power Switch	2-pin	2-pin	2-pin	3pin	3pin
Reset Button	1	1	1	1	1
Power Jack	Terminal blocks 3-pin phoenix Connector	Terminal blocks 3-pin phoenix Connector	Terminal blocks 3-pin phoenix Connector	Terminal Blocks 3-Pin Phoenix Connector	Terminal Blocks 3-Pin Phoenix Connector
Expansion	2 x mini-PCIe	2 x mini-PCIe	2 x mini-PCIe	1xMini PCIe	1xMini PCIe
Construction Front Panel	Aluminum front zero bezel	Aluminum front zero bezel	Aluminum front zero bezel	Aluminum Front Zero Bezel	Aluminum Front Zero Bezel
Mounting	Panel/wall/stand/VESA 100 x 100mm	Panel/wall/stand/VESA 100 x 100mm	Panel/wall/stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100x100mm	Panel/Wall/Stand/VESA 100x100mm
Power Input	+12 to 30V DC	+12 to 30V DC	+12 to 30V DC	+24V DC	+24V DC
Power Supply Adapter	Optional	Optional	Optional	Optional	Optional
Operating Temp.	-10°C to 60°C	-10°C to 60°C	-10°C to 60°C	0°C to 50°C	0°C to 50°C
Storage Temp.	-20°C to 75°C	-20°C to 75°C	-20°C to 75°C	-20°C to 75°C	-20°C to 75°C
Operating Humidity	10%~90%, non-condensing	10%~90%, non-condensing	10%~90%, non-condensing	10%~90%, Non-condensing	10%~90%, Non-condensing
IP Level	Front frame IP66	Front frame IP66	Front frame IP66	Front Frame IP66	Front Frame IP66
Cut Out Size (W x H, mm)	294 x 209	398 x 293	544 x 364	398x293mm	544x364mm
Dimension (W x H x D, mm)	308 x 223 x 60.7	417.4 x 312.4 x 63.75	562.4 x 382.4 x 62.85	417.4x312.4x81.75mm	562.4x382.4x80.35mm
Net Weight (kg)	3.7	6.4	9.26	6.4	9.26
Certifications	CE: EN61000-6-2/4; FCC Class A	CE: EN61000-6-2/4; FCC Class A	CE: EN61000-6-2/4; FCC Class A	CE: EN61000-6-2/4; FCC Class A	CE: EN61000-6-2/4; FCC Class A
Ordering Code	+72IPC1040P	+72IPC1640P	+72IPC2140P	+72IPC1680P	+72IPC2180P



	MON1205T	MON1500T1	MON1700T1	MON1900T1		MON1600P	MON2100P
LCD Size	12.1" 4:3	15" 4:3	17" 4:3	19" 4:3	LCD Size	15.6" 16:9	21.5" 16:9
Max. Resolution	XGA, 1024 x 768	XGA, 1024 x 768	SXGA, 1280 x 1024	SXGA, 1280 x 1024	Max. Resolution	HD, 1366 x 768	Full HD, 1920 x 1080
Luminance (cd/m ²)	500	400	350	350	Panel	AUO: G156XW01 V1	AUO: G215HVN01.0
Contrast Ratio	700	2500	800	1000	Luminance (cd/m ²)	400	300
Viewing Angle (H-V)	70(U), 70(D), 80(L), 80(R)	88(U), 88(D), 88(L), 88(R)	60(U), 80(D), 80(L), 80(R)	80(U), 80(D), 85(L), 85(R)	Contrast Ratio	500	5000
Backlight	LED	LED	LED	LED	Viewing Angle (H-V)	80(U), 80(D), 85(L), 85(R)	89(U), 89(D), 89(L), 89(R)
LCD Color	16.7M	16.7M	16.7M	16.7M	Backlight	LED	LED
Touch Screen	Resistive 5-wire	Resistive 5-wire	Resistive 5-wire	Resistive 5-wire	LCD Color	16.7M	16.7M
Touch Light Transmission	80%	81%	81%	81%	Touch Screen	10 x point P-Cap	10 x point P-Cap
Touch Screen I/F	USB	USB	USB	USB	Touch Light Transmission	87%	87%
OSD Function	OSD keypad	OSD keypad	OSD keypad	OSD keypad	Touch Screen I/F	USB	USB
Video Input	VGA; DVI-D	VGA; DVI-D	VGA; DVI-D	VGA; DVI-D	OSD Function	OSD keypad	OSD keypad
Power Jack	Terminal blocks 3-pin phoenix connector	Terminal blocks 3-pin phoenix connector	Terminal blocks 3-pin phoenix connector	Terminal blocks 3-pin phoenix connector	Video Input	VGA; DVI-D; DP	VGA; DVI-D; DP
Construction Front Panel	ABS+PC plastic front bezel	ABS+PC plastic front bezel	ABS+PC plastic front bezel	ABS+PC plastic front bezel	Power Jack	Terminal blocks 3-pin phoenix connector	Terminal blocks 3-pin phoenix connector
Mounting	Panel/wall/stand/VESA 100 x 100 mm	Panel/wall/stand/VESA 100 x 100 mm	Panel/wall/stand/VESA 100 x 100 mm	Panel/wall/stand/VESA 100 x 100 mm	Construction Front Panel	Aluminum front zero bezel	Aluminum front zero bezel
Power Input	+12 to 24V DC	+12 to 24V DC	+12 to 24V DC	+12 to 24V DC	Mounting	Panel/wall/stand/VESA 100 x 100mm	Panel/wall/stand/VESA 100 x 100mm
Power Supply Adapter	Optional	Optional	Optional	Optional	Power Input	+12 to 24V DC	+12 to 24V DC
Operating Temp.	-5°C to 50°C	-5°C to 50°C	-5°C to 50°C	-5°C to 50°C	Power Supply Adapter	Optional	Optional
Storage Temp.	-20°C to 75°C	-20°C to 75°C	-20°C to 75°C	-20°C to 75°C	Operating Temp.	-10°C to 60°C	-10°C to 60°C
Operating Humidity	10%~90%, non-condensing	10%~90%, non-condensing	10%~90%, non-condensing	10%~90%, non-condensing	Storage Temp.	-20°C to 75°C	-20°C to 75°C
IP Level	Front frame IP65	Front frame IP65	Front frame IP65	Front frame IP65	Operating Humidity	10%~90%, non-condensing	10%~90%, non-condensing
Cut Out Size (W x H, mm)	304.5 x 230	371 x 297	399 x 329	436 x 366	IP Level	Front frame IP66	Front frame IP66
Dimension (W x H x D, mm)	317 x 243 x 53.5	384.37 x 309.95 x 51	410.4 x 340.4 x 53.9	457.64 x 379.24 x 49.15	Cut Out Size (W x H, mm)	398 x 293	544 x 364
Net Weight (kg)	2.8	3.9	4.8	5.5	Dimension (WxHxD, mm)	417.4 x 312.4 x 51.75	562.4 x 382.4 x 50.85
Certifications	CE; FCC Class B	CE; FCC Class B	CE; FCC Class B	CE; FCC Class B	Net Weight (kg)	5.48	7.87
Storage Temp.	-20°C to 75°C	-20°C to 75°C	-20°C to 75°C	-20°C to 75°C	Certifications	CE; FCC Class B	CE; FCC Class B
Operating Humidity	10%~90%, non-condensing	10%~90%, non-condensing	10%~90%, non-condensing	10%~90%, non-condensing	Ordering Code	+73MON1600P	+73MON2100P
IP Level	Front frame IP65	Front frame IP65	Front frame IP65	Front frame IP65			
Certification	CE: EN61000-6-2/4; FCC Class A	CE: EN61000-6-2/4; FCC Class A	CE: EN61000-6-2/4; FCC Class A	CE: EN61000-6-2/4; FCC Class A			
Ordering Code	+73MON1205T1	+73MON1500T1	+73MON1700T1	+73MON1900T1			

