



HMI PAC - Control made easy.



HMI PAC

Control made easy.

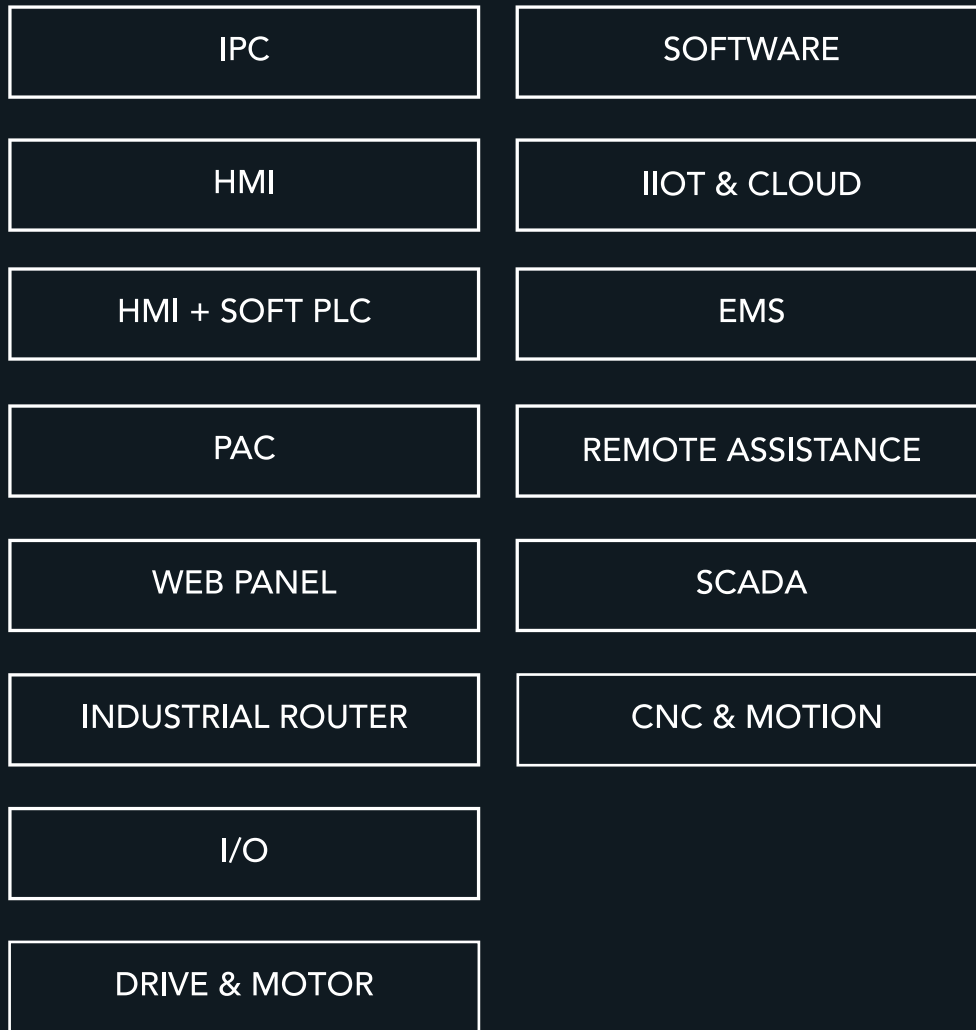
Connect
ideas.
Shape
solutions.

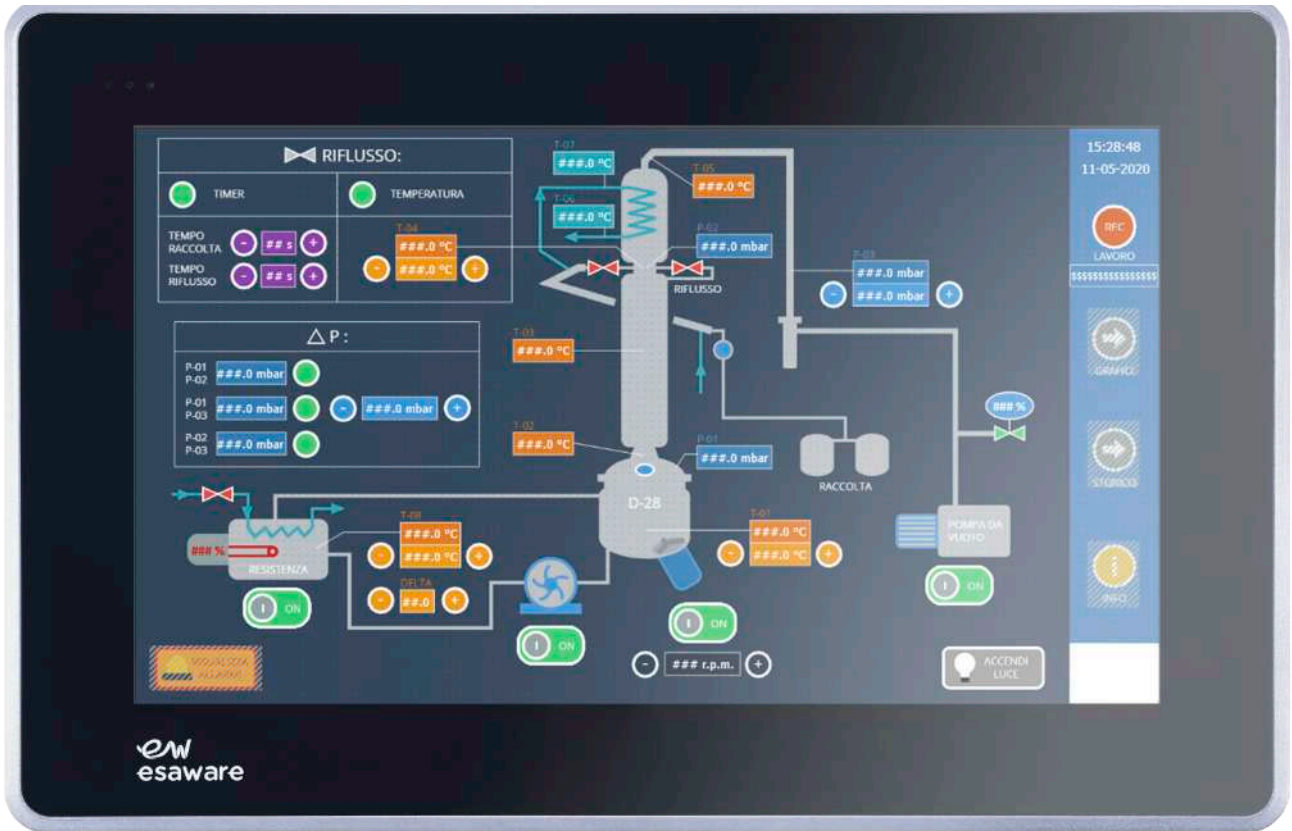
ESA S.p.A. | www.esa-automation.com |

HMI PAC - Control made easy.

Overview

Smart Tech. Ease of Use.





Linux

Linux



C++

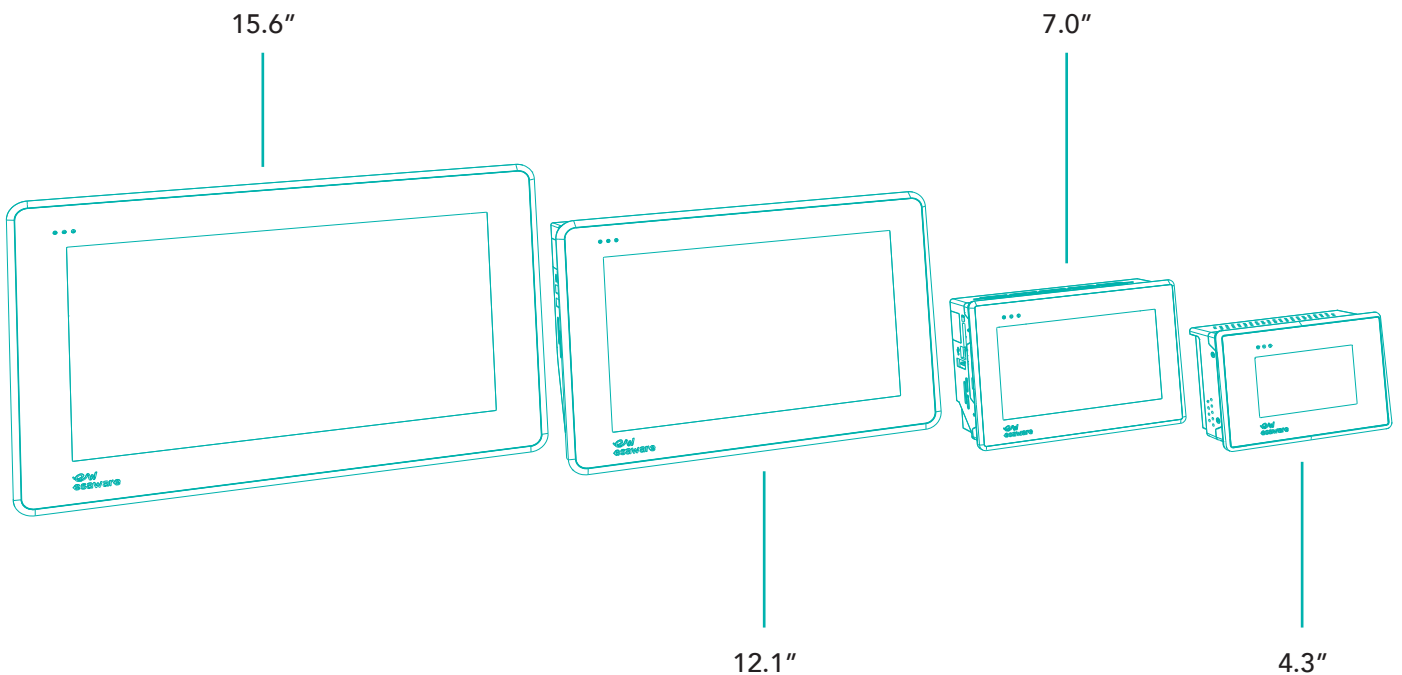


Codesys



Windows embedded

Size comparison



ESA HMI PAC is the evolution of the standard ESA HMI including the powerful and well known softPLC runtime Codesys. Both the visualization and the machine control functionalities are embedded in a single product. The I/O can be connected locally or remotely via the real time ethercat bus.

Online Tag sharing between the HMI and the SoftPLC programming environment.

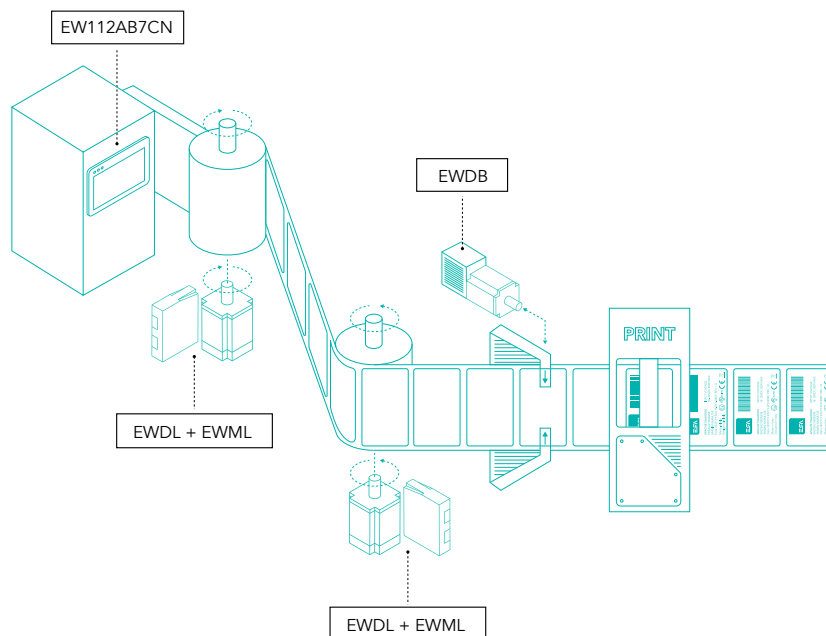
APPLICATION

- + Packaging Machine
- + Plastic and rubber machine
- + Steel and Wood working machine
- + CNC
- + Food processing machine
- + Robotics

FEATURES

- + Preloaded Codesys 3.5 runtime
- + Battery powered NVRAM
- + Software Watchdog
- + Hardware Watchdog
- + Ethercat master stack onboard
- + Windows Embedded Compact 7 Pro operating system
- + Preloaded Everywhere runtime
- + SNTP Server and Client
- + Aluminium front side PTFE coating
- + True Flat touch screen
- + Front status led
- + CPU Arm Cortex A8 1 GHz
- + Ram DDR3
- + 3 Gb internal memory
- + SDHC v 2.0 (till 25Mbyte)
- + High brightness display (16M colours)

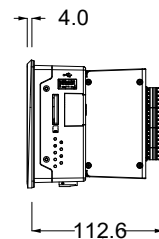
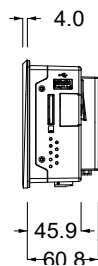
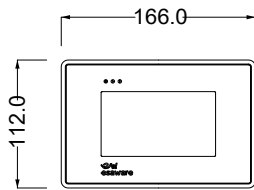
- + IEC 61131-3 softPLC programming
- + ESA motion library for single and multi axes management
- + Ethercat real time fieldbus
- + CANOpen real time fieldbus
- + Additional C++ task for advanced motion and CNC applications
- + Web based HMI visualization
- + Everywhere runtime for remote connection and maintenance



EW104

AB

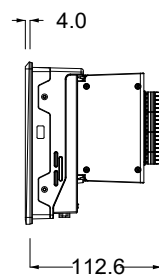
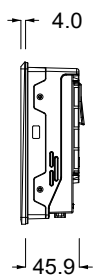
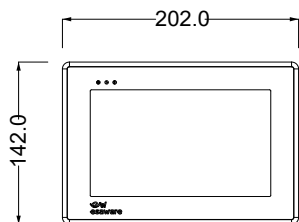
AC



EW107

AB

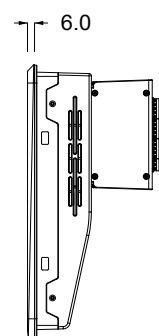
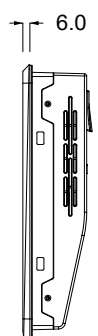
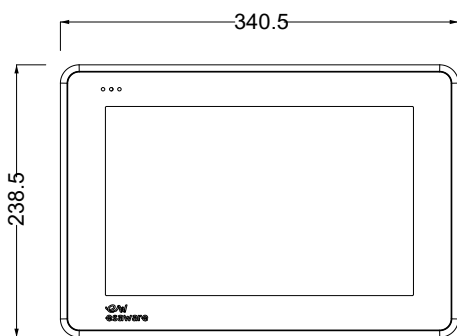
AC



EW112

AB

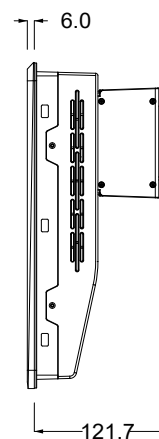
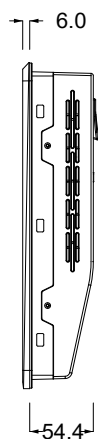
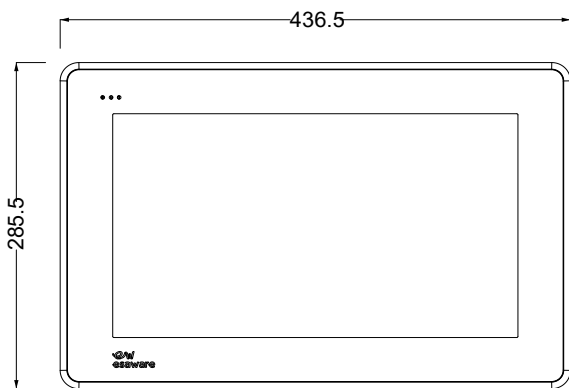
AC



EW115

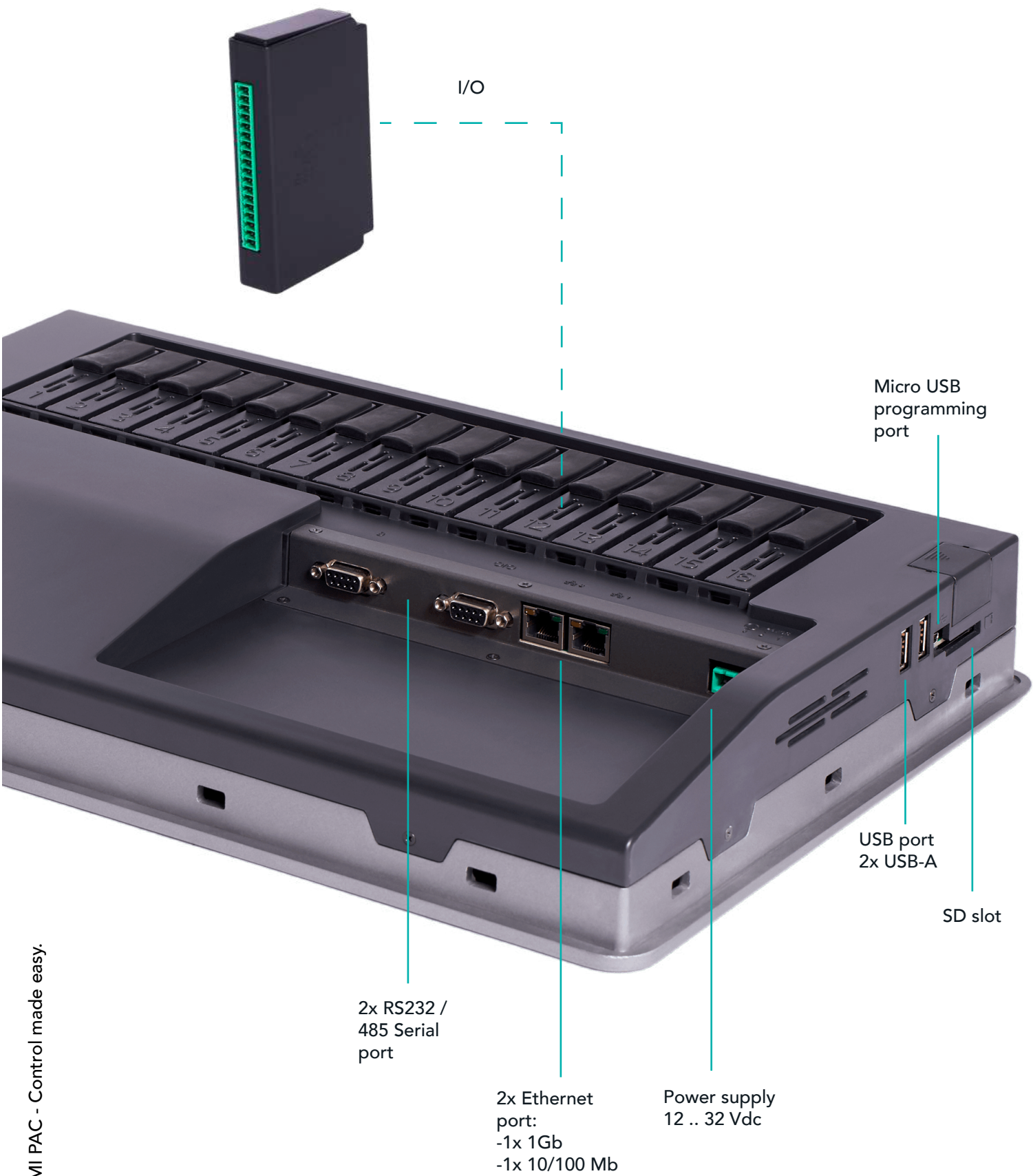
AB

AC



System configuration

HMI PAC - Control made easy.



I/O

Micro USB programming port

USB port
2x USB-A

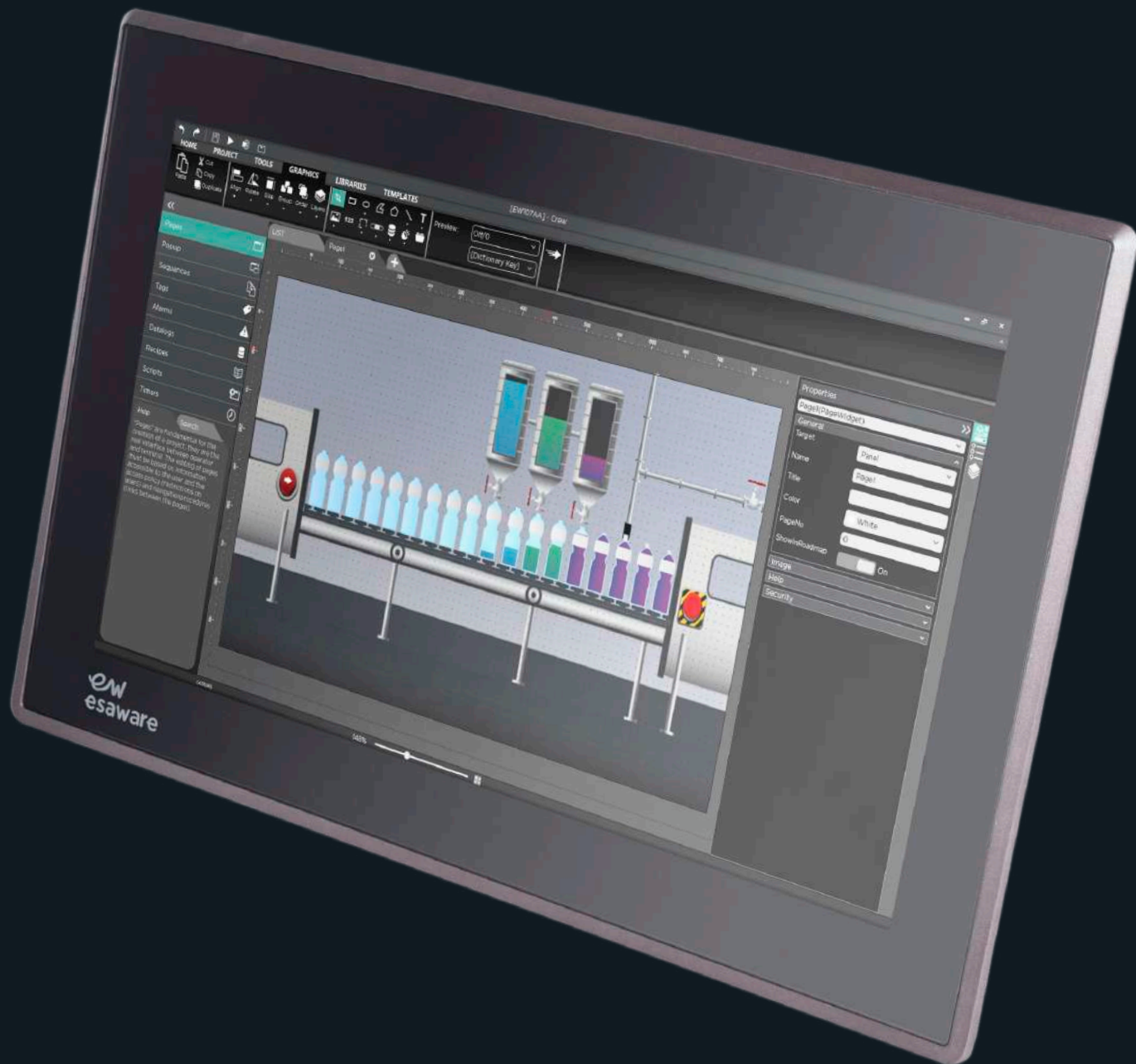
SD slot

2x RS232 /
485 Serial
port

2x Ethernet
port:
-1x 1Gb
-1x 10/100 Mb

Power supply
12 .. 32 Vdc

HMI PAC - Control made easy.



EW100AB

TECHNICAL SPECIFICATIONS

Esaware HMI + SoftPLC

Control made easy

| | EW104AB | EW107AB | EW112AB | EW115AB |
|---|---|------------------|-------------------------------|-------------------------|
| Display Size | 4,3" | 7" | 12,1" | 15,6" |
| Display Technology | TFT | | | |
| Display Colors | 262 K | 16 M | | |
| Display Backlight | LED | | | |
| Display Brightness (cd/m ²) | 400 | 600 | 400 | 300 |
| Display Resolution (pixel) | 480x272 | 800x480 | 1280x800 | 1366x768 |
| Backlight Life (hours) | 50 K | | | |
| Processor | ARM Cortex A8 | | | |
| RAM | 256 MB DDR3 | | 512 MB DDR3 | |
| Flash | 3 GB | | | |
| NVRAM | 32 Kb (SoftPLC) | | | |
| Scan Time (µSec) | Typical 30 | | | |
| Serial Ports | SP1 RS232/485-MPI-COM0; SP2 RS232/485-MPI-COM0; CAN; Profibus | | | |
| Ethernet (Ethercat Master) | 1 x 10/100Mb | 2 x 10/100Mb | | |
| USB Ports | 1 x USB Host + 1 x USB Device | | 2 x USB Host + 1 x USB Device | |
| Cardbus slot | 1 x SDHC/MMC | | | |
| Power Supply (Vdc) | 18 – 32 | | | |
| Consumption (W) | 4 | 7 | 15 | 19 |
| Operating Temperature (°C) | -10 ... +50 (non condensing) | | | |
| Storage Temperature (°C) | -20 ... +65 | | | |
| Humidity | <90% (non condensing) | | | |
| External dimensions(W/H/D) (mm) | 166 x 112 x 45,9 (61 with double port) | 202 x 142 x 45,9 | 340,5 x 238,5 x 48,6 | 436,5 x 285,5 x 54,4 |
| Cut-out dimensions (W/H) (mm) | 158,5 x 104,5 | 195 x 135 | 326 x 227 | 422,5 x 271,5 |
| Weight (kg) | 0,5 | 0,8 | 2,5 | 4,5 |
| Protection degree (front) | IP 66 | | | |
| Certifications | CE / EN60068-2-6 / EN60068-2-27 / Humidity EN60068-2-30 cULus (Certificate no. E189179) / EAC ATEX 2014/34/UE directive Group II Category 3 G D Zone 2/22 | | | |



EW100AC

TECHNICAL
SPECIFICATIONS

data sheet
↓

Esaware HMI + SoftPLC + I/O

Control made easy

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| Processor | ARM Cortex A8 | | | |
| RAM | 256 MB DDR3 | | 512 MB DDR3 | |
| Flash | 3 GB | | | |
| I/O Slot | 4 | 8 | 12 | 16 |
| NVRAM | 32 Kb (SoftPLC) | | | |
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| Serial Ports | SP1 RS232/485-MPI-COM0; SP2 RS232/485-MPI-COM0; CAN; Profibus | | | |
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Hole D.25 mm
Cable through



VESA Arm fixing kit

VESA BOX

Simple design ready for VESA mounting; available for all sizes (7" - 10,1" - 15,6") with IP21 protection level.





HAND HELD

Handheld solution including possibility to have customized push buttons.



Order Code

| | | | | | | | | | | | |
|------------------------------------|-------------------------|---|---|---|---|---|---|---|---|---|-------------------|
| EW | x | x | x | x | x | x | x | x | x | x | Personalizzazione |
| Serie | | | | | | | | | | | |
| 1=100 | | | | | | | | | | | |
| LCD | | | | | | | | | | | |
| 04= 4,3" wide | | | | | | | | | | | |
| 07= 7" wide | | | | | | | | | | | |
| 12= 12,1" wide | | | | | | | | | | | |
| 15= 15,6" wide | | | | | | | | | | | |
| Front / Touch | | | | | | | | | | | |
| A= AluTeflon Resist | | | | | | | | | | | |
| Type | | | | | | | | | | | |
| A= AluTeflon Resist | | | | | | | | | | | |
| 2= Winding type 2 | | | | | | | | | | | |
| Rt | | | | | | | | | | | |
| 0= Runtime Crew | Type: B and C + Codesys | | | | | | | | | | |
| 7= RT Crew + Codesys + Task Motion | Type: B and C | | | | | | | | | | |
| 9= Runtime Crew + Task C | Type: B | | | | | | | | | | |
| Opzione Porte | | | | | | | | | | | |
| CN= Can | | | | | | | | | | | |
| Opzione Wireless | | | | | | | | | | | |
| 00 = no radio option | | | | | | | | | | | |
| Personalizzazione | | | | | | | | | | | |
| N = No Logo | | | | | | | | | | | |



ERGO

All in one platform solution

Connect ideas.
Shape solutions.

Overview

Smart Tech. Ease of Use.

| | |
|-------------------|-------------------|
| IPC | SOFTWARE |
| HMI | IIOT & CLOUD |
| HMI + SOFT PLC | EMS |
| PAC | REMOTE ASSISTANCE |
| WEB PANEL | SCADA |
| INDUSTRIAL ROUTER | CNC & MOTION |
| I/O | |
| DRIVE & MOTOR | |

Overview Configuration



- 1. IPC
- 2. HMI+SOFTLPC
- 3. HMI
- 4. WEBPANEL
- 5. MONITOR
- 6. CUSTOM BUTTON SLOTS

- 1. KEYBOARD TOUCH
- 2. HMI+SOFTPLC
- 3. WEB PANEL
- 4. CUSTOM KEYBOARD

KVM OPTION



RFID option

USB

- 1. IPC
- 2. HMI+SOFTLPC
- 3. HMI
- 4. WEBPANEL
- 5. MONITOR

ERGO is the new all-in-one machine control system by ESA. A solution designed to deliver the highest level of flexibility, ergonomics and customization. With a true flat projected capacitive multi-touch screen and a 21.5" million colors TFT display, it offers a very wide choice of configurations and customizable options, including buttons, touch keypads and even an additional 12.1" HMI. In order to maximize productivity, ERGO comes into two true flat versions: classical and 120° ergonomic. Finally, thanks to its rough design and easy installing system, it can be installed in any work environment (even the harshest ones), both in landscape and in portrait mode.

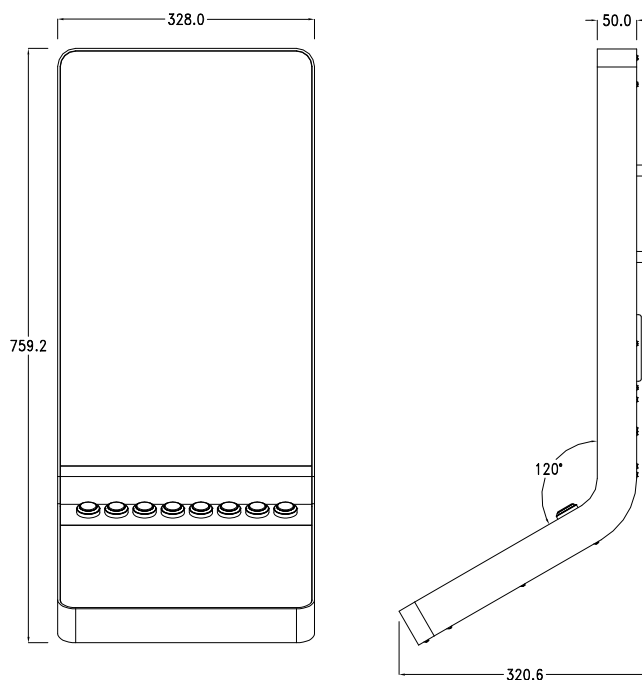
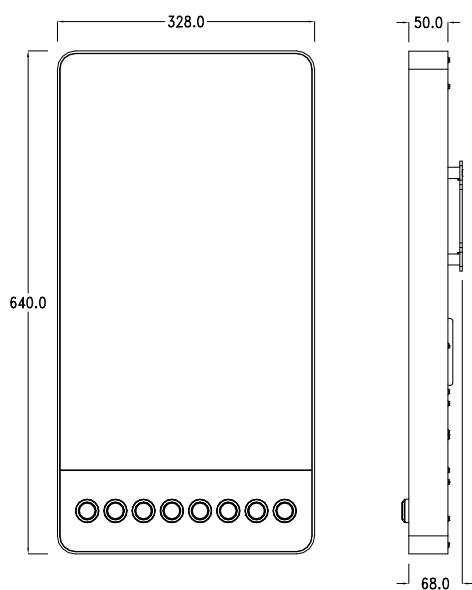
APPLICATION

- + Packaging Machine
- + Plastic and rubber machine
- + Steel and Wood working machine
- + CNC
- + Food processing machine
- + Robotics

FEATURES

- + Industrial Personal Computer All-in-One arm mounted
- + LCD 21.5" wide
- + Resolution 1920x1080
- + LED backlight 50 K/h
- + 16.7M colors
- + Mounting horizontal VESA 100
- + P-CAP Touch screen
- + CPU Intel® Core™ i3-4010U Dual Core 1.7GHz SoC, Fanless
- + 2x miniPCIe slots on the motherboard (mPCIe/mSATA cards)
- + RAM memory 8 GB DDR3L SO-DIMM 204 PIN 1333/1600 MHz single channel

- + SSD 256 GB SATA 2.5"
- + 1 serial port RS232
- + 4 USB (3.0) on the back , 1 on the front
- + 2 DP video ports (DP active cable required)
- + 2 Ethernet ports 10/100/1000 Mbps RJ45 - Intel I210 / I218
- + Power supply 24 VDC
- + Protection degree IP65
- + Operating Temperature 0...50°C
- + Storage Temperature -20...+65°C
- + Humidity 85% no condensing



Front view

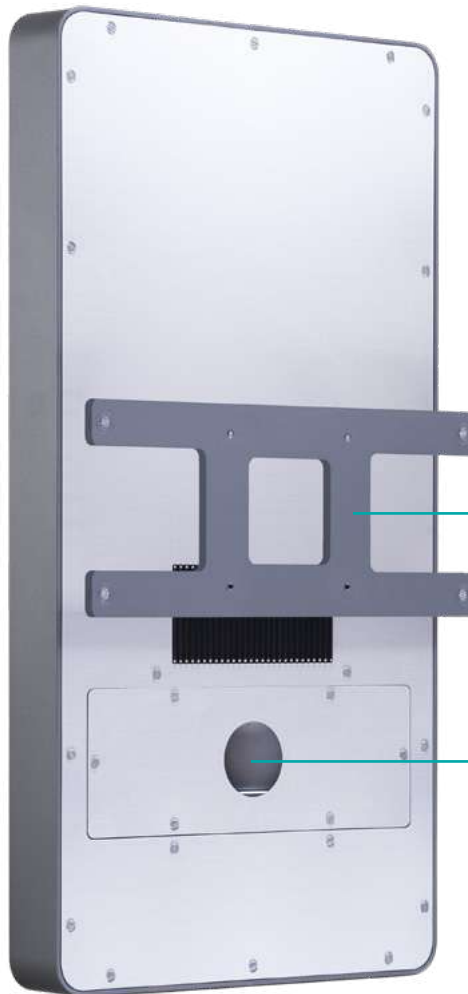
Back view

LCD 21.5" Touch
1920 x 1080



VESA arm
attachment

Compatible with
any cable gland
(\varnothing 42mm/ IP69K)



Portrait Configuration



Landscape Configuration





1 button of your choice + RFID



Empty slots



Custom button slots



1 button emergency



7 button slots + 1 emergency



Many options for different users

Thanks to its high level of configurability, ERGO perfectly embodies the new concept of human-machine interface 4.0. The device is equipped with a flat capacitive multi-touch screen and a 21.5" TFT display.

RFID option

1 button of your choice





Empty slots



Custom button slots



1 button emergency

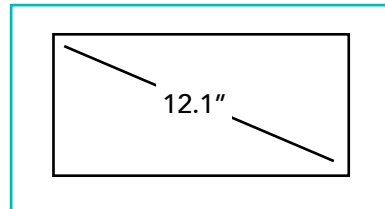


7 button slots + 1 emergency

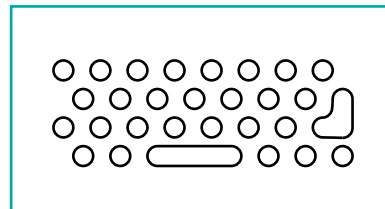


+

Display LCD touch 12.1"



Full QWERTY Keyboard



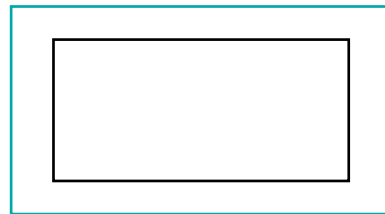
Many options for different users

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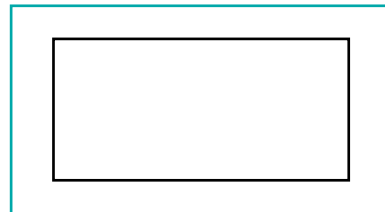
It also gives the user a choice of numerous configuration options, including a dual 12.1" visual area, touch keyboards and additional buttons.



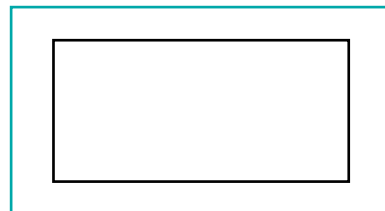
WEB PANEL



HMI



HMI+SOFTPLC



ERGO with Integrated HMI solution.

All in one product that do combine the flexibility of an industrial PC with the real time performance of a powerful HMI with integrated softPLC, motion and Ethercat master fieldbus.

Main 21.5" display with capacitive touch screen.

PC based applications.

Scada, data collection and analisys, web based applications.

Additional 12.1" display with capacitive touch.

Powerful HMI with more than 100 communication drivers.

Integrated real time soft PLC based on the IEC 61131 standard.

ESA Softmotion function blocks based on the PLCOpen standard.

Ethercat master stack for real time communication with remote I/O and drives.

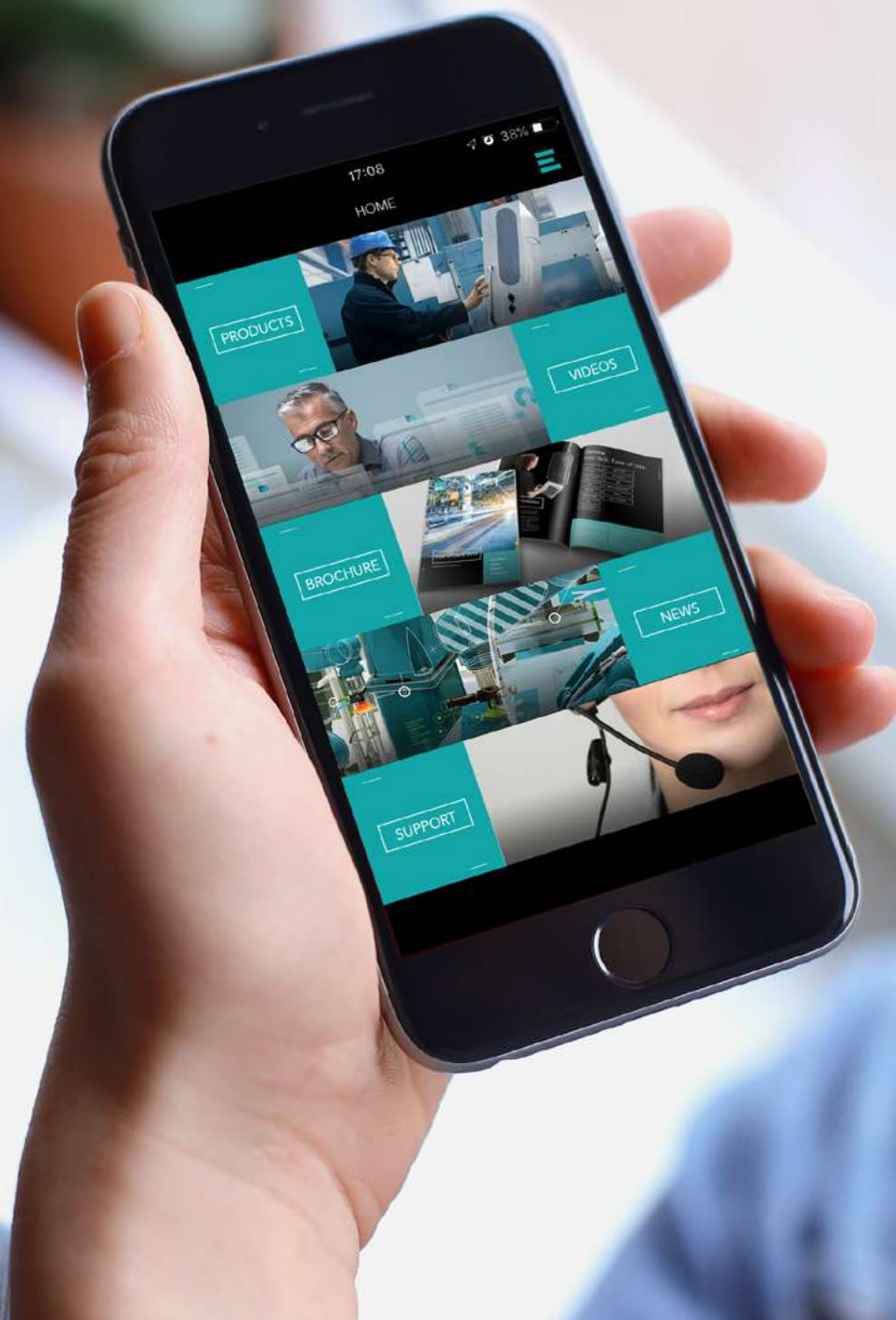


ERGO

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS (MORE CONFIGURATIONS AVAILABLE ONLINE ON OUR WEB TOOL CONFIGURATOR)

| MODEL | Embedded ARM ERGO122 | PC Control ERGO222 | Monitor ERGO322 |
|-------------------------------------|---|--|--|
| Versions | - Touch Capacitive - Full Glass | - Touch Capacitive - Full Glass - Dual Touch Capacitive 120° + Keyboard Touch - Dual Touch Capacitive 120° + 12" HMI Touch" | - Touch Capacitive - Full Glass - Dual Touch Capacitive 120° + Keyboard Touch - Dual Touch Capacitive 120° + 12" HMI Touch" |
| General | | | |
| Bezel /Chassis | Aluminum /Sheet Steel | Aluminum /Sheet Steel | Aluminum /Sheet Steel |
| Mounting | Portrait Landscape | Portrait Landscape | Portrait Landscape |
| | VESA 100 | VESA 100 | VESA 100 |
| Power Supply (Vdc) | 12...32 VDC | 15...36 VDC | 18...30 VDC |
| Consumption (W) | 24W for ARM base+ 24W for display keyboard (if any) | 45 - 50 W for PC base + 24W for display keyboard (if any) | 40W for monitor + 24W for display keyboard (if any) |
| Operating Temperature (°C) | -10 ... + 50 (non condensing) | -10 ... + 50 (non condensing) | -10 ... + 50 (non condensing) |
| Storage Temperature (°C) | -20 ... + 65 | -20 ... + 65 | -20 ... + 65 |
| Humidity | 90% (non condensing) | 90% (non condensing) | 90% (non condensing) |
| Protection degree (all) | IP65 | IP65 | IP65 |
| Certifications | CE / UL | CE / UL | CE / UL |
| Display Size 1 | 21.5" true flat multi-touch screen | 21.5" true flat multi-touch screen | 21.5" true flat multi-touch screen |
| Display Technology | TFT / 16,7 M colors / LED backlight | TFT / 16,7 M colors / LED backlight | TFT / 16,7 M colors/ LED backlight |
| Display Brightness (cd/m²) | 300 | 300 | 300 |
| Contrast | 5000:1 | 5000:1 | 5000:1 |
| Viewing Angle H-V | 89/89/89/89 | 89/89/89/89 | 89/89/89/89 |
| Display Resolution (pixel) | 1920x1080 | 1920x1080 | 1920x1080 |
| Backlight life (hours) | 50K | 50K | 50K |
| Touch Technology | Capacitive | Capacitive | Capacitive |
| Video input | | | DVI + VGA |
| Operating systems | Linux | Windows7 - Windows10 - WES7 | |
| CPU Fanless Celeron 4G | Quad Core i.MX6 1.2 GHz Cortex A9 Linux | Celeron quad core J1900 2,0 GHz (2,42GHz) – 10W | |
| CPU Fanless Intel® Core™ 4G | | Intel Core i3-4010U 1,7GHz / i7-4650U 1,7GHz (3,3GHz) – 15W | |
| RAM | 2 GB | | |
| FLASH | 8 GB | | |
| LAN | LAN 1xGb RJ45 - 1x10/100Gb RJ45 | | |
| RAM (Celeron quad core) | | on board 4GB DDR3L 1066/1333MHz - dual channel - | |
| RAM (Fanless Intel® Core™) | | up to 8GB DDR3L SODIMM 1333/1600MHz 204 pin -single channel- | |
| RS232 / RS485 | 1x RS232/RS485 | 1x RS232 + 1x RS485 | |
| USB Ports 2.0/3.0 rear | 2x 2.0 | 1x 2.0 + 1x 3.0 cpu J1900 / 4x 3.0 cpu Intel®Core™ | 1x USB 2.0 type A – rear 1x USB type B |
| Ethernet Celeron J1900 | | 2x 1Gb RJ45 Intel I210 | |
| Ethernet i-Core™ i3/i7 | | 2x 1Gb RJ45 Intel I210/I218 | |
| VGA/DP (Celeron J1900) | | 1x / 1x (DP passive cable required) | |
| DP (i-Core™ i3/i7) | | 2x (DP active cable required) | |
| RAID 0/1 | | 2x SSD on cpu i-core | |
| Drives (internal) | | HDD min. 500GB / SSD min. 64GB / mSATA min.32GB (options) | |
| Display Size 2 (only on dual Touch) | - | 12.1" true flat multi-touch screen | 12.1" true flat multi-touch screen |
| Display Technology | | TFT / 16,7 M colors / LED backlight | TFT / 16,7 M colors/ LED backlight |
| Display Brightness (cd/m²) | | 400 | 400 |
| Contrast | | 800:1 | 800:1 |
| Viewing Angle H-V | | 80/80/65/80 | 80/80/65/80 |
| Display Resolution (pixel) | | 1920x1080 | 1920x1080 |
| Backlight life (hours) | | 50k | 50K |
| Touch Technology | | Capacitive | Capacitive |
| Operating systems | | Linux WEC7 | Linux WEC7 |
| Keyboard Extension HMI Extension | - | HTML5 Web Browser + Touch keyboard | HTML5 Web Browser + Touch keyboard |
| | - | "Capacitive HMI 12,1" + 2 Ethernet port 10/100 Mbps RJ45, + Crew + Everyware + Codesys + Esa Motion Function Blocks Library" | "Capacitive HMI 12,1" + 2 Ethernet port 10/100 Mbps RJ45, + Crew + Everyware + Codesys + Esa Motion Function Blocks Library" |
| Push button extension | up to 8 x 22 mm standard push-buttons, switches, emergency button, USB, RFID etc. | up to 8 x 22 mm standard push-buttons, switches, emergency button, USB, RFID etc. | up to 8 x 22 mm standard push-buttons, switches, emergency button, USB, RFID etc. |



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