A new concept of Human-Machine Interface

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For the past decades, the evolution of the concept of human-machine interface has defined the industry. Today, with trends such as the Internet of Things and digitalization, we need increasingly sophisticated and interconnected HMI systems to operate in production plants.

In all industrial sectors, from automotive to the health sector, companies need interfaces that can make operations as immediate and intuitive as possible. Just like our everyday devices, such as smartphones and tablets.

That is one of ESA Automation's main goals. Our team of technicians and IT experts is constantly working on HMI solutions that can integrate all the Industry 4.0 principles. Starting with ERGO, our new all-in-one control system.

ERGO: flexibility and ergonomics

Thanks to its unique level of control and configurability, ERGO perfectly embodies the new concept of human-machine interface 4.0.
This device features a flat projected capacitive multi-touch screen and a 21.5" million colors TFT display, and offers users the possibility to choose among numerous configuration options, which include a second 12.1" HMI, touch keypads and additional buttons.
Furthermore, ERGO can be supplied with a powerful x86 PC based CPU with the latest Intel Core processor or with a Linux-based ARM Imx6 CPU. Or it can also be used as a simple monitor.
Available in two versions (ergonomic 120° or classical), the new ESA Automation solution aims to make human-machine interaction as efficient as possible, offering an incredible level of flexibility and customization.

With that in mind, ESA Automation aims to provide industrial solutions that are customer oriented. Synergistic and interconnected systems that can maximize productivity and efficiency.

ERGO

+ All in one integrated platform
+ 21" main display and capacitive touch
+ Integrated softkeyboard: 12" capacitive touch for custom keyboard layout
+ Web page visualization via a full screen browser area
+ Standard 22 mm input/output mechanical buttons and lamps

ERGO	PC Control Panel Station	Embedded ARM Control Panel Station	Monitor
Mechanical versions	120°L with display keyboard and push button extensions/ flat with push button extension	120°L with display keyboard and push button extensions/ flat with push button extension	120°L with display keyboard and push button extensions/ flat with push button extension
Keyboard Extension	12.1" true flat multi-touch screen	12.1" true flat multi-touch screen	12.1" true flat multi-touch screen
Push button extension	up to 8 x 22 mm standard push-buttons, switches, emergency button, USB, etc.	up to 8 x 22 mm standard push-buttons, switches, emergency button, USB, etc.	up to 8 x 22 mm standard push-buttons, switches, emergency button, USB, etc.
Display Size	21,5"	21,5"	21,5"
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	500:1	500:1	500:1
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
Bezel /Chassis	Aluminum /Sheet Steel	Aluminum /Sheet Steel	Aluminum /Sheet Steel
Mounting	VESA 100	VESA 100	VESA 100
Video input			DVI + VGA
CPU Fanless Celeron 4G	Celeron quad core J1900 2,0 GHz (2,42GHz) – 10W	Quad Core i.MX6 1.2 GHz Cortex A9	
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 + 1x RS485	1x RS232/RS485	
USB Ports 2.0/3.0 rear	1x 2.0 + 1x 3.0 cpu J1900 / 4x 3.0 cpu Intel®Core™	2x 2.0	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. 128GB / mSATA min.32GB (options)		
Power Supply (Vdc)	15...36 VDC	12...32 VDC	18...30 VDC
Consumption (W)	45 - 50 W for PC base + 24W for display keyboard (if any)	24W forARM 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)
Operating systems	Windows7 - Windows10 - WES7	Linux	
Protection degree (all)	IP65	IP65	IP65
Certifications	CE	CE	CE