

# Operating and Monitoring Systems

## Panel PC / Thin Client SERIES 500

### Device platform ORCA

### ORCA OS E59A



- Modular Panel PC / Thin Client Operator Station, 22" display
- Zone 1, 21, Class I, Zone 1 / Div 2, stainless steel enclosure IP66, GMP compliant
- Robust touch screen, protected behind reflection-free glass
- Data transmission via Ethernet copper up to 100 m and / or glass fibre up to 10 km

WebCode **ORCAPTCOSA**



The ORCA E59A Operator Stations are modular explosion-proof Panel PCs or Thin Clients for zones 1 and 21. Their brilliant 22-inch widescreen displays with robust multi-touch capable touch screen have a resolution of 1920 x 1080 pixels (format 16:9). The enclosures in SS304 or SS316L stainless steel are available with front opening in cleanroom-compatible design, also in different mounting variants. You can configure country-specific keyboards, pointing instruments, RFID readers and barcode readers, processors, memory variants, interfaces as well as SSDs. Data transmission is via Ethernet as 10/100/1000Base-TX, 1000Base-SX or 1000Base-LX.

## Technical Data

### General

Series	ORCA Panel PCs / Thin Clients Operator Stations
Product description	22" Panel PC / Thin Client
Technology	Panel PCs / Thin Clients
HMI type	Operator Station

### Explosion Protection

Application range (zones)	1 2 21 22
Application range (divisions)	Class I, Zone 1 / Division 2 Class II, Division 1 and 2 Class III
IECEX certification	IECEX UL 23.0007X
ATEX certification	UL 23 ATEX 2902X
NEC certification	in approval
CEC certification	in approval
CCC certification	in approval
CNEX certification	in approval
KCS certification	in approval
KCC certification	in approval
PESO certification	in approval
BIS certification	in approval
IECEX gas explosion protection	Ex eb ib qb [ib] [ia Ga] IIC T4 Gb
IECEX dust explosion protection	Ex tb [ib] [ia Da] IIIC T115°C Db
ATEX gas explosion protection	Ⓔ II 2(1) G Ex eb ib qb [ib] [ia Ga] IIC T4 Gb

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## Explosion Protection

ATEX dust explosion protection      Ⓔ II 2(1) D Ex tb [ib] [ia Da] IIIC T115°C Db

## Electrical Data

Power supply      24 VDC or 230 VAC

Rated operational voltage DC      DC option: 24 V

Rated voltage range DC      19.2 V - 31.2 V

Rated operational voltage AC      AC option: 110 / 230 V

Rated voltage range AC      85 V - 250 V

Processor type      E-Box Standard: Intel® ATOM™ E3940  
E-Box Pro: Intel® ATOM™ E3940 or Intel® Core i5™ 8365UE

Processor details      Intel® ATOM™: 1.6 / 1.8 GHz, Quad Core  
Intel® Core i5™: 1.6 / 4.1 GHz, Quad Core, 8 threads, 6 MB Cache

RAM      ATOM: 4 GB  
i5: 16 GB

Data memory      ATOM: 64 GB / 128 GB  
i5: 240 GB

Graphics controller      ATOM: Intel® HD graphics 500  
i5: Intel® UHD graphics 620

Operating system      None  
None / PXE Boot  
Windows™ 10 2019 LTSC  
IGEL OS

Operating system note      IGEL OS: pre-installed without licence

None  
Windows™ 10 2019 LTSC 32-Bit  
Windows™ 10 2019 LTSC 64-Bit  
Windows™ 10 2019 LTSC 64-Bit Remote HMI Firmware V6  
Windows™ 10 2019 LTSC 64-Bit Movicon 11  
IGEL OS

Ethernet / Data      E-Box Standard: 10/100/1000Base-TX  
E-Box Pro:  
2x 10/100/1000Base-TX oder  
1x 10/100/1000Base-TX + 2x 1000Base-SX oder  
1x 10/100/1000Base-TX + 2x 1000Base-LX

Data cable      TX: min. CAT5  
SX: FO cable 50/125 µm or 62,5/125 µm  
LX: FO cable 9/125 µm

Data cable length      TX: 100 m  
SX: 50 µm: 500 m  
SX: 62.5 µm: 300 m  
LX: 10 km

Data cable notice      TX: Ex e screw terminals

Interface medium      TX: min. CAT5 Data transmission  
SX: multi-mode optical cable  
LX: single mode optical cable

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Interface USB	E-Box Standard: 2x USB Ex ia (for keyboard, pointing device) 1x USB Ex ib (for USBi-Drive) 1x USB Ex e (LS/FS/HS 500 mA) E-Box PRO: 2x USB Ex ia (for keyboard, pointing device), 1x USB Ex ib (for USBi-Drive) 1x USB Ex e (LS/FS/HS 500 mA) 1x USB Ex e (LS/FS/HS for Bus Powered Devices only, 500 mA)
Interface serial	RS-232 / RS-422 / RS-485 switchable
Plug version FO	SX / LX: LC - Duplex socket
Battery	> 5 years
Capacitor buffered	approx. 4 days

#### Display

Display version	TFT colour display
Display version 2	16.7 million colours
Display size inch	22
Display size centimetres	55
Display resolution	1920 x 1080; 1680 x 1080; 1280 x 1024
Total pixels	1920 x 1080
Display dimensions	16:9
Display brightness	350 cd/m <sup>2</sup>
Display contrast	1:1000
Touchscreen	Yes
Touchscreen technology	Projected capacitive (PCAP), multi-touch
Touchscreen activation	Touch, no activation pressure required
Touchscreen input method	Finger, thin gloved finger or special gloves, conductive stylus
Touchscreen durability	Very good
Touchscreen transmissivity / optic	Very good
Touchscreen surface contaminants	Unaffected (may however be affected by conductive fluids such as saltwater)
Touchscreen abrasive resistance	No abrasion by finger or rubber
Backlight	LED Technology
Backlight service life	50000 h +25 °C
Front plate (display)	Glass, polyester on powder-coated aluminium
Function keys	Optionally via keyboard with integrated trackball, joystick or touchpad
Softkeys	Optionally via keyboard with integrated trackball, joystick or touchpad
Cursor keys	Optionally via keyboard with integrated trackball, joystick or touchpad
Alphanumeric keys	Optionally via keyboard with integrated trackball, joystick or touchpad
System keys	Input deactivation, display brightness, function key

#### Ambient Conditions

Ambient temperature operation	-20 °C ... +50 °C
Storage temperature	-40 °C ... +60 °C
Relative humidity	10 to 90 % at +40 °C, non-condensing
Positive pressure operation	<= 20 mbar

#### Mechanical Data

Dimensions (WxHxD)	without keyboard: 708 mm x 524 mm x 176 mm with keyboard: 708 mm x 794 mm x 404 mm
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## Mechanical Data

Material front	Stainless steel, glass and polyester on powder-coated aluminium
Material back	Stainless steel
Degree of protection (IP)	IP66
IP enclosure front	IP66
IP enclosure back	IP66

## Mounting / Installation

Enclosure type	ORCA OS enclosure
Enclosure material	Stainless steel enclosure V2A or V4A
Enclosure design	Cleanroom compatible
Mounting option	Wall mounting or mounting on stand / elbow

## Components

Keyboard	optional, 105 keys with trackball / joystick / touchpad
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