

Operating and monitoring systems

Panel PC SERIES 400
Device platform EAGLE
OS ET-406-TX



EXICOM



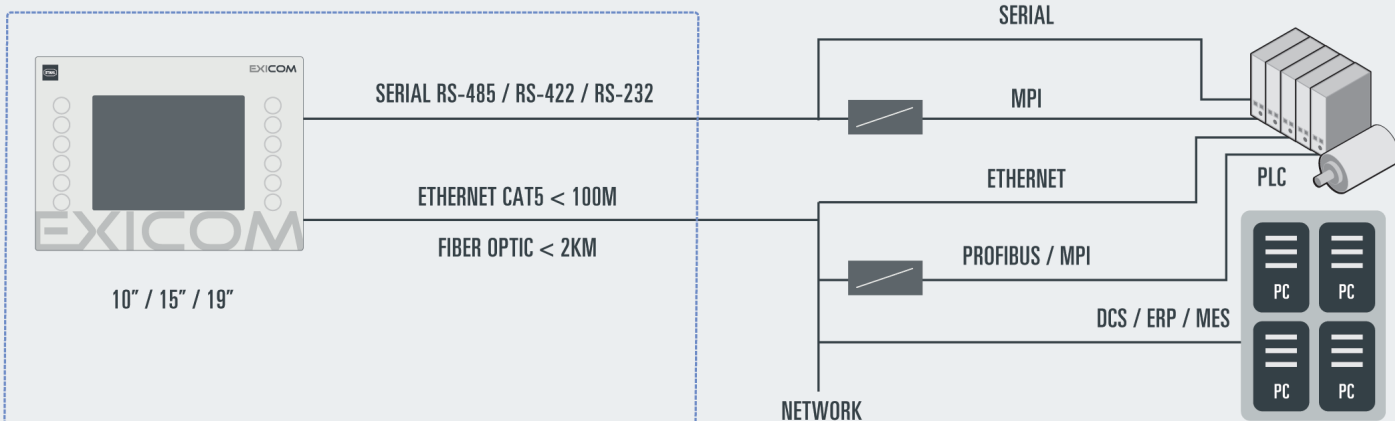
- Panel PC Operator Station, quad core ATOM E3845
- 10" display, 800 x 600 pixels with resistive foil touch screen
- 12 function keys, 10 soft keys, 30 alphanumeric keys
- Zone 1, 2, 21, 22 and Division 2, optional GMP-compliant enclosure
- Data is transmitted via Ethernet as 10/100Base-TX via CAT5 cable up to 100 m.

WebCode **ET406AA**

R. STAHL's OS ET-406 HMI systems are Panel PC Operator Stations for hazardous zones 1, 2, 21 and 22 as well as Division 2. Their brilliant 10" displays with analogue-resistive touch screen have a resolution of 800 x 600 pixels (format 4:3). The stainless steel enclosures (SS304 or SS316L) are available with a front opening or in cleanroom-compliant design and with different mounting options. Country-specific keyboards, pointer instruments and RFID and barcode readers are useful accessories. The state-of-the-art quad core processors can be complemented with various memory sizes and SSDs. Data is transmitted via Ethernet as 10/100Base-TX via CAT5 cable up to 100 m.

PANEL PCs EAGLE (SERIES 4X6)

Zone 1 / 2 / 21 / 22 – Class I, Div 2 / Class I, Zone 2 / Class II, Div 1 / Class III



Technical Data

General

HMI Technology	Panel PC
Type	Operator station
HMI WebCode	ET406AA

Explosion Protection

Application range	1 2 21 22
-------------------	--------------------

Operating and monitoring systems

Panel PC SERIES 400
Device platform EAGLE
OS ET-406-TX



Explosion Protection

Application range	Class I, Division 2 Class II, Division 1 and 2 Class III
Certifications	ATEX, IECEx, NEC, CEC, EAC, INMETRO, CNEX, KGS, PESO
Ship certificates	DNV, LR, ABS
Certification IECEx	IECEx TUR 11.0006X
Certification ATEX	TÜV 11 ATEX 7041 X
Certification TR	TC RU C-DE.ГБ04.В00334
Certification NEC	20130611-E202379
Certification CEC	2512677
Certification INMETRO	UL-BR 12.0265X
Certification CNEX	CNEx14.0065X
Certification KGS	12-GA4BO-0215X 12-GA4BO-0317X
Certification PESO	A/P/HQ/MH/104/5004(P391127) P391127/1
Certification DNV	Certificate number: A-12989 File number: 899.60 Order number: 262.1-001689-6
Certification LR	11/20032
Certification ABS	15-HG1418766-1-PDA
Certification ATEX	The certificates and explosion protection markings apply to a standard device combination of display and enclosure. Any additional built-in or added components may have an impact on / change these.
Gas explosion protection IECEx	ET-406-A-TX Ex d e ia ib mb [ia ib] IIC T4 Gb ET-406-A-FX Ex d e ia ib mb [ia ib op is] IIC T4 Gb
Dust explosion protection IECEx	ET-406-A-TX Ex ia tb [ia ib] IIIC T80°C Db IP66 ET-406-A-FX Ex ia tb [ia ib op is] IIIC T80°C Db IP66
Gas explosion protection ATEX	ET-406-A-TX II 2 (2) G Ex d e ia ib mb [ia ib] IIC T4 Gb ET-406-A-FX II 2 (2) G Ex d e ia ib mb [ia ib op is] IIC T4 Gb
Dust explosion protection ATEX	ET-406-A-TX II 2 (2) D Ex ia tb [ia ib] IIIC T80°C Db IP66 ET-406-A-FX II 2 (2) D Ex ia tb [ia ib op is] IIIC T80°C Db IP66
Gas explosion protection TR	ET-406-A-TX 1Ex d e ia ib mb [ia ib] IIC T4 Gb X ET-406-A-FX 1Ex d e ia ib mb [ia ib op is] IIC T4 Gb X
Dust explosion protection TR	ET-406-A-TX Ex ia tb [ia ib] IIIC T80°C Db ET-406-A-FX Ex ia tb [ia ib op is] IIIC T80°C Db
Explosion protection NEC	Class I, Division 2, Groups A, B, C, D Class II, Division 2, Groups F, G Class III Class I, Zone 2, Group IIC

Operating and monitoring systems

Panel PC SERIES 400 Device platform EAGLE OS ET-406-TX



Explosion Protection

Explosion protection CEC	Ex d e ia ib mb [ia ib] IIC T4 Gb, Type 4X, IP66 Ex ia tb [ia ib] IIIC T80°C Db, IP66 Class II, Division 1, Groups E, F, G, T80°C
Gas explosion protection CNEX	Ex d e ia ib mb [ia ib] IIC T4 Gb
Explosion protection KGS	Ex d e ia ib mb [ia ib] IIC T4 Ex ia tb [ia ib] IIIC T80°C Db IP66
Gas explosion protection INMETRO	ET-406-A-TX Ex d e ia ib mb [ia ib] IIC T4 Gb ET-406-A-FX Ex d e ia ib mb [ia ib op is] IIC T4 Gb
Dust explosion protection INMETRO	ET-406-A-TX Ex ia tb [ia ib] IIIC T80°C Db IP66 ET-406-A-FX Ex ia tb [ia ib op is] IIIC T80°C Db IP66
Explosion protection NEC	Ex d e ia ib mb [ia ib] IIC T4 Gb

Electrical Data

Processor type	ATOM E3845
Processor details	Intel Bay Trail (BT); 1.91 GHz; quad core
RAM	4 GB
Data memory	64 GB SLC 128 GB MLC
Graphics controller	integrated Intel Gen. 7 HD Graphics
Memory technology	SSD solid state flash drive
Operating system	Windows Embedded Standard 7 (64-Bit) Windows 7 Ultimate (64-Bit)
Language support	via Windows operating system
Ethernet / Data	10/100Base-TX (Ex e)
Data cable	CAT5 installation cable AWG 22
Data cable length	max. 100m
Interface medium	CAT5 Data transmission
Interface USB	2 x USB (Ex ib) 2 x USB (Ex e)
Interface serial	1 x RS-232 / RS-422 / RS-485 (Ex e)
Interface PS/2	for external keyboard (Ex ia)
Optional interface 1	-
Optional interface 2 reader	optional, reader interface (Ex ib)
Interface audio	1 x Audio line out (Ex e)
Rated operational voltage AC	optional, external power supply 230 V
Voltage range AC	90 – 253 V
Rated operational voltage DC	24 V
Voltage range DC	20.4 – 28.8 V
Power consumption DC	1.2 A
Frequency range	47 – 63 Hz
Rated operational power	36 W
Connection compartment	Power supply direct in integrated Ex-e connection box
Connections	via screw terminals, green, 2.5 mm ² (AWG14) (Ex e)
Wiring	Flexible conductors 0.2 to 2.5 mm ² (AWG24 to AWG14) Rigid conductors 0.2 to 2.5 mm ² (AWG24 to AWG14)

Operating and monitoring systems

Panel PC SERIES 400
Device platform EAGLE
OS ET-406-TX



Electrical Data

Max. input voltage Um	30 V DC
Plug version USB	1x USB connector type A
Real-time clock	yes
Real-time clock data buffer	Lithium battery and capacitor buffered, maintenance-free
Battery buffered	> 5 years
Capacitor buffered	at least 4 days
Status LED	below the back lid: for activity on: - Solid state drive or HD - Ethernet Link - COM 1 and COM 2

Display

Display version	TFT Colour display
Display version 2	16.7 million colours
Display size inch	10.4
Display size centimetres	26
Display resolution	VGA
Total pixels	800 x 600
Display dimensions	4:3
Display brightness	TFT 400 cd/m ²
Display contrast	TFT 700:1
Touch screen	analogue resistive
Touch screen technology	5-wire
Backlight	LED Technology
Backlight service life	130 000 h at +10 °C 55 000 h at +35 °C 40 000 h at +55 °C
Front plate (display)	Polyester on aluminium
Function keys	12
Softkeys	10
Cursor keys	Yes
Alphanumeric keys	12
System keys	14

Ambient Conditions

Ambient temperature operation	-20 °C ... +50 °C
Ambient temperature operation 1	-30 °C ... +50 °C with heater
Storage temperature	-30 °C ... +60 °C
Temperature note 2	The heater used must be of such a design that the temperature inside the HMI's enclosure does not fall below -20°C (-30°C at the front only).
Temperature note 3	The components integrated in the enclosure may only be operated when the temperatures inside the enclosure are within the permitted (certified) temperature range for these components. Further measures may be necessary.
Temperature note 3	The temperature details apply to a standard device combination with display and enclosure. Any additional built-in or added components may have an impact on / change these.
Heat dissipation	about 50% via the front plate and 50% via the enclosure
Relative humidity	90% at +40 °C [+104 °F], without condensation

Operating and monitoring systems

Panel PC SERIES 400
Device platform EAGLE
OS ET-406-TX



Ambient Conditions

Damp heat	+55 °C / 95 %
Damp heat cyclic	+55 °C / 90-100 % +20 °C / 80-100 %
Corrosion resistance	ISA-S71.04-1985, severity G3
Vibration sinus	5 to 13.2 Hz: ±1 mm 13.2 to 100 Hz: ±0.7 g Axis X, Y, Z
Vibration sinus 1	10 Hz, 1 g 450 Hz, 1 g Change cycle 1 oct/min Operating mode 1.2 Axis X, Y, Z acc. to IEC 60068-2-6
Vibration broadband random	10 Hz, 0.0100 PSD[(m/s ²) ² /Hz] 450 Hz, 0.0100 PSD[(m/s ²) ² /Hz] Grms 2.11 Axis X, Y, Z
Shock	20 Shocks 20 g/11 ms

Mechanical Data

Dimensions	720 mm x 820 mm x 400 mm
Weight	45.6 kg
Material front	Polyester on aluminium / stainless steel
Material back	Stainless steel
Ingress protection	IP66
Breather	optional
Material back	The mechanical data apply to an FR enclosure with display and keyboard. Other enclosure types as well as any additional built-in or added components may have an impact on / change these.

Mounting / Installation

Mounting option	Wall, elbow, stand
-----------------	--------------------

Components

Keyboard	optional, 105 keys or 107 keys with integrated trackball / joystick
----------	--

We reserve the right to make alterations to the technical data, dimensions, weights, designs and products available without notice. The illustrations cannot be considered binding.