Operating and Monitoring Systems
Panel PC SERIES 400
Device platform MANTA
OS IT-477-FX

STAHL

- Panel PC Operator Station, quad core ATOM E3845, 24" display, Full HD 1920 x 1080
- Stainless steel enclosure IP66, optional acc. to GMP, for installation in safe areas
- Optional resistive glass or foil touch screen
- Data transmission via Ethernet as 100Base-FX via multi-mode fibre optic up to 2 km

MY R. STAHL **MANTAPCT-COSA**

The OS IT-477-FX operator stations with MANTA device platform are Panel PCs for safe areas. Their brilliant 24" WU widescreen displays with a resolution of 1920 x 1080 pixels (format 16:9) are available with or without touch screen. The stainless steel enclosures (SS304 or SS316L) are available with a front opening in cleanroom-compliant design and with different mounting options. Configuration options include country-specific keyboards, pointer instruments, RFID readers and barcode readers, different memory sizes and SSDs. Data is transmitted via Ethernet as 100Base-FX via multi-mode fibre optic up to 2 km.

Technical Data

General	
Series	MANTA Panel PCs / Thin Clients Operator Stations
Product description	24" Panel PC
Technology	Panel PC
HMI type	Operator Station
Explosion Protection	
Application range (zones)	Non-Ex
Electrical Data	
Power supply	24 VDC or 230 VAC
Rated operational voltage DC	24 V
Voltage range DC	20 – 30 V
Rated operational voltage AC	230 V
Voltage range AC	100 – 240 V
Frequency range	50 – 60 Hz
Power consumption DC	3 A
Power consumption AC 1	1 A
Protection fuse DC	5 AT
Protection fuse AC	5 AT
Rated operational power	typ. 50 W / 100 W at O30 / max. 150 W (typ. 170 BTU / 341 BTU at O30 / max. 510 BTU)
Processor type	ATOM E3845
Processor details	Intel Bay Trail (BT), 1.91 GHz, quad core
RAM	4 GB
Data memory	64 GB MLC 128 GB MLC
Graphics controller	integrated Intel Gen. 7 HD graphics

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V 0.40 EN

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Electrical Data

Memory technology	SSD solid state flash drive
Operating system	Windows Embedded Standard 7 Windows 7 Ultimate (64 Bit) Windows 10 IoT Enterprise (64 Bit)
Operating system note	For Windows 7 Ultimate and Windows 10 IoT the 64 Bit version is preinstalled on the device. Additionally, the 32 Bit version of each Windows version is installed on the recovery stick included in the delivery.
Language support	via Windows operating system
Ethernet / Data	100Base-FX
Data cable	62.5 / 125 µm FO cable
Data cable length	Max. 2000 m
Interface medium	Multi-mode optical cable
Interface USB	2 x USB (Hub) 1 x USB (Root) 2 x USB (Hub) (keyboard, pointing device)
Interface serial	1 x RS-232
Interface reader note	RFID reader, support of the following standards: MIFARE Classic, DESFire, DESFire EV1, LEGIC prime and advant, NFC, INSIDE Secure, Sony FeliCa, ISO 14443A & 15693 1D/2D Barcode scanner: support of all common 1D/2D codes, wired or Bluetooth
Interface audio	1 x Audio Line out
WLAN	optional via USB
Connection compartment	Power supply direct in integrated connection box
Connections	via standard plug
Plug version FO	LC duplex socket
Plug version USB	USB-A connector
Max. input voltage U_m	250 VAC
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

Display

Display version	TFT Color display
Display version 2	16.7 million colours
Display size inch	24
Display size centimetres	61
Display resolution	1920 x 1080, 1680 x 1080, 1280 x 1024
Total pixels	1920 x 1080
Display dimensions	16:9
Display brightness	300 cd/m²
Display contrast	1000:1
Display viewing angle horizontal	178°
Display viewing angle vertical	170°
Touchscreen	optional, resistive glass or foil touchscreen
Touchscreen technology	5-wire glass or foil touch
Touchscreen activation	Foil touch: low activation pressure (0.1 to max. 1 N) Glass touch: medium activation pressure (1.8 to max. 2.5 N)
Touchscreen input method	Finger, gloved finger or stylus

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Touchscreen durability	Foil touch: polyester foil is easily scratched, with high pressure the spacer dots could be damaged Glass touch: Satisfactory, but glass is not hardened, with high pressure the spacer dots could be damaged
Touch screen scratch hardness MoHS	Foil touch: - Glass touch: >5
Touchscreen scratch hardness pencil test ISO15184	Foil touch: 3H Glass touch: 9H
Touchscreen transmissivity / optic	Foil touch: slightly milky effect due to foil Glass touch: very good
Touchscreen surface contaminants	unaffected
Touchscreen abrasive resistance	36 million activations with a silicone rubber finger R8, 250 g for 2 activations per second
Backlight	LED Technology
Backlight service life	50000 h at +20 °C
Front plate (display)	Aluminium and no touchscreen: glass foil touchscreen: polyester glass touchscreen: thin glass
Function keys	optional via keyboard with integrated trackball, joystick or touchpad
Softkeys	optional via keyboard with integrated trackball, joystick or touchpad
Cursor keys	optional via keyboard with integrated trackball, joystick or touchpad
Alphanumeric keys	optional via keyboard with integrated trackball, joystick or touchpad
System keys	optional via keyboard with integrated trackball, joystick or touchpad

Ambient Conditions

Ambient temperature operation	-20 °C … +55 °C
Ambient temperature operation 1	-30 °C … +55 °C with heater version O30
Storage temperature	-30 °C … +70 °C
Cold start temperature	-10 °C
Temperature note 1	The O30 version is only available for the AC version devices !
Temperature note 2	Operating temperature +55 °C for a maximum of 5 h, for constant operation (24/7) +50 °C.
Temperature note 3	Cold start temperature: If the HMI device is switched on at a temperature below -10 °C the display will need a certain amount of time to warm up until everything is clearly visible. Depending on how low the temperature is, this process may last up to 3 hours.
Temperature note general	The temperature details apply to a standard device combination with display, keyboard and enclosure. They may change accordingly with any additional built-in or added components.

Mechanical Data

Dimensions (WxHxD)	740 mm x 872 mm x 400 mm
Weight	42.5 kg
Material front	Aluminium / stainless steel
Material back	Stainless steel
Ingress protection	IP66
Breather	optional
Mechanical data note	The mechanical data apply to an FR enclosure with display and keyboard. They may change accordingly with other enclosure types as well as any additional built-in or added components.
Weight	-

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Mounting / Installation

Enclosure type	Stainless steel enclosure (FR)
	optional clean room (CFR)
Mounting option	Wall, elbow, stand
Components	
Keyboard	optional, 105 keys with trackball / joystick / touchpad

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