

ET-436 – 15" (1024 x 768)

NO. DS200640140102 | EN
2014 | V 03.02.01



ET-436 – 15" (1024 x 768)

ET-436 – the intelligent Panel PC with high bright 15" screen is suitable for applications in the oil and gas industries, and for machine-level operation in the process industry, hazardous areas, Zone 1, 2, 21, 22. The most innovative feature of the ET-436 terminal is the optionally available innovative SUNLIGHT READABLE display that ensures best image quality and readability even in direct sunlight, and is used worldwide, on oil rigs and in outdoor applications.

The ET-436 can be integrated in the company network architecture via Ethernet, and is able to simultaneously and independently process other on-site applications. This HMI is highly versatile, comes with intuitive touch screen and function keys.

The ET-436 is ready-to-run worldwide, with pre-installed, multilingual Windows Embedded Standard 2009 or -7 Ultimate operating system (QNX, Linux optional) – without time-consuming installation of drivers or operating systems.

All pre-installed operating systems are protected against external manipulations. In the rare case of a system failure, the BACKUP / RECOVERY solution via USB stick allows to immediately restore the original state.

Thanks to the modern heat pipe technology combined with protection screen and enclosure heater, the Panel PC operates at temperatures ranging between -20 °C up to +55 °C [-4 °F up to +131 °F] (+50 °C [+122 °F] permanent operation / with heater and protection screen -40 °C [-40 °F]).

State-of-the-art Intel® Atom™ 1.6 GHz processors and powerful storage media ensure fast data processing during production process; the LED backlighting provides excellent readability of process information. This Panel PC can be used worldwide and meets the highest international industry standards: ATEX, IECEx, NEC / UL, CEC / CSA, Marine approval DNV, LR (and more).



Explosion Protection Certificate / Marking



ATEX directive 94/9/EG

TÜV 11 ATEX 7041 X

ET-xxG-A-Tx

II 2 (2) G Ex d e ia ib mb [ia ib] IIC T4 Gb

II 2 (2) D Ex ia tb [ia ib] IIIC T80°C Db IP66

ET-xxG-A-Fx

II 2 (2) G Ex d e ia ib mb [ia ib op is] IIC T4 Gb

II 2 (2) D Ex ia tb [ia ib op is] IIIC T80°C Db IP66

IECEx

TUR 11.0006X

ET-xxG-A-Tx

Ex d e ia ib mb [ia ib] IIC T4 Gb

Ex ia tb [ia ib] IIIC T80°C Db IP66

ET-xxG-A-Fx

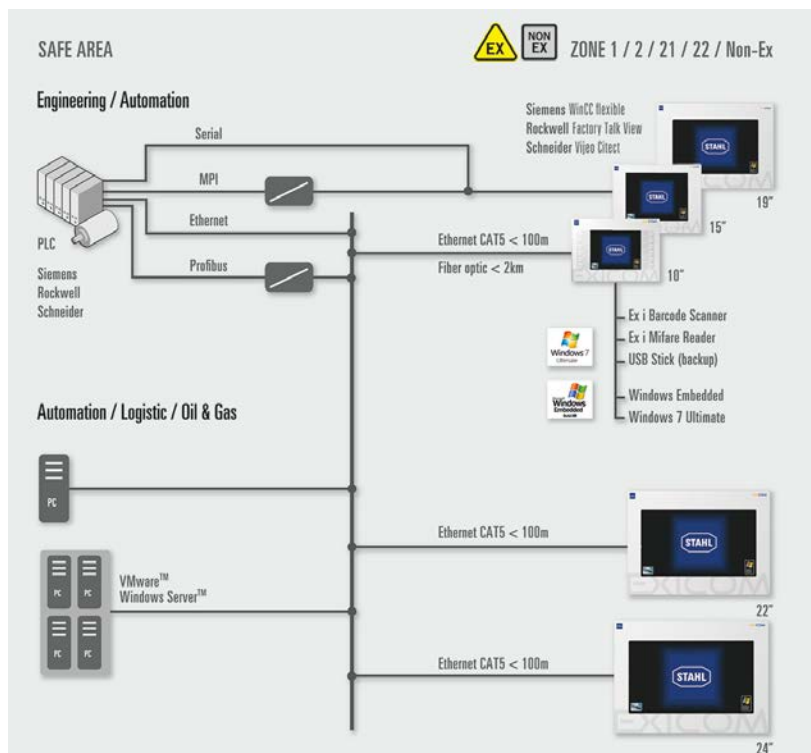
Ex d e ia ib mb [ia ib op is] IIC T4 Gb

Ex ia tb [ia ib op is] IIIC T80°C Db IP66

Ingress protection

Front and back side IP66

Operating Principle



ET-436 – 15" (1024 x 768)

NO. DS200640140102 | EN
2014 | V 03.02.01



Additional certifications

GOST-R

POCC DE.ГБ04.В01741

Operating licence

PCC 00-047986

ET-xxG-A-Tx

2Exdeiaibmb[iaib]IICT4

DIP A21 TA80°C, IP66

ET-xxG-A-Fx

2Exdeiaibmb[iaibopis]IICT4

DIP A21 TA80°C, IP66

KGS / KCC

12-GA4B0-0215X

12-GA4B0-0317X

Ex d e ia ib mb [ia ib] IIC T4

Ex ia tb [ia ib] IIIC T80°C Db IP66

NEC / UL

20130611-E202379

Class I, Division 2, Groups A, B, C, D

Class II, Division 2, Groups F, G

Class III Hazardous Locations

Class I, Zone 2, Group IIC

CEC / CSA

2512677

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

INMETRO

UL-BR 12.0265X

ET-xxG-A-Tx

Ex d e ia ib mb [ia ib] IIC T4 Gb

Ex ia tb [ia ib] IIIC T80°C Db IP66

ET-xxG-A-Fx

Ex d e ia ib mb [ia ib op is] IIC T4 Gb

Ex ia tb [ia ib op is] IIIC T80°C Db IP66

CNEX (China)

CNEx14.0065X

DNV (Det Norske Veritas)

A-12989

LR (Lloyd's Register)

11/20032

Highlights

- Rugged Panel PCs for temperatures ranging between -40 °C up to +55 °C
- Optional available with innovative sunlight-readable display
- Incl. special enclosure for rig floor applications
- Rugged, modular structured product design
- Without additional enclosure suitable for use in hazardous areas / many enclosure and mounting options

Firmware / Software

- OPEN HMI – open for all software applications
- Ready-to-run operating system in 25 languages
- Windows Embedded Standard 2009 / 7 Ultimate
- Optional installation of visualization software e. g. WinCC flexible® / Factory Talk View® / Vijeo Citect®, etc.

ET-436 – 15" (1024 x 768)

NO. DS200640140102 | EN
2014 | V 03.02.01



Technical Data

Mounting design	Front panel mounting
Display	38 cm (15") TFT color display 16,777,216 colors XGA+ 1024 x 768 Aspect ratio 4:3 Brighthness 350 cd/m ² / SR-Display 1000 cd/m ² Contrast 700:1 / SR-Display 600:1 8 wire resistive touch screen as standard / 5 wire resistive touch screen for SR-Display
Backlighting	LED technology Service life 500,000 h at +10 °C 70,000 h at +35 °C 50,000 h at +55 °C
Display function keys	8 function keys, polyester film on aluminum plate Switching cycles > 1 million
External keyboard	Yes (optional), 105 / 107 keys, incl. trackball / joystick (Ex ia)
Processor	ATOM 1.6 GHz
RAM	1 / 2 GB
Memory	4 / 16 GB, 128 GB MLC / SLC (Solid State Card)
Memory upgrade optional	Hard drive EXICOM-SHD-xxx 100 GB
Operating system	Windows XP Embedded MUI Windows 7 MUI
Standard Software	WinCC flexible, IFix, RSView (for more software solutions, please refer to the homepage)
Interfaces	1 x Ethernet 10/100Base-TX (Ex e) or FO 100Base-FX, 100 Mbit (Ex op is) 2 x USB (Ex e) 2 x USB (Ex ib) 2 x PS/2 (Ex ia) (keyboard, pointing device) 1 x RS-232 / RS-422 / RS-485 (Ex e) 1 x Audio line out (Ex e) Optional interfaces 1 x RSi (Ex ib) data and data supply for readers 1 x RS-232 / RS-422 / RS-485 (Ex e) WLAN via USB (Ex e)
Dimensions (W x H x D)	440 x 340 x 165 mm (17.32 x 13.38 x 6.5")
Cutout	427.5 x 327.5 (+/- 0.5) mm (16.83 x 12.89 (+/- 0.02)")
Weight	18 kg (39.6 lbs)
Power supply	24 VDC (20.4 up to 28.8 VDC); 1.2 A; 28.8 W optional: external power supply 90 - 253 VAC
Permissible ambient temperature ranges	Operation -20 °C up to +55 °C* [-4 °F up to +131 °F] Operation with heater ** -30 °C up to +55 °C* [-22 °F up to +131 °F] Operation with heater **, enclosure insulation, protection screen -40 °C up to +55 °C* [-40 °F up to +131 °F] Storage -30 °C up to +60 °C [-22 °F up to +140 °F] * ET-4x6-A and ET-5x6-A: 5 h maximum operation at +55 °C [+131 °F]; continuous operation (24/7) at +50 °C [+122 °F] ** The heater has to be designed to ensure that the temperature inside the enclosure of the operating unit does not fall below -20 °C [-4 °F] (-30 °C [-22 °F] only at the front side)
Heat dissipation	Front plate cooling by heat pipe 50 % through front plate, approx. 50 % through back side
Relative humidity	10 up to 90 % at +40 °C [+104 °F], non condensing

ET-436 – 15" (1024 x 768)

NO. DS200640140102 | EN
2014 | V 03.02.01



Vibration	Operation: Transportation:	3 up to 22 Hz: 1 mm (0.04") 22 up to 500 Hz: 9.8 m/s ² = 1 g (32 ft/s ² = 0.03 oz) 3 up to 9 Hz: 3.5 mm (0.14") 9 up to 500 Hz: 9.8 m/s ² = 1 g (32 ft/s ² = 0.03 oz)
Shock	Operation: Transportation:	15 g / 11 ms (0.52 oz / 11 ms) 25 g / 6 ms (0.88 oz / 6 ms)
Material front side	UV-resistant polyester film on seawater-resistant aluminum, incl. touch screen und protective safety glass Optional: stainless steel film on seawater-resistant aluminum, incl. touch screen and protective safety glass	
Material back side	Stainless steel	
Ingress protection	Front and back side IP66	