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Explosion Proof | www.wincomm.com.tw

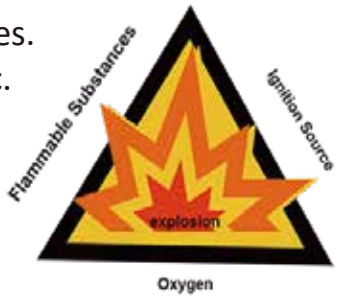
WTPE Series

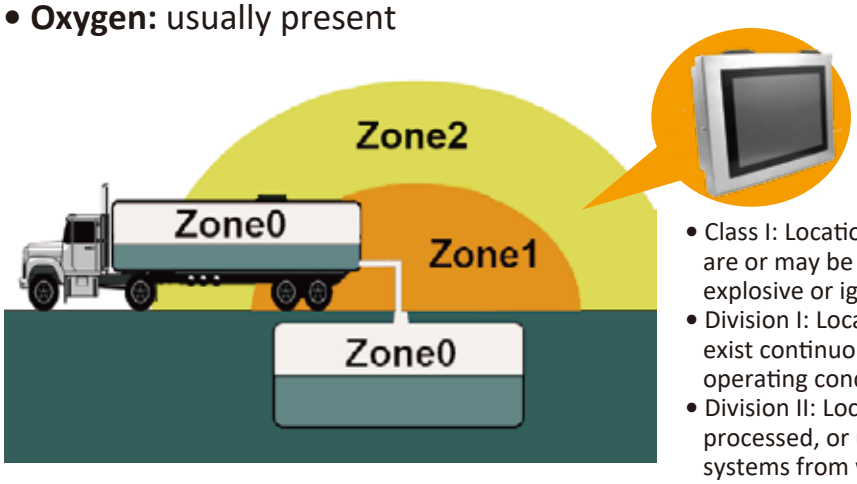
Explosion Proof ePlatform Solutions

When Will an Explosion Occur?

As a rule, the explosion can be occurred when three elements exist. The basic principle for explosion proof protection is to eliminate one or more legs of the explosion triangle.

- **Flammable material:** can be a gas, vapor or dust in sufficient quantities.
- **Source of ignition:** any source of energy, e.g. a spark or high temp etc.
- **Oxygen:** usually present





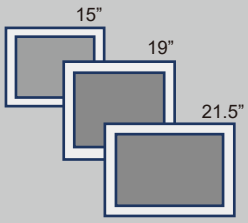
- Class I: Locations: Are those in which flammable gases or vapors are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures.
- Division I: Locations in which hazardous concentrations in the air exist continuously, intermittently, or periodically under normal operating conditions.
- Division II: Locations in which hazardous concentrations are handled, processed, or used but are normally within closed containers or closed systems from which they can escape only in case of accidental rupture or breakdown.

Why Explosion Proof Panel PC

Easy installation via cable gland and connector panel, flexible & max support to 4 ports.

Swappable M12 USB/COM connectors for hazard area installation.

Expansion Design



Size from 15” to 21.5” TFT LCD

Full Range of LCD Size

IIP66 water/ dustproof

Touch on/off for hygienic cleaning

Wide Temp. -20 ℃~60 ℃

Robust Antenna

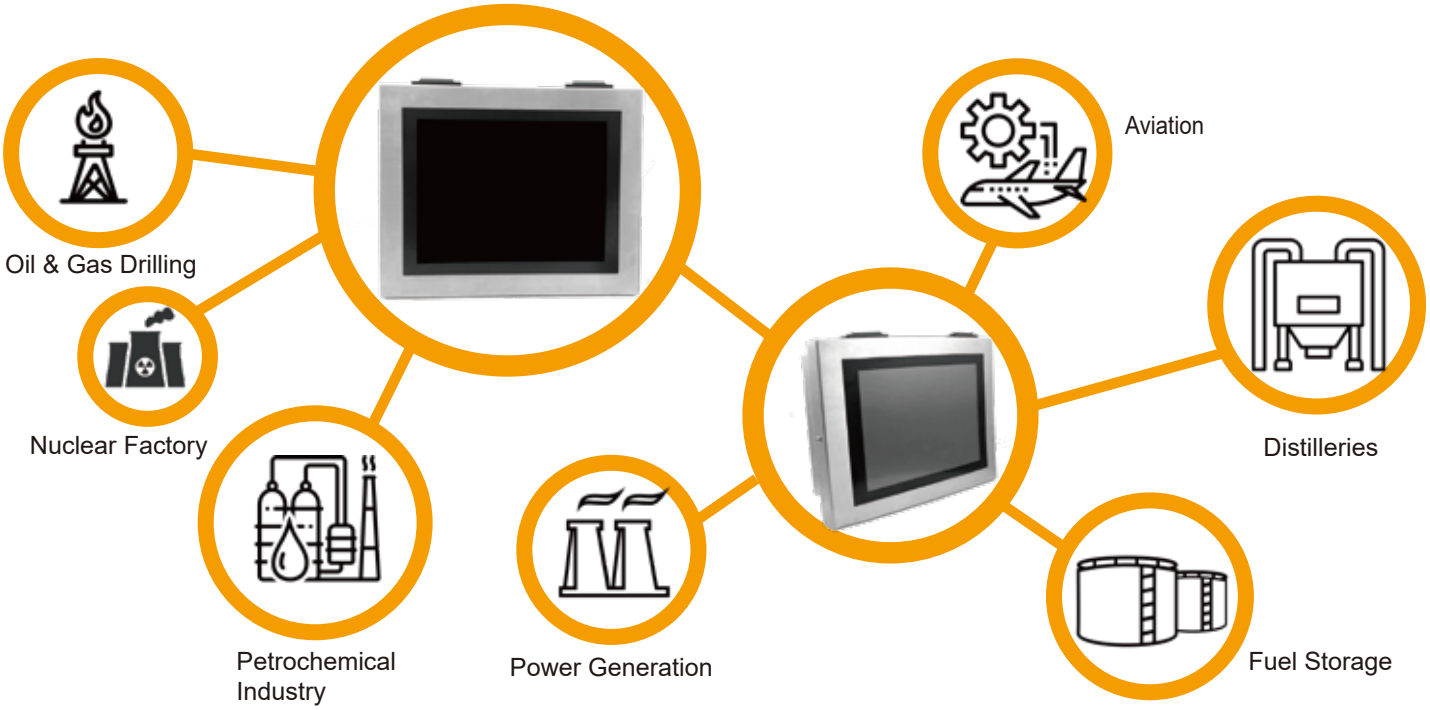
Harsh Environment Solution

Class B

High Quality & Customize Service

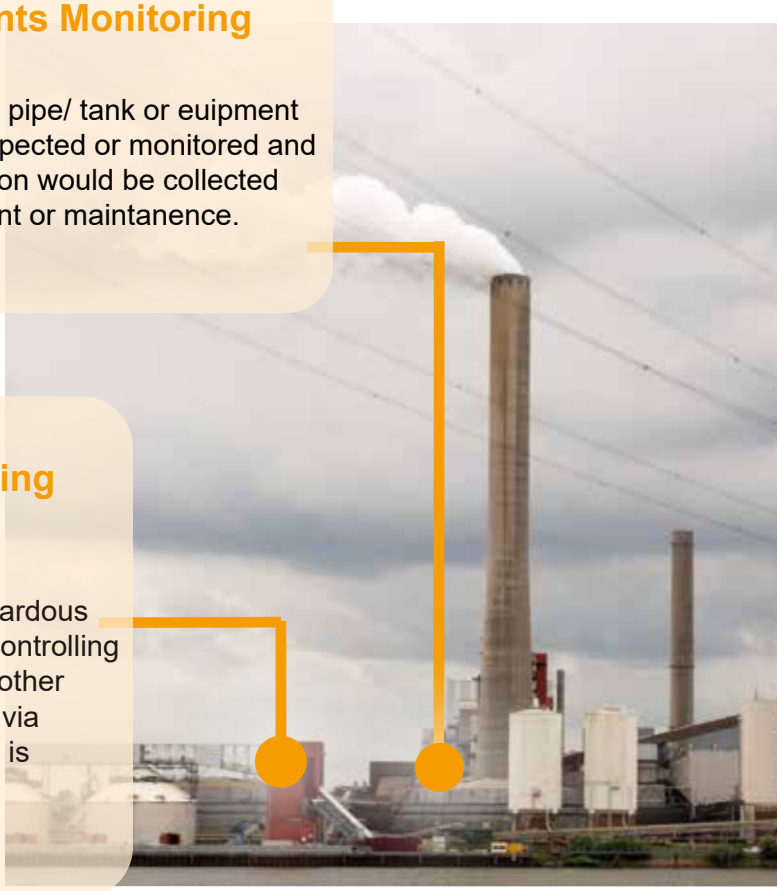
The Explosion Proof Panel PC series are built to suit for hazardous environments, undergoing rigorous testing to ensure safety and top performance. It is capable of withstanding vibration, shock, corrosion and can operate under the condition of exposure to gas and vapor. All of the models in the Explosion Proof Series are sealed to at least IP66 standards offering the best solution for environments with explosion considerations. The Explosion Proof Panel PC works well in oil & gas industry, chemical manufacturing, power generation, distilleries and other hazardous industrial applications. Wincomm takes our users concern to meet ATEX Zone 2 / IECEx / C1D2 / C2D2 certificate and WTPE series provide extremely safty design to fulfill Ex-area application requirements.

Wincomm Explosion Proof Panel PC Series Applications



Equipments Monitoring

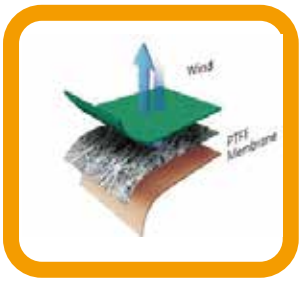
All data from pipe/ tank or euipment would be inspected or monitored and the information would be collected for adjustment or maintanence.



Real-time Controlling

In gas, oil industry or hazardous environments, real time controlling for power on/off and any other emergency maintanence via explosion proof panel PC is exactly requirement.

Features Highlight

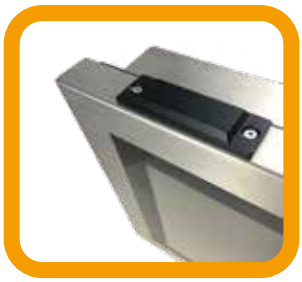


Powerful thermal solutions with stable CPU operation

1. Fanless cooling by high heat efficiency heat pipe and large heat dissipation heatsink, optimal MB power design to maximize power efficiency and minimize heat generation.
2. PTFE ventilation film to exhaust hot air for air pressure balance to avoid stainless steel case deformation; enclosure IP grade is still effective.

Extremely evironment solution: wide range temp & water/dust proof

With special selected key components (ex. LCD, RAM, Storage, power module ...), large heat dissipation heatsink and Wincomm "pre-heating control system", WTPE products could be 24/7 operation under -20~60°C.



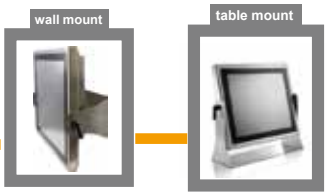
No corrosion after long-term usage

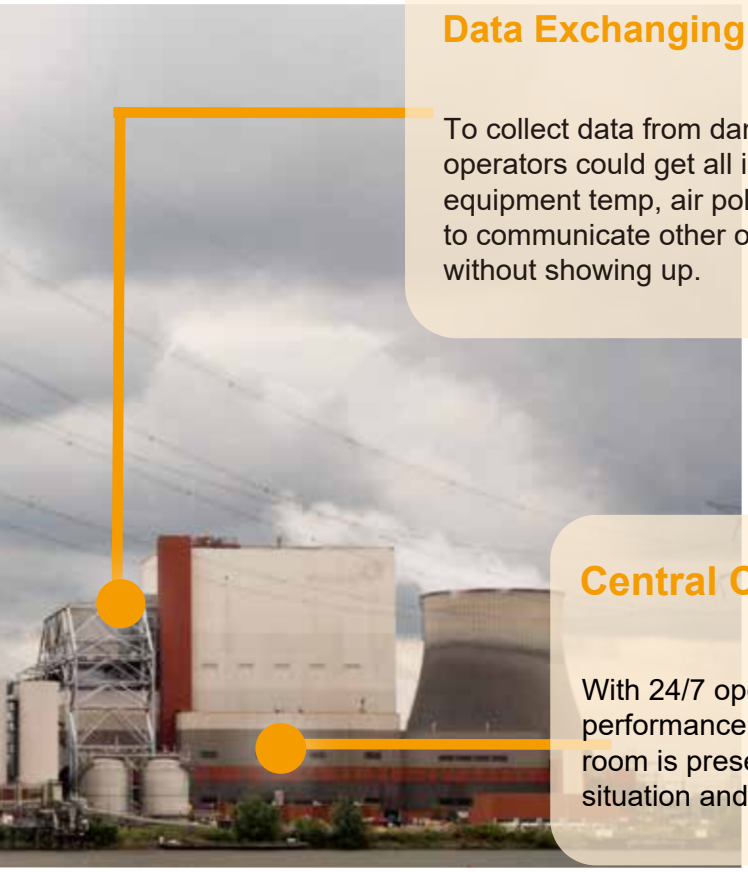
With dedicated designs in
- Stainless steel covers, glands and screws
- Robust connectors, seals, antenna covers
- Touch screen bonded with LCD
- Low power circuit in COM and touch screen

WTPE series can be guaranteed no corrosion after long-term usage.

Saving space by downward I/O design

With minimized outside dimensions and downward external IO, it doesn't occupy but saving space.





Data Exchanging & Collection

To collect data from dangerous field, operators could get all information of equipment temp, air pollution rate etc. to communicate other operated field without showing up.

Central Control Room

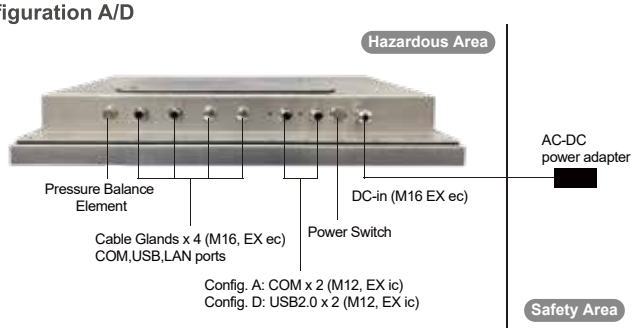
With 24/7 operation and high performance CPU, central control room is presented to deal with any situation and communication.

WTPE Panel PC Series

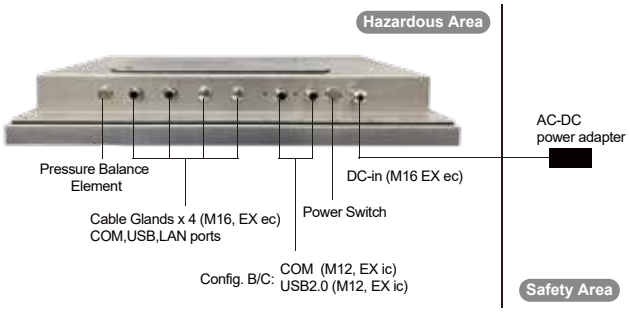
WTPE-9H66-15W (Front)

WTPE-9H66-15W (Back)

I.O. Configuration A/D



I.O. Configuration B/C



WTPE Series Selection Guide

ATEX, C2D2, IEXEx Explosion Proof Panel PC Series				
Product Name	WTPE-9H66-15W	WTPE-9H66-19W (By Project)	WTPE-9H66-22W	
Main System				
CPU/ Graphics	FCBGA1356 13th generation Intel® Core i5 / i7 processor (15W max.) / Intel® integrated Iris Xe Graphics			
Memory	Two 5200 MHz DDR5 SODIMM socket support dual Channel, non-ECC, up to 64GB			
OS support	Windows 10 IoT Enterprise LTSC / WIN 11 IoT Enterprise LTSC			
Display & Touch Panel				
Size	15"	19"	21.5"	
Resolution	1024 x 768(XGA)	1280 x 1024 (SXGA)	1920 x 1080 (FHD)	
Color Numbers	16.7M	16.7M	16.7M	
View Angle (H/V)	160/160	170/160	178/178	
Contrast	600:1	1000:1	5000:1	
Brightness (nits)	450	350	250	
Touch Panel	Full Flat Resistive Touch			
IO & Power				
I/O Ports	Configuration	A	B / C	D
	Swappable M12, 8pin (I.S. Output, Support EX ic, Extension Cable to Ex ic Devices)	2 x COM for RS232	1 x USB2.0 1 x COM for RS232	2 x USB2.0
	Cable Gland M16 (Max. Output x 4, Must be Installed by User)	2 x USB 2.0 (EX ec), 2 x LAN (EX ec, i219LM for Vpro), 1x COM for RS232/422/485 (EX ec)		
Storage & Expansion				
Storage	512G SSD			
Expansion slot	1 x M.2 Type E			
Mechanical & Environmental				
Weight (kg)	11	12.4	13	
Operating Temp.	-20~60°C			
IP rating	IP66 / NEMA4X			
Cooling	Fanless			
Power				
Power Input	DC 24V Input, M16 (EX ec, Must Be Installed by User)			
Power Adapter	100W AC-DC power adapter with 24V DC output, 1.2M cable, PSE			
Power Consumption	46.7W	53.5W	54.2W	
Certification				
Certification	EMC: FCC, CE (EMC), VCCI Class B, Canada ICES-003, Safety: IEC-62368 IECEx, Class 1 Division 2 Group A, B, C, D T4 (Config. A, B/C, D) ATEX Zone2 EX II 3G Ex ic ec IIC T4 Gc IP66 Class 2 Division 2 Group F, G (configuration A B/C, D), ATEX Zone22 EX II 3D EX tc IIIC T135C Dc IP66(compliance)			

*Remark: Configuration B/C is defined/verified as different interface combination connected in certificate report.

About Wincomm Corp.

Wincomm is one of Taiwan's leading manufacturer of industrial computer and embedded computer products. Wincomm designs and develops all in one panel PC, large size all in one digital signage system, rugged box PC and embedded software products for a broad range of industries and applications. Wincomm aims to provide hardware and software integrated solutions for the most variant environments such as industrial automation/ human machine interface control, digital signage / infotainment Kiosk, and medical computing.

Application

Petrochemical Industry

Oil & Gas Factory

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