

HMIS IN THE PROCESS INDUSTRIES

For Hazardous & Industrial Areas

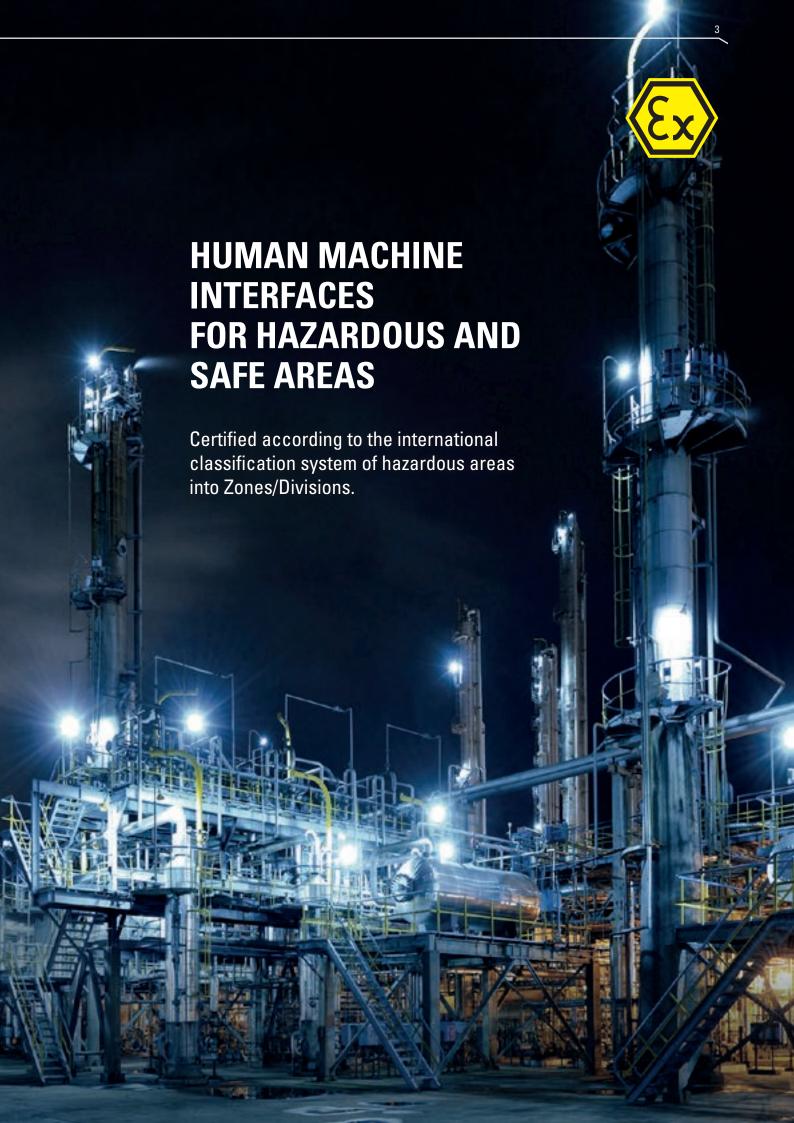
R. STAHL HMI – THE EXPLOSION PROTECTION EXPERT

R. STAHL HMI products have been designed for worldwide use in hazardous and industrial areas. They are built in compliance with global standards and fully comply with all of the requirements for clean room areas and harsh environments.

We offer a full range of display sizes and technologies, from 7" to 24" widescreen displays; from KVM Systems, Thin Clients, Panel PCs, Operator Panels, smartphones, tablet computers to peripheral equipment.

CONTENT

TECHNOLOGIES KVM SYSTEMS SERIES 600 THIN CLIENTS SERIES 500 PANEL PCS SERIES 400 OPERATOR INTERFACES SERIES 200 / 300 MOBILE DEVICES PERIPHERALS THIN CLIENTS IN VIRTUAL ENVIRONMENTS THIN CLIENTS WITH REMOTE HMI SOFTWARE	04		
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TECHNOLOGIES

KVM SYSTEMS

KVM SYSTEMS SERIES 600

Hazardous locations & safe areas



- Easy extension of monitor, keyboard and mouse from PC in safe areas to industrial and hazardous locations
- Fully digital data transmission
- Future-proof because of upgradeability for future hardware platforms

THIN CLIENT SYSTEMS

THIN CLIENTS SERIES 500

Hazardous locations & safe areas



- Flexible access from HMI to PCs or virtual PCs
- Centralized data management and security management
- New Remote HMI Firmware V5 for enhanced data security
- Driverless plug-and-play on host systems

PANEL PC SYSTEMS

PANEL PCS SERIES 400

Hazardous locations & safe areas



- Robust industrial grade PCs as complete unit of computer and integrated monitor
- · Modern Dual and Quad Core processors up to Core i7
- Modular front panel mount units or operator stations

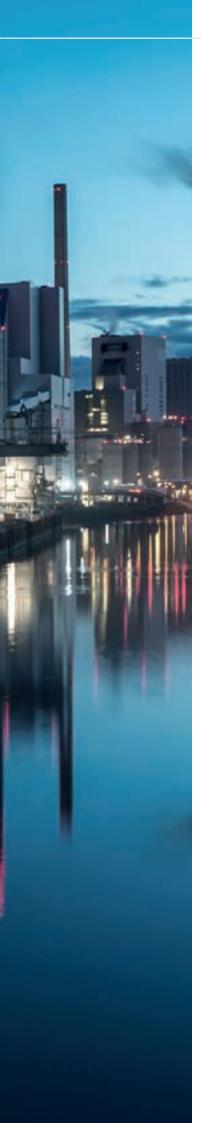
OPERATOR INTERFACES

OPERATOR INTERFACES SERIES 300 / 200

Hazardous locations & safe areas



- Robust industrial grade Operator Interfaces as complete unit of computer, monitor and visualization software on Windows® Embedded Compact 7
- Cost-effective, pre-installed SPSPlus or Movicon® CE Runtime
- Modular front panel mount units or operator stations



Our range of KVM systems and Thin Clients are first choice for all major process control systems. They easily and securely connect to the system in compliance with international standards. Both SERIES are also compliant with FDA requirements for cGMP, GMP, and GAMP.

Our high performance Panel PCs can either be used as standalone solutions with full-screen visualization, or in a client-server architecture. R. STAHL Operator Interfaces have been designed to provide a plug-and-play solution with integrated software.

They can be used used in a wide range of different applications, e.g. for the visualization and control of machines in the process industries or logistics processes.







KVM SYSTEMS SERIES 600

A KVM system is a point-to-point connection between, and extension of a workstation's keyboard, video and mouse connectors going from the safe area to the hazardous area.

The KVM systems of the MANTA device platform have been designed for applications in the pharmaceutical industry, in

life science engineering, or in the fine chemical industry.

The SHARK devices are designed for applications in harsh environments and the oil and gas industries. The KVM DVI3 transmission unit supports all types of process control systems.







THIN CLIENTS SERIES 500

THIN CLIENT MANTA

HAZARDOUS AREAS

CLASS I ZONE 1: CEC, NEC

CLASS I DIV 2: CEC, NEC

UNIVERSAL USE HYGIENIC DESIGN GMP, CGMP, GAMP, FDA 21 PART II

RUGGED DESIGN CORROSION
PROTECTION
ISA 71.4 G3

SAFE AREA

UNIVERSAL USE HYGIENIC DESIGN

PERMANENT OPERATION (MAX.)

PANEL MOUNT -30 °C ... +60 °C (-22 °F ... +140 °F) OPER. STATION -30 °C ... +55 °C (-22 °F ... +131 °F) REMOTE HAN

DISPLAY SIZES

7"

10"

EXPLOSION PROTECTION CERTIFICATES

ZONE 1 / 2 / 21 / 22: ATEX, IECEX, TR EAC, KGS KCC

15"

19"

21.5"

22"

24"

24"WU

THIN CLIENT EAGLE

HAZARDOUS AREAS

UNIVERSAL USE HYGIENIC DESIGN GMP, CGMP, GAMP, FDA 21 PART II

RUGGED DESIGN CORROSION PROTECTION ISA 71.4 G3 SAFE AREA

JNIVERSA USE HYGIENIC DESIGN

PERMANENT OPERATION (MAX.)

PANEL MOUNT -20 °C ... +55 °C (-4 °F ... +131 °F)

OPER. STATION -30 °C ... +50 °C (-4 °F ... +122 °F)



DISPLAY SIZES

7"

10"

EXPLOSION PROTECTION CERTIFICATES

CLASS II DIV 2: CEC, NEC; CLASS III: CEC, NEC

ZONE 1 / 2 / 21 / 22: ATEX, IECEX, TR EAC, KGS KCC

CLASS I ZONE 1: CEC, NEC; CLASS I DIV 2: CEC, NEC

15"

19"

21.5"

22"

24"

24"WU

THIN CLIENT SHARK

HAZARDOUS AREAS

UNIVERSAL USE HYGIENIC DESIGN GMP, CGMP, GAMP, FDA 21 PART II

RUGGED DESIGN CORROSION PROTECTION ISA 71.4 G3 SAFE AREA

UNIVERSA USE HYGIENIC DESIGN

EXPLOSION PROTECTION CERTIFICATES

ZONE 1 / 21: ATEX, IECEX, TR EAC ZONE 2 / 22: ATEX, IECEX, TR EAC

PERMANENT OPERATION (MAX.)

PANEL MOUN

OPER. STATION -40 °C ... +65 °C (-40 °F ... +149 °F)



/"

10"

15"

19"

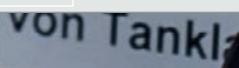
21.5"

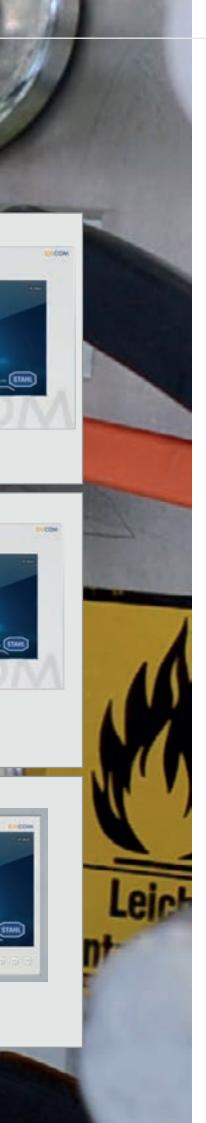
22"

24"

24"WU







Our Thin Clients are available in display sizes ranging from 15" up to 24"WU as front panel mounted device or as operator station. All panel mounted versions have been designed for easy integration into cabinets or wall-mounting. The operator stations are available either with FR enclosure or CFR enclosure suitable for cleanroom applications, and are ready for either floor, wall or ceiling mounting.

The KVM over IP system has been designed for connecting single workstations to the network.

All Thin Clients come pre-installed with our latest REMOTE HMI FIRMWARE V5 that ensures enhanced system communication and usability.



HIGHLIGHTS

- New REMOTE HMI FIRMWARE V5 Windows® 10 IOT
- RDP, VNC or DeltaV DRDC communication
- Remote access from any operator terminal to one/multiple PCs
- · Cost-effective hardware, centralized data management

PANEL PCS SERIES 400

The stand-alone HMI Panel PCs can independently perform process tasks on site, as well as DCS, ERP, or MES tasks within the network. The LED backlight technology ensures best quality and readability of process images on site.

Optionally, the monitor is also available with touch screen for intuitive operation while wearing gloves, or when using a touch pen. The SERIES 400 Panel PCs are ready-to-run worldwide, with pre-installed, multi-lingual Windows® Embedded Standard 7 or Windows® 7 Ultimate operation system – any further, and often time-consuming installation of drivers or operating systems is not required.

READY-TO-RUN.



HIGHLIGHTS

- Ready-to-run, multi-lingual Windows® operating system
- Intel[®]Atom[™] Quad Core or i7 processors
- Open for all types of HMI software, e.g.
 - WinCC®
 - Factory Talk View®
 - Vijeo Citect®





PANEL PC MANTA

HAZARDOUS AREAS

UNIVERSAL USE

HYGIENIC DESIGN GMP, CGMP, GAMP, FDA 21 PART II

UNIVERSAL USE

SAFE AREA

HYGIENIC DESIGN

EXPLOSION PROTECTION CERTIFICATES ZONE 1 / 2 / 21 / 22: ATEX, IECEX, TR EAC, KGS KCC

CLASS I ZONE 1: CEC, NEC CLASS I DIV 2: CEC, NEC

PERMANENT OPERATION (MAX.)

PANEL MOUNT -30 °C ... +60 °C (-22 °F ... +140 °F)

OPER. STATION -30 °C ... +55 °C (-22 °F ... +131 °F)

DISPLAY SIZES

22"

24"

24"WU



CPU

PANEL PC EAGLE

HAZARDOUS AREAS

UNIVERSAL USE

HYGIENIC DESIGN GMP, CGMP, GAMP, FDA 21 PART II

SAFE AREA

EXPLOSION PROTECTION CERTIFICATES

ZONE 1 / 2 / 21 / 22: ATEX, IECEX, TR EAC, KGS KCC CLASS I ZONE 1: CEC, NEC; CLASS I DIV 2: CEC, NEC CLASS II DIV 2: CEC, NEC; CLASS III: CEC, NEC

PERMANENT OPERATION (MAX.)

PANEL MOUNT -20 °C ... +55 °C (-4 °F ... +131 °F)

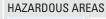
OPER. STATION -30 °C ... +50 °C (-22 °F...+122 °F)

DISPLAY SIZES

15"

19"

PANEL PC SHARK



UNIVERSAL USE

RUGGED **DESIGN**

CORROSION **PROTECTION** SAFE AREA

EXPLOSION PROTECTION CERTIFICATES

ZONE 1 / 21: ATEX, IECEX, TR EAC ZONE 2 / 22: ATEX, IECEX, TR EAC

PERMANENT OPERATION (MAX.)

OPER. STATION -40 °C ... +65 °C (-40 °F . . . +149 °F)

DISPLAY SIZES

15"

21.5"



OPERATOR INTERFACES

SERIES 200

As a standard, two integrated visualization systems are available for the SERIES 200: SPSPlus Runtime and Movicon™ CE Runtime. Both visualization systems are pre-installed and licensed, and supplied together with a Windows® Embedded Compact 7 operating system.

SPSPlus Runtime is a tried and tested visualization software developed by R. STAHL HMI and supports all EXICOM Operator Interface series.

The engineering software SPSPlusWIN runs on Windows® XP 7/8 and supports fast and affordable project engineering of simple to medium complexity.

The Movicon™ 11 software package is now used with over 80,000 applications and is based on XML technology. It is fully scaleable, contains powerful functions, and supports applications based on Embedded Win CE up to a SCADA platform on Windows® 7/8 and servers.

SERIES 300

The EAGLE Operator Interfaces have been designed for the visualization of complex automation tasks, machine-level operations, and for tankfarm applications. Pre-configured with a proprietary operating system, the 10.4" and 15" touch screen monitors are ready to run in hazardous areas, Zone 1, 2, 21, 22.

Data transfer is realized over modern Ethernet protocols such as: Ethernet IP, Modbus TCP, or over serial protocols such as Modbus and MPI.

All operator stations of the SERIES 300 allow for remote access to networks and web servers, thus providing comprehensive on-site information.





- Brilliant 7" color display, 800 x 480 pixels
- Extreme temperature range from -40 °C up to + 65 °C (-40 °F up to +149 °F)
- Windows® Embedded Compact 7, and SPSPlus Runtime / Movicon™ CE
- Optionally, open operating system for third-party software







HIGHLIGHTS

- Multi-lingual machine terminal for medium-sized automation tasks
- Proprietary operating system for enhanced security









ET-100-SMART-EX-01



The ET-100-Smart-Ex-01 is an ultra-rugged, unlocked, LTE / WiFi / Android™ smartphone suitable for operations in hazardous locations, Zones 1, 2, 21, 22, Division 1, 2 and harsh environments.

With the ET-100, R. STAHL addresses the need for a rugged smartphone that is not only waterproof, dust-proof and shock resistant, but offers the full functionality of a modern smartphone.

With many years of experience in the process industries and in logistics and security, this smartphone has been developed to enhance the safety of employees in hazardous areas.

HIGHLIGHTS

- Operating System Android™ Kitkat 4.4.4
- 1.2 GHZ Quad Core
- 1.0 GB RAM + 16 GB internal memory
- Expandable up to 12 GB
- 4" TFT display
- Corning Gorilla® glass 2 with glove touch
- WWAN, LTE (4G), UMTS, GSM
- Bluetooth®, Wireless LAN, WiFi
- 8 MP camera / 1 MP front camera
- LED torch light
- Push-to-talk
- Lone worker protection

HAZARDOUS AREAS UNIVERSAL USE USE HYGIENIC DESIGN DESIGN DESIGN EXPLOSION PROTECTION CERTIFICATES ZONE 1/2/21/22: ATEX, IECEX

CLASS | DIV 1: CEC, NEC
CLASS | | & | | | DIV 1: GROUPS E-G T4: CEC, NEC

IP68 FRONT / BACK

TEMPERATURE RANGE -20 °C ... +55 °C (-4 °F ... +131 °F)



ET-110-TAB-EX-01

The ET-110-Tab-Ex-01 is an ultra-rugged tablet computer suitable for operations in hazardous locations, Zones 1, 2, 21, 22, Division 1, 2 and harsh environments based on the Samsung GALAXY Tab Active.

With the ET-110, R. STAHL addresses the need for a rugged tablet that is not only waterproof, dust proof and shock resistant, but offers the full functionality of a modern tablet computer.



HIGHLIGHTS

- Operating System Android[™] Kitkat 4.4.4
- Quad Core 1.2 GHz processor
- 1.5 GB RAM + 16 GB internal memory
- Optional microSD, expandable up to 64 GB
- 8" TFT display, 1280 x 800 pixels
- WWAN, LTE (4G), UMTS, GPRS
- Bluetooth®, Wireless LAN, WiFi
- Up to 11 hours battery life
- 3 MP camera / 1.3 MP front camera
- Flash with barcode scanner
- Samsung KNOX
- Secure file management
- H/W & S/W secure platform

HAZARDOUS AREAS

UNIVERSAL USE HYGIENIC DESIGN GMP, CGMP, GAMP, FDA 21 PART II RUGGED DESIGN

EXPLOSION PROTECTION CERTIFICATES

ZONE 1 / 2 / 21 / 22: ATEX, IECEX CLASS I DIV 1: CEC, NEC

IP64 FRONT / BACK
TEMPERATURE RANGE
-20 °C ... +50 °C (-4 °F ... +122 °F)

RFID CHIPCARD READERS

The RFIDi-RDR chipcard readers are explosion-protected equipment for installation in hazardous areas, Zones 1, 2, 21 and 22 – based on MIFARE® technology.

The devices may be connected to intrinsically safe type RSi reader interfaces of the R. STAHL HMI Systems Operator Interfaces series ET/MT-xx6.

Power supply and data communication takes place via the reader's interface.



HIGHLIGHTS

- MIFARE® reader
- ASCII / CRYPT versions
- · Customized solutions possible

EXPLOSION PROTECTION CERTIFICATES

ZONE 1 / 2 / 21 / 22: ATEX, IECEX, KGS KCC

IP66 FRONT / IP20 BACK

TEMPERATURE RANGE -30 °C ... +60 °C (-22 °F ... +140 °F) HAZARDOUS AREAS

UNIVERSAL
USE

HYGIENIC
DESIGN
GMP, CGMP,
GMP, FDA 21 PART II

RUGGED
DESIGN
DESIGN



The IDM barcode scanners identify all popular 1D / 2D codes, and with PDF version also stacked codes. They are available as Bluetooth® or wired versions. The compact housing with up to IP65 withstands drops from 2 m (6.6 ft) on concrete.

An LED gives good read feedback via, beeper and vibrator. All popular corded and cordless interfaces are supported. The exchange of cable and battery is tool-free.



HIGHLIGHTS

- Identification of all popular 1D / 2D codes
- Hygienic and robust housing with IP65 protection
- Feedback via LED, beeper and vibrator
- Corded and cordless versions

EXPLOSION PROTECTION CERTIFICATES
ZONE 1/2/21/22: ATEX, IECEX

IP65 FRONT / IP 65 BACK
TEMPERATURE RANGE
-20 °C ... +50 °C (-4 °F ... +122 °F)

HAZARDOUS AREAS

UNIVERSAL USE HYGIENIC DESIGN GMP, CGMP, GAMP, FDA 21 PART II RUGGED DESIGN

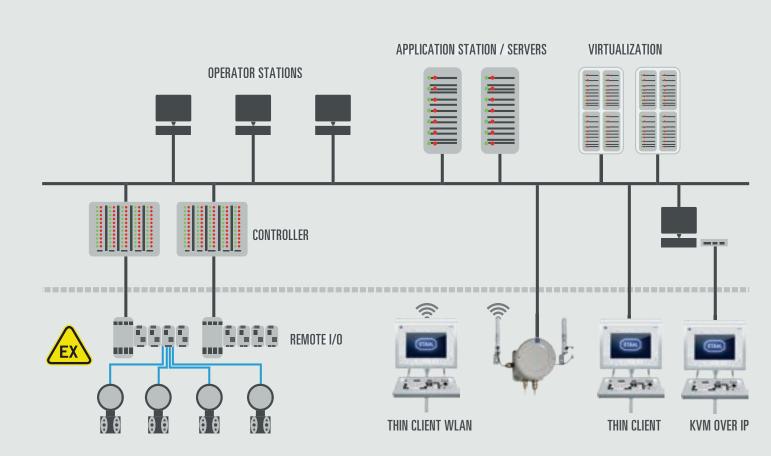
THIN CLIENTS IN VIRTUAL ENVIRONMENTS

The process industries' demand for modern network technologies, virtual machines, and Thin Clients keeps growing. The main advantages of these technologies are: cost-effectiveness, centralized data and security management, and a high level of flexibility for remote access.

Thin Clients communicate with other clients / PCs, or servers over standard Ethernet TCP/IP, RDP, VNC, thus enabling integrated communications

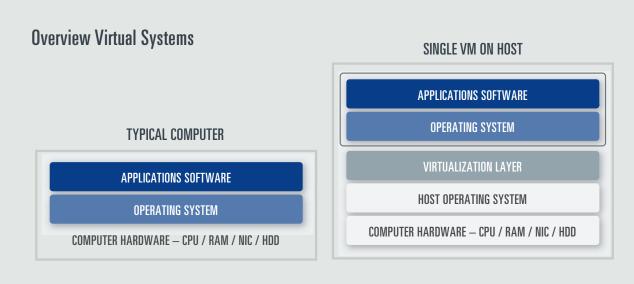
across all levels – from the field level through to the enterprise management level (ERP).

Mobile operators working on-site in the hazardous area can flexibly access any PC, server, or virtual machine from the Thin Client operator terminal, thus providing comprehensive information, and resulting in highly effective operator control and information management. The network technology eliminates any distance limitations.

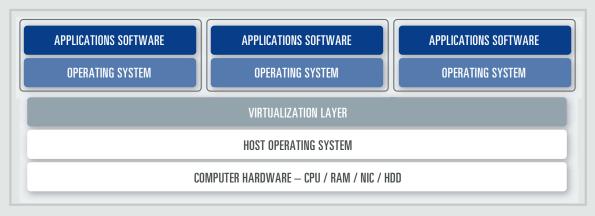


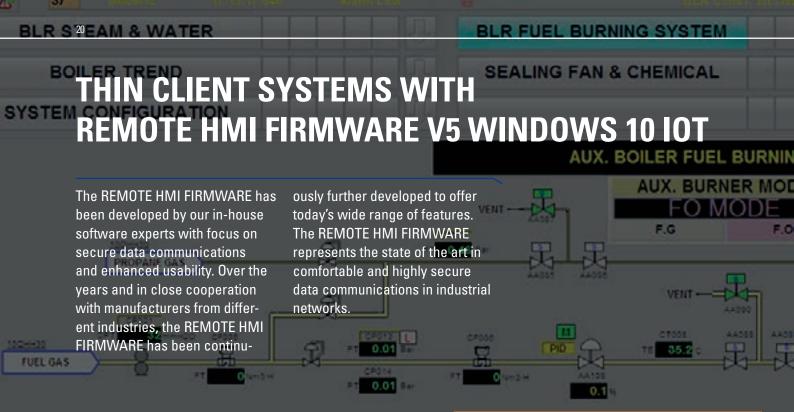
FUNDAMENTAL ADVANTAGES OF VIRTUAL ENVIRONMENTS:

- · High level of flexibility, remote access to different kinds of machines
- · Virtual machines are completely hardware independent
- Virtual machines can run different kinds of operating systems in parallel on one single virtualization software
- More virtual machines can be added by creating a new VMware session
- · A virtual machine can easily be replaced while running
- Enhanced security thanks to remote access and centralized hardware management
- Centralized security management on server for enhanced threat and data protection
- Reduced acquisition and maintenance costs



MULTIPLE VMS ON HOST





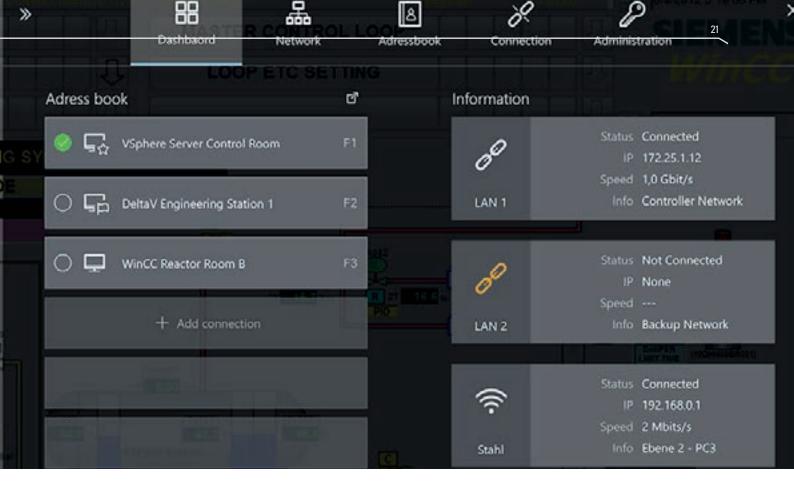
NEW

BASIC FUNCTIONS

- Closed system design
 - High degree of protection against external manipulations
 - Based on Microsoft® Embedded systems
 - Defined access via OSD menu or system console
 - Keyboard shortcuts for system access disabled (F8, Ctrl-Alt-Del...)
- Firmware protection by FILE-BASED WRITE FILTER (FBWF)
- Filtering of all TCP and UDP ports for incoming connections
- Password protection for OSD entries
- Integrated network diagnostics
- Watchdog function for monitoring data communications

THIN CLIENT DIAGNOSTICS

- Ethernet link
- Local IP address recognizable
- · Ping successful
- IP address conflict
- Remote workstation connection not responding
- RDP/VNC server unavailable



OPERATOR MENU – OSD

- Touch screen calibration
- · Display brightness adjustment
- Right-click de-/activation
- Operator input block
- Access to address book
- Software keyboard in 21 languages

CONFIGURATION

- · Network configuration for remote HMI
- Connection details of address book input fields
- KVM box setting (for KVM box connection)
- Configuration management via system console
- Access to integrated offline help / manual

ADDRESS BOOK

- Connected / not connected
- Multiple input switch
- Startup/primary connection
- Fallback connection
- Hot key connection
- Software Support Center

NETWORK SETTINGS

- · Configuration of network settings
- DHCP / IP address
- Integrated network scanner
- Default configuration available

SOFTWARE SUPPORT CENTER

Various experts for installation, integration and software solutions available

LAN MONITORING

- ADD MAC address retrieved from scanner
- PC name
- · Monitoring of selected PCs
- Monitoring of all configured PCs

ENCLOSURES

STANDARD ENCLOSURES



FR ENCLOSURE
For any type of application

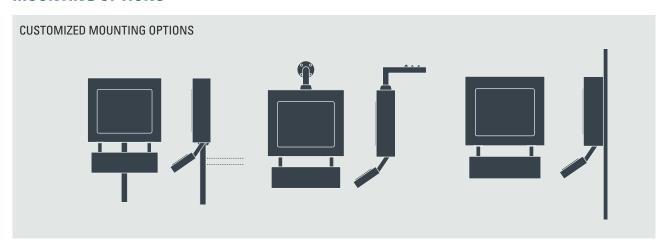


CFR ENCLOSUREFor clean rooms, aseptic/food processing



GMP ENCLOSURE - FOR SAFE AREAS ONLY

MOUNTING OPTIONS





ACCESSORIES

HARDWARE



WLAN + ACCESS POINT



Ex i Mifare Card Reader



Ex i Keyboard available as panel-mount module, or stand-alone keyboard in "office style"



Touch Pen ideal to perform precise touch operation in hazardous areas



Ex i Barcode Scanner



Backup/Recovery Stick

Additional accessories available on request

SOFTWARE



Operating System

RDP

REAL VNC

Remote Administration Software



R. STAHL Remote HMI Firmware



MOVICON 11

SPSPlusWIN / MOVICON™ 11 Project Engineering Software



OUR EXPERTS



Our R. STAHL HMI experts are ready to assist you.

CONSULTING SERVICE

Our team of experts advise you on all issues related to HMIs in the process industries. They are ready to assist you with selecting the right HMI system, the optimum set of product configurations, and they provide you with detailed information on software solutions, mounting options, and on the special features of our HMI systems.

HEADQUARTERS GERMANY

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R. STAHL: YOUR GLOBAL PARTNER

FOR THE SAFETY OF YOUR EMPLOYEES AND YOUR GLOBAL PROJECTS

We are at your service around the globe: with seven production sites, subsidiaries in 24 countries and 60 agencies. Our international employees understand your needs and offer you R. STAHL quality – no matter where you need it.

Thanks to this global presence, we realize international joint projects that include customers, planners, installation companies and operators from various countries. And we take care of the needs of everyone involved in the project – right on site.

At the same time we ensure compliance with the various legal stipulations relevant for each project since we have international certifications and approvals available worldwide.



OUR PRODUCTION SITES





Germany - Waldenburg

Germany - Cologne

Germany - Wei





mar Netherlands Norway India USA



STAHL

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