Product Overview

observerRack™

environmental surveillance systems

observerRack™

Introduction

Environmental system management is one of the most critical elements in delivering high quality data centre services. We understand that it is simply unacceptable to operate mission critical computer equipment without reliable environmental systems to provide the right monitoring, protection and reporting for these systems.

The ObserverRack™ environmental management system ensures that all the necessary ingredients are in place, managed and monitored around the clock to perpetually deliver the right services for mission critical network technology.

The ObserverRack™ emphasizes utilizing IP, Web and GSM technologies to oversee and control critical support systems from just about anywhere on the globe.

We believe vital proactive monitoring and control systems must be cost effective, quickly deployed, and easy to use. It must provide intuitive alarming and provide robust reporting all from a secure and managed location, making it easy for a client to manage multiple remote locations.

Effective environmental control improves the overall function and reliability of communication equipment avoiding expensive and unnecessary downtime.

benefits

- Lowest cost of ownership
- Reduced deployment lead times
- Minimize environmental threats
- Total environmental surveillance
- Graphical interface, reducing language and skills barriers
- Proactive disaster prevention
- Extended equipment longevity
- Real-time status and alarm notification
- Enhanced access and security
- Compact design saving valuable office space
- Global access
- Total cost saving of up to 50%
- Movable asset

features

- Comprehensive environmental monitoring; humidity, temperature, mains power, UPS status, generator fuel level, GSM signal strength, luminosity, levels, smoke, & fire detection
- System can bee monitored and managed "out the box" via comprehensive browser interface without any additional software
- CFC free, roof, door or rack mounted cooling system scalable to equipment requirements
- GSM, Web and IP monitoring with bidirectional communications capability
- Surge protection designed to withstand currents of 40kA
- User configurable thresholds and alarm escalation settings
- Remote door access via SMS, LAN, WAN & WEB
- Automated SMS/Email notification
- Alarm status report logging
- Audible alarm
- Automated, standards compliant and equipment friendly fire suppression system NAF 125 (FM-200)

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features…

- Manual fire system override/activate facility
- Touch screen graphical user interface and status display
- Multi user touch screen interface and status display
- Universal 19" mountings compatible with all rack mount servers and ICT equipment
- 300kg force magnetic locking system together with internal lights, fan and ventilation system all controlled by proactive management system
- 48 hours from on site delivery to 100% operation
- Scalable design from single to dual, triple, quad, 25u-47u 19" racks

optional features

- Radwin wireless point to point connectivity of up to 120km
- Class 1 direct lightning strike protection
- External or rack mount UPS sized accordingly with electrical load and runtime requirements of ICT equipment
- External generator
- IP camera
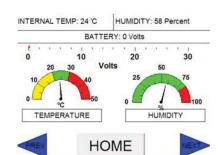- 8 port KVM monitor console with keyboard and touch pad

control system

The ObserverRack™ uniquely monitors the physical environment as well as the electronic devices responsible for controlling that environment and will proactively respond to the threat and notify you of the condition.

The control system uses a combination of proven IP and PLC technologies to create an industry proven, extremely reliable and robust monitoring system that communicates via GSM, IP and RS232. It is essentially the nerve centre that connects and communicates between attached devices and the environment. It activates the threat elimination processes and communicates these events to you.

The control system will monitor and report on the status of :

- Temperature
- Humidity
- Smoke
- Batteries
- Fuel
- Doors
- Mains power
- Lights
- Fire

INTERNAL TEMP: 24 °C   HUMIDITY: 58 Percent

BATTERY: 0 Volts

Volts

TEMPERATURE

HUMIDITY

PREV   HOME   NEXT

The control system is self contained and has built in power redundancy for 24 hours, independent of any additional UPS system.

Note: the fire system is monitored by the management system however continues to function and is capable of responding and extinguishing a fire even if the ObserverRack™ monitoring system has been completely removed from the rack.

The fire system is automatically placed in a standby mode when the doors are opened but can still be activated if a fire is detected. This eliminates the need for a manual key override and human error.

Actual ambient temperature and humidity is monitored in independent zones. Should maximum and minimum thresholds be exceeded the system automatically activates an independent fan ventilation system.
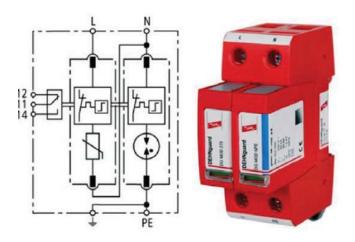
Clean and continuous mains power has become the single biggest new threat to communications systems. The ObserverRack™ monitors all elements of the 220v power supply from the utility provider, generator fuel levels and UPS batttery levels and optionally the system can also report on under and over voltage changes.

Surge Protection

There are two types of surge arrestors. Class 1 lightning current arrestors which are designed to withstand direct lightning (10/350 impulse) and must be used in conjunction with Class 2 surge arrestors.

The ObserverRack™ is supplied as standard with Class 2 surge arrestors which are designed to withstand induced lightning surge currents and mains power spikes; not a direct strike; which covers about 90% of all surges.

Our surge technologies are guaranteed for 10 years and are currently used by all major carriers such as Telkom, Sentech, Vodacom and Engen. They comply to SABS IEC code ensuring the highest protection available.

Access Control

The primary function of the access control system is to provide easy access for authorized users, prevent unauthorized intrusion and report on possible security risks.

Users can each be allocated a personalized alphanumeric access code, each code can be assigned unique administration and security rights allowing physical ccess to a specific or multiple doors of the ObserverRack™ and/or access to the control system software.

All codes can be allocated time specific access and expiry dates for temporary contractors. All doors can be operated remotely via cell phone or PC. Lock failure and forced entry is automatically detected activating an audible alarm and sending SMS/Emails in accordance with the predetermined alarm reported sequence.

Magnetic locks remain active during mains power failure, supplied by onboard 17ah battery backup.Internal rack lighting is automatically activated access is granted.

The management system together with the access control will send still IP photographs or streaming IP video to your PC (optional) on entry to the ObserverRack™, this can be configured to activate on the doors being opened or alternatively on motion detection.

Temperature control System

The use of air-conditioning is an essential part of the ObserverRack™ concept due to the capacity of communications and IT hardware to generate heat.

Dramatic temperature changes have a direct impact on the reliability and lifespan of your equipment. Options that are available to the ObserverRack™ are:

- Roof mount split unit air conditioner
- Door or side mount air conditioner
- Door or side mount split unit
- Rack mount self contained unit

All air conditioning options are configured to meet your exact requirements and are:

- CFC free ecologic R134a refrigerant according to EN814
- Thermostat setting adjustable within a range of +20°C to +45°C
- Constructed from sheet steel with galvanized electro statically powder coated anti corrosion protection
- Electric shock protection as per DIN 31 001
- High performance Condensate Evaporation KV DTX self regulating unit preventing condensation from collecting on the floor

Fire Suppression

The fire suppression system consists of a gas cylinder containing the gas. A solenoid, fire control panel and two optical smoke detectors. The smoke detectors use the double knock system to prevent false alarms. The double knock is reported to the fire control panel which is also able to report faults and activate the system. A relay is used to activate the solenoid valve on the gas cylinder which causes the gas to be discharged via a gas diffuser nozzle.

NAF 125 HFC fitting into the FM-200 family of gasses is a drop in replacement for Halon 1301 and is therefore the suitable product for total and semi flooding systems. The concentration of NAF 125 per m³ is less than other gases which means less gas is required.

NAF 125 is a non-conductive product therefore it is suitable for all electrical or electronic applications. The product leaves no residue and will not harm electronic components.

NAF 125 has UL, EN and ULC approvals. The gas is colourless, non toxic and has a citrus like odour.IMO testing of NAF 125 shows effective tests conducted at -15°C. Testing showed that only 8.7% per volume was required to extinguish a heptane test fire (flammable liquid) and 7.5% per volume for a crib test (flammable solids) ISO 9001 2000

Construction

Designed to be compact, tough, scalable and aesthetically stylish manufactured from 1.2mm cold rolled steel, oxidation treated and epoxy powder coated.

- 20 x 220 volt dedicated power outlets
- Easy network cable entry
- Internal cable routing complying to ISO11801 standards for copper and fibre cable
- Thermal insulation between side panels
- Detachable side panels
- Toughened glass front doors
- Easy access to lighting for quick maintenance
- 19" standard rack mounting for all makes of ICT hardware

Construction

The multi function touch screen features a full graphics 5.7inch colour STN display with 258 colours, resistive touch technology as a host of communication options.
The Windows CE based panel comes with 64Mb SRAM memory and 6Mb flash memory is provided for visualization tasks and 2Mb flash memory for the PLC program.

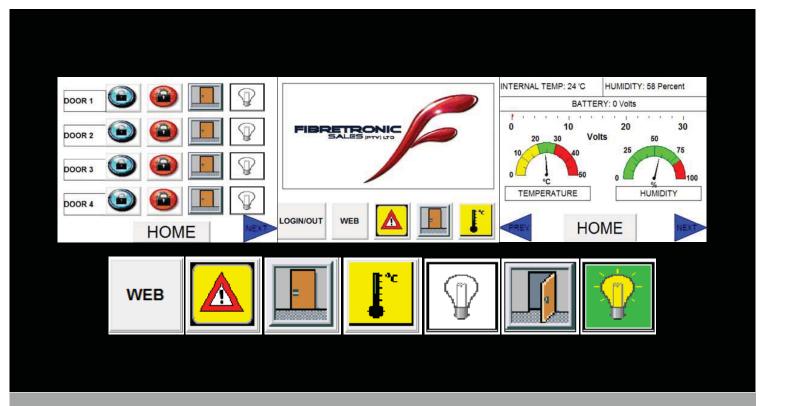The 10/100 Mbps Ethernet interface of MFD4 guarantees the connection to IT equipment.

extras

Wireless

Radwin wireless products are carrier class high capacity broadband point to point links, providing connectivity of up to 200Mbps and allows the connectivity of TDM services and Ethernet for up to 120Km

IP camera

The IP camera is available as ruggedized and is specifically designed to withstand tough environments. It is discreetly housed in a four centimeter high tamper resistant casing to farther enhance the security of the ObserverRack™

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UPS & Generators

A versatile UPS developed for the harshest power conditions in the world. APC Smart-UPS RT is a family of high-density performance UPSs for voice and data networks, medical labs, and light industrial applications. Capable of supporting 10kVA in a 6U rack/tower convertible form, users can support power hungry blade servers or heavily loaded equipment racks. This flexible form factor allows standardization across multiple applications. High power internal chargers allow virtually unlimited additional matching battery packs to comply with aggressive runtime demands of business-critical systems. Customers with harsh power environments looking for extremely tight voltage and frequency regulation, internal bypass, and input power factor correction typical of double conversion online topology will get them in the Smart-UPS RT.

This enables uninterrupted long-term electrical power for continuous operation if need be. Downstream from the electrical power sources are high-end UPS & Generators that condition the power and provide power back-up for electrical disruptions. Full-service maintenance programs performed by equipment manufactures ensure that all components are tested and operating normally. The bottom line is you get 100% complete power back-up and SLA if agreed.

KVM LCD Monitor

High availability 1U, metal, rack mount, direct connect to 8 port KVM switch, control single or multi-PC, 15" LCD, high contrast, high brightness, high resolution, ultra thin keyboard. standard PS/2 touch pad. front panel with locker, slide rail automatically lock and unlock, internal power source with auto power on/off.

applications

- High security server rooms
- Cost effective disaster recovery rooms
- Remote location data centre's
- Temporary computer rooms
- Campus subsidiary computer rooms
- Building floor distributors

modules

single

double

triple

quad

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six

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