






 Humidity/Dew Point


 Smoke

 Door Position

 Temperature

 Airflow

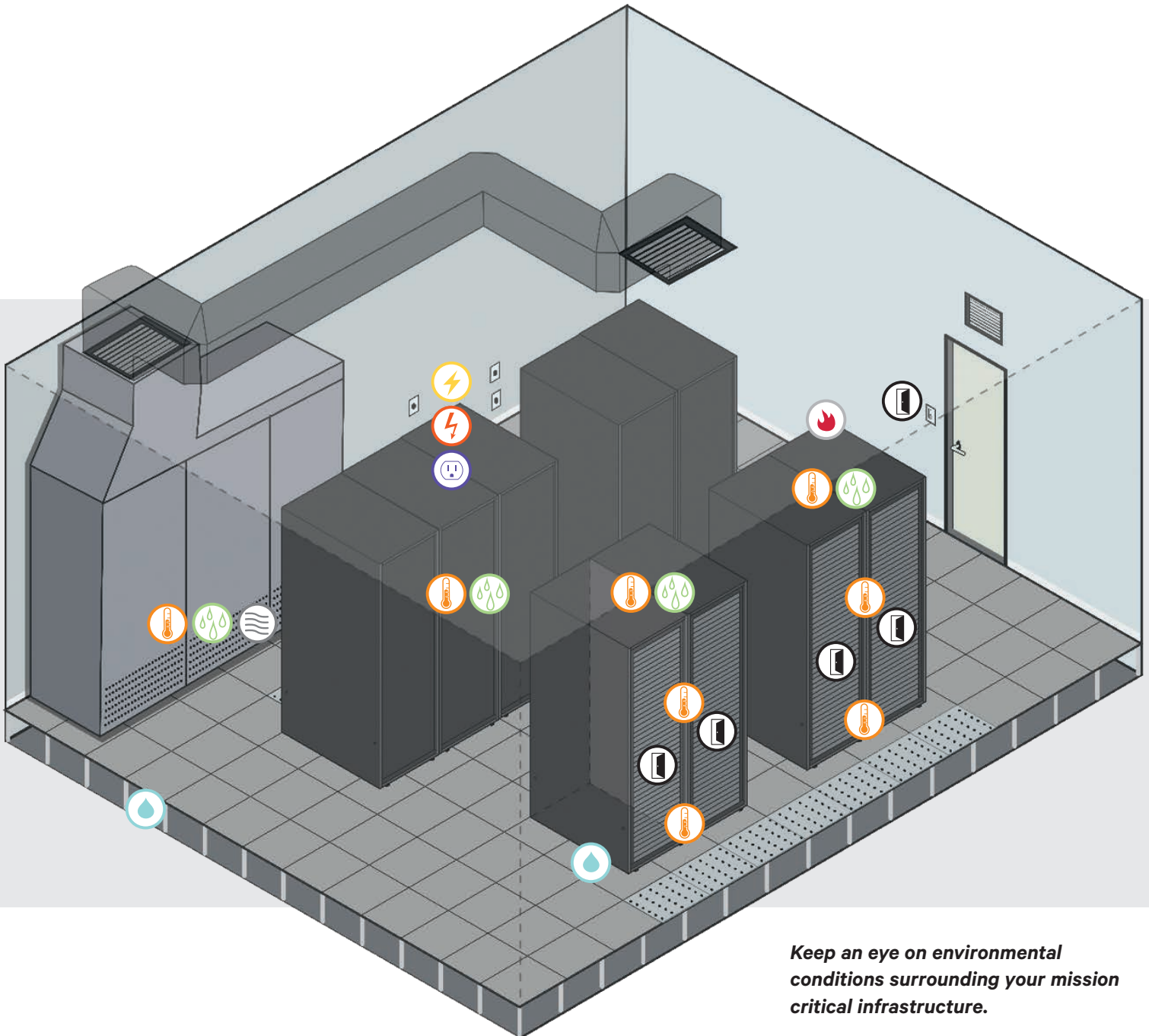
 Power Failure

 Water Leaks

Vertiv™ Geist™ Environmental Monitoring solutions provide peace of mind ensuring your critical infrastructure is protected.

Proactively Monitor Your Data Center

Vertiv Geist Watchdog Environmental Monitors enable you to remotely monitor a variety of environmental parameters in critical areas. Environmental factors like heat, humidity and moisture pose a severe threat to mission-critical infrastructure. These dangers can be minimized by incorporating a network of environmental sensors to collect data and alert users of potential threats.



Keep an eye on environmental conditions surrounding your mission critical infrastructure.

Key Features

- Receive alerts when a user specified threshold is breached to ensure out-of-range conditions are addressed before resulting in downtime.
- Expand monitoring capabilities with the addition of external sensors.
- View real time sensor data from a secure web interface and receive alerts via Email, SNMP, or Email-to-SMS.

Environmental Monitor Product Overview

	Feature	Watchdog 15	Watchdog100
On Board Sensors	Temperature	•	•
	Humidity / Dew Point	•	•
External Sensor	# Plug-n-Play Sensor Ports	2	2
	Max Plug-n-Play Sensor Capacity	4	4
	# Dry-Contact / 0-5V Sensor Ports	0	4
Hardware	Built-in PoE	Optional	Optional
	Dry-Contact Relay Outputs	0	1
	Rackmount 19" 1U		•
	Ethernet	10/100	10/100
Web Server	USB		
	IPv6	•	•
	HTTP / HTTPS	•	•
	DHCP	•	•
Firmware	JSON API	•	•
	Real Time Sensor Data Feeds	•	•
	Sensor Data Logging & Graphing	•	•
	Data Logs	CSV, JSON	CSV, JSON
	SNMP (v1, v2c, v3)	•	•
	Email & Email-to-SMS Alerts	•	•
	Alarm Escalations	•	•
	Alarm Repeat	•	•
	Alarm Delay	•	•
	Alarm Valid Hours	•	•
	Encryption via TLS	•	•
Login Security	3 Admin, Control, View Only		
Benefits	Compatible with Device Director	•	•
	Free Firmware Updates	•	•
	Free Technical Support	•	•
Warranty		5 Years**	
Reg	Regulatory Compliance	UL, FCC, CE, RoHS	

- Smoke
- Amperage
- Humidity/Dew Point
- Door Position
- Voltage
- Water Leaks
- Temperature
- Airflow
- Power Failure

**Standard 3 year warranty increased to 5 years with product warranty registration within 120 days of purchase.

Product Overview

Environmental Monitors

Watchdog 15/15P

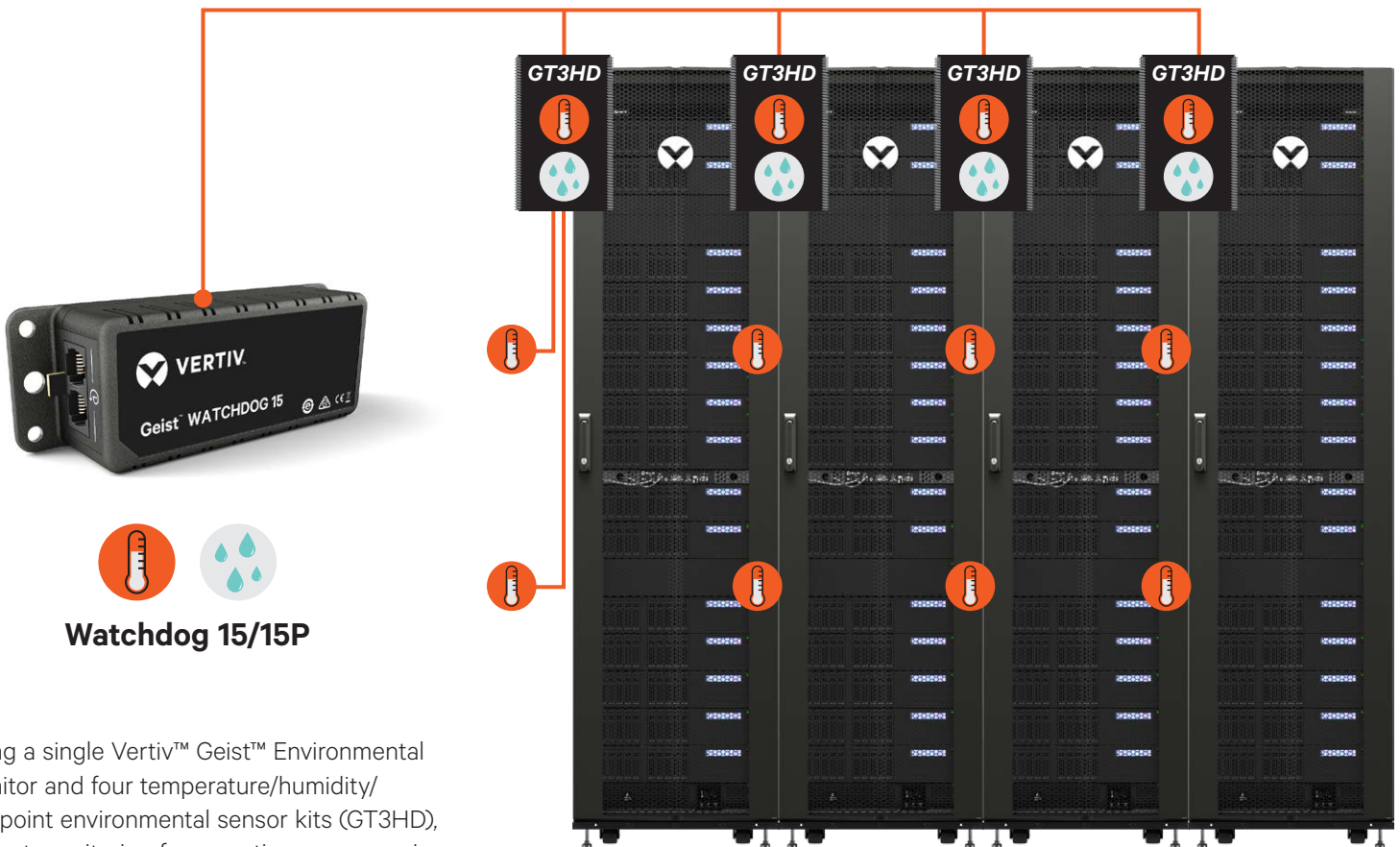
The Watchdog 15 is a self-contained environmental monitor with an onboard temperature and humidity sensor. Equipped with two Plug-n-Play sensor ports, the Watchdog can support up to four external sensors using a splitter.

The Watchdog 15 is a cost-effective and reliable solution for monitoring critical environments.

Power over Ethernet (PoE) option available.



Effective temperature monitoring in the data center



Watchdog 15/15P

Using a single Vertiv™ Geist™ Environmental monitor and four temperature/humidity/dewpoint environmental sensor kits (GT3HD), vigilant monitoring for an entire server row is remarkably convenient and affordable.



Watchdog 100/100P

The Watchdog 100 combines environmental monitoring with remote relay control. The relay output can be tied to alarm settings or triggered manually. The unit comes equipped with an onboard temperature and humidity sensor, two Plug-n-Play sensor ports and four Dry Contact/ 0-5V sensor ports.

The Watchdog 100 provides comprehensive sensor connection options in a compact solution. It is shipped with rack-mount brackets offering flexibility for installation and wire management.

Power over Ethernet (PoE) option available.

Web Interface Overview

The screenshot shows the VERTIV web interface with a navigation bar containing 'Sensors', 'System', and 'Help'. The 'Sensors' section is active, displaying two sensor panels. The 'Rear of Rack' panel (Device ID 60D88039829405C3) shows real-time data for Geist WD100: Temperature (75.18 F), Humidity (33%), and Dewpoint (44.13 F). Below this is a table of sensor states: Door (Open), Flood (Dry), Smoke Alarm (Clear), and GX Temperature (100.00 C). The 'External' panel (Device ID C2000007FA0E0228) shows a visual alarm status for SRT with a temperature of 74.19 F.

Real-time Sensor Data

Friendly Names Per Sensor

Visual Alarm Status

Analog Input Customization

The Configuration dialog for 'Analog 1' shows the following settings: Name: Analog 1, Label: Isolated Voltage Sensor, Mode: Isolated Voltage (- Gnd), Scaled Value at 0V: 0, Scaled Value at 5V: 72, and Units Label: VDC. 'Save' and 'Cancel' buttons are at the bottom.

The Data Graph shows a time-based data graph for the period '2019-04-01 19:20 through 2019-04-29 18:04'. The graph displays multiple data series for Rear of Rack Temperature, Humidity, Dewpoint, Door, Flood, Smoke Alarm, and GX Temperature, along with External Temperature. A legend below the graph identifies each series. At the bottom, there is a 'Time Range' dropdown set to '30 days' and a 'Display/Refresh' button.

Time Based Data Graph

Customizable Time Range

International Support and Language Selection

The Locale configuration dialog shows 'Default Language' set to 'English' and 'Temperature Units' set to 'Fahrenheit'. A 'Save' button is located at the bottom.

About Our Firmware

We strive to continually improve our product and feature set by listening to our customers and keeping up with the latest trends. Listed here are some of the major firmware features Vertiv™ Geist™ environmental monitors offer.

Logging	Record sensor data over time. Turn data logging on or off for certain sensor measurements. Export sensor data logs in XML or CSV file formats.
Graphing	Graph sensor data over time to view trends. Graph select sensors in relation to each other.
Email & SMS Alerts	Receive Email alerts on alarm. Configure SMS alerts via Email-to-SMS gateway. SMS messages are shortened so that you receive one text message per alarm as opposed to multiple messages.
SNMP	Support for SNMP v1, v2c, v3 with traps. Devices are compatible with most network management software such as What's Up Gold, Nagios, IP Sentry, OpenView, Solarwinds, Spiceworks and other SNMP based software.
Alarms Escalations	Specify any combination of actions or recipients per alarm. Configure multiple alarm thresholds per sensor
Alarm Repeat & Delay	Specify a 0 to 240 minute delay per alarm to get an alert only when a threshold has exceeded continuously for the set number of minutes. Alarms can repeat every 10, 30, or 60 minutes until all measurements are back to normal.
Business Hours	Enable or disable Email alert notifications for selected recipients during specified business hours on certain days of the week.
Analog Inputs	Configure analog inputs by assigning a scale range to the 0—5 VDC signal to view sensor data in meaningful units.
Friendly Names	User specifies descriptive names per sensor for easy identification.
International Support	Metric & Imperial measurements. Customizable date and time format options.
Security	HTTPS using SSLv3/TLSv1.
Supported Languages	English (default), Spanish, French, German and Mandarin. Easily change between languages as needed.
Access Account Levels	Administrator, Control, and View Only accounts with varying privileges.
Plug-n-Play Sensors	Firmware automatically detects a sensor when connected.
Remote Firmware Updates	Update firmware safely and easily through the web interface.

Plug-n-Play Environmental Sensors



Temperature (SRT)

The SRT is an easy-to-install external temperature sensor great for monitoring a variety of areas, such as; A/C inlet, A/C outlet, ambient room temperature, hot spots, and internal cabinet temperature. The SRT is available in a variety of cable lengths. Contact a Vertiv sales representative for a full list of temperature sensor options.



Temperature/ Humidity/ Dew Point (GTHD)

The GTHD sensor collects and transmits real-time data to protect critical data center and Edge infrastructure from heat and moisture. The sensors can be daisy chained together to simplify installation.



Temperature x 3/ Humidity/ Dew Point Kit (GT3HD)

The GT3HD provides real-time temperature and humidity monitoring with additional 3ft/ .9m and 6ft/ 1.8m temperature sensors. The GT3HD is ideal for monitoring temperature at the top, middle, and bottom of a server cabinet. A supplementary input provides the ability to daisy-chain additional sensors together making it a perfect solution for monitoring a row of racks or cabinets.



Temperature/ Humidity/ Dew Point/ Airflow (RTAFHD3)

The RTAFHD3 temperature, humidity, dew point, and airflow sensor provides critical information to ensure equipment is receiving adequate airflow within the optimal parameters to prevent premature equipment failure due to out-of-range operating conditions.



Analog-to-Digital Converter (A2D)

The A2D allows users to connect a dry contact, 0-10V, or 4-20mA sensor to an RJ12/ Plug-n-Play sensor port. It provides users with the flexibility to utilize a Plug-n-Play sensor port for a Dry Contact / 0-5V sensor.

Environmental Monitor Accessories

5-Port Splitter

The 5-Port Splitter increases the number of available Plug-n-Play sensor ports. The splitter is required to connect four external sensors to the Watchdog without daisy-chaining.

-48 VDC Power Supply

The -48VDC Power Supply allows users to utilize a -48VDC power source to power the Watchdog 15 and Watchdog 100.

Analog/ Dry Contact Environmental Sensors



Door Position (RDPS)

The RDPS detects when a door or cabinet is open or closed. The door position sensor has four components: magnet, switch with screw-terminal, cover and connection wires. The wired switch is mounted to the door frame or cabinet and the magnet on the door, opposite the switch. When the door is opened, the switch separates and the sensor trips an alarm.



Smoke Detector

The Smoke Detector provides real-time recognition of the presence of smoke. The kit contains a standard smoke alarm plus all the wiring to connect to an analog input. The detector plugs into a standard US-style wall outlet.



Flood Sensor (FS)

The Flood Sensor detects the presence of water. The sensor measures conductivity and indicates whether the sensor is dry, wet, or completely immersed in water. Flood Sensors are commonly installed near or under plumbing fixtures, A/C drip pans, pipes and water sprinklers.



Water Sensing Cable Kit (WSCK)

The WSCK is a perimeter leak detection kit used to detect the presence of water along the entire cable length. These kits are ideal for monitoring for moisture over a wide area such as around a room or group of racks. When connected to any monitor with analog input ports, users will be alerted of the presence of water before it damages critical equipment.



Power Failure Sensor (PFS)

The power failure sensor provides real-time notifications of power outages. It is commonly used to monitor utility, UPS, and 3-phase power. The PFS connects to an analog input port and comes complete with its own power adapter that plugs directly into the power source being monitored. Status LEDs provide immediate indications of system state.



Current Transducer 30/60/120A (CT)

The Current Transducer monitors how much current is being drawn by a particular device or group of devices. The CT clamps around a single current carrying wire, while the output of the CT connects to an analog port. The CT measures current ranges of 30, 60, or 120 amps, determined by a 3-position switch. Outputs 0-5 VDC (proportional to current).



Isolated Voltage Sensor (IVS-DC)

The IVS-DC is a 0-5V sensor used to track and monitor DC voltages for either positive-ground or negative-ground battery backup and telecom systems. It was designed for telephone battery voltage monitoring or other applications requiring monitoring of DC voltage. The monitoring range is +/- 72VDC.

Product Overview

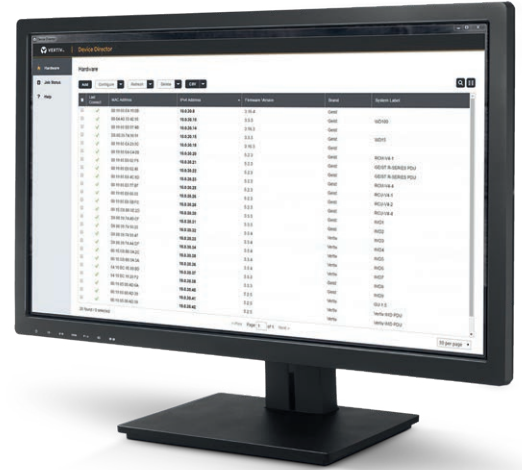
Device Director

Device Director is a comprehensive, Windows-based utility that is used to install, configure and maintain multiple Vertiv™ Geist™ devices within a single interface.

Device Director helps you set the IP addresses of multiple devices, configure user accounts, modify network settings, update firmware, export/import configuration settings and validate device connectivity.

Device Director gives you a powerful and easy way to mass configure Vertiv Geist devices, and effectively reduces setup time and maintenance cost.

- Automatic discovery of Vertiv Geist devices on the network
- Mass configuration of device and network settings
- Bulk firmware updates



Monitor Your Critical Facility

Hyperscale and Enterprise Data Centers

Hyperscale and enterprise data centers house thousands of servers and racks. These facilities require confidence that network equipment will stay online to ensure maximum availability.

The Vertiv Geist Environmental Monitoring solutions offer user-defined alerts and escalations to empower users to take control of the environmental conditions around their critical infrastructure and prevent system downtime, hardware damage and data loss.



Edge Data Centers

The edge is more important and more complex than ever before, requiring an infrastructure to maintain critical functionality in harsh conditions. With vast differences in Edge applications, it is important to safeguard against uncertain environmental conditions.

Vertiv Geist Environmental Monitoring enables IT managers to keep an eye on remote conditions to ensure an optimal operating environment for critical infrastructure, improving reliability and reducing the risk of downtime.





Smoke

Temperature

Door Position

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Airflow

Power Failure

Water Leaks



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