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GEIST

Future Thinking • Solutions Today

Environmental Monitoring and Alarming

GEIST MONITOR

Environmental Monitoring

Data Center

Strategically monitor data center, server room and network closet environments to protect critical infrastructure and prevent system downtime, hardware damage and data loss.

Telecom

Monitor climate and power conditions within base transceiver stations, cell sites, and technical rooms to ensure your equipment is running in optimal conditions.

Health Care

Monitor and validate temperature among various environments within healthcare facilities including hospitals, blood and tissue banks, laboratories and more. Our sensors are designed to monitor extreme temperatures and allow users to satisfy FDA 21 CFR Part 11 compliant reporting.

Cold Storage

Our environment monitors enable users to strategically monitor cold-storage facilities among restaurants, cafeterias, grocery stores and warehouses across the globe to protect perishable inventory ensuring food quality and safety.

Monitor

- **Temperature**
- **Humidity/Dew Point**
- **Airflow**
- **Light**
- **Sound**
- **Door Position**
- **Smoke**
- **Water Leaks**
- **Power Failure**
- **Voltage**
- **Amperage**
- **Kilowatt-Hour(s)**
- **Battery**
- **Video Surveillance**

Prevent

- **Equipment Failure**
- **Downtime**
- **Loss of Revenue**
- **Loss of Reputation**

Alerts

- **Alert notifications via Email, SMS,* SNMP Traps and voice call* when user-adjustable thresholds are breached**
- **Automation and control of external devices**

*Relay-controlled auto dialer required

Variety of Environmental Monitors Available

ITWatchdogs by Geist environment monitors are used for a wide range of other applications including traffic control boxes, climate-controlled storage, wine cellars, air-traffic control communications closets, research laboratories, stability chambers, greenhouses, livestock, poultry farms and museums. Our products are fully scalable to meet various special needs.

MADE IN THE USA

- **Free Tech Support**
- **Free Firmware Updates**
- **No Annual Fees**

Product Overview

		Environment Monitors					
		Watchdog 15	Watchdog 100	Watchdog 1200	Watchdog 1250	Watchdog 1400	ClosetAir
On-Board Sensor	Temperature	•	•	•	•	•	•
	Humidity / Dew point	•	•	•	•		
	Airflow			•	•		
	Light Level			•	•		
	Sound Level			•	•		
External Sensor	Digital Sensor Ports	2	1	5	5	4	4
	Maximum Digital Sensor Capacity	4	4	16	16	16	4
	0-5 VDC Analog Sensor Ports	0	4	3	3	6	0
Hardware Features	Optional Built-in PoE	•	•			•	
	Built-in Alarm Buzzer				•	•	
	Dry-Contact Relay Outputs	0	1	0	0	3	0
	LCD Display w/ Scrolling Measurements				•	•	
	Rackmount 19" 1U		•	•	•	•	
	Temperature Regulated Fan						2
	Ethernet	10/100					
Web Server	IPv6	•	•				
	HTTP / HTTPS	•	•	•	•	•	•
	DHCP	•	•	•	•	•	•
	Network Time Protocol (NTP)	•	•	•	•	•	•
Firmware	Real Time Sensor Data Feeds	GUI, HTTP, HTTPS, SNMP					
	Sensor Data Logging & Graphing	•	•	•	•	•	•
	Data Logs	CSV, JSON		CSV, XML			
	SNMP (v1, v2c, v3)	•	•	•	•	•	•
	Email & Email-to-SMS Alerts	•	•	•	•	•	•
	Alarm Escalations	•	•	•	•	•	•
	Alarm Repeat	•	•	•	•	•	•
	Alarm Delay	•	•	•	•	•	•
	Alarm Valid Hours	•	•	•	•	•	•
	Periodic Email Status Reports			•	•	•	•
	Office 365 Email Support	•	•				
	Display in Metric or US Measurements	•	•	•	•	•	•
	Multiple Languages	•	•	•	•	•	•
	Access Account Levels	3	3	3	3	3	3
	Encryption via TLS/SSL	•	•	•	•	•	•
	Interface with IP Surveillance Cameras	•	•	•	•	•	•
	Remote Firmware Updates	•	•	•	•	•	•
Benefits	Free Technical Support and Firmware Updates	•	•	•	•	•	•
	Warranty	1 Year Standard Warranty*					
Reg	Regulatory Compliance	UL FC CE N136					

Plug-n-Play Sensors:

Temperature**
Temperature/Humidity/Dew Point (GTHD)**
Temperature/Humidity/Dew Point (GT3HD)**
Temperature/Humidity/Dew Point/Airflow**
Analog-to-Digital Converter (A2D)

Analog / Dry Contact Sensors:

Door Position (NO/NC)
Smoke Detector (NO/NC)
Flood Sensor (Conductivity)
Water Sensing Cable Kit (NO/NC)
Power Failure Sensor (0-5V)
Current Transducer 30/60/120A (0-5V)
Isolated Voltage Sensor (0-5V)
60 VDC Sensor (0-5V)

Accessories:

5-Port Splitter
PoE Splitter
PoE Injector
In-line Power Meter 15
In-line Power Meter 20A
-48 VDC Power Supply
PSTN Auto-Dialer (Analog)
GSM Auto-Dialer (SIM card required)
Rack Shelves
Blanking Panels

Extended warranties available
***Temperature Range -40°F to 185°F (-40°C to 85°C)*

GEIST MONITOR

Monitors

Watchdog 15

The Watchdog 15 is a self-contained environment monitor with an on-board temperature and humidity sensor. Equipped with two digital sensor ports, the Watchdog can support up to four external sensors using a splitter.

The Watchdog 15 is the most cost-effective and reliable solution in the market for monitoring temperature, humidity and other environmental parameters in critical environments.

Watchdog 15 & Watchdog 15-PoE Specifications

Ethernet Connection
608 VDC Power Supply
Optional Power-over-Ethernet (PoE)
Power on Indicator
IP Reset Button

Two Digital Sensor Ports
(capacity of four external sensors)

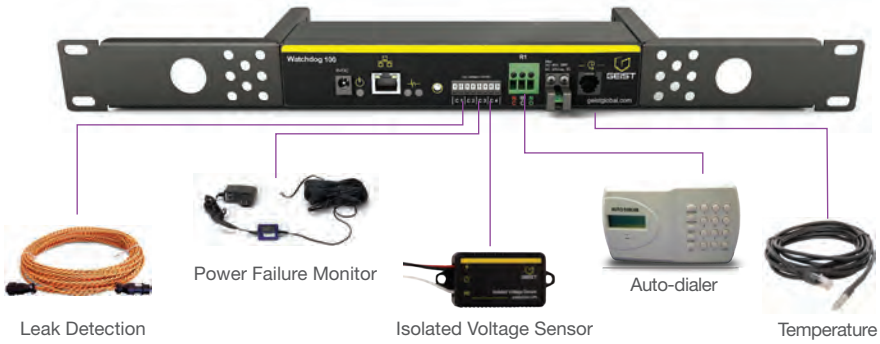
On-board Sensors
Temperature Range:
-13° F to 176° F (-25° C to 80° C), +/- 0.5° C
Humidity:
5% to 95%, +/- 3%

Chassis Dimensions:
1.72" H x 5.22" W x 1.29" D
FCC Part 15 Class A Conformance

Watchdog 100

The Watchdog 100 combines climate monitoring with remote relay control. The relay outputs can be tied to alarm settings or triggered manually. The unit comes equipped with on-board temperature, humidity sensor and optional built-in Power-over-Ethernet (PoE).

The Watchdog 100 is a compact solution perfect for tight installments. It is shipped with rack-mount brackets offering flexible wire management options.



Watchdog 100 & Watchdog 100-PoE Specifications

Ethernet Connection
6 VDC Power Supply
Optional Power-over-Ethernet (PoE)
Power on Indicator
Idle/Activity Indicator
IP Reset Button

One Digital Sensor Ports
(connect up to four using splitters)
Four Analog Sensor Ports
One Output Relay
Max Switching Capacity:
DC: 60V, 30W / AC: 30V_{rms}, 1A

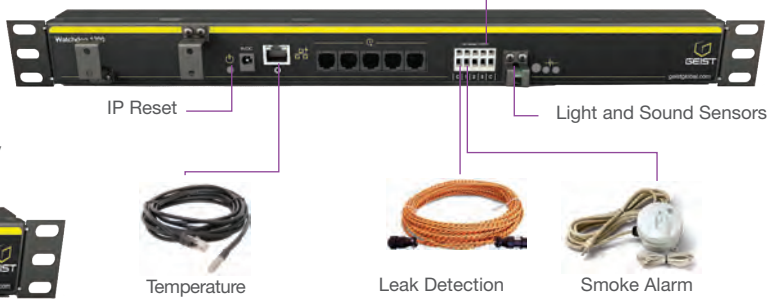
On-board Sensors
Temperature Range:
-4° F to 176° F (-20° C to 80° C), +/- 0.5° C
Humidity:
5% to 95%, +/- 3%

Chassis Dimensions:
1.6" H x 8.5" W x 2.5" D
(with 19" mounting brackets)
FCC Part 15 Class A Conformance

Watchdog 1200 and Watchdog 1250

The Watchdog 1200 and Watchdog 1250 contain five on-board environmental sensors and additional sensor ports for connecting external digital and analog sensors. The Watchdog 1250 comes with an audible alarm and LCD display.

Watchdog 1200



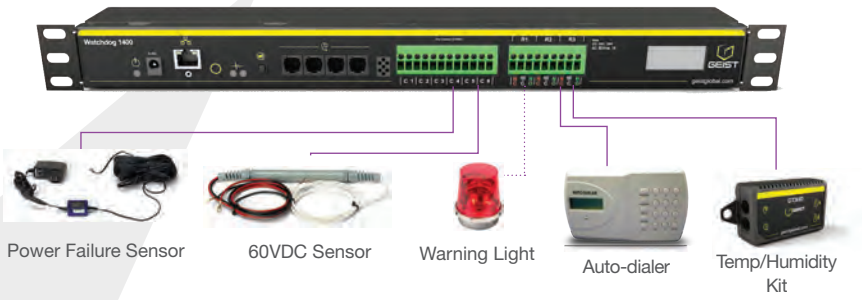
Watchdog 1250

Watchdog 1200 & Watchdog 1250 Specifications

- Ethernet Connection
- 6 VDC Power Supply
- Power on Indicator
- Idle/Activity Indicator
- IP Reset Button
- Five Digital Sensor Ports (capacity of 16 with splitters)
- Three Analog Sensor Ports
- LCD Display (Watchdog 1250)
- Audible Alarm (Watchdog 1250)
- On-board Sensors
- Temperature Range: -22° F to 185° F (-30° C to 85° C), +/- 0.5° C
- Humidity: 0% to 100%, +/- 3%
- Airflow, Sound & Light: 0-99, realtive
- Chassis Dimensions: 1.61" H x 17" W x 1.61" D
- FCC Part 15 Class A Conformance

Watchdog 1400

The Watchdog 1400 offers climate monitoring with three relay outputs. Equipped with an on-board temperature sensor and six analog inputs, the Watchdog 1400 supports up to 16 remote digital sensors. The relay outputs enable users to trigger external devices like auto-dialers, strobe lights or back-up A/C units on alarm or manually through the Web interface.



Watchdog 1400 & Watchdog 1400-PoE Specifications

- Ethernet Connection
- 6 VDC Power Supply
- Power on Indicator
- Optional Power-over-Ethernet (PoE)
- Idle/Activity Indicator
- IP Reset Button
- Four Digital Sensor Ports (capacity of 16 with splitters)
- Six Analog Sensor Ports
- Three Relay Outputs
- LCD Display
- Audible Alarm
- Max Switching Capacity: DC: 60V, 30W / AC: 30V_{rms}, 1A
- On-board Sensors
- Temperature Range: -22° F to 185° F (-30° C to 85° C), +/- 0.5° C
- Humidity: 0% to 100%, +/- 3%
- Chassis Dimensions: 1.61" H x 17" W x 1.61" D
- FCC Part 15 Class A Conformance

GEIST MONITOR

ClosetAir™

Small Room Cooling

GEIST COOL

The ClosetAir™ system removes hot air from a small space and sends it to the outside corridor or ceiling plenum return. An intelligent heat removal and monitoring solution for servers, network switches and phone systems in small spaces. A built-in web interface provides remote management, including email alerts and generated graphs, to monitor settings and environmental conditions within the room. ClosetAir is a complete management system that provides superior visibility and control of your room environment.

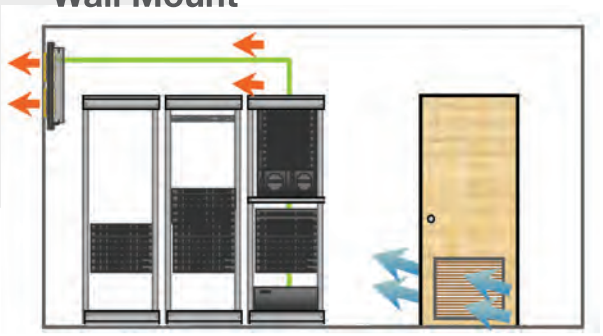
ClosetAir™

RAC10	0-8 kW intelligent heat removal for computer and network systems in small spaces, up to four RJ12 Temperature Sensors with 20' cords (two included)
RT-20	Option for two additional temperature sensors
SC-D002	Duct discharge cap, can utilize two 8' duct flanges and flex ducting (Optional)

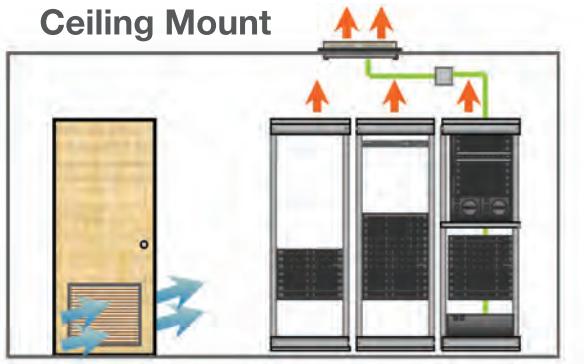
ClosetAir™ Specifications

Input	120 VAC, 50/60 Hz, 10' cord, NEMA 5-15P
Fan Speed Regulation	Automatic temperature control with Ethernet remote adjustment
Air Flow	1100 CRM Maximum
Environmental Monitoring	Ethernet remote access and alarms, up to four RJ12 Temperature Sensors with 20' cords (two included)
Regulation	Temperature based, range: 60 - 120 degrees F
Physical	21"(W) x 14"(L) x 3.52" (H)
Network	HTTP/ HTTPS/ SNMP/ DHCP
Regulatory	UL, cUL 507, FCC Part 15 Class A
Warranty	2 Years

Wall Mount



Ceiling Mount



RS-Wi Wireless Monitoring System

The RS-Wi Wireless Gateway is designed for easy integration with Geist's DCIM systems. The convenient wireless design helps reduce installation costs associated with hard-wired sensors. An auto-discovery mechanism detects sensors as they are installed within the monitoring network.

- Wireless design
- 900MHz & 418MHz receivers
- Operates on a mesh network
- Receives transmissions up to 100 feet in open air with the 418MHz antenna
- Receives transmissions up to a quarter mile in open air with the 900MHz antenna
- Provides direct alarm notification
- Ability to output to Modbus, BACnet and SNMP

RS-Wi Compatible Sensors

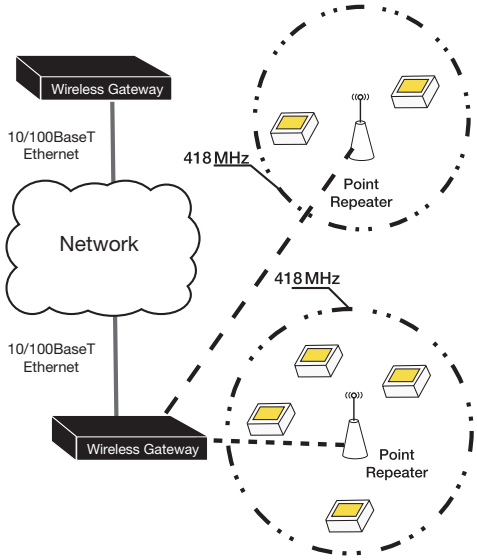
- Digital temperature sensor
- Digital temperature measurement and dry contact
- Analog input sensor
- Analog input transmitter
- Point repeater
- Digital temperature/ humidity sensor

RS-Wi Wireless Temperature Sensor

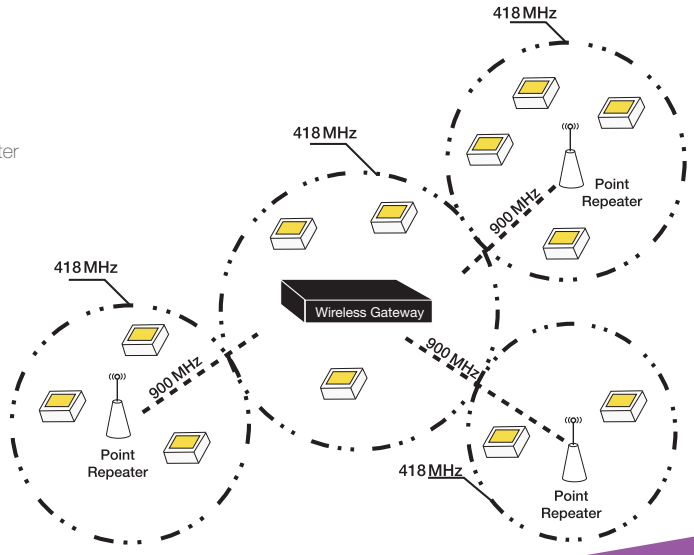
RS-Wi Wireless Gateway

Part #	Description
RS-Wi	Wireless Gateway
ENV-AS1 (0-20Ma transmitter)	Analog Input (0-20MA), 418 MHz Wireless Transmitter
ENV-AS2 (0-5V transmitter)	Analog Input 0-5V, 418 MHz Wireless Transmitter
ENV-DIT (temp + dry contact sensor)	Digital (DI) and Temperature Sensor, 418 MHz Wireless Transmitter
ENV-MS (motion sensor)	Motion Sensor, 418 MHz Wireless Transmitter
ENV-PR (point repeater)	Point Repeater (Mesh), 418 MHz Receiver with 900 MHz Transceiver
ENV-THS-2 (temp/hum sensor)	Temperature and Humidity Sensor, 418 MHz Wireless Transmitter
ENV-TS (temp sensor)	Temperature Sensor, 418 MHz Wireless Transmitter

RS-Wi as a mesh network



RS-Wi as a network repeater



GEIST MONITOR

Sensors

Temperature Sensor

Part # SRT 1.25/4/10

The Temperature Sensor comes in multiple cord lengths (12', 20', 25', 50', 100') to monitor temperature in a variety of locations. With Ingress Protection Rating (IP67), this sensor can be submerged in liquid. This small and lightweight sensor can be used in refrigeration units, A/C inlet, A/C outlet.

Sensor Details: Temperature: -55° C to 125° C or -67° F to 257° F; Accurate to +/-0.5°

Temperature/Humidity/Dew Point Sensor

Part # GTHD

The Temperature, Humidity, Dew Point Sensor (THD) provides real-time measurements to the appliance for data logging and alarming. The sensor comes equipped with two 6P6C modular jacks (aka RJ12), one for output to the host device and one supplementary input for daisy-chaining an additional digital sensor. A 6P6C modular patch cable is included to connect the sensor to the host device. You may mount the sensor nearly anywhere using screws or adhesive.

Sensor Details: Temperature Range: -4° F to 176° F (-20° C to 80° C), +/- 0.5° C; Humidity: 5% to 95%, +/- 3%;
Dew Point: -58° F to 185° F (-50° C to 85° C)

Temperature/Humidity/Dew Point Sensor Kit

Part # GT3HD

The T3HD is an enhanced version of the Temperature, Humidity, Dew Point Sensor (THD) with four 6P6C modular jacks (aka RJ12), one for output to the appliance and a supplementary input for daisy-chaining. Two additional inputs are strictly compatible with the temperature sensors. The unit comes kitted with 3' and 6' temperature sensors and is ideal for monitoring top, middle and bottom of a server rack.

Sensor Details: Temperature Range: -4° F to 176° F (-20° C to 80° C), +/- 0.5° C; Humidity: 5% to 95%, +/- 3%;
Dew Point: -58° F to 185° F (-50° C to 85° C)

Temperature/Airflow/Humidity/Dew Point Combo Sensor

Part # RTAFHD3 -12/20/25/50/100

The Temperature, Humidity, Dew Point, Airflow combination sensor allows you to monitor equipment to ensure it is not overheating and helps prevent damage by condensation or static electricity using relative humidity and dew-point readings.The sensor comes in a variety of cord lengths (12', 20', 25', 50', 100').

Sensor Details: Accurate to +/-0.5° C within the normal operating range of 20° C to 45° C;
Accurate to +/-2% RH within the normal operating range of 20% to 80% RH at 25° C;
Extended operating range of -40° C to 85° C (-40° F to 185° F)

A2D

Part # A2D-10’
Part # A2D-50’

Converts a dry contact or analog sensor into a plug-n-play sensor. It comes equipped with an extra digital input port for daisy-chaining capability, allowing greater flexibility and convenient installation. The A2D is compatible with Geist sensors as well as any industry standard sensors that are dry-contact or that emit a 0-10VDC or 4-20mA signal.

Door Position Sensor

Part # RDPS (30’ wire)
Part # RDPS-50/100 (50 or 100’ wire)

Detect 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 opens, the switch separates and the sensor trips an alarm.

Power Failure Sensor

Part # GRCP-2-100 US (100’ cord)

This power sensor provides real-time notification of a power outage and is commonly used to monitor main power, UPS and 3-phase. It connects to an analog input port and comes complete with its own power adapter that plugs directly into the power source that is being monitored. Status LEDs indicate system state.
Input voltage range: 100 to 240 VAC.

Smoke Detector

Part # SD2

The SD2 is a low voltage Smoke Detector with a built-in-interface to allow monitoring through the ports of an environmental or power + environmental monitoring unit. A power supply is attached for easy installation.

Flood Sensor

Part # FS-15 (15’ cord)
Part # FS-100 (100’ cord)

Detect water leakage. The flood sensor measures conductivity and indicates whether the sensor is dry, damp, or completely immersed in water. Most commonly placed near plumbing fixtures, pipes, A/C drip pans and water sprinklers. Comes in 15’ and 100’ lengths.

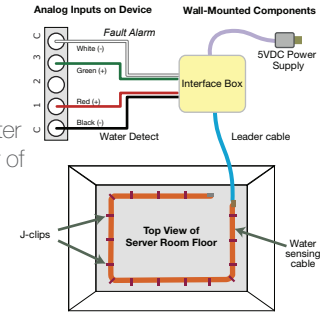
GEIST MONITOR

Water Sensing Cable Kit

Part # 8706 (10'cable) 8708 (50' cable)
8707 (25' cable) 8709 (100' cable)

Water-sensing kits feature detection cables that recognize the presence of water anywhere along the cable's length. Monitor a wide area, such as the perimeter of a group of racks and cabinets.

Sensor Details: Within the normal operating environment of 32° to 167°F



Current Transducer

Part # CT 30/60/120

Measure how much current is being drawn by a particular device or group of devices. Measures current ranges of 30, 60, 120 amps, determined by a 3-position switch. Outputs 0 to 5 VDC (proportional to current).

Isolated Voltage Sensor

Part # IVS-DC

The Isolated Voltage Sensor monitors positive-ground DC voltages used in telecom systems through our Environmental Monitors.

60 VDC Voltage Sensor

Part # G60VDCM

Measure battery voltage. Continuously track the voltage of telephone batteries or a cell phone system's power with 60 VDC. Designed for monitoring telephone battery voltage and other applications that require monitoring of a DC voltage.

5-Port Splitter

Part # SP-5

Increase the number of available sensor ports with the 5 port splitter. Chain the splitters together to connect up to 16 sensors. One RJ-11 plug, five receptacles and 5' cord.

PoE Splitter and Injector Kit

Part # POI-2002 (Injector)
Part # POS-1002 (Splitter)

Power any environmental monitor and/or web camera over Ethernet cable using the PoE Splitter & Injector Kit. Only a standard CAT5 cable (max 300') is required to carry both data and power to each device. The injector takes data from an Ethernet hub and power from the wall outlet and outputs both data and power through the CAT5 cable. The splitter is placed at the end of the CAT5 cable, returning data and power to their respective cables. This unit is a standalone device and does not interface to an environment monitor.

-48 Volt DC Power Supply

Part # -48VDCPS

-48VDC Power Supply allows you to use a -48 VDC power source to power any Geist environmental monitor.

Input	**Output**
36 VDC to 60 VDC (max)	6 VDC
Positive to negative ground	1 Amp (max)
Ring terminal connectors	Barrel Connector (fits monitor)

PSTN and GSM Auto-Dialers

Part # ADP-G06 (GSM auto-dialer)
Part # ADP-T01 (PSTN auto-dialer)

The relay-controlled GSM and PSTN auto-dialers add an additional level of alert notification by dialing preprogrammed phone numbers. Battery back-up ensures the auto-dialer delivers alerts even if its power source is lost. The dialer can be programmed to call up to nine different phone numbers.

IP Cameras

The D-Link® DCS-930L Network Camera connects to a wireless (or wired) network to provide high quality video surveillance. With its sleek compact design, the DCS-930L is an affordable network camera ideal for monitoring your critical facility.

GEIST MONITOR

Racknet Node Manager (NM)

A Simple DCIM Solution

GEIST DCIM

Racknet Node Manager (NM) provides a simple solution for managing Geist devices. This low-cost solution provides a single aggregation point for real-time monitoring and trending.

Racknet NM manages the data center white space with a single point of integration. It is designed to support Geist equipment in a single interface and allows for user-defined alarms, alerts and history trending, creating a single view of critical Geist infrastructure.

Features and Benefits

- Single Access Point for Integration
- Capacity Planning
- Remote Access through Browser Interface
- Simple Device Discovery
- Outlet Control Capability
- Support for all Geist Hardware
- SNMP and BACnet Output of All Collected Data
- Supports Thousands of Devices
- Geist Equipment Global Firmware Updates
- Alarm and Trend on all Collected Data
- User-Defined Graphical View
- Virtual Machine Option
- Easy Upgrade to Full Racknet Solution

Racknet NM	Collects data from specified Geist equipment then stores, aggregates and displays the data on a secure internet connection for multiple user remote access.
Temperature/ Humidity/ Dewpoint Sensors (GTHD)	Measure critical environmental elements and send data through intelligent PDU ports. The GTHD sensors shown can daisy chain similar units to create a sensor network
Water Sensing Unit	Detects presence of water and reports information to the intelligent PDU.
Intelligent PDUs	Supplies power to critical data center equipment. In addition, the intelligent PDU sends performance metrics as well as data captured from environmental sensors to Racknet for collection.
Temperature and Air Flow Sensors	Measure specific temerature and air flow at critical locations around the cabinet then sends data through intelligent PDU ports.

For more information about the Racknet solutions, contact Geist DCIM at 877.449.4150 or dcimsales@geistglobal.com.