

Wireless General Purpose Adapter (WGA100)

Daintree Wireless Solution

The **Wireless General Purpose Adapter (WGA100)** is part of the Daintree product portfolio, an open networked wireless controls solution for lighting and building control, monitoring, and optimization. Daintree controls provide a highly scalable solution to address evolving environmental regulations and transform spaces into intelligent environments for buildings of all sizes.

Consisting of three components, Daintree includes sensors and controls at the edge, an open API cloud platform, and software apps to help facility managers make decisions based on how space and assets are actually being used using a data-rich sensor network. Benefits of adding wireless Daintree controls include:

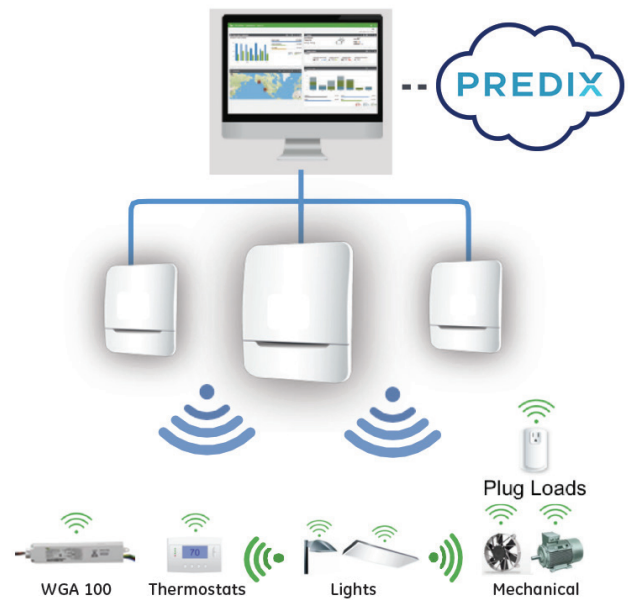
- Up to 50% Energy savings across lighting, HVAC, plugload, fans and more
- Visibility into energy usage, trends and insights to optimize operations
- Automated demand response, superior comfort and lower maintenance expense
- Regulatory compliance with Title 24; 2005 EnergyPolicy Act; 2007 Energy Independence and Security Act; 2009 DOE Regulations

Product Overview

The WGA100 provides On/Off switching and 0-10V analog control as well as reporting and monitoring capability of binary and 0-10V analog signal inputs for a variety of building applications.

Binary outputs can be used to wirelessly control devices such as pumps, motors and contactors, while connecting a device to one of the low voltage binary inputs allows the ControlScope Manager (CSM) software application to report the On/Off state of the attached device.

The 0-10V analog output can be used to wirelessly control the variable speed of a fan, while connecting the 0-10V analog input to a multi-state device, such as a temperature sensor, allows CSM to report the current temperature in real-time.



Daintree Network Architecture



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ControlScope Manager Integration

The WGA100 Wireless General Purpose Adapter is supported by the ControlScope Manager web application, providing complete online access to monitor and control a variety of building devices across one or multiple facilities.

Label	Facility	Type	Manufacturer	Model	Status	Value Range
2000-0000-0000-000	All Facilities	Fan	2000 Fans	100	OFF	0-100%
2000-0000-0000-000	All Facilities	Fan	2000 Fans	100	OFF	0-100%
2000-0000-0000-000	All Facilities	Temperature Sensor	Wera	7500	OK	Unit: °F (2 points)
2000-0000-0000-000	All Facilities	Humidity Sensor	Wera	NEW007A	OK	Unit: % RH
2000-0000-0000-000	All Facilities	Setback Thermostat	Wera	7000	OK	Thermostat Setback Thermostat Normal
2000-0000-0000-000	All Facilities	Air Quality Sensor	Santoro	QF0001	OK	CO2 PPM
2000-0000-0000-000	All Facilities	Moisture Output	Wera	7500	OK	Unit: % (2 points)

Environmental Monitoring

Ensure correct operation of **heating and cooling systems** with system-wide monitoring of temperature and humidity:

- Room
- Outdoor
- Duct, discharge and return air

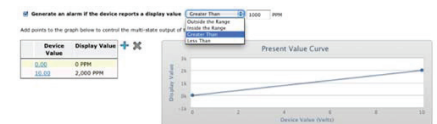
Zone	Alarm	Active Control Strategy	Current State	Devices in Zone
2000-0000-0000-000	OFF	OFF	OFF	1
2000-0000-0000-000	OFF	Auto ON Auto OFF	OFF	1
2000-0000-0000-000	OFF	Auto ON Auto OFF	OFF	1
2000-0000-0000-000	OFF	Auto ON Auto OFF	OFF	1
2000-0000-0000-000	ON	CO2: 543 PPM	1	1
2000-0000-0000-000	OFF	Auto ON Auto OFF	OFF	1
2000-0000-0000-000	OFF	Auto ON Auto OFF	OFF	1
2000-0000-0000-000	OFF	Auto ON Auto OFF	OFF	1
2000-0000-0000-000	ON	Thermostat: Normal	1	1
2000-0000-0000-000	Auto ON Auto OFF	OFF	1	1

Protect inventory and verify within specification operation of **refrigeration and freezer equipment** in small commercial applications such as food service, c-store and small box retail, using environmental sensors:

- Temperature, Humidity
- Pressure
- Refrigerants

Check air quality (e.g., CO2), pressure, temperature and humidity sensors for optimal operation of **ventilation systems**.

Generate system alarms and email alerts when configured thresholds are exceeded.



Schedule and Occupancy-based Control

Actuate binary (e.g., On/Off) and multi-state (e.g., 0-10V) devices using standard, time-based schedules.

Trigger device actuation using occupancy detection from installed motion sensors that are simultaneously automating lighting controls.

- E.g., manage a setback thermostat between two set points in response to occupancy and vacancy events.

October 7 - 13, 2012

Schedule: 10/6/2012

Control Strategy: Auto ON Auto OFF

Occupancy Control: OFF

Manual Override Thermostat: 1

Weekly Schedule: A table showing the schedule for each day of the week.



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Warranty

Current offers a limited Warranty across its Daintree Portfolio. The table below summarizes the Warranty terms. For additional information, please review the Limited Warranty Document on the Daintree Homepage.

Component	Warranty Period	Coverage Details
Daintree Software	1 year (on-premise installed Software) Subscription term (SaaS) 3 years	GE warrants that as long as all applicable fees due are paid, Daintree Software will substantially conform to the applicable published documentation and published specifications for the Warranty Period.
System Controller	3 years	100% parts coverage. Warranty for non-Daintree software (such as operating system software) is provided by the respective software; GE makes no warranty with respect to non-Daintree software.
WACs	5 years	100% parts coverage
Wireless Adapters	5 years	100% parts coverage
Wireless Devices	5 years	100% parts coverage, excluding batteries
Wireless Thermostats	2 years	100% parts coverage

Product Code	Product Description
WGA100	Wireless General Purpose Adapter

Specifications

Dimensions	1.18" H x 1.7" W x 9.4" D
Operating Environment	-4°F to +149°F (-20°C to +65°C) Dry location (or inside Listed non-metallic waterproof enclosure)
Indicators	Green LED (power) Green LED (joined network) Red LED (error state)
Mounting	Snap-in 1/2" nipple for junction box mount Screw tab and optional mounting bracket
Switched Binary Output (relay)	15A @ 120-277 VAC 1hp @ 120-230 VAC
Binary Output	(1) LSD (low side driver); aux relay control; 75mA maximum (including attached sensors) 24VDC
Binary Input	Binary Input (2) : Active high (>= 8.25V). Max 40V, Impedance ~22K Analog Input (1): 0-10V, Max 24V, Input resistance ~90K
Analog Output	(1) 0-10VDC, 5mA maximum
Analog Input	(1) 0-10VDC
Power	120-277 VAC 50/60Hz
Power Consumption	0.95W (@277V; Relay ON) 0.51W (@277V; Idle, Relay OFF)
Low Voltage Output	24VDC; 75mA

Wire Color	Application
HIGH VOLTAGE (AWG14)	
Black	Active
White	Neutral
Red	Switched Binary Output
LOW VOLTAGE (AWG22)	
Red	24VDC
Black	Reference Ground (Digital)
Gray	Reference Ground (Analog)
Violet	0-10V Analog output
Orange	0-10V Analog input
Blue	Binary input
Yellow	Binary input
Green	Binary input (low side driver)

