

SimplControls

Product Brief

SimplControls

What is it?

SimplControls is a collection of sensors, switches, software and communications modules that work together to reduce energy consumption and the peak power load of a commercial or residential building.

SimplControls is specifically designed for buildings with automation area of less than 20,000 square feet.



How does it work?

At the core of the system is SimplMeter, a two channel, 3-phase power and energy measurement system that measures power consumption and production of a building in real-time.

With this information and a knowledge of various electrical equipment in the building, SimplControls uses its AI engine to switch electrical power loads in order to keep maximum power to an optimal level.



Sensors:

Temperature and humidity sensors, door monitors, and light intensity measurements are used within a secure mesh network to determine the optimal scheme for keeping the peak power levels to a minimum.



Switches and Relays:

A network of wireless relays and switches dynamically switch HVAC units, water heaters or refrigerators and freezers. Other appliances or electric loads are also managed according to their respective parameters.



Key Differentiators:

- Wireless sensors, switches and controller means no conduit runs or expensive electrical work
- Easy, low-cost installations performed in hours, not days
- Online system design
- Intelligent, software-based self-commissioning
- Universal sensor device for temperature, humidity, light intensity and door sensing
- Dynamic power measurement using SimplMeter, a dual-channel, revenue-grade power measurement element. The real-time capabilities of SimplMeter is responsible for the dynamic demand management
- Out-of-the-box integration with solar and battery systems
- Uses an integrated tariff table to decide when a load should be turned off based on dollar savings
- Real-time view of the savings generated by the system
- 4G or Wi-Fi Connectivity with mesh technology

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Module Specifications

	SimplMeter Wireless Realtime, Dual Power and Energy Measurement		
Model Number	SimplMeter-0000		SimplMeter-0001
Number of Meters	1		2
Current Transformers	Meter is equipped with two, 1"-diameter CTs		Each Meter is equipped with two, 1"-diameter CTs
Phase/Meter	Split phase or 3-phase		
Voltage Range	100VAC to 480VAC		
Current Range with Different Size Rope CTs	1" Diameter CT 10-100 A	4" Diameter CTs 10-1000A	8" Diameter CTs 10-5000A
Dimensions	2" W x 2" L x 1.5" D		
Environmental	IP67 rating; -30 °C to 60 °C at up to 95% RH		
Storage Temperature	-30 °C to 60 °C		
Communication Protocol	Private Wi-Fi Mesh Network based on Simpl Global's patent-pending technology		
Options	SimplMeter-0002: Add 1"-Diameter CTs SimplMeter-0003: Replace or Add 4"-Diameter CTs SimplMeter-0004: Replace or Add 8"-Diameter CTs		

	SimplRelays Wireless Switching for Electrical Loads and Appliances		
Model Number	SimplRelays-HVAC	SimplRelays-30A-single	SimplRelays-30A-dual
Number of Relays	4	1	2
Current per Relay (A)	2A	30A	30A
Voltage	24 to 250VAC		
Dimensions	2" W x 2" L x 1.5" D	5" W x 3.8" L x 2.3" D	
Environmental	IP67 rating; -30 °C to 60 °C at up to 95% RH		
Storage Temperature	-30 °C to 60 °C		
Communication Protocol	Private Wi-Fi Mesh Network based on Simpl Global's patent-pending technology LoRa Radio for long-distance, inter-building communications. Uses Simpl's proprietary communication protocol		

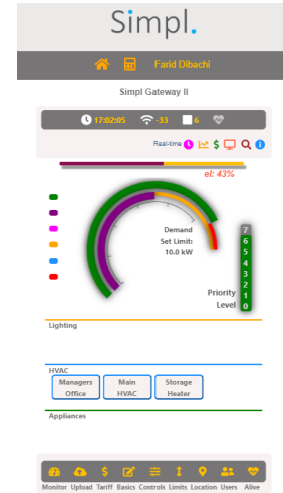
	SimplGateway Wireless Building Management Controller	
Model Number	SimplGateway-0000	
Voltage Requirements	Single Phase 24VAC to 280VAC	
Dimensions	2.25" W x 4" L x 1.5" D	
Environmental	IP67 rating; -30 °C to 60 °C at up to 95% RH	
Storage Temperature	-30 °C to 60 °C	
Communication Protocol	Private Wi-Fi Mesh Network based on Simpl Global's patent-pending technology	
Installation	Plugs into a wall outlet	
Options	<p>SimplGateway-0001: Adds 4G communications using AT&T and Verizon Wireless networks</p> <p>SimplGateway-0002: Adds WiFi mesh extender for Simpl's private WiFi network</p>	

	SimplSensors Wireless Building Sensors		
Model Number	SimplSensors-0000		
Sense Parameters	Ambient Temperature / Relative Humidity with on-board Sensor Light Intensity with on-board sensor Door Sensor with on-board sensor. Requires optional magnet External Temperature Sensor. Requires product sensors or external thermistor		
Current per Relay (A)	2A	30A	30A
Voltage	Battery Supplied		
Dimensions	2" W x 2" L x 1.5" D		
Environmental	Outdoor & Indoor. IP67 rating; -30 °C to 60 °C at up to 95% RH		
Storage Temperature	-30 °C to 60 °C		
Communication Protocol	Private Wi-Fi Mesh Network based on Simpl Global's patent-pending technology LoRa Radio for long-distance, inter-building communications. Uses Simpl's proprietary communication protocol.		
Optional Equipment	<p>SimplSensors-0001: Temperature Sensor with bottle</p> <p>SimplSensors-0002: External Temperature Sensor</p> <p>SimplSensors-0003: External Magnet used for door sensor</p>		

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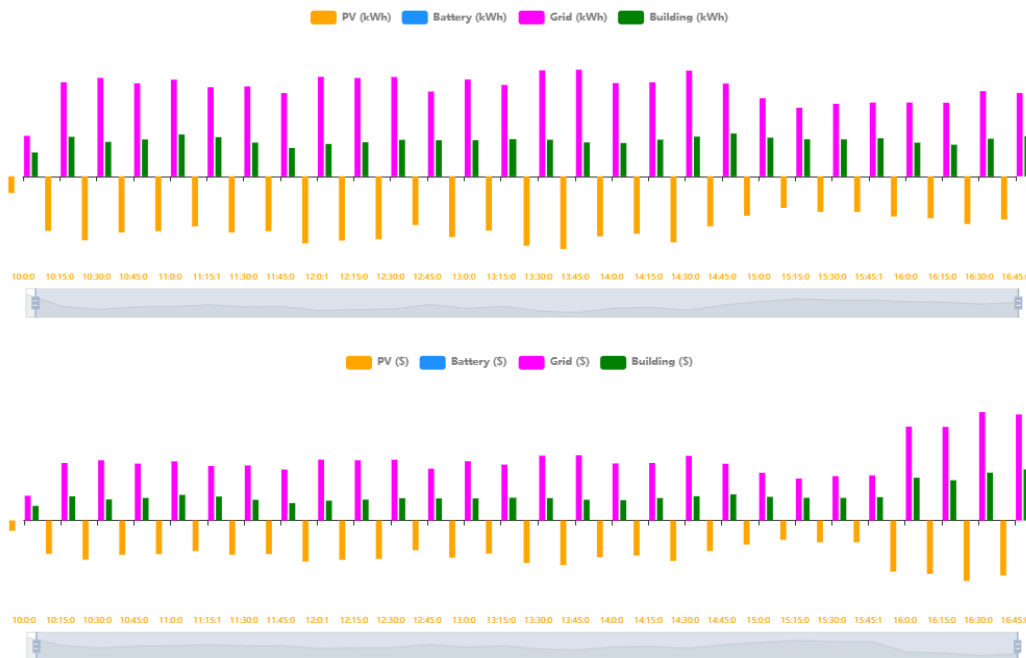
User Interface and Commissioning

Installation crews use their cell phones to interface with SimplControls

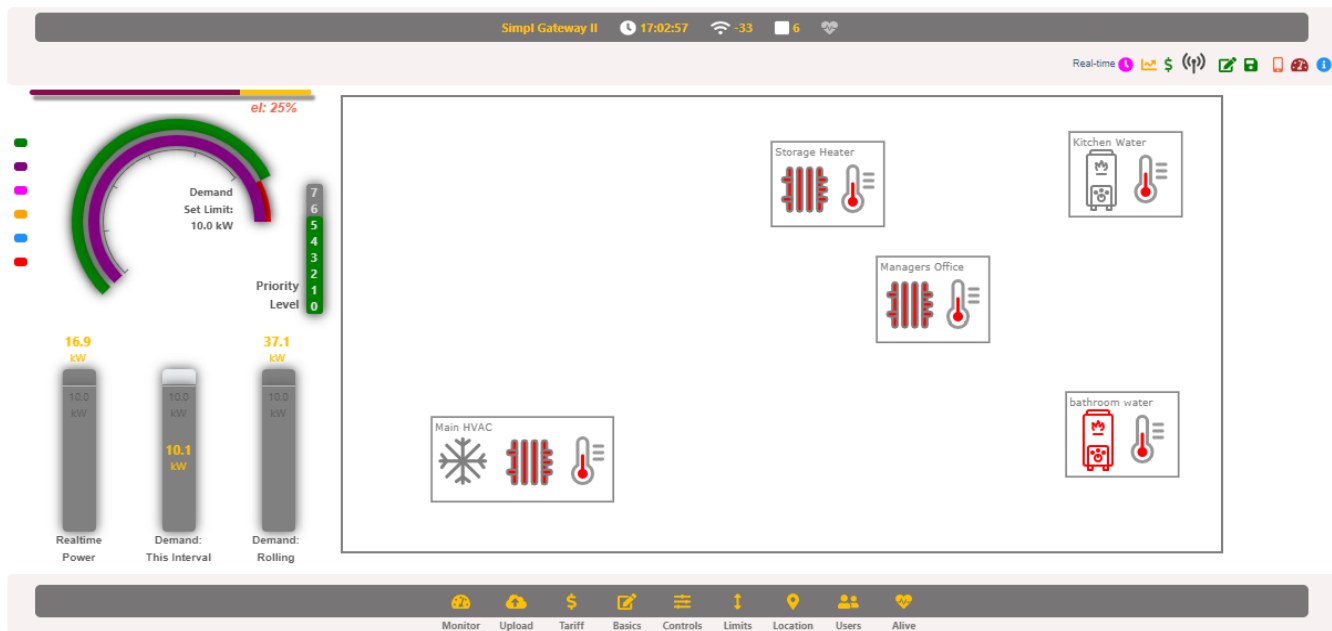


15-minute interval data is displayed for any data or time range showing building consumption, solar production, battery usage and grid usage.

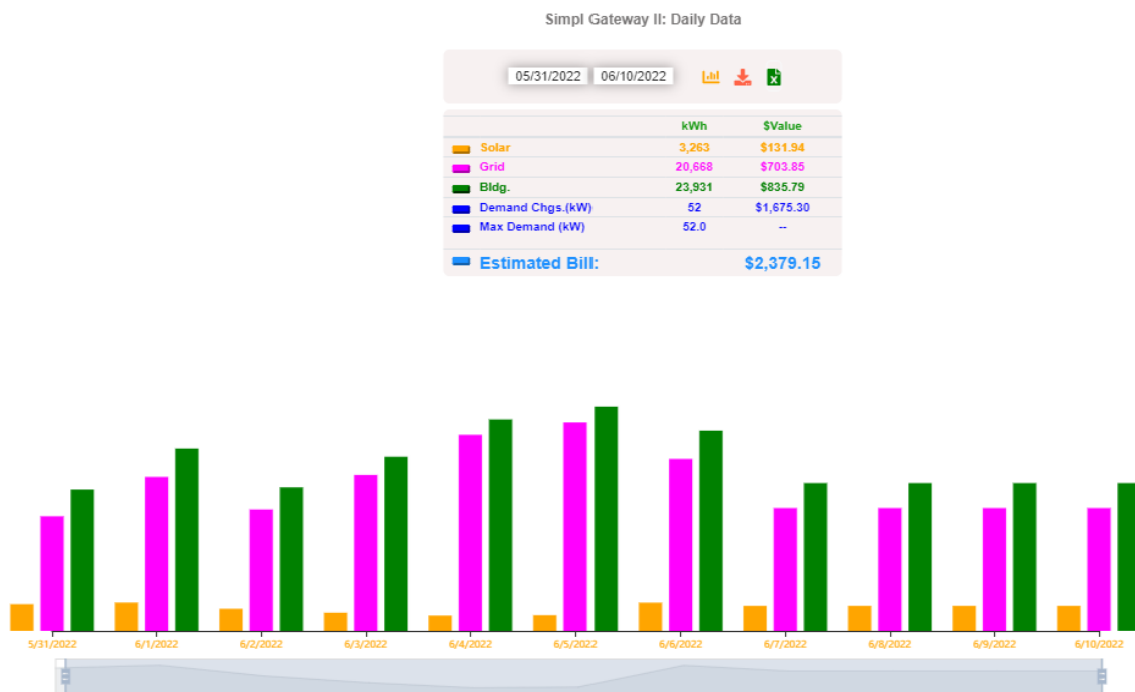
SimplControls is the only system available in the market today that measures and displays this information not only in kWh but also in terms of dollars.



Setup and commissioning is performed using a drag and drop system where an appliances is placed in its location and then is monitored by simply clicking on it.



Daily information is queried and viewed in terms of 15-minute kWh and dollars.



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By

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