



Integration Note

Manufacturer:	Vantage
Model Number(s):	InFusion Lighting and Climate Control
Minimum Core Module Version:	g! 6.1.35
Comments:	Design Center 3.0.68
Document Revision Date:	2/12/2012

OVERVIEW AND SUPPORTED FEATURES

The Vantage InFusion system is communicating lighting & climate system. Infusion supports Ethernet control, enabling reliable feedback and control in g!.

Installing a Vantage lighting system can be broken down into the following basic steps:

1. Work with the client to determine what lights will be controlled, where switches will be installed, and where keypads will be installed. Follow Vantage guidelines and the **Vantage Programming Overview** below.
2. Install and test the Vantage system, again according to Vantage standard procedures with the additional requirement of a communication connection to the g! system. Refer to the connection diagrams below for details on wiring the Vantage hardware to the g! system.
3. Program the Vantage system: refer to **Vantage Programming Overview** below. Also see the **Connection Diagrams** for additional notes and details on communication setup.
4. Integrate the lighting system into the g! system and test proper operation. See **g! Configuration Details** below.

VANTAGE LIGHTING SYSTEMS SUPPORT THE FOLLOWING FEATURES:

Automatic Device Discovery: The g! system can query the Vantage controller for compatible devices and automatically add them to the configurator over Ethernet. Alternately, the DC program file may be read directly into Configurator. See Vantage Programming Overview for notes on discovering devices automatically.

Lighting Load Control: Control and feedback of lighting load devices in the InFusion system are supported.

Scene Control: Control and tracking of scenes (“tasks” in Vantage parlance) from virtual and simulated keypads. See Vantage Programming Overview for details.

Schedule Control: Multiple schedules can be set using the Viewer software, and are automatically tied to the System Mode.

Virtual Keypads: The configurator will automatically add pre-designed templates to emulate real Vantage keypads to the system. These keypads are available for use in building custom control pages or for adding directly to the g! user interface.

HVAC: Control and tracking of HVAC climate using the Vantage CC-Stat thermostat is supported. See the HVAC section under Vantage Programming Overview below for detailed information and limitations.

Devices Supported: The devices in the table below are supported for control and feedback in the **g!** system. See the Vantage Programming Overview section below for important information and limitations for each device type.

Fahrenheit and Celsius display: The Vantage thermostat temperature values may be displayed in whole number values in Fahrenheit or Celsius units on the **g!** user interface (the one decimal place option is not supported for this system). NOTE: Behind the scenes the Vantage devices communicate to the system controller in Celsius values and as a result of units conversions there may be an inconsistency of a degree or so between the Vantage UI and the **g!** UI.

Supported InFusion Devices	
InFusion Controller	IC-24v or IC-36v
InFusion Load Modules	Dimming and Relay modules
KeyPads	Easy Touch II Series
	RPTouch Series
	SquareTouch Series
	FineTouch Series
	HiddenTouch Series
	ScenePoint Series
HVAC	Vantage CC-STAT (8800) Thermostat
<i>Devices not present in this table are not supported</i>	

VANTAGE LIGHTING SYSTEMS DO NOT SUPPORT THE FOLLOWING FEATURES:

Shades: Direct control of shades behind an InFusion controller is not available in **g!** at this time. Indirect control through tasks has not been evaluated and is not supported.

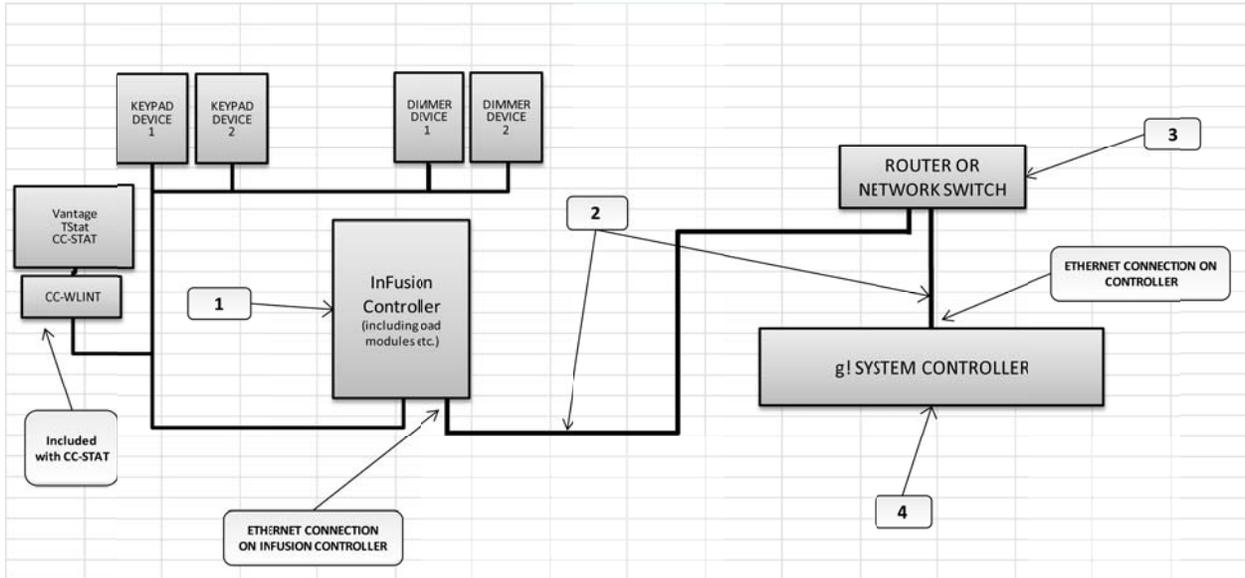
IR or other subsystem types: Only Lighting and Climate devices are supported in **g!** at this time.

Devices not listed below: InFusion Devices that are not listed in the table above are not compatible with control from the **g!** System. See the Vantage Programming Overview section below for important information and limitations for each device type that is supported.

Any feature not specifically noted as “supported” is not supported.

CONNECTION DIAGRAM: ETHERNET CONTROL

Refer to the **Bill of Materials** and **Wiring Diagram** that follow.



BILL OF MATERIALS

#	Device	Manufacturer	Part Number	Protocol	Connector Type	Notes
1	Vantage InFusion Controller	Vantage	IC-24v/36v	Ethernet	RJ45 Female	
2	Cat5 Cable Assy.	Installer	N/A	Ethernet	RJ-45 Male X RJ-45 Male	
3	Network Device	Various	Various	Ethernet	RJ-45 Female	
4	Controller	Elan	Various (ex. HC-12)	Ethernet	RJ-45 Female	

VANTAGE PROGRAMMING OVERVIEW

The Vantage InFusion system must be fully programmed using **Vantage InFusion Design Center** software prior to integration with **g!**. Program the InFusion according to standard Vantage programming procedures, with the following additional considerations:

Ethernet Control: For reliable control, assign a static IP address to the InFusion Master Controller on the same network as the **g!** Controller. Elan recommends assigning an Ethernet Lighting Device to 192.168.0.50 (and incrementing to .51 and so on as needed).

1. On the front panel, select “**Net**”, (the far left button).
2. Use the “**Adj**” button to scroll through the available types until “**Static**” shows.
3. Using the “**Next**” and “**Prev**” buttons to go to each field and the “**Adj**” button to select a value, set each digit of the IP address and the mask.
4. Hit the “**Set**” button to save the settings. Hit “**Exit**” to return to the main menu.
5. No special steps are needed in the Design Center programming phase.

Automatic Device Discovery: The **g!** system automatically reads in the compatible Vantage devices from the InFusion Controller.

Use the following procedure to automatically read in the InFusion programming:

1. **In Design Center:** Once all of the Vantage programming is complete, **Program** to send all of the Vantage program information to the InFusion controller. This step is critical since the **g!** system must read the programming from the Main InFusion Controller.
2. **In the g! Configurator:** Add a new communication device for Ethernet control, refer to the **g!** Configuration Details below.
3. Add the InFusion InFusion Lighting Interface if it does not already exist.
4. To learn devices, you may either:
 - a. Click the **Discover Devices** button at the bottom of the InFusion lighting interface page.

Or

 - b. Click the Read Config File and locate your Vantage DC file at the prompt.
5. The **g!** system may discover for several minutes, depending on the size of the system. Once the query is complete the configurator page will refresh showing all of the devices that were discovered.
6. Any time changes are made to the InFusion configuration you will need to repeat this procedure to re-read in the system configuration and sync the **g!** configuration with the InFusion system. Some notes below about re-discovering a InFusion system:
 - a. The **g!** system will not delete any devices automatically from the configurator. If devices are deleted in the InFusion system they will need to be manually deleted from the configurator.
 - b. The **g!** system will not rename devices automatically once they are discovered. If a device is renamed in the InFusion system and rediscovered it will need to be renamed manually in the configurator.

Vantage Devices: Review the following notes about the various InFusion devices prior to programming your system to understand how the **g!** driver handles them.

- **Switches/Dimmers:** All programmed Vantage switches are automatically added to the configurator as an Vantage Load. They will display in the configurator tree with the Name and VID populated from Vantage. The **g!** system will control and track the state of the load. To control a load individually from the UI it will need to be connected to a virtual keypad or a custom control on a custom viewer tab.
- **Tasks:** All programmed Vantage Tasks are automatically added to the configurator as a Vantage Toggle Task with the Name and VID populated from Vantage. To control a Task individually from the UI it will need to be connected to a virtual keypad or a custom control on a custom viewer tab. The **g!** system will control and track the state of the task. Note that Tasks may have different properties, and while On/Off may appear as option, the device will only operate as programmed in Vantage. This means an ON only Task will not toggle off from the **g!** system and will obey Vantage programming.
- **Keypads:** All programmed Vantage keypads are automatically added to the configurator as a keypad. They will display in the configurator tree with the Name and VID populated from Vantage. The discovered keypads will automatically generate a virtual keypad interface that can be added to the UI for tracking and control. Alternatively, the individual keypad buttons can be added to custom tabs using the Light Scene Button (from keypad) custom control.
- **HVAC:** All programmed Vantage Thermostats are automatically added to the configurator climate tab as a thermostat device. They will display in the configurator tree with Name and VID auto-discovered. The **g!** system will control and track the status of the Thermostat. A thermostat zone page will be automatically added to the UI for control. The **g!** software supports the following functionality:
 - Monitoring and display of Room Temperature
 - Monitoring and control of HVAC modes including Off, Heat, Cool, and Auto.
 - Monitoring and control of Heat and Cool set points.
 - Monitoring and control of the fan mode, Auto or On
 - Scheduling- Scheduling from the **g!** software is supported.

The **g!** software does NOT support the following on the Vantage climate systems:

- HVAC Usage tracking or history- the Vantage tstats do not provide notice when their relays are active at this time. As such, **g!** UI will not indicate when heating or cooling is active (blinking set points) and will not plot the system usage on the history graph.
- Fan mode Circulate is not supported in the Vantage protocol at this time and is not available in the **g!** system.
- There is some delay for a Vantage thermostat to appear offline in the **g!** system: up to 10 minutes.
- Remote Thermostat sensors are not supported.

g! CONFIGURATION DETAILS

The following table provides settings used in the g! Configurator. Please refer to the Configurator Reference Guide for more details.

- “<Select from list>” Select the appropriate item from the list (or drop-down) in the Configurator.
- “<User Defined>”, etc. Type in the desired name for the item.
- “<Auto Detect>”, etc. The system will auto detect this variable.

Refer to the **g! System Programming Details** below for additional information.

Devices	Variable Name	Settings (Ethernet)	
Communication Devices <See Note 1>	Name	<User Defined> (Default: Lighting)	
	Type	Ethernet	
	Communication Type	Vantage InFusion (Ethernet)	
	Location	<User Defined> (Not Required)	
	COM Port/IP Address	<User Defined> (Enter IP address of Processor)	
	Port	<3001>	
Lighting Interface	Name	<User Defined> (Default: Vantage InFusion)	
	Device Type	Vantage InFusion	
	COM Device	<Select from list> (Default: Lighting)	
<<Click Discover Devices to query the repeater and automatically add the supported devices (See Note 1) or Read Config File to choose DC file>>			
Lighting Devices	Name	<Auto Detect>	
	System #	<Auto Detect>	
	Device Type	<Auto Detect>	
	Hide Device from Scheduler	<User Defined> (Default: No)	
	Location	<Select from list> (Not Required)	
	VID	<Auto Detect>	
Keypad Interfaces	Name	<Auto Detect>	
	Interface Device	<Auto Detect> (Default: Vantage InFusion)	
	Keypad Type	<Auto Detect>	
	Lighting Device	<Auto Detect>	
And / Or:			
Custom Tab	Create Custom Lighting Interfaces using the available custom lighting controls, see the Online Help or Training Guide for details.		
Thermostats	Name	<User Defined> (Default: Thermostat1, etc.)	
	Location	<User Defined> (Not Required)	
	Com Device	<Auto Detect>	
	Thermostat #	<Auto Detect>	
	Heating Unit	<Select from list>	
	Cooling Unit	<Select from list>	
HVAC Units	Name	<User Defined>	
	Model	Generic HVAC Unit	
	Controls Heat	<Select from list>	
	Controls Cooling	<Select from list>	
	Controls Fan	<Select from list>	
Schedules	HVAC Schedule	<Select from list>	Select desired number of schedules
	Programs	<Select from list>	Select desired weekly programs
	Monday - Sunday	<Select days>	Select days that go together
	Periods per Day	<Select from list>	1, 2 or 4 periods per day
Global Options	Units	<Select from list>	Fahrenheit or Celsius
	Temporary Hold Mode	<Select from list>	Timed Hold or Hold until next schedule period
	Temporary Hold Default Time	<Select from list>	Select default Temporary Hold time
	Outside Temperature Sensor	<Select from list>	Choose optional sensor if installed or choose Internet
	Outside Humidity Sensor	<Select from list>	Choose optional sensor if installed or choose Internet
Notes:			
1. An Ethernet communication device is required for auto discovery of device. The Discover Devices button will not work when configured with a serial communication device.			

COMMON MISTAKES

1. Discover Devices does not pull in all devices.
 - a. The built in **g!** functionality limits the number of devices on a system. In a larger system you will need a **g!** Pro App.
 - b. The **g!** system does not support all Vantage device types. Refer to the Vantage Devices listing above for details on device compatibility for any that are having issues discovering.
 - c. Vantage Programming not transferred to the InFusion Controller. The **g!** system reads in the programming from the Main InFusion Controller, be sure to perform a transfer to the processor from the Vantage software after any changes have been made. See Automatic Discovery above for details. Note that reading the DC file may be an alternative to discovery, but it will not populate any programming into the Vantage Controller itself.
2. Outdated Core Module. Version 6.1.35 is the minimum **g!** Core Module for InFusion support.
3. Vantage Thermostat: Must be connected using the Vantage adapter (included) and the thermostat itself needs to be at Vantage defaults. See Vantage documentation for details.