



DOMOSAPIENS IP INTERFACE DRIVER FOR VANTAGE INFUSION, INCLUDING SHADOW KEYPADS

This driver enables you to control a Vantage InFusion system from Control4 with special support for Control4 Configurable Keypads.

DRIVER FEATURES

- Supports a Vantage InFusion centralized lighting system.
- Provides an elaborate and resilient IP connection to the InFusion controller.
- Allows a progressive migration to Control4 Panelized Lighting and Control4 Configurable Keypads.
- Provides full support for Vantage loads, buttons and tasks in a seamless fashion.
- The driver uses the Control4 lightV2 proxy and supports Advanced Lighting Scenes.
- Provides real time feedback on Vantage events.
- A Shadow Keypad driver provides Single Tap, Double Tap, Triple Tap as well as Press & Hold functions.
- The Shadow Keypad driver provides advanced task management for each button.
- The Shadow Keypad driver also provides sophisticated LED management, including blinking.
- Legacy Vantage keypads (4- and 8-buttons) are fully supported.
- Vantage Contact Input Stations (10 inputs) and Low Voltage Relay Stations (8 outputs) are also supported.
- Provides enhanced programming Events, Variables and Commands.
- Action ("Print Status Report") with significant operational information simplifies reporting of issues.

QUICK INSTALL (SEE FULL INSTRUCTIONS BELOW)

- Use the free trial period or activate the driver at any time by assigning to this project the license you purchased from the driverCentral website (requires the driverCentral cloud driver).
- Set the Vantage InFusion controller to a static IP address or ensure it always receives the same IP address from the DHCP server via a MAC-based reservation.
- Enter the IP address of the VANTAGE InFusion controller in Composer's Connections area.- Select the colors you plan to use in Shadow Keypad. Also see the ***NEW AND IMPORTANT*** item in the Full Instructions below.
- When appropriate, add companion drivers for Shadow Keypads, Dimmer Lighting Loads, Non-dimming Lighting Loads, legacy Vantage keypads as well as Vantage CIS and LVRS to the project.
- Connection of the companion drivers should be automatic, but verify that each one is connected properly.

- As required, use the Actions to "Validate Vantage Network" and "Reset and Identify Devices".

SUPPORT

For support on this driver please go to <https://help.drivercentral.io/>. Give a detailed description of the problem and also include the version number of the driver and the version of Control4 OS that you are using.

AUTO UPDATE

This driver is updated with fixes and new features from time to time. To ensure your project uses the latest version, set the Automatic Updates property of the main driver to On. If required, companion drivers will also be updated automatically.

COLORS

The following colors have been found to display adequately on the Control4 Configurable Keypad:

- Red: 255, 0, 0
- Blue: 0, 0, 255
- Matched Green: 0, 120, 0 (too bright otherwise)
- Turquoise: 0, 102, 188
- Yellow: 255, 120, 0
- Orange: 255, 86, 0
- Purple: 255, 0, 255
- White: 255, 120, 255 (too greenish otherwise)
- Black: 0, 0, 0

CHANGELOG

1.0.0	February 9, 2016	Initial Release
10.0.0	July 17, 2017	Migrated to driverCentral
10.1.0	February 8, 2018	No changes in this interface driver
10.2.0	January 2, 2019	Improved resilience to Cloud Driver updates
11.0.0	May 3, 2019	Updated driver infrastructure, documentation moved inline
11.0.1	April 8, 2020	Lights/keypads now synchronized after loss of communications
11.1.0	May 25, 2020	Added Username and Password to support DesignCenter 4.0.0+
11.2.0	March 7, 2021	Licensing update
11.3.0	June 3, 2024	Startup improvements and updates
11.4.0	January 30, 2025	Startup improvements

FULL INSTRUCTIONS

Introduction

The Vantage InFusion lighting systems provide comprehensive centralized lighting control. However, an orderly migration to a Control4 lighting environment may prove to be a challenge. This driver has been designed to allow the client to progressively move from Vantage centralized lighting to Control4 centralized lighting, including replacing the Vantage keypads with Control4 configurable keypads. You no longer have to make this migration all at the same time, in only one step. In addition, the driver provides a seamless integration of the two lighting environments.

This document (please read it fully, as it likely answers many of your questions!) assumes that the lighting systems is already installed and working. For details on installing the Vantage InFusion systems, please refer to the available documentation or to the Vantage InFusion website.

Test before you install

We recognize that it may not be easy to test this driver in the office. However it is really important that you are not trying to set this up on the Friday afternoon before the property is supposed to be handed over. Your first installation may take a little longer than you expect!

Please ensure that the Vantage InFusion system is working correctly *before* you install the driver. Adding Control4 won't magically fix any underlying problems. This is especially important if you are adding Control4 to an existing Vantage InFusion system that you didn't install.

Important Notes (“Before you begin...”)

- If your current project already includes existing Vantage InFusion drivers, it is recommended that you back your project up and delete the Vantage InFusion drivers before adding these new drivers from Domosapiens. This will eliminate any potential conflicts.
- It is recommended that the Vantage InFusion controller have either a static IP address or a fixed address via MAC-based reservation in the router.
- As you go through the installation steps, check the Driver Information field in the Properties tab which will display important status information.
- If you need to modify the physical Vantage InFusion configuration after successfully installing the Vantage InFusion Extended Interface and companion proxy drivers, please see the recommended steps at the end of the Driver Installation section.

Driver Installation

1. Copy all the required drivers from the distribution package to your Control4\Drivers directory. In Composer Pro, you will find these drivers under Manufacturer “Vantage”; they will be identified with “**Domosapiens**” in their name and “IP” or “Network” next to the “Local” indicator. In addition, the version number is included.
2. ***NEW AND IMPORTANT*** with DesignCenter 4.0.0 and above: ensure port 3001 is defined in your DesignCenter project (Systems->Controller Settings->Network Settings->Port Settings). If not, simply add it using DesignCenter. Also, if the Security Level is Local (Settings->Project Security), add a User with a Username and a password to be used by this driver, distinct from the default

'administrator' Username. The Username and Password must then be entered exactly in the Vantage Interface driver.

3. Add the Vantage Interface driver to the project and activate it as per the appropriate procedure.
4. Identify the Vantage InFusion controller by specifying its IP address in the Network tab (Connections).
5. Next add to the appropriate rooms enough instances of the companion Vantage Lighting drivers (Dimmer and Non-dimming). If you are using Control4 Configurable Keypads, add a companion Shadow Keypad driver for each. If you are using Vantage Legacy Keypads (4 or 8 buttons), Vantage Contact Input Stations (CIS) or Vantage Low Voltage Relay Stations (LVRS), also add a companion driver for each.
6. If the Vantage InFusion Interface driver was installed and properly activated before adding all the companion proxy drivers in the previous step, everything should be connected automatically. If, on the other hand, you notice that the connections were not made, you will need to activate the Vantage InFusion Interface driver and then make the connections manually.
7. The main Vantage Interface driver allows you to specify up to 10 color combinations (“A” to “J”) for use by the Shadow Keypad drivers. During testing, the following values have been found to be effective:

	-R-	-G-	-B-	
- Red:	255	0	0	
- Blue:	0	0	255	
- Matched Green:	0	120	0	(too bright otherwise)
- Turquoise:	0	102	188	
- Yellow:	255	120	0	
- Orange:	255	86	0	
- Purple:	255	0	255	
- White:	255	120	255	(too greenish otherwise)
- Black:	0	0	0	

8. For each Vantage Lighting driver (Dimmer and Non-dimming) specify its Load Vantage ID (VID). If this is a “real” Vantage load, this is all that is needed. If this is a “virtual” load (e.g. it has been replaced by a physical Control4 panelized lighting load but is left in the project to ensure Vantage tasks still work), then specify its Mirror Control4 light, as well as the Mirror Direction (usually Both Ways). To avoid seeing these “virtual” Vantage loads in Navigator, you may want to group them all in a “legacy” room in your project, effectively hidden from Navigators.
9. For each Control4 Configurable Keypad, connect all its BUTTON_LINK connections to the corresponding connection of its Shadow Keypad driver. **IMPORTANT: configure each Configurable Keypad button's LED Behavior as “Follow Bound Device”.** The Shadow Keypad's

passthrough BUTTON_LINK connections may then be used for further connections (to an Advanced Lighting Scene, for example).

A physical keypad BUTTON_LINK may be connected directly to another device. In this case, note that the Shadow Keypad will not perform any function for the specific button, including managing its LED color.

Then, specify the various Vantage IDs (VID) related to each Shadow Keypad button. See the section on Shadow Keypad Properties later in this document. Furthermore, each Shadow Keypad driver also has the ability to monitor additional Vantage VIDs for use in Programming, but this is entirely optional.

10. Similarly, for each Vantage Legacy keypad, specify its keypad button Vantage IDs (VID). If using only 4 buttons, you may specify only 4 values. Make sure you specify the button VIDs and NOT the VIDs of tasks connected to buttons.
11. For each Vantage Contact Input Station (CIS), specify its 10 VIDs and for each Vantage Low Voltage Relay Station (LVRS), specify its 8 VIDs. In both cases, you may prefix each VID with the name of the connection.
12. Once you have added and configured all the devices, you should refresh the Navigators.
13. Actions in the Actions tab NEED NOT be used in normal operation except "Print Status Report" which provides a snapshot of key driver elements and can be used for diagnostic purposes. The Action "Validate Vantage Network" may be used to assist during the companion proxy driver installation phase. The Action "Reset and Identify Devices" can be used if you suspect issues in the configuration.
14. Setting the Debug Mode to "On" will show the exchange of messages as well as some other information in the Lua tab. You may adjust the Debug Duration.
15. After finishing your configuration, it is always wise to wait a few minutes before performing any disruptive operation (such as powering off or rebooting the Director, for example), in order to allow the Director to properly save all your settings.
16. If you need to make changes after the initial installation is complete, you may proceed as follows:
 - Adding devices (lights, keypads, CIS, LVRS): simply add instances of the appropriate drivers and specify the appropriate VIDs on each driver's Properties page. The connection will be automatic, as long as the Interface driver is properly activated.
 - Deleting devices: delete all the unused driver instances and then use the Action "Reset and Identify Devices". This will ensure that all the internal tables are properly updated.
 - Modifying a Vantage ID (VID): simply update the VID on the device's Properties page. The Vantage InFusion Interface driver will then perform all required validations and

adjustments. Look for messages in the Driver Information area. Success is indicated by “Communicating with the Vantage InFusion interface normally”.

Additional Functions Available Through Programming

In addition to the normal programming functions available for a lighting system and keypads, the Vantage InFusion Interface and companion proxy drivers offer various Events (triggers), variables and commands. Look for them in the Programming tab in Composer.

Shadow Keypad Properties

For each of up to 7 buttons, the Shadow Keypad driver allows the specification of Vantage tasks and/or buttons to be activated when the corresponding button is pressed on the real Configurable Keypad (assuming the BUTTON_LINKs are connected). Other actions are also available: Single Tap, Double Tap, Triple Tap and Press & Hold.

In the simplest form, specify a single Vantage task or button VID: 1302. When the keypad button is pressed, if the VID designates a Vantage task, the Vantage Dimming task 1302 is executed and the LED follows the task LED (color B when the task is On, color A when the task is Off). If the keypad button is held, then the task is dimmed accordingly.

Similarly, if the VID designates a Vantage button, the Vantage button is pressed and released accordingly. In this case, the LED can also follow the blinking status of the Vantage button. The driver automatically determines if a VID refers to a Vantage task or to a Vantage button.

The full specification for the Button Property is as follows (spaces are ignored, also see [Examples](#) later):

pTAP1nf, pTAP2nf, pTAP3nf, pP&Hnf, LEDBnf where:

- ***p*** is an optional prefix for tasks and may be “D” (the default), “N” or “T” – see [Notes](#) below.
- ***TAP1*** is the VID of the Vantage task to be run or button to be pressed when the keypad button is single-tapped.
- ***TAP2*** is the VID of the Vantage task to be run or button to be pressed when the keypad button is double-tapped.
- ***TAP3*** is the VID of the Vantage task to be run or button to be pressed when the keypad button is triple-tapped.
- ***P&H*** is the VID of the Vantage task to be run or button to be pressed when the keypad button is pressed and held.
- ***LEDB*** is the VID of the Vantage button which the LED will follow (otherwise, it follows the task).

- **n** is optional and is the LED color for the On state (default is color “B”) of the task. A special processing takes place if **n** is “L” or “N” – see Notes below.
- **f** is optional and is the LED color for the Off state (default is color “A”). Only one **f** is required and if several are specified, the last **f** found will be used.

Notes:

- Unused VIDs may be omitted or replaced by 0 for increased readability. Therefore, the following are equivalent: “123,,,256” and “123,0,0,256”.
- TAP1, TAP2, TAP3 and P&H may be prefixed with “D” (the default), “N” or “T”, where:
 - o “D” indicates this is a normal Vantage Dimming task.
 - o “N” indicates this is a Vantage Dimming task operated in non-dimming mode. The dimming task will be toggled only, even if the keypad button is pressed and held.
 - o “T” indicates this is a Vantage Toggle task. It is important to specify “T” in such cases, as the Vantage Toggle task will not be activated properly.
- If a VID refers to a Vantage button instead of a task, the prefix is unnecessary and is ignored if specified.
- TAP1, TAP2, TAP3, P&H and LEDB may be suffixed with one or two letters representing the On and Off colors respectively. The defaults are “BA”. LEDB may also be suffixed with “L”. In this case, the blinking state of the Vantage button (LEDB) will be superimposed over the task’s LED state. You may have programming in Vantage, for example, which blinks a Vantage keypad button under specific circumstances. This is a way to transpose this blinking to the Control4 keypad.
- In addition, the suffix may be “N”. In this case, the Keypad button’s LED will follow the Native colors and state of the connected device (an Advanced Lighting Scene, for example).
- Except if LEDB is specified or if “N” is used as a suffix, the Keypad button’s LED will always follow the task or the button, including blinking, for buttons. If more than one entry has an “Off” color code, the last one found will be used, as having more than one “Off” color for a given button is inconsistent. Color “K” is always available as Black.
- The driver uses a sophisticated internal timing mechanism to determine Single, Double and Triple Taps as well as Press & Hold. This may cause response delays at times. This is normal as the driver waits as necessary to determine the actual action performed by the user.

- There is a special case where the Button property is specified as only one or two characters: *f* or *nf*. This is used where only the LED color (not the LED state) is controlled by the Shadow Keypad driver. This can also be used to set the color of an unused button.

Examples:

- **676** Vantage Dimming task 676 will be executed or Vantage button 676 will be pressed each time the keypad button is pressed.
- **D676** Equivalent to above (“D” is the default and is ignored if 676 is a Vantage button).
- **T677** Vantage Toggle task 677 will be executed or Vantage button 677 will be pressed each time the keypad button is pressed. “T” is ignored if 677 is a Vantage button.
- **N676** Vantage Dimming task 676 will be executed or Vantage button 676 will be pressed each time the keypad button is pressed. “N” is ignored if 676 is a Vantage button.
- **676C** Same as **676** above, but the LED color will be C (as defined in the main Interface driver) when the task/button is active, color B (default Off) otherwise.
- **676CD** Same as **676C** above, except the Off color will be color D.
- **676,T677C,678E,679G** Vantage Dimming task 676 will be executed or Vantage button 676 will be pressed when the keypad button is single-tapped (the LED color will be “A” (the default) when the task/button is active), Toggle task 677 will be executed or button 677 will be pressed when the keypad button is double-tapped (the LED color will be “C” when the task/button is active), Dimming task 678 will be executed or button 678 will be pressed when the keypad button is triple-tapped (the LED color will be “E” when the task/button is active) and Dimming task 679 or button 679 will be pressed will be executed when the keypad button is pressed and held (the LED color will be “G” when the task/button is active).
- **676,,,679G** Same as above for Single Tap and Press & Hold. Double and Triple taps will not be recognized (which makes the response quicker).
- **676,0,0,679G** Equivalent to above for easier readability (tasks 0 are ignored).
- **676,0,0,0,345GC** Dimming task 676 will be executed or button 676 will be pressed when the keypad button is pressed, but the LED will follow Vantage button 345, with the On color being “G” and Off color being “C”. The LED will also blink if Vantage button 345 is blinking.

- **676,0,0,0,345L** Same as above, but the LED will only follow the blinking status of Vantage button 345. The color will follow task or button 676 itself.
- **676N** The LED will follow the native state of the device or Advanced Lighting Scene the BUTTON_LINK is connected to.

Use Case: A Real Example

This driver set has been developed for a real hybrid/migration situation. Initially, a Vantage centralized lighting system with 3 panels (96 circuits) and 38 Vantage keypads (with some CIS and one LVRS) was installed and operational. The owner wanted to migrate to Control4 over time, but a failure of some Vantage dimming modules precipitated the installation of one Control4 Centralized Lighting panel (32 circuits) to replace one Vantage panel.

Later, the owner decided to replace all 38 legacy Vantage keypads with Control4 Configurable Keypads, while wanting to maintain some of the Vantage functionality, including Press & Hold and LED colors. One legacy Vantage keypad was retained for testing and installed in the equipment room, next to the InFusion controller. Installing the Control4 Keypads had the extra advantage of creating a solid Zigbee mesh covering the whole house.

This section shows how the various drivers were installed and configured in the project at each step.

Initially: A Complete Vantage InFusion System

The following drivers were installed in the project

- The main Vantage Interface driver.
- 96 instances of Vantage Lighting drivers (Dimmer or Non-dimming, as appropriate) in their respective rooms.
- 38 instances of the Vantage Legacy Keypad driver, in their respective rooms. Installing these drivers is optional, however. They are required only if you wish to trigger Control4 programming and/or Advanced Lighting Scenes when buttons are pressed on legacy Vantage keypads.
- 5 instances of the Vantage Contact Input Station driver.
- 1 instance of the Vantage Low Voltage Relay Station driver.

The color scheme was configured into the main Interface driver, and the Vantage IDs (VID) were entered for each lighting load as well as each legacy keypad button, each CIS contact and each LVRS relay. Lighting drivers (both Dimmer and Non-dimming) did NOT have a Mirror Control4 Light selected.

The project did not use any Shadow Keypad driver. This comes later.

First Step: Replacement of a Vantage Lighting Panel with a Control4 Centralized Lighting Panel

IMPORTANT: if you decommission a Vantage module or even a full panel, leave it configured in the Vantage configuration (in Design Center). The remaining Vantage equipment will still function and all the loads, tasks and buttons related to the decommissioned hardware will be available to this Control4 driver.

The following changes were made to the project, in addition to the normal installation steps for the Control4 Centralized Lighting panel:

- The standard Control4 lighting loads were created for the new panel and located in their respective rooms.
- A separate “legacy” room was created and the former replaced Vantage lighting drivers (Dimmer and Non-dimming) were moved into that room. When done, the “legacy” room contained the 32 old lighting drivers which were replaced. It is important to keep these in the project as they are used as a link between Vantage and Control4.
- For each lighting driver in the “legacy” room, its Mirror Control4 Light was set to the corresponding light from the Control4 Centralized Lighting panel, ensuring that the type was the same for each light: Dimmer with Dimmable and Non-dimming with Non-dimmable.

The project still did not use any Shadow Keypad driver.

Important note on Dimming: to properly dim Control4 panelized loads from legacy Vantage keypads, the Vantage Legacy Keypad drivers are required. Simply specify the VIDs of each button and connect the appropriate BUTTON_LINKs to the Panelized load’s Toggle Button Link connection.

Second Step: Replacement of Vantage Legacy Keypads with Control4 Configurable Keypads

The following changes were made to the project, in addition to the normal installation steps for the Control4 Configurable Keypads:

- All 38 Vantage Legacy Keypad drivers were removed from the project.
- A Vantage Shadow Keypad driver was added alongside each Control4 Configurable Keypad driver for a total of 38 Shadow Keypad drivers.
- A new Vantage Legacy Keypad driver was added in the equipment room for the spare legacy Vantage keypad installed.

Each Shadow Keypad driver had its BUTTON_LINK connections connected to the corresponding BUTTON_LINKs of the Control4 Configurable Keypad driver. Note that depending on the

Configurable Keypad layout (double buttons, triple buttons), not all BUTTON_LINKs are available. It is important to connect like-numbered links. The VID were then set up for each Shadow Keypad button, including color selection where appropriate. Refer to the section “Shadow Keypad Properties” earlier in this document for details.

Important note on Dimming: to properly dim Control4 panelized loads in this environment where no Vantage tasks and buttons are involved, either connect the Configurable Keypad’s BUTTON_LINK directly to the Panelized load’s Toggle Button Link, or connect it via a Vantage Shadow Keypad driver with its Passthrough BUTTON_LINK connected to the Panelized load’s Toggle Button Link. The benefit of using a Vantage Shadow Keypad driver in the loop is the management of the Configurable Keypad’s LED color as well as all the Programming triggers and commands which are available.

Eventually: Replacement of Remaining Vantage Panels

If other Vantage panels are eventually replaced by Control4 Centralized Lighting panels, the process outlined in the First Step above can be repeated until the Vantage system can be decommissioned. At that time, all Vantage-related drivers may be deleted from the project and all Vantage task programming converted to Control4 programming.

Troubleshooting & Support

Submit questions and issues to our support team at <https://help.drivercentral.io/>

Please include all relevant information and, if possible, a copy of a Print Status Report done while a trouble is present.