



## Unifi Protect Alarm Manager v1.2 SIMPL Windows Application Guide

### Description

This SIMPL Windows Module provides the ability to send and receive events to and from the Unifi Protect Application (Protect version 4.1 or greater) Alarm Manager, running on a local controller (e.g., CloudKey, UDM, UNVR). When configured with Custom Webhooks, the Alarm Manager can trigger up to 100 digital outputs in SIMPL Windows in response to various Unifi Protect events, including but not limited to:

- Doorbell rings
- Motion detection
- Person detection
- Vehicle detection

All event configurations are managed within the Unifi Protect Alarm Manager.

Additionally, you can create custom Alarms in Unifi Protect and use this module to trigger those alarms from within SIMPL Windows, allowing for two-way integration between SIMPL and the Unifi Protect ecosystem.

This Module requires a license that can be obtained by [following the steps in later in this document](#). Each Module requires a license. Licenses are tied to the Crestron processor and program slot.

### Supported Processors

Any 3 or 4 series appliance, or VC-4 instance, with Ethernet. Internet access is not required. This module is not supported on 2-series or earlier processors.

For the Crestron Home version please see <https://store.controlworks.com/products/Unifi-Protect-Crestron-Home>.

Compatibility			Processor Requirements	
			 Ethernet REQUIRED	 REMOVABLE MEDIA NOT REQUIRED

Unifi Protect Alarm Manager SIMPL Windows V1.2

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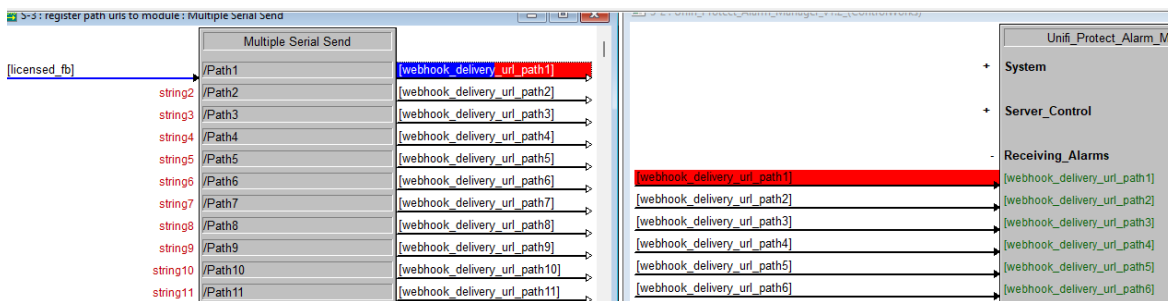
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## Receiving Unifi Protect Alarms

The following example demonstrates how to configure a single Alarm in the Unifi Protect Alarm Manager. In this case, the alarm is triggered by a doorbell ring event on a specific device and results in a pulse to [webhook\_path1\_received\_pulse] in SIMPL Windows.

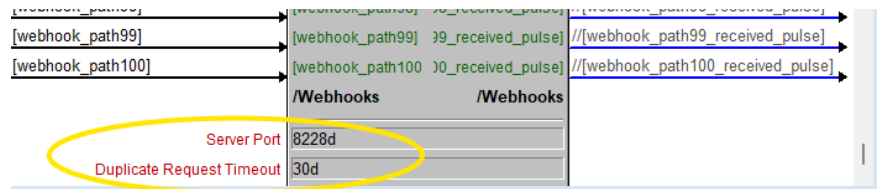
While this example focuses on a doorbell event, the same general process applies to other event types. However, each event type may include different attributes or conditions depending on the nature of the alarm.

1. Determine the webhook path(s) you wish to use. The demonstration program initializes the paths to /Path1 - /Path100 however, you may choose alternative path names if desired.



**Figure 1 - Set Paths**

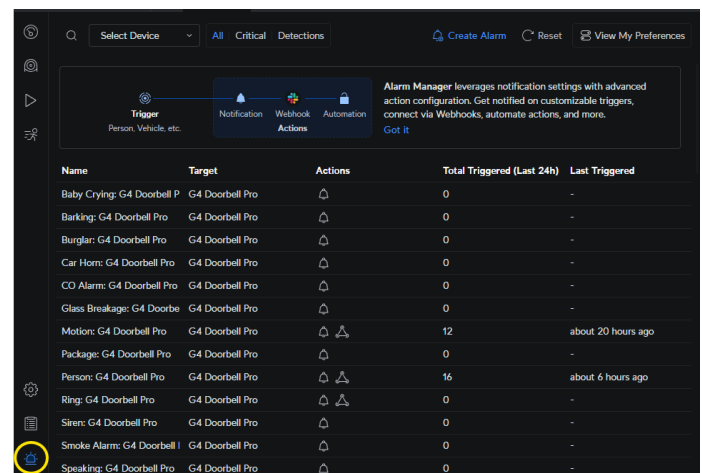
2. Set the Server Listener Port on the Module. If running multiple Modules, this port must be unique. You may change the port number to any port not being used on the system.



**Figure 2 - Server Port**

- If using this Module on VC-4, you will need to manually open the Server Listener ports in the firewall.

3. Navigate to Unifi Protect, and select the Alarm Manager



**Figure 3 - Alarm Manager**

4. Select the "Ring" Alarm, then select "Edit Alarm".

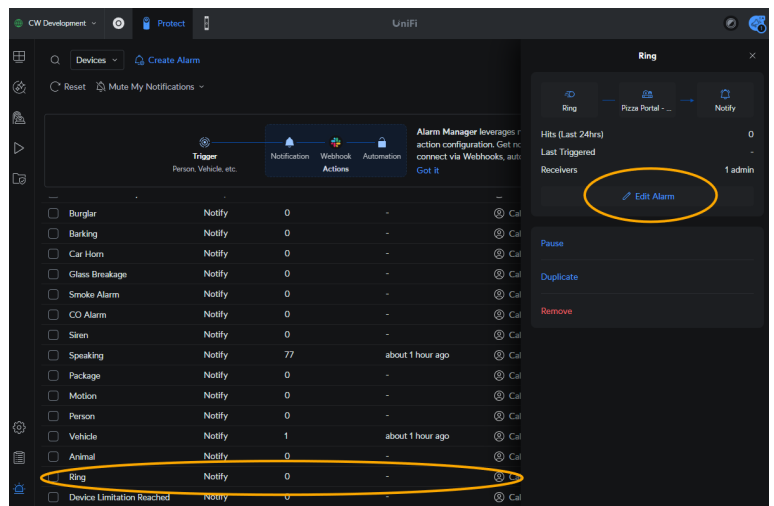


Figure 4 - Select Alarm, Edit Alarm

5. Edit the Alarm and set the Delivery URL.
- In the Actions dialog, select Add Action.
  - For the new action, select Webhook.
  - In the Dropdown, select "Custom Webhook".
  - Setup the Delivery URL.

The Delivery URL is a combination of Processor IP Address, Server Port number, and the event path, in the format of

`http://[processor_ip]:[Server_Port]/[webhook_delivery_url_pathx]`  
i.e. <http://10.22.1.107:8228/Path1>

- Press Save.

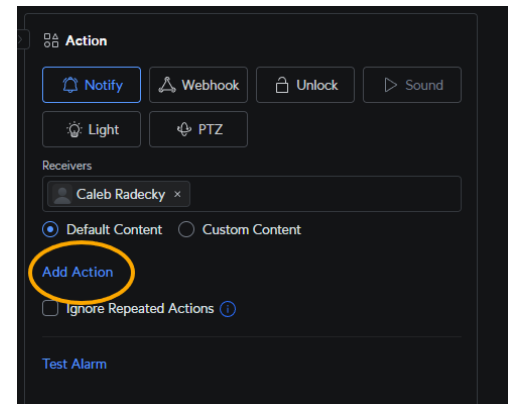


Figure 5 - Add Action

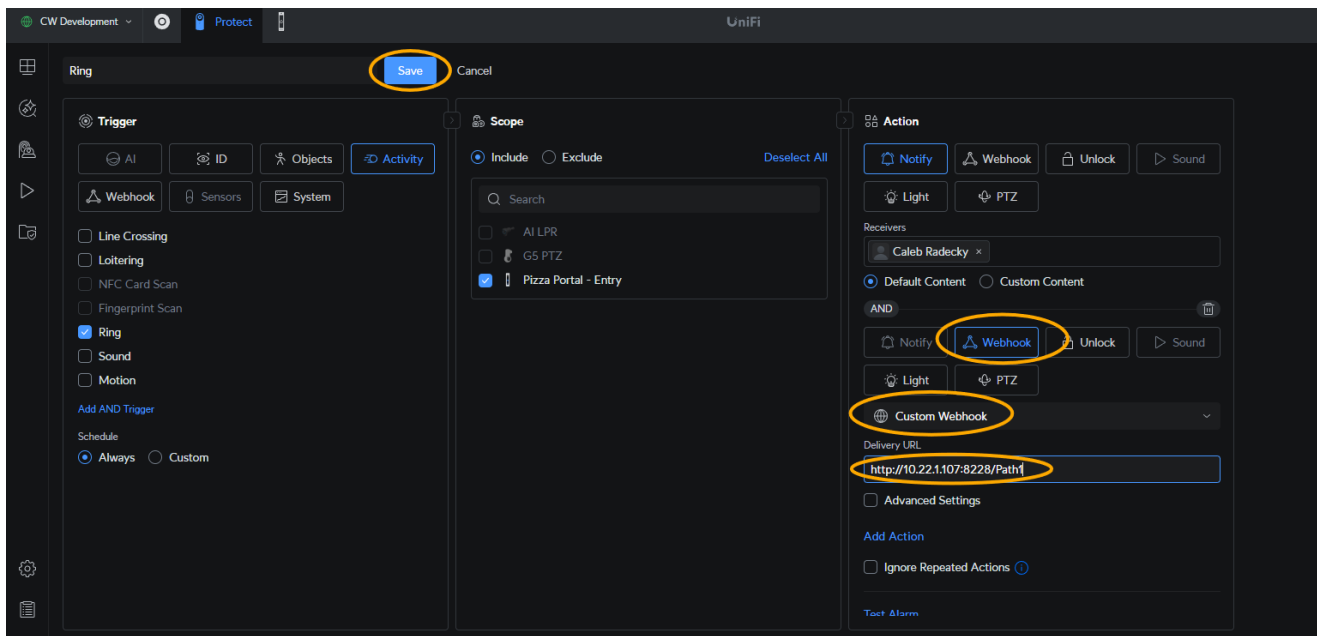


Figure 6 - Creating Webhook

The existing Ring Alarm has now been modified to send a webhook to Crestron. When the event is triggered, the UniFi Protect application will make a request to the specified Webhook and pulse the corresponding digital output.

## Sending Unifi Protect Alarms

The following example demonstrates how to configure a new Alarm in the Unifi Protect Alarm Manager and trigger the Alarm from Crestron. In this example, when the Alarm is triggered, a user will be notified. Alarms support many actions, for example: sending a notification, calling another webhook, unlocking a door, playing a sound, turning on a light, or moving a PTZ camera to a preset location. Additional Alarm actions may be added by Ubiquiti at a later time, review the Unifi Protect Alarm Manager application for the full list of supported actions.

### Ensure you have an API Key

You must have a Unifi API key, obtained from the Unifi console, for this feature to work. If you have previously setup an API key, you may use that key and skip to the [following section](#). If you need to create an API key, follow the steps below.

1. In a browser, connect to the Unifi Console, and select settings (Gear Icon).
2. Select Control Plane.
3. In the header, select Integrations.
4. Enter an API Key Name.
5. Select Create API Key. Save the API Key someplace safe; it is not possible to view the key after leaving this page.

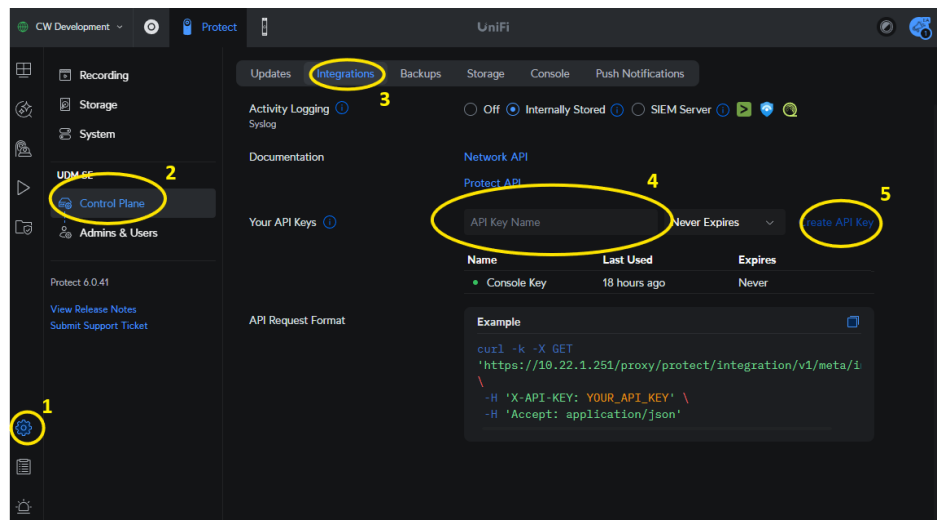


Figure 7 - Unifi API Key

### Enter Connection Settings

Next, enter the API Key and Console IP Address in SIMPL Windows using the Console IP Address and API Key Parameter. If driving your program from configuration file, initialize the [console\_ip\_address\$\_override] and [api\_key\$\_override] strings after reboot is finished.

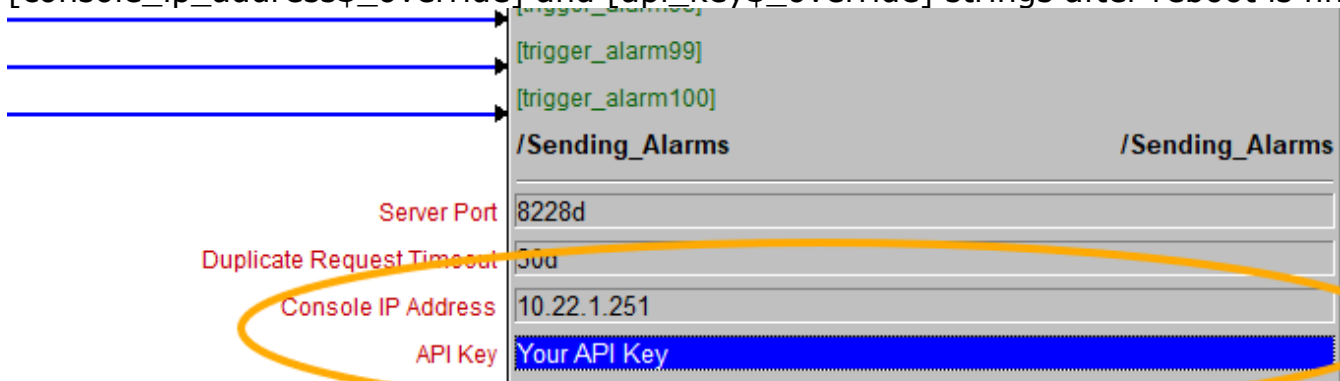


Figure 8 - Console Address and API Key

Proceed to the [next section](#) to setup an Alarm in Unifi Protect.

## Setup An Alarm In Unifi Protect

Next, you will need to setup an Alarm that Unifi Protect is listening for.

1. In a browser, connect to the Unifi Console Protect App.
2. Select the Alarm Manager.
3. Select Create Alarm.
4. Give the Alarm a name.
5. In the Trigger dialog, select Webhook.
6. Copy the Trigger ID (you will need this in a later step).
7. In the Action dialog, setup the desired Action.
8. Select Create.

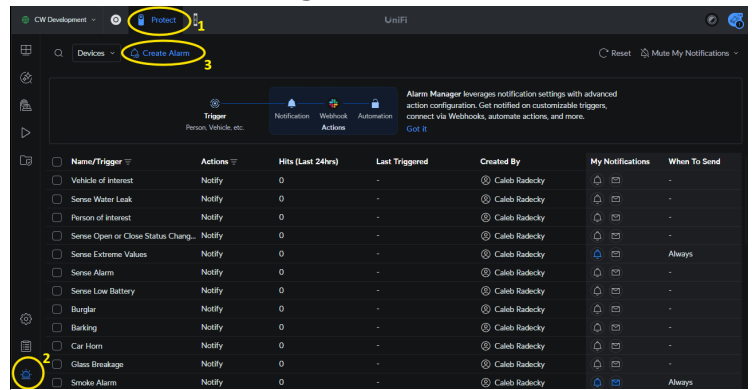


Figure 9 - Create Alarm

The Alarm is now listening in Unifi Protect. Next you need to connect a Trigger ID in SIMPL windows to one of the [alarm\_trigger\_id\_1] inputs on the module.

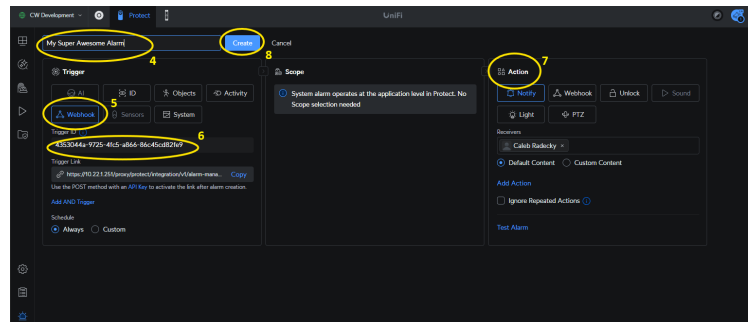


Figure 10 - Configure Alarm

## Setup SIMPL to Trigger Alarm

The following steps link an Alarm generated in the previous steps and trigger that Alarm from SIMPL Windows:

1. If you have not entered the Console Address or API Key in the module, please review Enter Connection Settings. The Console Address and API Key are required for this portion of the Module to operate.
2. In SIMPL Windows, set the Trigger ID that you previously copied to an [alarm\_trigger\_id\_x] input.

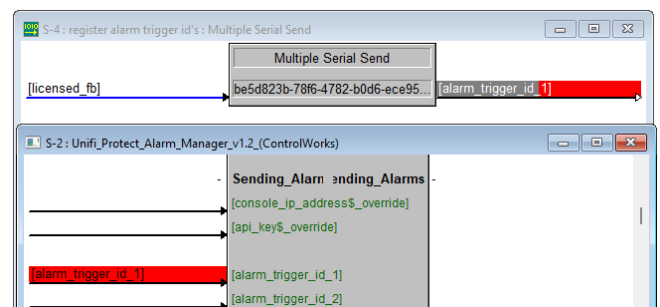


Figure 11 - Initializing [alarm\_trigger\_id\_x]

3. Pulse the corresponding [trigger\_alarmx] input and the Module will trigger the Alarm in Unifi Protect.

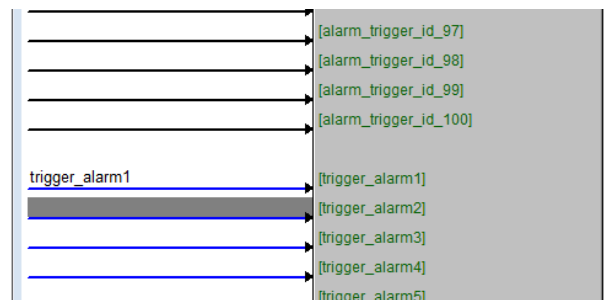


Figure 12 - Trigger Alarm x

## Module Instance License

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This Module requires a License that can be obtained by following the steps below. Each instance of a module in a program module requires an associated license. For example, if you have 2 modules in a program slot, 2 licenses are required.

Licenses (and the Activation Key) are tied to the:

- Appliance processors:
  - Processor and program slot.
- VC-4-PC-3 processors:
  - Processor and RoomID.

Licenses are purchased using the Activation Key. The Activation Key is unique to each program slot (appliance processor) or VC-4 Room (VC-4 processor), and a different key is generated for different program slots or VC-4 Rooms.

If you have purchased a license(s) for the processor previously, and you would like to add additional licenses, additional licenses can be purchased at any time using the same Activation Key.

### License Changes and Transfers

If a processor fails and is replaced the license will need to be updated. If the program slot (appliance processor) or Room ID (VC-4 processor) changes, the license will need to be reassigned. We offer one complimentary reassignment of the license. A processing fee is required for subsequent reassignment of the licenses. Before purchasing a license, we encourage the use of our Trial Period to allow for development and testing before purchasing licenses.

All licenses associated with an Activation Key must be transferred together. Unused licenses, or a quantity of used or unused licenses cannot be transferred.

### Trial Period

To aid testing, the Module includes a complimentary 7-day trial period, during which time the Module is fully functional. This Trial Period functionality requires that the system has active Internet connection and are able to reach ControlWorks' activation servers. The Trial period starts when the module is first loaded to the processor. For offline activation, please contact us.

Trial mode is only available when no licenses have been purchased for this Module. If a license(s) has been purchased and applied, any additional Modules that are not licensed will not enter trial mode and will not function.

### Steps for Purchasing a License

Licenses are tied to the Crestron Processor and program slot. The steps below outline how to purchase a license(s) and how to apply them to the processor. The process is the same for a Crestron processor appliance or VC-4.

1. Add the Module(s) to your program

- Ensure the [reboot\\_finished\(latch\\_high\)](#) signal is being latched high after program is started and initialized.
  - Ensure the signals [\[license\\_status\\_fb\\$\]](#), [\[activation\\_key\\_fb\\$\]](#), [\[activation\\_url\\_fb\\$\]](#), [\[refresh\\_license\\_from\\_file\]](#), and [\[refresh\\_license\\_from\\_server\]](#) are defined. You may comment them out to avoid unconnected signal warnings.
  - Compile and load.
2. Open Crestron Debugger and connect to the system.
  3. After the [reboot\\_finished](#) is latched high, the Modules will attempt to retrieve the license. [\[license\\_status\\_fb\\$\]](#) will display the retrieval status. If the license has been retrieved, [\[activation\\_url\\_fb\\$\]](#) will contain a URL, that when navigated to, the license page will be displayed, and the activation key will automatically be entered into the web site.
    - Alternatively, you may copy the value for [\[activation\\_key\\_fb\\$\]](#) and proceed to the license page at <https://store.controlworks.com/products/Unifi-Protect-Alarm-Manager-License>.
      - i. Place the Activation Key into the Activation Key field on the web page.
  4. Enter a Site Reference Name. This is used to help you identify your purchased licenses and may speed support in some cases.
  5. Enter the quantity you wish to purchase. Note that unused licenses cannot be transferred to a different processor or program slot/room at a later time.
  6. Press Order Online for Instant License Activation and complete the payment process. Once the purchase is complete, the licenses are immediately available for the processor to be retrieved. Follow the steps below for the processor to retrieve the purchased licenses.

## Steps to Apply Licenses

Once the license(s) have been purchased, you will need to apply them to the processor. This can be done a few different ways.

### Applying licenses from Crestron Debugger:

- Ensure the signals [\[license\\_status\\_fb\\$\]](#), [\[activation\\_key\\_fb\\$\]](#), [\[activation\\_url\\_fb\\$\]](#), [\[refresh\\_license\\_from\\_file\]](#), and [\[refresh\\_license\\_from\\_server\]](#) are defined in your program.
- Open Crestron Debugger and connect to the system.
- If you have purchased licenses from the web store, pulse the [\[refresh\\_license\\_from\\_server\]](#) digital input.
- Alternatively, you may send a [console command](#) to initiate a license refresh.

### Applying licenses from console:

- Connect to the Crestron Processor using console (for example, using Crestron Toolbox Text Console, or PuTTY).
- Send the command UCMD:[program slot #] "RETRYAUTH"  
i.e UCMD:1 "RETRYAUTH"



- The Modules will check the activation server for updated licensing information and will apply the license.
- The console will display updated license information.
- [license\_status\_fb\$] will be updated showing the current license information.

### **Offline Activation**

We understand that not all installations have access to the Internet. Because of this, we offer an offline activation method. Please contact us for the specific procedure, and please have the Activation Key available.

# Signal and Parameter Descriptions

Bracketed signals such as "[signal\_name]" are optional signals

## DIGITAL INPUTS

reboot_finished .....	set to high after reboot is finished and program is started. Do not use 1.
[refresh_license_from_file] .....	Pulse to refresh license from the file system.
[refresh_license_from_server] .....	Pulse to refresh the license from the licensing server.
[enable_server] .....	Latch high to enable the Listener. Latch low to disable server.
[trigger_alarmx] .....	Pulse to trigger the created Unifi Protect Alarm. Used in conjunction with [alarm_trigger_id_x]. When [trigger_alarmx] is pulsed, the [alarm_trigger_id_x] is used to tell Unifi Protect which Alarm is being called.

## ANALOG INPUTS

[server_port_number_override] .....	Use to override the Server Port Parameter during runtime. Valid values are 1-65535d. Care should be taken to not use a port currently in use elsewhere in the system.
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## SERIAL INPUTS

[webhook_delivery_url_pathx] .....	Input used to define the path of the webhooks. The path must start with a forward slash i.e. "/Event5".
[console_ip_address\$_override] .....	Input used to Override the Console IP Address Parameter. This is typically used with systems driving configurations dynamically.
[api_key\$_override] .....	Input used to Override the API Key Parameter. This is typically used with systems driving configurations dynamically.
[alarm_trigger_id_x] .....	Input a Triggger ID from a created Unifi Protect Alarm. Corresponds to [trigger_alarmx]. When [trigger_alarmx] is pulsed, the [alarm_trigger_id_x] is used to tell Unifi Protect which Alarm is being called.

## DIGITAL OUTPUTS

[licensed_fb] .....	High when there is a license present.
[trial_license_valid_fb] .....	High when there is a license and the license is trial.
[perpetual_license_valid_fb] .....	High when there is a license and the license is perpetual.
[server_enabled_fb] .....	High when the server is listening.
[webhook_delivery_url_pathx_received_pulse] .....	Pulsed when the server receives a request containing the path as defined by [webhook_delivery_url_pathx]

## ANALOG OUTPUTS

This module does not use any analog outputs.

## SERIAL OUTPUTS

[license_status_fb\$] .....	String indicating the current status of the license.
[activation_key_fb\$] .....	Serial indicating the Activation Key.
[activation_url_fb\$] .....	Serial indicating the License purchase URL.

**PARAMETERS**

Server Port.....	Enter the port number the Listener Server should listen for requests on.
Duplicate Request Timeout .....	This setting prevents multiple events from firing if the same webhook path is repeatedly called within a short period. The default timeout is 30 seconds. When a request is received on a specific path, the event will fire only if it hasn't been triggered by a request to the same path within the last 30 seconds. If another request is received on that path within this timeout window, the event will not fire again.
Console IP Address.....	The Unifi Protect Console Address. Used when triggering Alarms in Unifi.
API Key.....	Enter the Unifi Integration API Key. Used when triggering Alarms in Unifi. See Sending Unifi Protect Alarms on how to obtain the API Key.

## **Support**

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This Module is supported by ControlWorks Consulting, LLC. Should you need support for this Module you may email us at [support@controlworks.com](mailto:support@controlworks.com) or call us at:

- (+1) 440 449 1100 (Cleveland, Ohio)
- (+1) 508 695 0188 (Boston, Massachusetts)
- (+1) 202 381 9070 (Washington, DC)
- (+44) (0)20 4520 4600 (London, England)

ControlWorks normal office hours are 9 AM to 5 PM US Eastern time, Monday through Friday, excluding holidays.

## **Updates**

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Updates, when available, are free of charge, and are automatically distributed via our webstore. If you have purchased a license, you will receive an email notification to the address entered when the license was purchased. In addition, updates may be obtained using your username and password at <https://store.controlworks.com/account/login.aspx>.

## Distribution Package Contents

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The distribution package for this module should include:

Unifi_Protect_Alarm_Manager_Demo_v1.2_(ControlWorks).smw	Demonstration Program
Unifi_Protect_Alarm_Manager_v1.2_(ControlWorks).umc	Main User Module
Unifi_Protect_Alarm_Manager_Engine_v1.2_(ControlWorks).usp	SIMPL+ for use inside main module
Unifi_Protect_Alarm_Manager_Engine_v1.2_(ControlWorks).ush	SIMPL+ header file, for use inside main module
UnifiProtectAlarmManager.clz	SIMPL# module for use in SIMPL+ module
Unifi_Protect_Alarm_Manager_v1.2_(ControlWorks)_Help.pdf	This help file.

## Revision History

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V1.2 [caleb@controlworks.com](mailto:caleb@controlworks.com) 2025.06.27

- Added the ability to send alarms into Unifi Protect.
- Updated argument definition to more accurately reflect the names of the Unifi Alarms now that the Module is able to both send and receive alarms.

V1.1 [caleb@controlworks.com](mailto:caleb@controlworks.com) 2025.03.26

- CH Updates
- Fix for offline licensing not properly retaining license.
- Fix for driver showing offline after adjustments made to settings.
- GETACTIVATIONFINO command has additional information.

V1.0 [caleb@controlworks.com](mailto:caleb@controlworks.com) 2024.05.01

- Initial Version

## Development Environment

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This module version was developed on the following hardware and software. Different versions of hardware or software may or may not operate properly. If you have questions, please contact us.

<b>Crestron Hardware</b>	<b>Firmware Version</b>
CP4	v2.8005.00012
PRO4	v2.8003.00055
VC-4	4.0003.00045
TSW-1060	v1.002.0031
<b>Software</b>	<b>Software Version</b>
SIMPL Windows	4.28
Device Database	200.345
Crestron Database	224.05

# ControlWorks Consulting, LLC Type 5 Module/Module License Agreement

## Definitions:

"ControlWorks", "We", and "Us" refers to ControlWorks Consulting, LLC, with headquarters located at 8228 Mayfield Road Suite 6B Rear, Chesterland, Ohio 44026.

"You" refer to the entity installing, integrating, or otherwise deploying the Module.

"End User" refer to the person or entity for whom the Crestron hardware is being installed, utilize, and/or will utilize the installed system.

"Module", "Module", and "Licensed Software" each include all components provided by ControlWorks pursuant to this license agreement required for or useful in implementing the functionality described herein. The Licensed Software includes but is not limited to files with extensions such as UMC, USP, CLZ, SMW, VTP, and PKG.

"Type 2 Module/Module License" refers to a module license that is granted to a specific Crestron processor and a single controlled device; a separate license must be purchased for each combination of Crestron processor and controlled device.

"System" refers to all components described herein as well as other components, services, or utilities required to achieve the functionality described herein.

"Demo Program" refers to a group of files used to demonstrate the capabilities of the Module, for example a SIMPL Windows program and VisionTools Touchpanel file(s) illustrating the use of the Module but not including the Module.

"Software" refers to the Module and the Demo Program and any files provided by ControlWorks as part of the distribution package including the Module, Demo Program, and associated documentation.

## Disclaimer of Warranties

ControlWorks Consulting, LLC software is licensed to You as is. You, the consumer, bear the entire risk relating to the quality and performance of the Licensed Software. In no event will We or any of our Licensors be liable for direct, indirect, incidental or consequential damages resulting from your use or attempt to use the Licensed Software, or for any defect in the Software, breach of security, or other failure or malfunction even if We had reason to know of the possibility of such damage. If the Licensed Software proves to have defects, You and not Us must assume the entire cost of any necessary service, repair, or other loss resulting from such defects.

## Indemnification/Hold Harmless

ControlWorks, in its sole and absolute discretion may refuse to provide support for the application of the Module in such a manner that We feel has the potential for property damage, or physical injury to any person. Dealer shall fully and unconditionally indemnify and hold harmless ControlWorks Consulting LLC, its employees, agents, licensors, and owners from any and all liability, including direct, indirect, and consequential damages, including but not limited to personal injury, property damage, or lost profits which may result in any way from the operation (or failure to operate) of a program or System containing Licensed Software or any component thereof.

## Provision of Support

We provide limited levels of technical support only for the most recent version of the Module as determined by Us. We do not provide support for previous versions of the Module, modifications to the module not made by Us, or to persons who have not purchased the Module from Us. In addition, we may decline to provide support if the demo Program has not been utilized. We may withdraw a module from sale and discontinue providing support at any time and for any reason, including, for example, if the equipment for which the Module is written is discontinued or substantially modified. The remainder of your rights and obligations pursuant to this license will not be affected should We discontinue support for a Module.

## Modification of Software

You may not decrypt (if encrypted), reverse engineer, modify, translate, disassemble, or de-compile the Licensed Software in whole or part. Any modifications to the Licensed Software shall immediately terminate any licenses purchased with respect thereto. You may, however, modify the Demo Program.

## License Grant

You may use the Licensed Software on the specific Crestron Processor identified when the license was purchased or otherwise granted by ControlWorks. You may integrate with only as many devices using the Licensed Software as you have been granted licenses for (for example, if you purchase 3 licenses associated with a processor, you may control up to 3 devices using the Licensed Software from that processor).

Licenses are generally non-transferrable, however in ControlWorks sole discretion, ControlWorks may grant a transfer of an existing license to a new Crestron Processor. If granted, transfer may be subject to an administrative fee as determined by ControlWorks from time to time, and the prior license may be disabled remotely.

You may permit End Users to utilize the functionality provided by the Licensed Software as part of a Crestron Home configuration or Crestron Program, as applicable.

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