SolarAssistant Integration Driver

This driver allows for easy integration of Control4 into multiple inverter & solar systems via the SolarAssistant product.

SolarAssistant is software used to monitor and control your solar system. It is designed to run on a Raspberry Pi that is plugged into the solar inverter and optionally a battery BMS. The idea is that you leave the PI running permanently. The application can be accessed from a web browser or the Android/iPhone app via local network or the internet.

There are 3 Drivers in this Driver Suite:

- SolarAssistant Interface (HM_SolarAssistant_Interface.c4z)
- SolarAssistant Battery (HM_SolarAssistant_Battery.c4z)
- SolarAssistant Inverter (HM_SolarAssistant_Inverter.c4z)

Table of Contents

Compatibility

The following inverters show as supported:

Brand	Compatibility Link
Axpert	https://solar-assistant.io/explore/axpert#hero

Brand	Compatibility Link
Growatt	https://solar-assistant.io/explore/growatt#hero
EG4	https://solar-assistant.io/explore/eg4#hero
Deye	https://solar-assistant.io/explore/deye#hero
Kodak	https://solar-assistant.io/explore/kodak#hero
SunSynk	https://solar-assistant.io/explore/sunsynk#hero
MPP Solar	https://solar-assistant.io/explore/mpp-solar#hero
Sol-Ark	https://solar-assistant.io/explore/solark#hero
Mecer	https://solar-assistant.io/explore/mecer#hero
RCT	https://solar-assistant.io/explore/rct#hero
MUST Power	https://solar-assistant.io/explore/must#hero
SRNE	https://solar-assistant.io/explore/srne#hero
InfiniSolar	https://solar-assistant.io/explore/infini_solar#hero
Megarevo	https://solar-assistant.io/explore/megarevo#hero
Luxpower	https://solar-assistant.io/explore/luxpower#hero
Don't see your inverter?	Double check here

Getting Started

Head to the SolarAssistant website help section & you will find:

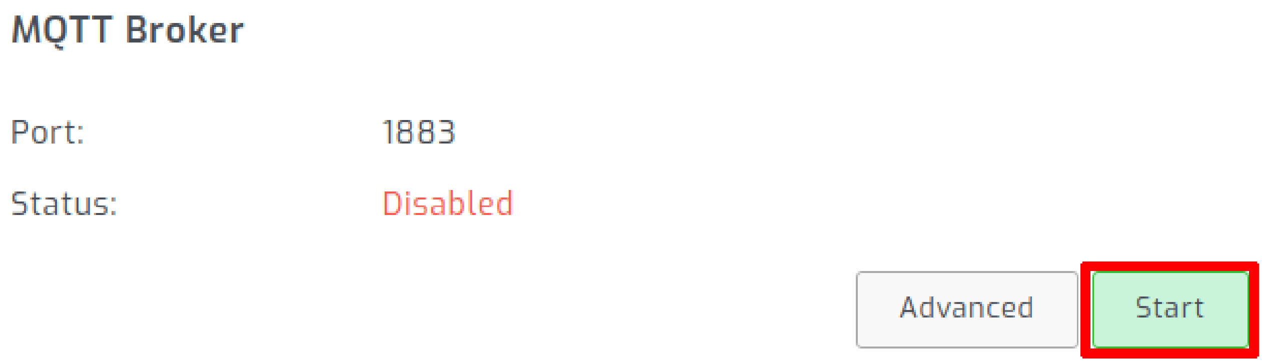
- Compatibility checks that will tell you what to order.
- Integration guides to get you up and running for each specific setup.
- Order the components needed for your specific setup.
- https://solar-assistant.io/help/general/introduction

***** SolarAssisnant needs to be up and running correctly before trying to integrate with Control4**

Driver Setup & Recommendations

SolarAssistant Device

- Although Wi-Fi might be convenient, hard-wired connections are highly recommended.
- Get SolarAssistant up and running.
- The MQTT Broker NEEDS to be enabled from the Configuration --> MQTT Broker section.

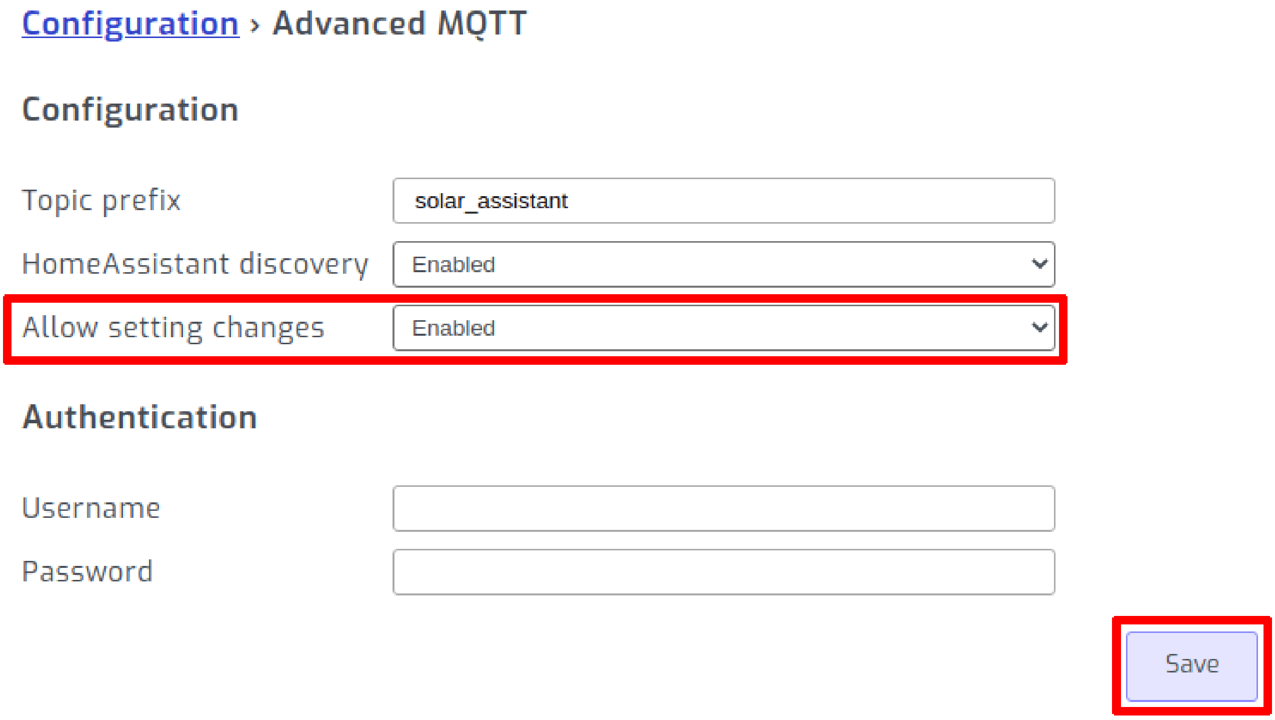


MQTT Broker

Port: 1883

Status: Disabled

- If you want to write setting to the inverter from Control4 you need to enable "Allow setting changes". (Coming Soon)



Configuration › Advanced MQTT

Configuration

Topic prefix: solar_assistant

HomeAssistant discovery: Enabled

Allow setting changes: Enabled

Authentication

Username:

Password:

Control4 Composer

- Add the SolarAssistant Inverter for each inverter you have in the system.
    - In most systems there will be one.
    - Check the documentation on this driver for more details.
- (Optional) Add the SolarAssistant Battery for each battery you have configured.
    - In our test system we needed extra cables to configure this.
    - Check the documentation on this driver for more details.

Driver Properties:

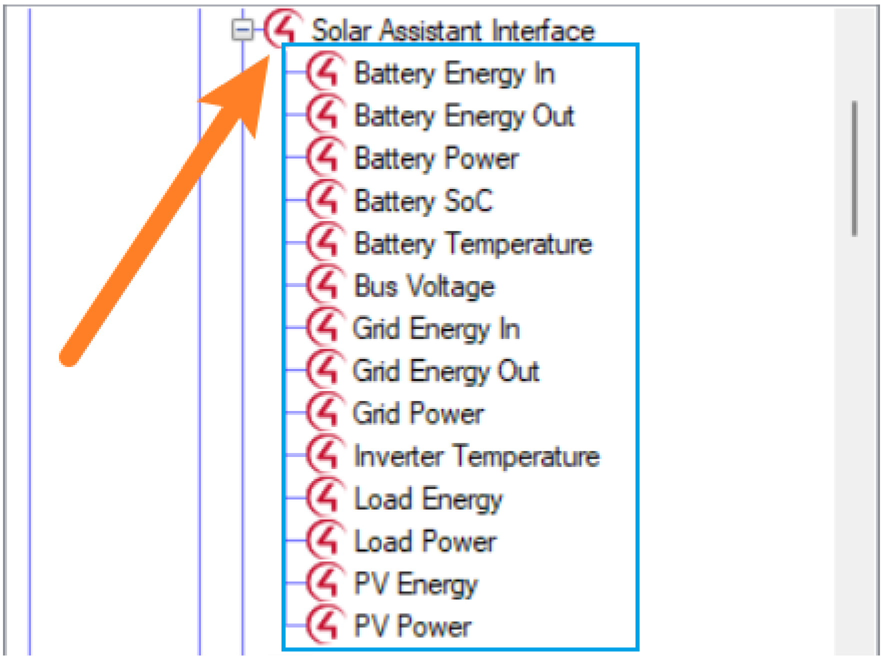
- **IP Address:** IP Address of the Solar Assistant Device.
- **Communication Status:** The Communication status of the connection

- **Last Communication:** Timestamp of when there was last communication with the Solar Assistant Device.
- **Comms Timeout Alert (S):** After communication is lost, how many seconds should pass until the Communication Failure programming event is fired.
- **Debug Mode:** Set to print to troubleshoot the driver.
- **Last Address Received:** Shows the last address the driver received.

Available Readings

These readings are totals and are read directly from the Solar Assistant Device. Depending on your setup, some readings might not show any values.

These readings are available in the **Programming** section of Composer as Events (left side) and Actions (right side) by expanding the Interface Driver like this:

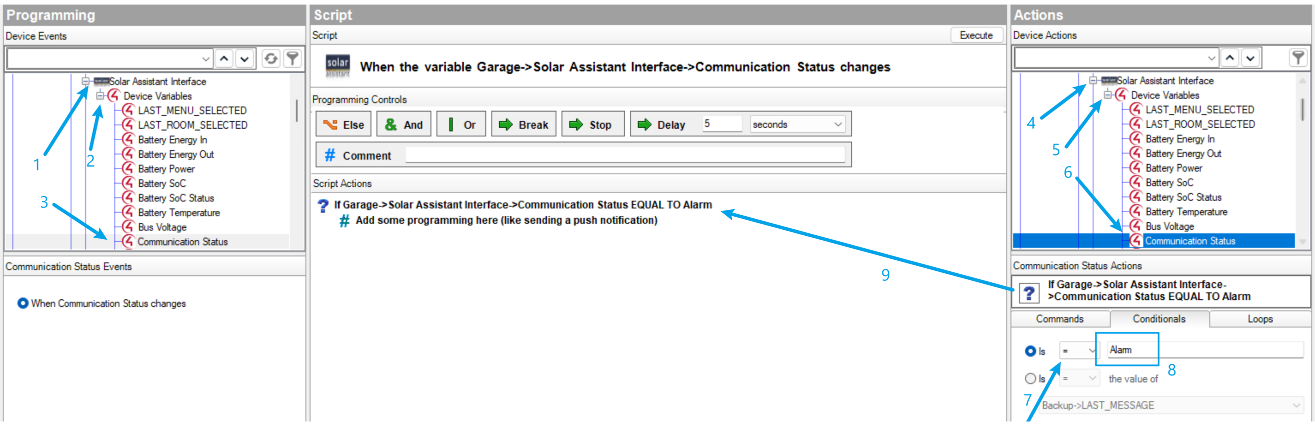


Solar Assistant Interface
Battery Energy In
Battery Energy Out
Battery Power
Battery SoC
Battery Temperature
Bus Voltage
Grid Energy In
Grid Energy Out
Grid Power
Inverter Temperature
Load Energy
Load Power
PV Energy
PV Power

Name	Type	Programming Values
Battery Energy In	Number	Any number
Battery Energy Out	Number	Any number
Battery Power	Number	Any number
Battery SoC	Number	0 - 100
Battery SoC Status	Text	Charged/High/Medium/Low/Critical/Unknown
Battery Temperature	Number	Any number
Bus Voltage	Number	Any number
Communication Status	Text	Online/Offline/Alarm/Unknown
Grid Energy In	Number	Any number

Name	Type	Programming Values
Grid Energy Out	Number	Any number
Grid Power	Number	Any number
Inverter Temperature	Number	Any number
Load Energy	Number	Any number
Load Power	Number	Any number
PV Energy	Number	Any number
PV Power	Number	Any number

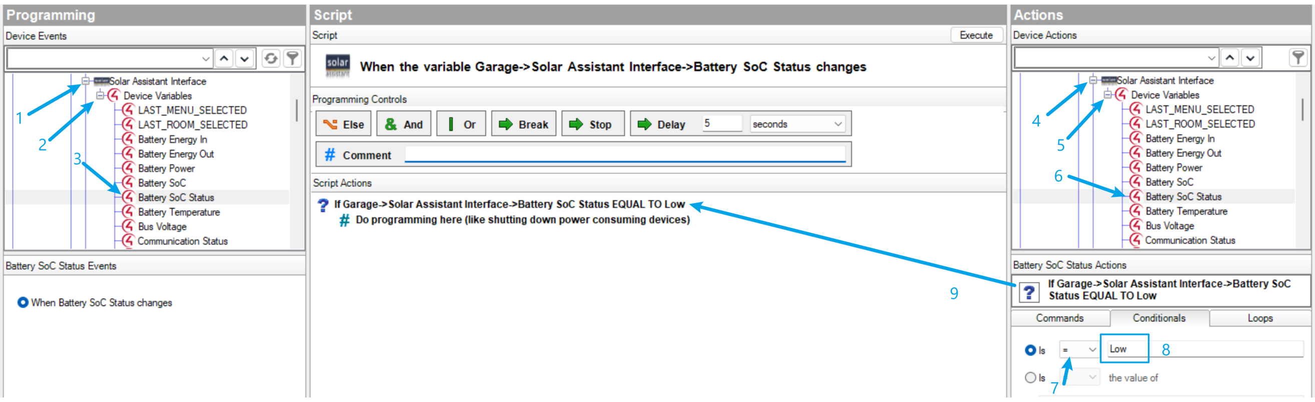
Programming Examples


When the variable Garage->Solar Assistant Interface->Communication Status changes

If Garage->Solar Assistant Interface->Communication Status EQUAL TO Alarm
Add some programming here (like sending a push notification)

When Communication Status changes

If Garage->Solar Assistant Interface->Communication Status EQUAL TO Alarm


When the variable Garage->Solar Assistant Interface->Battery SoC Status changes

If Garage->Solar Assistant Interface->Battery SoC Status EQUAL TO Low
Do programming here (like shutting down power consuming devices)

When Battery SoC Status changes

If Garage->Solar Assistant Interface->Battery SoC Status EQUAL TO Low

FAQ

- **What is this driver for?**
  - Communicating with a variety of 3rd-Party systems that allows 2-way control of Inverter systems within Control4.
- **Why did you create this driver?**
  - Demand for a driver to communicate with these systems.
- **Can I test the driver first?**
  - Although, tested on various systems and all systems worked right away, please trial this driver before purchasing. As with all Homemation drivers, Showroom licenses are free and activate

automatically.

Changelog

- **1**
    - Initial Release